INTRODUCTION

The Brown Tree Snake *Boiga irregularis* (Bechstein, 1802) is a species that achieved notoriety after it was inadvertently introduced into the island of Guam. There it proceeded to breed in massive numbers and decimated the local lizards and avifauna (Rodda and Fritts 1992, Rodda and Savidge 2007).

While various forms have been formally described, most authors have treated all as being variants of a single species. This remains the case even since a molecular study by Richmond et al. (2014) showed that there were deep phylogenetic divisions between populations.

Rodda et al. (1999) and again Rodda and Savidge (2007) noted this incongruity and for nearly a decade since 2007, there has been no advancement in that position. Furthermore the anomaly becomes even more apparent when one reconciles this situation with that of another related species complex *Dorisis dendrophila* (Boie, 1827), formerly known as *Boiga dendrophila* (Boie, 1827), a Sundaland species for which local populations exhibit similar divergences and have been assigned widely-recognized and used subspecies names for many years. These including six more than 100 years old and three more recent.

This paper corrects the anomaly and divides the *B. irregularis* group based on consistent morphological differences between forms. These also coincide with available molecular data.

The result here is ten subspecies, four of which have available names and the other six are assigned in accordance with the rules of the *International Code of Zoological Nomenclature* (Ride et al. 1999).

A neotype is designated for *B. irregularis*.

**Keywords:** Taxonomy; Brown Tree Snake; snakes; genus; *Boiga*; species; *irregularis*; *fusca*; *laticeps*; *flavigastra*; *boydii*; *ornata*; *flavescens*; new subspecies; *halmaheraensis*; *buruensis*; *sudestensis*; *solomonensis*; *newbritainensis*; *roddai*; Solomon Islands; Solomons; Australia; Queensland; New South Wales; Northern Territory; Western Australia; New Guinea; Guam; Sulawesi; Obi; Guadalcanal; Halmahera; New Britain; Milne Bay; Tagula; Sudest Island; Buru; Ambon; Manus; Ceram.
Boiga dendrophila (Boie, 1827), better known as the Mangrove Snake, which is a Sundaland species for which local populations exhibit similar divergences and have been assigned widely-recognized and used subspecies names for many years. These include six more than 100 years old and three more recently assigned.

It is also notable that Dorisious dendrophila (Boie, 1827), would clearly be more suited to dispersal among nearby island groups than the species B. irregularis, which while inhabiting mangrove swamps and/or regularly venturing into them, does in fact prefer more terra-firma land-based habitats.

This paper corrects the anomaly, and divides the B. irregularis group based on consistent morphological differences between forms. These also coincide with the molecular data. The basis of the division includes direct inspection of many hundreds of specimens, both live and in museums, over a forty year period from across most parts of the known distribution of Boiga irregularis.

This includes specimens from Australia, New Guinea, the Solomon Islands, and other islands, north and west of New Guinea.

The result here is ten identified subspecies, four of which have available names, with three being resurrected from synonymy. The other six subspecies are assigned new names in accordance with the rules of the International Code of Zoological Nomenclature (Ride et al. 1999).

The taxonomy is robust and conservative. While no populations are currently regarded as threatened with extinction, things can change rapidly. A necessary first step to conserving biodiversity is to have a proper inventory of it, which is further reason for these descriptions to be published now, rather than at a later date.

Notwithstanding the theft of relevant materials from this author in an illegal armed raid on 17 August 2011, which were not returned (Court of Appeal Victoria 2014 and VCAT 2015) and not returned in breach of various earlier court orders, I have made a decision to publish this paper.

This is in view of the conservation significance attached to the formal recognition of unnamed species and on the basis that further delays may in fact put these otherwise unnamed taxa at risk. This is in view of the conservation significance attached to the formal recognition of unnamed species and on the basis they are self evident to any vaguely perceptive reader.

A situation compounding the problems involving taxonomy and nomenclature of B. irregularis has been the absence of a type specimen. The original description matches that of the east Australian form and so it is appropriate that this be regarded as the form typical of the species. Most contemporary authors (e.g. Rodda and Savidge 2007) have done exactly that.

On that basis I hereby assign a neotype for the species B. irregularis which is done preceding the relevant subspecies descriptions.

Also it is relevant to point out that the earlier named subspecies were never properly defined by the original authors within the context of other forms. Hence these are redescribed herein in order to enable others to identify and separate each of the ten named forms and in the absence of relevant locality data.

**MATERIALS AND METHODS**

These are not formally explained in a number of my recent papers under the heading “Materials and methods” or similar, on the basis they are self evident to any vaguely perceptive reader. However, the process by which the following taxonomy and nomenclature in this and other recent papers by myself of similar form (in Australasian Journal of Herpetology issues 1-32), has been arrived at, is explained herein for the benefit of people who have recently published so-called “criticisms” online of some of my recent papers. They have alleged a serious “defect” by myself not formally explaining “Materials And Methods” under such a heading.

The process involved in creating the final product for this and other relevant papers has been via a combination of the following:

Genera and component species have been audited to see if their classifications are correct on the basis of known type specimens, locations and the like when compared with known phylogenies and obvious morphological differences between like species.

Original descriptions and contemporary concepts of the species are matched with available specimens from across the ranges of the species to see if all conform to accepted norms.

These may include those held in museums, private collections, collected in the field, photographed, posted on the internet in various locations or held by individuals, and only when the location data is good and any other relevant data available.

Where specimens do not appear to comply with the described species or genera (and accepted concept of the each), this non-conformation is looked at with a view to ascertaining if it is worthy of taxonomic recognition or other relevant considerations on the basis of differences that can be tested for antiquity or deduced from earlier studies.

When this appears to be the case (non-conformation), the potential target taxon is inspected as closely as practicable with a view to comparing with the nominate form or forms if other similar taxa have been previously named.

Other relevant data is also reviewed, including any available molecular studies which may indicate likely divergence of populations.

Where molecular studies are unavailable for the relevant taxon or group, other studies involving species and groups constrained by the same geographical or geological barriers, or with like distribution patterns are inspected as they give reasonable indications of the likely divergences of the taxa being studied herein.

Additionally other studies involving geological history, sea level and habitat changes associated with long-term climate change, including recent ice age changes in sea levels, versus known sea depths are utilized to predict past movements of species and genus groups in order to further ascertain likely divergences between extant populations (as done in this very paper).

When all available information checks out to show taxonomically distinct populations worthy of recognition, they are then recognized herein according to the rules of the International Code of Zoological Nomenclature (Ride et al. 1999).

This means that if a name has been properly proposed in the past, it is used. This is exactly what happens in this paper for four different taxa referred to within.

Alternatively, if no name is available, one is proposed according to the rules of the Code as is done six times in this paper.

As a matter of trite I mention that if a target taxon or group does check out as being “in order” or properly classified, a paper is usually not published unless some other related taxon is named for the first time.

The published literature relevant to Boiga irregularis sensu lato and the taxonomic and nomenclatural judgements made within this paper includes papers relevant to other Australian, New Guinea, East Indonesia and Pacific Island species affected by the same physical barriers to dispersal as well as those “directly relevant to Boiga”. Combined, this literature includes the following:


As a result of these relevant factors and under Article 75.3.1 of the code it is herein noted that the original holotype specimen for Coluber irregularis Bechstein, 1802, has apparently been permanently lost and searches have been unable to locate it. Refer to the summary of relevant events on page 209 of Cogger et al. (1983).

Based on the original description of the holotype by Bechstein (1802), the neotype matches the same species within the description and may well be from the same regional location. Relevant to article 75.3.5 of the code, this detail has been corroborated by Rodda and Savidge (2007).

In accordance with Article 75.3.6 of the code, I note that the type locality of the original holotype is not known, other than obviously being the general region it could possibly come from (in or near Australia and most likely eastern Australia). However the description of the holotype excludes outlier locations including island groups where congenic snakes do not match the original species descriptions (refer again to Rodda and Savidge 2007).

**BOIGA IRREGULARIS (BECHSTEIN, 1802).**

**Holotype:** Lost. Neotype described above.

**Diagnosis:** The species B. irregularis and all subspecies described herein are separated from all other snakes by the following suite of characters:

The body shape is very slender, with a mass of about 100 g for an average 1,000-mm SVL individual. Colour is usually reddish, orange or brown or a combination of these, either patterned, unpatterned or indistinctly marked in varying configurations, sometimes taking on a whitish grey appearance prior to shedding skin. Scales or interstitial skin may be marked with black or other darker pigment, either in the form of blotches, flecks, scale edging or similar. Attains up to about 2 metres maximum length, with most non-growing adults about 1.2 metres.

Tail is more or less round in cross section and tapering to a point. There is a single loreal scale, a single row of enlarged ventral scales, numbering from 217-296. 17-20 dorsal mid-body rows, anal plate either single or divided, 65-130 all divided subcaudals, standard colubrid head shields, there are sometimes transversely enlarged middorsal scales, head shape is with a blunt short snout with wide quadrates (relative to neck) and large eyes with an elliptical pupil.

**Distribution:** Naturally occurs along the east and north coasts of Australia, stretching from north of Sydney Harbour, New South Wales to the Kimberley in Western Australia, New Guinea and nearby islands as far west as Sulawesi and offshore islands as far south east as Sudest (AKA Tagula Island), north-east as the Solomon Islands and including the Bismark Archipelago as well as Manus Island. Found also in Ambon, Ceram, Buru, Obi, Halmahera, Aru, Kar Kar and other islands near New Guinea. Introduced to Guam where it is a serious ecological pest. Has been found in Micronesia where it may also be introduced. The various subspecies are defined and diagnosed below.

**BOIGA IRREGULARIS IRREGULARIS (BECHSTEIN, 1802).**

**Holotype:** Lost. Neotype described above.

**Diagnosis:** Boiga irregularis irregularis (Bechstein, 1802) from Eastern Australia, which includes B. boydii (Macleay, 1884), that has been synonymised herein is diagnosed and separated from all other snakes by the following unique suite of characters: It is (in life) (in adults) reddish brown dorsally, with indistinct black speckling along the mid-dorsal line and to a lesser extent the sides. There is no obvious banding pattern and the tail lacks any obvious bands or pattern, being one colour and with just a

The three relevant animals (neotype and those depicted in images numbers 367 and 368 on page 142 of Hoser (1989) all come from within or the boundary of Kurringai Chase National Park, in New South Wales, Australia and are of the same general form and appearance and relevant taxonomic features.

Under Article 75.3.4. I herein state that the original holotype specimen for Coluber irregularis Bechstein, 1802, has apparently been permanently lost and searches have been unable to locate it. Refer to the summary of relevant events on page 209 of Cogger et al. (1983).

Based on the original description of the holotype by Bechstein (1802), the neotype matches the same species within the description and may well be from the same regional location. Relevant to article 75.3.5 of the code, this detail has been corroborated by Rodda and Savidge (2007).

In accordance with Article 75.3.6 of the code, I note that the type locality of the original holotype is not known, other than obviously being the general region it could possibly come from (in or near Australia and most likely eastern Australia). However the description of the holotype excludes outlier locations including island groups where congenic snakes do not match the original species descriptions (refer again to Rodda and Savidge 2007).

**BOIGA IRREGULARIS IRREGULARIS (BECHSTEIN, 1802).**

**Holotype:** Lost. Neotype described above.

**Diagnosis:** The species B. irregularis and all subspecies described herein are separated from all other snakes by the following suite of characters:

The body shape is very slender, with a mass of about 100 g for an average 1,000-mm SVL individual. Colour is usually reddish, orange or brown or a combination of these, either patterned, unpatterned or indistinctly marked in varying configurations, sometimes taking on a whitish grey appearance prior to shedding skin. Scales or interstitial skin may be marked with black or other darker pigment, either in the form of blotches, flecks, scale edging or similar. Attains up to about 2 metres maximum length, with most non-growing adults about 1.2 metres.

Tail is more or less round in cross section and tapering to a point. There is a single loreal scale, a single row of enlarged ventral scales, numbering from 217-296. 17-20 dorsal mid-body rows, anal plate either single or divided, 65-130 all divided subcaudals, standard colubrid head shields, there are sometimes transversely enlarged middorsal scales, head shape is with a blunt short snout with wide quadrates (relative to neck) and large eyes with an elliptical pupil.

**Distribution:** Naturally occurs along the east and north coasts of Australia, stretching from north of Sydney Harbour, New South Wales to the Kimberley in Western Australia, New Guinea and nearby islands as far west as Sulawesi and offshore islands as far south east as Sudest (AKA Tagula Island), north-east as the Solomon Islands and including the Bismark Archipelago as well as Manus Island. Found also in Ambon, Ceram, Buru, Obi, Halmahera, Aru, Kar Kar and other islands near New Guinea. Introduced to Guam where it is a serious ecological pest. Has been found in Micronesia where it may also be introduced. The various subspecies are defined and diagnosed below.

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Based on the original description of the holotype by Bechstein (1802), the neotype matches the same species within the description and may well be from the same regional location. Relevant to article 75.3.5 of the code, this detail has been corroborated by Rodda and Savidge (2007).

In accordance with Article 75.3.6 of the code, I note that the type locality of the original holotype is not known, other than obviously being the general region it could possibly come from (in or near Australia and most likely eastern Australia). However the description of the holotype excludes outlier locations including island groups where congenic snakes do not match the original species descriptions (refer again to Rodda and Savidge 2007).

**BOIGA IRREGULARIS IRREGULARIS (BECHSTEIN, 1802).**

**Holotype:** Lost. Neotype described above.

**Diagnosis:** The species B. irregularis and all subspecies described herein are separated from all other snakes by the following suite of characters:

The body shape is very slender, with a mass of about 100 g for an average 1,000-mm SVL individual. Colour is usually reddish, orange or brown or a combination of these, either patterned, unpatterned or indistinctly marked in varying configurations, sometimes taking on a whitish grey appearance prior to shedding skin. Scales or interstitial skin may be marked with black or other darker pigment, either in the form of blotches, flecks, scale edging or similar. Attains up to about 2 metres maximum length, with most non-growing adults about 1.2 metres.

Tail is more or less round in cross section and tapering to a point. There is a single loreal scale, a single row of enlarged ventral scales, numbering from 217-296. 17-20 dorsal mid-body rows, anal plate either single or divided, 65-130 all divided subcaudals, standard colubrid head shields, there are sometimes transversely enlarged middorsal scales, head shape is with a blunt short snout with wide quadrates (relative to neck) and large eyes with an elliptical pupil.

**Distribution:** Naturally occurs along the east and north coasts of Australia, stretching from north of Sydney Harbour, New South Wales to the Kimberley in Western Australia, New Guinea and nearby islands as far west as Sulawesi and offshore islands as far south east as Sudest (AKA Tagula Island), north-east as the Solomon Islands and including the Bismark Archipelago as well as Manus Island. Found also in Ambon, Ceram, Buru, Obi, Halmahera, Aru, Kar Kar and other islands near New Guinea. Introduced to Guam where it is a serious ecological pest. Has been found in Micronesia where it may also be introduced. The various subspecies are defined and diagnosed below.

**BOIGA IRREGULARIS IRREGULARIS (BECHSTEIN, 1802).**

**Holotype:** Lost. Neotype described above.

**Diagnosis:** Boiga irregularis irregularis (Bechstein, 1802) from Eastern Australia, which includes B. boydii (Macleay, 1884), that has been synonymised herein is diagnosed and separated from all other snakes by the following unique suite of characters: It is (in life) (in adults) reddish brown dorsally, with indistinct black speckling along the mid-dorsal line and to a lesser extent the sides. There is no obvious banding pattern and the tail lacks any obvious bands or pattern, being one colour and with just a
few indistinct flecks. There is little black pigment on the head save for scattered darkish blotches and rarely darker etching of the rear of one or two of the last two labials. The belly is a distinctive salmon colour.

*Boiga irregularis fusca* (Gray, 1842), from Northern Australia west of Cape York and with a type locality of Port Essington, Northern Territory is herein treated as including *B. ornata* (Macleay, 1888), with a type locality of Kings Sound, northwestern Australia.

The subspecies *B. irregularis fusca* as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characteristics: It is the only subspecies with (in adults) a distinctive dorsal pattern of alternating thick white and reddish cross-bands of roughly equal width. These bands continue along the tail and the darker bands become considerably wider, at the expense of the whitish ones as one moves towards the end of the tail. All specimens have the reddish bands narrow slightly on the lower flanks, but this is more distinctive in the NT specimens (conforming to *B. fusca*), whereas West Australian animals (which would otherwise be treated as *B. ornata*) have only slight narrowing of the darker bands on the lower flanks. The West Australian animals also tend to have reddish-orange bands as opposed to orange in the Northern Territory and Queensland animals and a stronger contrast between the white and darker bands, but in view of the likely continuities of the populations across the north-west of the NT and nearby WA including through the Victoria River region, I do not herein treat them as subspecifically distinct from one another.

*Boiga irregularis laticeps* (Macleay, 1877) from south-east New Guinea, which includes *B. fravigastra* (Macleay, 1877), that has been synonymised herein, is diagnosed and separated from all other subspecies by the following unique suite of characters: It is the only subspecies with (in life) (in adults) a distinct blackish-brown temporal streak and similar thick dark etching of the rear upper labials. The top of the head is generally unmarked except for scattered and indistinct peppering. The snout, upper labials and chinshield are creamish to white. Belly is creamish white and the body is generally unpatterned, but with scattered dark flecks. The tail has indistinct blackish and brownish bands.

*Boiga irregularis flavescens* (Duméril et al. 1854) from Sulawesi as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: It is the only subspecies with (in life) (in adults) a thick dark brown temporal streak running from the lower eye to the back of the head. It does not extend anterior to the eye. There is no dark pigment on the anterior of the head and no obvious dark etching or barring of the upper labials. Dorsally, the color is reddish-brown with darkish bands running in a jagged manner across the back. At the mid-dorsal line, these darken to become nearly black and fade to merge with the lighter background on the lower flanks. On the main part of the body, the lighter cross bands are twice as wide as the darker ones. There are no black spots, flecks or markings anywhere on the sides or flanks of the snake, or if so (in some specimens only), they are only continuation of those from the mid-dorsal ridge and do not go beyond the mid flanks. The tail has distinct thick black bands, separated by lighter reddish brown bands of half the thickness. Venter is yellowish brown and immaculate.

*Boiga irregularis halmaheraensis* subsp. nov. as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: It is the only subspecies with (in life) (in adults) a thick dark brown temporal streak running from the lower eye to the back of the head and in that it extends anterior to the eye to the nostril, although it is a thinner and less distinct streak anterior to the eye. Colouration in the anterior part of the body is a distinctive combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration atforebody being a three coloured series of bands. The mid and lower body is essentially a light beigish-brown colour all over and with scattered black tipped scales giving the snake a flecked appearance. The tail is yellowish brown with black peppering.

*Boiga irregularis roddai* subsp. nov. from North New Guinea, Manus Island, other nearby islands and accidentally introduced onto the island of Guam is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults in life, it is characterised by a distinctively light orangeish colouration throughout and a general lack of dark patches or pigment on the head. The body is effectively unpatterned, being an orangeish colour, sometimes broken with a small number of dark flecks. These are scattered dark patches within individual scales, usually not consisting of the whole scale, parts of which remain the orange background colour (usually the outer parts of each scale). The tail is plain orange with no flecks, banding or other markings. Sometimes the rear upper labials have a dark orange etching. The venter is an immaculate yellowish brown, although in some specimens the edges of each scale are a thickened yellow.

*Boiga irregularis buruensis* subsp. nov. is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults in life, other than peppering of scales on the head near the eye (see below), there is no obvious black pigment on the upper body (readily separating this taxon from *B. irregularis irregularis* and *sudestensis* subsp. nov.). The body is an indistinct pattern of dark grey patches on a yellowish-brown background. On the head, there is peppering on the scales running in a line laterally through the eye and near to the eye (both front and back of it) (not seen in *B. irregularis irregularis* and *sudestensis* subsp. nov.);

*Boiga irregularis irregularis* lacks obvious temporal markings and *B. sudestensis* subsp. nov. has distinct but faint temporal streak, but no darkening in front of the eye.

In *Boiga irregularis buruensis* subsp. nov. there is no distinct temporal streak running behind the eye as seen in some of the other subspecies described herein. Other than the grayish peppering near the eye (both front and back of it only) and a large patch of dark grey around the frontal shield (which may fade in old specimens), the rest of the head is distinctly yellow, including the upper labials and the lower labials and chin, giving this taxon a similar appearance to *B. irregularis sudestensis* subsp. nov. as described herein.

*Boiga irregularis sudestensis* subsp. nov. as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults in life, it is similar in most respects to *B. irregularis irregularis* as defined above, from which it is separated by having distinct yellowing of the upper labials and rear of the skull and an immaculate yellow belly and distinct but faint temporal streak running behind the eye. There is also less black pigment on the body than on Australian specimens of *B. irregularis irregularis*.

*Boiga irregularis solomonensis* subsp. nov. is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults (in life), the dorsal pattern is a combination of broken black cross-bands alternating with thinner brownish-yellow bands. On the sides of the ventrals, these reverse with there being a black rectangular blotch on every second scale, or sometimes every third scale, and the in between ones being immaculate yellowish-white.

The venter itself is also an immaculate yellowish-white. This gives the appearance of two broken black lines running down either side of the belly. The head is characterized by a dark temporal streak on either side and thick dark lines running across the labials at the rear of the eye, running from the lip upwards, either to or very near the dark temporal streak. The top of the head is often covered with...
Boiga irregularis newbrtainensis subsp. nov. is diagnosed and separated from all other subspecies by the following unique suite of characters: It is the only subspecies with (in adults) a distinctive dorsal colour with well-defined but indistinct crossbands of similar colour. There is a general lack of black pigment throughout. The chin shields and lower labials are mainly white, or occasionally some or more may be yellowish. The iris is slightly bluish in colour in contrast to all other subspecies. The fore-belly is yellow, posterior belly whitish and all is peppered. The posterior rims of each ventral is darkened, being generally greyish on the neck, then yellowish anteriorly and reddish posteriorly.

There is a general lack of white on the upper head (including the upper labials), this being in contrast to most other subspecies which have a very noticeable whitening of the upper labials. There is a slight, but noticeable dark orange etching of the rear upper labials.

**Distribution:** East of Cape York Australia, from the tip of Cape York to the North Shore of Sydney, New South Wales.

**BOIGA IRREGULARIS FUSCA** (GRAY, 1842).

**Holotype:** A specimen at the Museum of Natural History, London, UK, specimen number: 1946.1.1.28 from Port Essington, Northern Territory, Australia.

**Diagnosis:** Boiga irregularis fusca (Gray, 1842), from Northern Australia west of Cape York and with a type locality of Port Essington, Northern Territory is herein treated as including B. ornata (Macleay, 1888), with a type locality of Kings Sound, north-western Australia.

The subspecies as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: It is the only subspecies with (in adults) a distinctive dorsal pattern of alternating thick white and reddish cross-bands of roughly equal width. These bands continue along the tail and the darker bands become considerably longer (at the expense of the white ones as one moves towards the end of the tail). All specimens have the reddish bands narrow slightly on the lower flanks, but this is more distinctive in the NT specimens

**Distribution:** Northern Australia west of Cape York and with a type locality of Port Essington, Northern Territory is herein treated as including B. ornata (Macleay, 1888), with a type locality of Kings Sound, north-western Australia.

**BOIGA IRREGULARIS RODDAI** (MACLEAY, 1877).

**Holotype:** Australian Museum, Sydney, NSW, Australia, specimen numbers: R3188, 3189, 3190 and 3191 from the Australian Museum, Sydney, NSW, Australia, specimen number: R.130423.001 collected at Essington, Northern Territory, Australia.

**Diagnosis:** Boiga irregularis roddai (Macleay, 1877) from Hall Sound, Papua New Guinea.

**Classification:** This is a facility that allows access to its holdings.

**Paratypes:** Three specimens at the US National Museum (USNM), now called the Smithsonian National Museum of Natural History, Washington, DC, USA, specimen numbers: 215937.635070, 215939.635072 and 215945.635078 collected at Kampung Loleba, Waisle District, Moluccas, Indonesia.

**Diagnosis:** Boiga irregularis halmaheraensis subsp. nov. as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: It is the only subspecies with (in adults) a thick dark brown temporal streak running from the lower eye to the back of the head and in that it extends anterior to the eye to the nostril, although it is a thinner and less distinct streak anterior to the eye. Colouration in the anterior part of the body is a distinctive combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour. The interstitial skin in the middle of the beige scales is black, significantly altering the appearance to give the impression of the snake’s colouration at forebody being a three coloured combination of bands being beige and yellow in colour.
In most respects to B. irregularis irregularis as defined above, following unique suite of characters: In adults in life, it is similar appearance to B. irregularis sudestensis sp. nov. as described and the lower labials and chin, giving this taxon a similar around the frontal shield (which may fade in old specimens), the distinct for this subspecies) and a large patch of dark grey.

Black pigment on the upper body (readily separating this taxon from B. irregularis irregularis and sudestensis subsp. nov.). The subspecies as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: It is the only subspecies with (in adults) a distinctive reddish brown dorsally, with indistinct black speckling along the mid-dorsal line and to a lesser extent the sides. There is no obvious banding pattern and the tail lacks any obvious bands or pattern, being one colour and with just a few indistinct flecks. There is little black pigment on the head save for scattered darkish blotches and rarely darker etching of the rear of one or two of the last two labials. The belly is a distinctive salmon colour.

Boiga irregularis fusca (Gray, 1842), from Northern Australia west of Cape York and with a type locality of Port Essington, Northern Territory is herein treated as including B. ornata (Macleay, 1888), with a type locality of Kings Sound, north-western Australia. The subspecies as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: It is the only subspecies with (in adults) a distinctive dorsal pattern of alternating thick white and reddish cross-bands of roughly equal width. These bands continue along the tail and the darker bands become considerably longer (at the expense of the whitish ones as one moves towards the end of the tail. All specimens have the reddish bands narrow slightly on the lower flanks, but this is more distinctive in the NT specimens (conforming to B. fusca), whereas West Australian animals (which would otherwise be treated as B. ornata) have only slight narrowing of the darker bands on the lower flanks. The West Australian animals also tend to have reddish-orange bands as opposed to orange in the NT animals and a stronger contrast between the white and darker bands, but in view of the likely continuum of the populations across the north-west of the NT and nearby WA, I do not herein treat them as subspecifically distinct from one another.

For separation of all other subspecies see for Boiga irregularis irregularis as detailed within this paper.

**Diagnosis:** Boiga irregularis sudestensis subsp. nov. as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults in life, it is similar in most respects to B. irregularis irregularis as defined above, from which it is separated by having distinct yellowing of the upper labials and rear of the skull and an immaculate yellow belly and distinct but faint temporal streak running behind the eye. There is also less black pigment on the body than on Australian specimens of B. irregularis irregularis.

**Distribution:** Buru Island as well as Ambon, Ceram and Obi, Indonesia.

**Etymology:** Named after the location the holotype originates.

**Boiga irregularis sudestensis subsp. nov.**

Holotype: A specimen at the Bernice Pauahi Bishop Museum, Honolulu, Hawai’i, USA, specimen number: BPBM 20790 collected at Mt. Río, oxbow along Gesirava River upstream from “Camp 1”, “Point 9”, Sudest Island. Lat. -11°49’, Longitude 153°42’, Milne Bay Province, Papua New Guinea. The Bernice Pauahi Bishop Museum, Honolulu, Hawaii, USA is a facility that allows access to its holdings.

**Diagnosis:** Boiga irregularis sudestensis subsp. nov. as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults in life, it is similar in most respects to B. irregularis irregularis as defined above, from which it is separated by having distinct yellowing of the upper labials and rear of the skull and an immaculate yellow belly and distinct but faint temporal streak running behind the eye. There is also less black pigment on the body than on Australian specimens of B. irregularis irregularis.

**Distribution:** Buru Island as well as Ambon, Ceram and Obi, Indonesia.

**Etymology:** Named after the location the holotype originates.

**Boiga irregularis sudestensis subsp. nov.**

Holotype: A specimen at the Bernice Pauahi Bishop Museum, Honolulu, Hawai’i, USA, specimen number: BPBM 20790 collected at Mt. Río, oxbow along Gesirava River upstream from “Camp 1”, “Point 9”, Sudest Island. Lat. -11°49’, Longitude 153°42’, Milne Bay Province, Papua New Guinea. The Bernice Pauahi Bishop Museum, Honolulu, Hawaii, USA is a facility that allows access to its holdings.

**Diagnosis:** Boiga irregularis sudestensis subsp. nov. as herein defined is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults in life, it is similar in most respects to B. irregularis irregularis as defined above, from which it is separated by having distinct yellowing of the upper labials and rear of the skull and an immaculate yellow belly and distinct but faint temporal streak running behind the eye. There is also less black pigment on the body than on Australian specimens of B. irregularis irregularis.

**Distribution:** Buru Island as well as Ambon, Ceram and Obi, Indonesia.

**Etymology:** Named after the location the holotype originates.
The Bernice Pauahi Bishop Museum is a facility that allows access to its holdings.

**Paratype:** A specimen at the Bernice Pauahi Bishop Museum, Honolulu, Hawaii, USA, specimen number: BPBM 3311 collected at Nini Creek, Roroni, Guadalcanal Island, Solomon Islands.

**Diagnosis:** Boiga irregularis solomonensis subsp. nov. is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults (in life), the dorsal pattern is a combination of broken black dorsal crossbands alternating with thinner brownish-yellow bands. On the sides of the ventrals, these reverse with there being a black rectangular blotch on every second scale, or sometimes every third scale, and the in between ones being immaculate yellowish-white.

The venter itself is also an immaculate yellowish-white. This gives the appearance of two broken black lines running down either side of the belly.

The head is characterized by a dark temporal streak on either side and thick dark lines running across the labials at the rear of the eye, running from the lip upwards, either to or very near the dark temporal streak. The top of the head is often covered with dark pigment and at least always includes blackish spots or markings on the parietals. The tail is either darkish black or banded.

For separation of all other subspecies see for Boiga irregularis banded.

**Distribution:** The Solomon Islands. It should be noted that populations based on consistent colouration differences between some of the main islands.

**Etymology:** Named after where the subspecies is known from.

**BOIGA IRREGULARIS NEWBRITAINENSIS SUBSP. NOV.**

**Holotype:** A specimen at the Bernice Pauahi Bishop Museum, Honolulu, Hawaii, USA, specimen number: BPBM 22548 collected 9 km NNW of Marmar, New Britain Island, Papua New Guinea.

The Bernice Pauahi Bishop Museum is a facility that allows access to its holdings.

**Paratypes:**

1/ A specimen at the Bernice Pauahi Bishop Museum, Honolulu, Hawaii, USA, specimen number: BPBM 22549 collected 9.2 km NNW of Marmar, New Britain Island, Papua New Guinea.

2/ A specimen at the Bernice Pauahi Bishop Museum, Honolulu, Hawaii, USA, specimen number: BPBM 22550 collected 2.5 km NNW of Marmar, New Britain Island, Papua New Guinea.

3/ A specimen at the Bernice Pauahi Bishop Museum, Honolulu, Hawaii, USA, specimen number: BPBM 22551 collected 2.5 km NNW of Marmar, New Britain Island, Papua New Guinea.

**Diagnosis:** Boiga irregularis newbritainensis subsp. nov. is diagnosed and separated from all other subspecies by the following unique suite of characters: In adults in life it is generally orange in dorsal colour with well-defined but indistinct crossbands of similar colour.

There is a general lack of black pigment throughout. The chin shields and lower labials are mainly white, or occasionally some or more may be yellowish. The Iris is slightly bluish in colour in contrast to all other subspecies.

The fore-belly is yellow, posterior belly whitish and all is peppered. The posterior rims of each ventral is darkened, being generally greyish on the neck, then yellowish anteriorly and reddish posteriorly.

There is a general lack of white on the upper head (including the upper labials), this being in contrast to most other subspecies which have a very noticeable whitening of the upper labials.

There is a slight, but noticeable dark orange etching of the rear upper labials. For separation of all other subspecies see for Boiga irregularis irregularis as detailed within this paper.

**Distribution:** New Britain and immediately adjacent islands in the Bismark Archipelago.

**Etymology:** Named after the location the holotype originated from.

**NOTES ON THE DESCRIPTIONS FOR ANY POTENTIAL REVISORS**

Unless mandated by the rules of the International Code of Zoological Nomenclature, none of the spellings of the newly proposed names should be altered in any way. Should one or more newly named taxa be merged by later authors to be treated as a single subspecies, the order of priority of retention of names should be the order (page priority) of the descriptions within this text.

**REFERENCES CITED**


Buden, D. W., de Queiroz, K., Van Rooijen, J., Stinson, D. W., Wiles, G. J. and Robert, S. 2014. New Information and


CONFLICT OF INTEREST
The author has no known conflicts of interest in terms of this paper and conclusions within.