

***Euanedwardsserpens subradiatus* (Schlegel, 1837) revisited and formally divided into six allopatric species based on morphological and genetic divergence.**

LSIDURN:LSID:ZOOBANK.ORG:PUB:D72BBB59-B8F0-429F-928E-7F796F0C310E

RAYMOND T. HOSER

LSIDurn:lsid:zoobank.org:author:F9D74EB5-CFB5-49A0-8C7C-9F993B8504AE

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

Phone: +61 3 9812 3322 Fax: 9812 3355 E-mail: snakeman (at) snakeman.com.au

Received 1 April 2022, Accepted 13 June 2022, Published 28 June 2022.

ABSTRACT

The species originally described as *Coluber subradiatus* Schlegel, 1837, has been transferred to various genera, including, *Elaphe* Wagler, 1832, *Coelognathus* Fitzinger, 1843 and most recently *Euanedwardsserpens* Hoser, 2012.

Until now in 2022, the species *Euanedwardsserpens subradiatus* has been treated as a single biological entity distributed in the Lesser Sunda Islands of Indonesia, including Lombok, Sumbawa, Sumba, Komodo, Rinca, Flores, Alor, Roti, Semau, Timor (including Timor-Leste) and Wetar.

De Lang (2011) stated “*Coelognathus subradiatus* in the Lesser Sundas is a species complex”, but in the 11 years since that publication, none of the other unnamed relevant species have been formally named.

In line with morphological and molecular evidence, corroborated by deep sea biogeographical barriers that remained during ice-age maxima, the single putative species is split six ways, with five formally named for the first time in accordance with the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

Keywords: Herpetology; taxonomy; snake; nomenclature; Indonesia; Sunda; ratsnake; Timor; Sumba; Sumbawa; Flores; Alor; Wetar; Semau; Roti; Rinca; Lombok; *Euanedwardsserpens*; *Coelognathus*; *Elaphe*; *subradiatus*; lectotype; designation; new species; *adelynhoserae*; *euanedwardsi*; *floresensis*; *wetarensis*; *sumbaensis*.

INTRODUCTION

The species originally described as *Coluber subradiatus* Schlegel, 1837, better known as the Lesser Sundas Ratsnake has been transferred to various genera, including, *Elaphe* Wagler, 1832, *Coelognathus* Fitzinger, 1843 and most recently *Euanedwardsserpens* Hoser, 2012.

Euanedwardsserpens Hoser, 2012 was created scientifically on the basis of morphological and molecular divergence of the relevant species.

Currently, as of 2022, the species *Euanedwardsserpens subradiatus* is treated as a single biological entity distributed in the Lesser Sunda Islands of Indonesia, including Lombok, Sumbawa, Sumba, Komodo, Rinca, Flores, Alor, Roti, Semau, Timor (including Timor-Leste) and Wetar.

De Lang (2011) stated “*Coelognathus subradiatus* in the Lesser Sundas is a species complex”, but in the 11 years since that publication, none of the unnamed relevant species have been formally named.

The progress of scientific studies with regards to these snakes may be impeded by the failure to correctly identify the relevant biological entities and so it was decided to formally name the unnamed forms to correct this problem.

De Lang (2011) was not the first to flag that there may be more

than one form of putative *Euanedwardsserpens subradiatus* occupying the known distribution.

How *et al.* (1996) provided evidence of more than one species in the complex as have other more recent authors.

In line with morphological and molecular evidence, corroborated by deep sea biogeographical barriers that remained during ice-age maxima, the single putative species is split six ways, with five formally named for the first time in accordance with the *International Code of Zoological Nomenclature* (Ride *et al.* 1999).

MATERIALS AND METHODS

Before the decision was made to formally name the relevant forms of putative *E. subradiatus* specimens from across the range of putative *E. subradiatus* were inspected (live, dead and from photos with quality location data), along with a review of the relevant published literature on the putative species, including all notable morphological and molecular studies.

These were also cross-checked with other studies relevant to known sea level minima during times of glacial maxima in the Pliocene-Pleistocene epochs as a means to attempt to calibrate measured genetic divergences in the relevant published studies. Literature relevant to the putative species *E. subradiatus* and the taxonomic decisions made herein include Bethencourt (1897), Boulenger (1894, 1987, 1898), De Lang (2011), Helfenberger

(2001), Hoser (2012b, 2022), How *et al.* (1996), Knight (2009), Maryanto *et al.* (2021), Mecke (2016), Mertens (1930), Pyron and Burbrink (2013), Pyron *et al.* (2013), Reilly *et al.* (2017, 2019a, 2019b, 2021), Ride *et al.* (1999), Schlegel (1837a, 1837b), Schulz (1988, 1996a, 1996b), Simpson (1977), Vinciguerra (1892), Wagler (1830), Wallace (1860), Wallach *et al.* (2014) and sources cited therein.

RESULTS

As noted already in this paper and flagged prior to the preparation of this paper, molecular studies indicated species-level division within putative *E. subradiatus*.

Reilly *et al.* (2021) showed estimated divergences between the following main populations:

Alor Island, 4.5 MYA from all others;

Timor and Wetar islands 3.6 MYA from all others (exl. Alor Island at 4.5 MYA) and 1.3 MYA from one another;

Flores and Sumbawa islands 3.6 MYA from all others (exl. Alor Island at 4.5 MYA) and 1.5 MYA from one another;

There is clearly an unarguable basis to formally recognize at least three valid species based on the molecular divergence, assuming each can be morphologically defined.

In terms of the lesser splits at 1.3-1.5 MYA, these sit at the cusp of species and subspecies in terms of these definitions in herpetology based on molecular and morphological results.

However as the relevant forms can be separated morphologically and they are well and truly isolated by deep sea barriers and therefore evolving separately, with no obvious genetic mixing, I have no hesitation at all in accepting each entity as a valid species.

A further divergent form from Sumba Island is also identified herein as a morphologically divergent species, also separated by a deep sea barrier, not removed in recent times of glacial maxima and likely to be of similar divergence to the other forms, at least at the lower level, being in excess of 1.3 MYA.

Each of the relevant forms could be distinguished from one another by consistent morphological differences, confirming the correctness of identifying each as a separate species.

FORMAL DESIGNATION OF A LECTOTYPE IN ACCORDANCE WITH THE INTERNATIONAL CODE OF ZOOLOGICAL NOMENCLATURE

The only available name for any of the preceding species is for the snake originally named as *Coluber subradiatus* Schlegel, 1837, based on a syntype series from potentially more than one location.

In order to maintain stability of names, I herein **designate** a **lectotype** for the species originally named as *Coluber subradiatus* Schlegel, 1837 in accordance with Article 74 of the *International Code of Zoological Nomenclature* (Ride *et al.* 1999) for the syntype animal, currently held at the Naturalis Museum, The Netherlands, specimen number RMNH.RENA.403, collected from Timor, by S. Müller.

This lectotype is now the unique bearer of the name of the nominal species-group taxon and the standard for its application (Articles 74.1 all parts, 74.3 all parts).

FORMAL NAMING OF FIVE NEW SPECIES ALL UNTIL NOW TREATED AS PUTATIVE "COLUBER SUBRADIATUS".

As already noted, the current genus-level assignment for the putative taxon is *Euanedwardsserpens* Hoser, 2012.

In the absence of any available names for any of the five other identified taxa, each are formally named herein, as five species.

The form *E. subradiatus* (Schlegel, 1837) is herein confined to Timor and immediately offshore islands.

In terms of the descriptions that follow, the following should be noted:

There is no conflict of interest in terms of this paper or the conclusions arrived at herein.

Several people including anonymous peer reviewers who revised the manuscript prior to publication are also thanked as are

relevant staff at museums who made specimens and records available in line with international obligations.

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

This includes if gender assignment of suffixes seems incorrect, Latinisation is wrong, apparent spelling mistakes and so on (see Article 32.5.1 of the Code).

In the unlikely event two or more newly named taxa are deemed to be the same by a first reviser, then the name to be used and retained is that which first appears in this paper by way of page priority and as listed in the abstract keywords.

Some material in descriptions for taxa may be repeated for other taxa in this paper and this is necessary to ensure each fully complies with the provisions of the *International Code of Zoological Nomenclature* (fourth edition) (Ride *et al.* 1999) as amended online since (ICZN 2012).

Material downloaded from the internet and cited anywhere in this paper was downloaded and checked most recently as of 10 June 2022 (including if also viewed prior), unless otherwise stated and was accurate in terms of the content cited herein as of that date.

Any online citations within this paper, including copied emails and the like, are not necessarily cited in the references part of this paper and have the same most recent viewing date as just given.

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

SVL or SV means snout-vent length, TL means tail length.

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

EUANEDWARDSSERPENS HOSERAE SP. NOV.

LSIDurn:lsid:zoobank.org:act:BBAC5BF1-65C6-4127-8CB4-D2A69535C331

Holotype: A preserved specimen at the Museum of Vertebrate Zoology, University of California, Berkeley, California, USA, specimen number MVZ 292828 collected from Alor Desa Waisika, Kecamatan Alor Timor Laut, Kabupaten Alor, Provinsi Nusa Tenggara Timur, Indonesia, Latitude -8.18916 S., Longitude 124.75098 E at 70 metres elevation.

This facility allows access to its holdings.

Paratypes: Three preserved female specimens at the Museum of Natural History, London, UK, specimen numbers 1897.12.30.19-21 collected from Alor Island.

Diagnosis: Until now each of *Euanedwardsserpens hoserae* sp. nov., *E. euanedwardsi* sp. nov., *E. florensensis* sp. nov., *E. wetarensis* sp. nov. and *E. sumbaensis* sp. nov. have all been treated as populations of *Euanedwardsserpens subradiatus* (Schlegel, 1837), a species still more widely known as *Coelognathus subradiatus* (Schlegel, 1837) or *Elaphe subradiatus* (Schlegel, 1837), otherwise known as the Lesser Sundas Rat Snake.

Because of the significant variation in specimens both by age and within a single population, diagnosing the relevant species has not been attempted until now. However each of the following six species can be separated from one another as follows:

Euanedwardsserpens subradiatus (Schlegel, 1837) from Timor and immediately adjacent small islands, including Roti Island to the south, is separated from the other five species by the following unique suite of characters:

Medium to light brown dorsally with a strong russet tinge, always

a well defined black line running from the eye, posteriorly to the rear of the head at the upper labial, where there is an obvious break before one or more lines commence and run down the body in one or more longitudinal lines or rows of broken spots in a longitudinal manner. These markings usually stop or fade about 1/3 of the way down the body, after which the snake is generally unmarked. Top of head is brownish and unmarked. Upper labials are yellowish. Iris is a dark reddish brown in colour.

E. hoseræ sp. nov. from Alor Island and possibly Pantar Island to the immediate west is separated from the other five species by the following unique suite of characters:

The dorsum is a light yellowish brown to beige in colour and without any russet tinge. The top of the head has a pair of distinct black spots on the central edge of each of the supraciliaries. The black line running posteriorly from the eye to the upper labial is relatively short and ends on the second upper labial past the eye. Back of head may have some semi-distinct black marks but the upper neck is unmarked. About two head lengths down the body irregular black markings arrange in a longitudinal manner in two irregular longitudinal lines on either side of the median line, before breaking up about a third of the way down the body.

A light yellowish-brown iris.

E. euanedwardsi sp. nov. from Sumbawa Island and Lombok to the west is separated from the other five species by the following unique suite of characters:

Dorsal surface of head and neck is an olive brown, becoming slightly reddish brown posteriorly from about a third of the way down the body.

The head is generally devoid of markings. There is a very indistinct and short, narrow dark brown streak running from behind the middle of the eye, posteriorly down the two adjacent labials to about halfway down the second labial. Lower parts of all upper labials are white, turning brown higher, but without a well-defined boundary. Commencing about 2-3 head lengths down the neck from the back of the head are two rows of spotted scales, forming broken longitudinal lines running down the first half of the body length, before disappearing. About five head lengths past the back of the head are two similar lines of dots running in similar dotted longitudinal lines along each of the flanks along the middle of each. These become as prominent as those near the mid-dorsal line but also fade lower down the body. Iris is a dull orange-brown colour.

E. floresensis sp. nov. from Flores, Komodo, Rinca, Adonara and Lembata is similar in most respects to *E. euanedwardsi* sp. nov. as described above, but is separated from that species by having a yellowish tinge in colour at the anterior end of the body, grading through brown to become a dark reddish brown posteriorly; lower flanks invariably have one or more dark blotches, sometimes in a longitudinal array; some black spots on the upper dorsum may be expanded to be significantly larger than most of the rest in the longitudinal array and the iris is a light yellow with orange tinge, to light orange in colour.

E. wetarensis sp. nov. from Wetar Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species by being olive brown dorsally, becoming slightly darker at the rear body, with spotting and broken lines and the like far more prominent on the flanks than on the dorsum, invariably aligned in a linear manner and far more prominent on the anterior third to half of the body; top of head brownish, upper labials yellowish and iris is a medium yellowish-brown colour.

E. sumbaensis sp. nov. from Sumba Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species (and *E. wetarensis* sp. nov.) by being a dark olive-brown dorsally, with spotting and broken lines and the like more prominent on the dorsum than the flanks, being well-defined and black, (versus dark-brown to off-black in the other two species) and a dark brown iris.

E. subradiatus (Schlegel, 1837), *E. adelynhoseræ* sp. nov., *E. euanedwardsi* sp. nov., *E. floresensis* sp. nov., *E. wetarensis* sp. nov. and *E. sumbaensis* sp. nov. are separated from all

other species within *Euanedwardserpens* Hoser, 2012 by the following suite of characters:

Rostral much broader than deep; internasals as long as broad or a little broader, shorter than the prefrontals; frontal one and one sixth to one and a half as long as broad, as long as or a little shorter than its distance from the end of the snout, shorter than the parietals; loreal usually longer than deep; a subocular below the ocular; two postoculars; temporals usually 2+2; eight or nine upper labials, fifth and sixth labials entering the eye; four or five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior ones; scales in 23 or 25 rows (25 or 27 on the neck), more or less strongly keeled on the posterior half of the body, the outer series without a trace of a keel. 228-242 ventrals which have an obtuse lateral keel; anal entire; subcaudals 80-100 (all divided). A dorsum that is brownish above, with sometimes with black flecks, spotting or stripes that may tend to form a pair of black stripes along each side of the anterior third of the body, either on the dorsum, the flanks or both; a short black streak of some sort is usually seen behind the eye; lower parts uniform yellowish (effectively modified from Boulenger 1894 and De Lang 2011).

Snakes in the genus *Euanedwardserpens* Hoser, 2012, were defined as follows:

"Diagnosis: A group large ratsnakes found in the Southeast Asian region, typified by a vertically compressed body and an angled relatively pointed head and snout. Often defensive (interpreted commonly as "aggressive") to people when encountered and to a greater degree than most other ratsnake genera, with specimens commonly struggling against the handler if handled.

Helfenberger (2001) separated *Coelognathus* from the other Eurasian ratsnakes based on anatomical and osteological features as well as electrophoretic loci and used this to diagnose that genus *sensu lato*, including (in effect) the genera *Euanedwardserpens* gen. nov. and *Cynophis* in terms of their common attributes.

This information is relied upon herein as part of this diagnosis as relevant.

These snakes are medium to large and relatively long and slender, have correspondingly high ventral scale and precaudal vertebra counts and have a distinctly long and slender head, which separates them from all other ratsnake genera except *Orthriophis*. However these genera are easily separated by viewing the head colouration. In *Orthriophis* the post-orbital stripe runs more-or-less parallel with the jawline, whereas is *Coelognathus* it distinctly points downwards towards the back of the jaw, although this may be either broken, or one of two such lines, the other running in an upward direction.

If in any doubt, *Orthriophis* is also separated from the genera *Coelognathus*, *Cyanophis* and *Euanedwardserpens* gen. nov. by having a divided anal plate as opposed to a single one.

Snakes of the ratsnake genus *Gonyosoma* Wagler, 1828 also have a divided anal.

Separation of the three relevant genera (namely *Coelognathus*, *Cyanophis* and *Euanedwardserpens* gen. nov.) is done as follows:

The species *Coelognathus radiatus* (now the entire content of that genus as defined herein) is separated from all other Asian ratsnakes (including those of genera *Cyanophis* and *Euanedwardserpens* gen. nov.) by having a short interpulmonary bronchus (see plate 1A-D, Fig 4, Tables 1-2 in Utiger et. al. 2005).

Snakes of the genera *Coelognathus* and *Euanedwardserpens* gen. nov. as defined herein always have three supralabials in contact with the eye. By contrast *Cyanophis helena* does not. *Coelognathus radiatus* also differs from the other relevant taxa (*Cyanophis* and *Euanedwardserpens* gen. nov.) by the possession of a relatively short and stout hemipenis, versus long, slender and subcylindrical (sometimes tapering distally) (particularly) in the snakes of the genus *Euanedwardserpens*

gen. nov..

If the snake does not identify as being within the genera *Coelognathus* or *Cyanophis* it will be in the genus *Euanedwardsserpens* gen. nov."

E. subradiatus (Schlegel, 1837) from Timor and Roti Island is depicted in life in De Lang (2011) on pages 81 and 82 and online at:

<https://www.inaturalist.org/observations/5202489>
and

<https://www.inaturalist.org/observations/5202442>

E. hoserae sp. nov. from Alor Island is depicted in life in Reilly et al. (2021) on page 270.

E. euanedwardsi sp. nov. from Sumbawa and Lombok is depicted in life online at:

<https://www.inaturalist.org/observations/14932611>
and

<https://www.inaturalist.org/observations/100236888>

E. floresensis sp. nov. from Rinca and Flores is depicted in life in De Lang (2011) on pages 77-79 and online at:

<https://www.inaturalist.org/observations/82422738>

E. sumbaensis sp. nov. is depicted in life in Maryanto et al. (2021) on page 68 top left.

Reilly et al. (2021) found a 4.5 MYA divergence of *E. hoserae* sp. nov. from the other five species also until now treated as putative *E. subradiatus* confirming the sense in treating *E. hoserae* sp. nov. as a species rather than a subspecies.

Distribution: *E. hoserae* sp. nov. is confined to Alor Island, Provinsi Nusa Tenggara Timur, Indonesia.

Etymology: *E. hoserae* sp. nov. is named in honour of my mother, Katrina Hoser, of Lane Cove, New South Wales, Australia in recognition of enormous contributions to herpetology spanning many decades.

EUANEDWARDSSERPENS EUANEDWARDSI SP. NOV.

LSIDDurn:lsid:zoobank.org:act:31202998-C2BA-49C3-B47D-297E9DB9CC4B

Holotype: A preserved specimen at the Museum of Vertebrate Zoology at the University of California, Berkeley, California, USA, specimen number MVZ:Herp:292831 collected from Desa Tolotangga, Kecamatan Monta, Kabupaten Bima, Sumbawa Island, Provinsi Nusa Tenggara Barat, Indonesia, Latitude -08.76643 S., Longitude 118.60496 E. Snout vent length (SV) is 1345 mm, tail length 252 mm, weight 546.6 grams.

This facility allows access to its holdings.

Paratype: A preserved specimen at the Museum of Vertebrate Zoology at the University of California, Berkeley, California, USA, specimen number MVZ:Herp:292830 collected from Desa Bolo, Kecamatan Bolo, Kabupaten Bima, Sumbawa Island, Provinsi Nusa Tenggara Barat, Indonesia, Latitude -08.51034 S., Longitude 118.59798 E. Snout vent length (SV) is 1170 mm, tail length 230 mm.

Diagnosis: Until now each of *Euanedwardsserpens euanedwardsi* sp. nov., *E. hoserae* sp. nov., *E. floresensis* sp. nov., *E. wetarensis* sp. nov. and *E. sumbaensis* sp. nov. have all been treated as populations of *Euanedwardsserpens subradiatus* (Schlegel, 1837), a species still more widely known as *Coelognathus subradiatus* (Schlegel, 1837) or *Elaphe subradiatus* (Schlegel, 1837), otherwise known as the Lesser Sundas Rat Snake.

Because of the significant variation in specimens both by age and within a single population, diagnosing the relevant species has not been attempted until now. However each of the following six species can be separated from one another as follows:

Euanedwardsserpens subradiatus (Schlegel, 1837) from Timor and immediately adjacent islands, including Roti Island to the south, is separated from the other five species by the following unique suite of characters:

Medium to light brown dorsally with a strong russet tinge, always a well defined black line running from the eye, posteriorly to the

rear of the head at the upper labial, where there is an obvious break before one or more lines commence and run down the body in one or more longitudinal lines or rows of broken spots in a longitudinal manner. These markings usually stop or fade about 1/3 of the way down the body, after which the snake is generally unmarked. Top of head is brownish and unmarked. Upper labials are yellowish. Iris is a dark reddish brown in colour.

E. hoserae sp. nov. from Alor Island and possibly Pantar Island to the immediate west is separated from the other five species by the following unique suite of characters:

The dorsum is a light yellowish brown to beige in colour and without any russet tinge. The top of the head has a pair of distinct black spots on the central edge of each of the supraciliaries. The black line running posteriorly from the eye to the upper labial is relatively short and ends on the second upper labial past the eye. Back of head may have some semi-distinct black marks but the upper neck is unmarked. About two head lengths down the body irregular black markings arrange in a longitudinal manner in two irregular longitudinal lines on either side of the median line, before breaking up about a third of the way down the body.

A light yellowish-brown iris.

E. euanedwardsi sp. nov. from Sumbawa Island and Lombok to the west is separated from the other five species by the following unique suite of characters:

Dorsal surface of head and neck is an olive brown, becoming slightly reddish brown posteriorly from about a third of the way down the body.

The head is generally devoid of markings. There is a very indistinct and short, narrow dark brown streak running from behind the middle of the eye, posteriorly down the two adjacent labials to about halfway down the second labial. Lower parts of all upper labials are white, turning brown higher, but without a well-defined boundary. Commencing about 2-3 head lengths down the neck from the back of the head are two rows of spotted scales, forming broken longitudinal lines running down the first half of the body length, before disappearing. About five head lengths past the back of the head are two similar lines of dots running in similar dotted longitudinal lines along each of the flanks along the middle of each. These become as prominent as those near the mid-dorsal line but also fade lower down the body. Iris is a dull orange-brown colour.

E. floresensis sp. nov. from Flores, Komodo, Rinca, Adonara and Lembata is similar in most respects to *E. euanedwardsi* sp. nov. as described above, but is separated from that species by having a yellowish tinge in colour at the anterior end of the body, grading through brown to become a dark reddish brown posteriorly; lower flanks invariably have one or more dark blotches, sometimes in a longitudinal array; some black spots on the upper dorsum may be expanded to be significantly larger than most of the rest in the longitudinal array and the iris is a light yellow with orange tinge, to light orange in colour.

E. wetarensis sp. nov. from Wetar Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species by being olive brown dorsally, becoming slightly darker at the rear body, with spotting and broken lines and the like far more prominent on the flanks than on the dorsum, invariably aligned in a linear manner and far more prominent on the anterior third to half of the body; top of head brownish, upper labials yellowish and iris is a medium yellowish-brown colour.

E. sumbaensis sp. nov. from Sumba Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species (and *E. wetarensis* sp. nov.) by being a dark olive-brown dorsally, with spotting and broken lines and the like more prominent on the dorsum than the flanks, being well-defined and black, (versus dark-brown to off-black in the other two species) and a dark brown iris.

E. subradiatus (Schlegel, 1837), *E. adelynhoserae* sp. nov., *E. euanedwardsi* sp. nov., *E. floresensis* sp. nov., *E. wetarensis* sp. nov. and *E. sumbaensis* sp. nov. are separated from all other species within *Euanedwardsserpens* Hoser, 2012 by the

following suite of characters:

Rostral much broader than deep; internasals as long as broad or a little broader, shorter than the prefrontals; frontal one and one sixth to one and a half as long as broad, as long as or a little shorter than its distance from the end of the snout, shorter than the parietals; loreal usually longer than deep; a subocular below the ocular; two postoculars; temporals usually 2+2; eight or nine upper labials, fifth and sixth labials entering the eye; four or five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior ones; scales in 23 or 25 rows (25 or 27 on the neck), more or less strongly keeled on the posterior half of the body, the outer series without a trace of a keel. 228-242 ventrals which have an obtuse lateral keel; anal entire; subcaudals 80-100 (all divided). A dorsum that is brownish above, with sometimes with black flecks, spotting or stripes that may tend to form a pair of black stripes along each side of the anterior third of the body, either on the dorsum, the flanks or both; a short black streak of some sort is usually seen behind the eye; lower parts uniform yellowish (effectively modified from Boulenger 1894 and De Lang 2011).

Snakes in the genus *Euanedwardsserpens* Hoser, 2012, were defined as follows:

“Diagnosis: A group large ratsnakes found in the Southeast Asian region, typified by a vertically compressed body and an angled relatively pointed head and snout. Often defensive (interpreted commonly as “aggressive”) to people when encountered and to a greater degree than most other ratsnake genera, with specimens commonly struggling against the handler if handled.

Helpfenberger (2001) separated *Coelognathus* from the other Eurasian ratsnakes based on anatomical and osteological features as well as electrophoretic loci and used this to diagnose that genus *sensu lato*, including (in effect) the genera *Euanedwardsserpens* *gen. nov.* and *Cynophis* in terms of their common attributes.

This information is relied upon herein as part of this diagnosis as relevant.

These snakes are medium to large and relatively long and slender, have correspondingly high ventral scale and precaudal vertebra counts and have a distinctly long and slender head, which separates them from all other ratsnake genera except *Orthriophis*. However these genera are easily separated by viewing the head colouration. In *Orthriophis* the post-orbital stripe runs more-or-less parallel with the jawline, whereas in *Coelognathus* it distinctly points downwards towards the back of the jaw, although this may be either broken, or one of two such lines, the other running in an upward direction.

If in any doubt, *Orthriophis* is also separated from the genera *Coelognathus*, *Cyanophis* and *Euanedwardsserpens* *gen. nov.* by having a divided anal plate as opposed to a single one.

Snakes of the ratsnake genus *Gonyosoma* Wagler, 1828 also have a divided anal.

Separation of the three relevant genera (namely *Coelognathus*, *Cyanophis* and *Euanedwardsserpens* *gen. nov.*) is done as follows:

The species *Coelognathus radiatus* (now the entire content of that genus as defined herein) is separated from all other Asian ratsnakes (including those of genera *Cyanophis* and *Euanedwardsserpens* *gen. nov.*) by having a short interpulmonary bronchus (see plate 1A-D, Fig 4, Tables 1-2 in Utiger *et al.* 2005).

Snakes of the genera *Coelognathus* and *Euanedwardsserpens* *gen. nov.* as defined herein always have three supralabials in contact with the eye. By contrast *Cyanophis helena* does not.

Coelognathus radiatus also differs from the other relevant taxa (*Cyanophis* and *Euanedwardsserpens* *gen. nov.*) by the possession of a relatively short and stout hemipenis, versus long, slender and subcylindrical (sometimes tapering distally) (particularly) in the snakes of the genus *Euanedwardsserpens* *gen. nov.*

If the snake does not identify as being within the genera *Coelognathus* or *Cyanophis* it will be in the genus *Euanedwardsserpens* *gen. nov.*”

E. subradiatus (Schlegel, 1837) from Timor and Roti Island is depicted in life in De Lang (2011) on pages 81 and 82 and online at:

<https://www.inaturalist.org/observations/5202489> and

<https://www.inaturalist.org/observations/5202442>

E. hoserae *sp. nov.* from Alor island is depicted in life in Reilly *et al.* (2021) on page 270.

E. euanedwardsi *sp. nov.* from Sumbawa and Lombok is depicted in life online at:

<https://www.inaturalist.org/observations/14932611> and

<https://www.inaturalist.org/observations/100236888>

E. floresensis *sp. nov.* from Rinca and Flores is depicted in life in De Lang (2011) on pages 77-79 and online at:

<https://www.inaturalist.org/observations/82422738>

E. sumbaensis *sp. nov.* is depicted in life in Maryanto *et al.* (2021) on page 68 top left.

Reilly *et al.* (2021) found a 3.6 MYA divergence of *E. euanedwardsi* *sp. nov.* from nominate *E. subradiatus* and a divergence of 1.6 MYA from *E. floresensis* *sp. nov.*, being the closest related species, confirming the sense in treating *E. euanedwardsi* *sp. nov.* as a full species rather than as a subspecies.

Distribution: *E. euanedwardsi* *sp. nov.* is confined to Sumbawa and Lombok islands, Indonesia.

Etymology: *E. euanedwardsi* *sp. nov.* is named in honour of Euan Edwards of Robina (Gold Coast), Queensland, Australia in recognition of many decades of important work involving herpetology and wildlife conservation worldwide.

EUANEDWARDSSERPENS FLORESENSIS SP. NOV.

LSIDurn:lsid:zoobank.org:act:FC762839-EAC6-4280-AFEE-9EBDBDCF9915

Holotype: A preserved specimen at the Museum of Vertebrate Zoology at the University of California, Berkeley, California, USA, specimen number MVZ:Herp:292829 collected from Desa Mataloko, Kecamatan Golewa, Kabupaten Ngada, Flores Island, Provinsi Nusa Tenggara Timur, Indonesia, Latitude -08.82344 S., Longitude 121.04986 E. at 1103 metres elevation. This facility allows access to its holdings.

Paratypes: 1/ A preserved specimen (1510 mm in total length) at the University of Florida at the Florida Museum of Natural History, Florida, USA, specimen number UF Herp 36202 collected from 4.5 km east of Maumere, Flores Island, Provinsi Nusa Tenggara Timur, Indonesia. 2/ A preserved specimen at the University of Florida at the Florida Museum of Natural History, Florida, USA, specimen number UF Herp 39778 collected from near Djarek, Flores Island, Provinsi Nusa Tenggara Timur, Indonesia at an elevation of 80 metres. 3/ A preserved male specimen at the Natural History Museum, London, UK, specimen number BMNH 1897.6.21.46, collected from Flores Island Provinsi Nusa Tenggara Timur, Indonesia. 4/ Two preserved specimens at the Naturalis Biodiversity Center, The Netherlands, specimen number ZMA.RENA.16874 collected from Larantoeke, East Flores Island, Provinsi Nusa Tenggara Timur, Indonesia. 5/ A preserved specimen at the Naturalis Biodiversity Center, The Netherlands, specimen number ZMA.RENA.16871 collected from Sikka, Flores Island, Provinsi Nusa Tenggara Timur, Indonesia.

Diagnosis: Until now each of *Euanedwardsserpens floresensis* *sp. nov.*, *E. euanedwardsi* *sp. nov.*, *E. hoserae* *sp. nov.*, *E. wetarensis* *sp. nov.* and *E. sumbaensis* *sp. nov.* have all been treated as populations of *Euanedwardsserpens subradiatus* (Schlegel, 1837), a species still more widely known as *Coelognathus subradiatus* (Schlegel, 1837) or *Elaphe subradiatus* (Schlegel, 1837), otherwise known as the Lesser

Sundas Rat Snake.

Because of the significant variation in specimens both by age and within a single population, diagnosing the relevant species has not been attempted until now. However each of the following six species can be separated from one another as follows:

Euanedwardsserpens subradiatus (Schlegel, 1837) from Timor and immediately adjacent islands, including Roti Island to the south, is separated from the other five species by the following unique suite of characters:

Medium to light brown dorsally with a strong russet tinge, always a well defined black line running from the eye, posteriorly to the rear of the head at the upper labial, where there is an obvious break before one or more lines commence and run down the body in one or more longitudinal lines or rows of broken spots in a longitudinal manner. These markings usually stop or fade about 1/3 of the way down the body, after which the snake is generally unmarked. Top of head is brownish and unmarked. Upper labials are yellowish. Iris is a dark reddish brown in colour.

E. hoseræ sp. nov. from Alor Island and possibly Pantar Island to the immediate west is separated from the other five species by the following unique suite of characters:

The dorsum is a light yellowish brown to beige in colour and without any russet tinge. The top of the head has a pair of distinct black spots on the central edge of each of the supraciliaries. The black line running posteriorly from the eye to the upper labial is relatively short and ends on the second upper labial past the eye. Back of head may have some semi-distinct black marks but the upper neck is unmarked. About two head lengths down the body irregular black markings arrange in a longitudinal manner in two irregular longitudinal lines on either side of the median line, before breaking up about a third of the way down the body.

A light yellowish-brown iris.

E. euanedwardsi sp. nov. from Sumbawa Island and Lombok to the west is separated from the other five species by the following unique suite of characters:

Dorsal surface of head and neck is an olive brown, becoming slightly reddish brown posteriorly from about a third of the way down the body.

The head is generally devoid of markings. There is a very indistinct and short, narrow dark brown streak running from behind the middle of the eye, posteriorly down the two adjacent labials to about halfway down the second labial. Lower parts of all upper labials are white, turning brown higher, but without a well-defined boundary. Commencing about 2-3 head lengths down the neck from the back of the head are two rows of spotted scales, forming broken longitudinal lines running down the first half of the body length, before disappearing. About five head lengths past the back of the head are two similar lines of dots running in similar dotted longitudinal lines along each of the flanks along the middle of each. These become as prominent as those near the mid-dorsal line but also fade lower down the body. Iris is a dull orange-brown colour.

E. floresensis sp. nov. from Flores, Komodo, Rinca, Adonara and Lembata is similar in most respects to *E. euanedwardsi* sp. nov. as described above, but is separated from that species by having a yellowish tinge in colour at the anterior end of the body, grading through brown to become a dark reddish brown posteriorly; lower flanks invariably have one or more dark blotches, sometimes in a longitudinal array; some black spots on the upper dorsum may be expanded to be significantly larger than most of the rest in the longitudinal array and the iris is a light yellow with orange tinge, to light orange in colour.

E. wetarensis sp. nov. from Wetar Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species by being olive brown dorsally, becoming slightly darker at the rear body, with spotting and broken lines and the like far more prominent on the flanks than on the dorsum, invariably aligned in a linear manner and far more prominent on the anterior third to half of the body; top of head brownish, upper labials yellowish and iris is a medium yellowish-brown colour.

E. sumbaensis sp. nov. from Sumba Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species (and *E. wetarensis* sp. nov.) by being a dark olive-brown dorsally, with spotting and broken lines and the like more prominent on the dorsum than the flanks, being well-defined and black, (versus dark-brown to off-black in the other two species) and a dark brown iris.

E. subradiatus (Schlegel, 1837), *E. adelynhoserae* sp. nov., *E. euanedwardsi* sp. nov., *E. floresensis* sp. nov., *E. wetarensis* sp. nov. and *E. sumbaensis* sp. nov. are separated from all other species within *Euanedwardsserpens* Hoser, 2012 by the following suite of characters:

Rostral much broader than deep; internasals as long as broad or a little broader, shorter than the prefrontals; frontal one and one sixth to one and a half as long as broad, as long as or a little shorter than its distance from the end of the snout, shorter than the parietals; loreal usually longer than deep; a subocular below the ocular; two postoculars; temporals usually 2+2; eight or nine upper labials, fifth and sixth labials entering the eye; four or five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior ones; scales in 23 or 25 rows (25 or 27 on the neck), more or less strongly keeled on the posterior half of the body, the outer series without a trace of a keel. 228-242 ventrals which have an obtuse lateral keel; anal entire; subcaudals 80-100 (all divided). A dorsum that is brownish above, with sometimes with black flecks, spotting or stripes that may tend to form a pair of black stripes along each side of the anterior third of the body, either on the dorsum, the flanks or both; a short black streak of some sort is usually seen behind the eye; lower parts uniform yellowish (effectively modified from Boulenger 1894 and De Lang 2011).

Snakes in the genus *Euanedwardsserpens* Hoser, 2012, were defined as follows:

“Diagnosis: A group large ratsnakes found in the Southeast Asian region, typified by a vertically compressed body and an angled relatively pointed head and snout. Often defensive (interpreted commonly as “aggressive”) to people when encountered and to a greater degree than most other ratsnake genera, with specimens commonly struggling against the handler if handled.

Helfenberger (2001) separated *Coelognathus* from the other Eurasian ratsnakes based on anatomical and osteological features as well as electrophoretic loci and used this to diagnose that genus *sensu lato*, including (in effect) the genera *Euanedwardsserpens* gen. nov. and *Cynophis* in terms of their common attributes.

This information is relied upon herein as part of this diagnosis as relevant.

These snakes are medium to large and relatively long and slender, have correspondingly high ventral scale and precaudal vertebra counts and have a distinctly long and slender head, which separates them from all other ratsnake genera except *Orthriophis*. However these genera are easily separated by viewing the head colouration. In *Orthriophis* the post-orbital stripe runs more-or-less parallel with the jawline, whereas in *Coelognathus* it distinctly points downwards towards the back of the jaw, although this may be either broken, or one of two such lines, the other running in an upward direction.

If in any doubt, *Orthriophis* is also separated from the genera *Coelognathus*, *Cyanophis* and *Euanedwardsserpens* gen. nov. by having a divided anal plate as opposed to a single one.

Snakes of the ratsnake genus *Gonyosoma* Wagler, 1828 also have a divided anal.

Separation of the three relevant genera (namely *Coelognathus*, *Cyanophis* and *Euanedwardsserpens* gen. nov.) is done as follows:

The species *Coelognathus radiatus* (now the entire content of that genus as defined herein) is separated from all other Asian ratsnakes (including those of genera *Cyanophis* and *Euanedwardsserpens* gen. nov.) by having a short

interpulmonary bronchus (see plate 1A-D, Fig 4, Tables 1-2 in Utiger *et al.* 2005).

Snakes of the genera *Coelognathus* and *Euanedwardsserpens* *gen. nov.* as defined herein always have three supralabials in contact with the eye. By contrast *Cyanophis helena* does not. *Coelognathus radiatus* also differs from the other relevant taxa (*Cyanophis* and *Euanedwardsserpens* *gen. nov.*) by the possession of a relatively short and stout hemipenis, versus long, slender and subcylindrical (sometimes tapering distally) (particularly) in the snakes of the genus *Euanedwardsserpens* *gen. nov.*.

If the snake does not identify as being within the genera *Coelognathus* or *Cyanophis* it will be in the genus *Euanedwardsserpens* *gen. nov.*"

E. subradiatus (Schlegel, 1837) from Timor and Roti Island is depicted in life in De Lang (2011) on pages 81 and 82 and online at:

<https://www.inaturalist.org/observations/5202489>
and

<https://www.inaturalist.org/observations/5202442>

E. hoserae *sp. nov.* from Alor island is depicted in life in Reilly *et al.* (2021) on page 270.

E. euanedwardsi *sp. nov.* from Sumbawa and Lombok is depicted in life online at:

<https://www.inaturalist.org/observations/14932611>
and

<https://www.inaturalist.org/observations/100236888>

E. floresensis *sp. nov.* from Rinca and Flores is depicted in life in De Lang (2011) on pages 77-79 and online at:

<https://www.inaturalist.org/observations/82422738>

E. sumbaensis *sp. nov.* is depicted in life in Maryanto *et al.* (2021) on page 68 top left.

Reilly *et al.* (2021) found a 3.6 MYA divergence of *E. floresensis* *sp. nov.* from nominate *E. subradiatus* and a divergence of 1.6 MYA from *E. euanedwardsi* *sp. nov.*, being the closest related species, confirming the sense in treating *E. floresensis* *sp. nov.* as a full species rather than as a subspecies.

Distribution: *E. floresensis* *sp. nov.* is a taxon confined to Flores, Komodo, Rinca, Adonara and Lembata.

Etymology: The new species is named in reflection of the largest and best-known island from where it occurs and also in reflection of the type locality.

EUANEDWARDSSERPENS WETARENSIS SP. NOV.

LSIDurn:lsid:zoobank.org:act:4873FD9F-9857-4115-B9B0-7983B5B5C191

Holotype: A preserved specimen at the Museum of Vertebrate Zoology at the University of California, Berkeley, California, USA, specimen number MVZ: Herp:292833 collected from Wetar Desa Ilwaki, Kecamatan Wetar Selatan, Kabupaten Maluku Barat Daya, Provinsi Maluku, Indonesia, Latitude -7.92627 S., Longitude 126.40800 E.

This facility allows access to its holdings.

Diagnosis: Until now each of *Euanedwardsserpens wetarensis* *sp. nov.*, *E. euanedwardsi* *sp. nov.*, *E. hoserae* *sp. nov.*, *E. floresensis* *sp. nov.* and *E. sumbaensis* *sp. nov.* have all been treated as populations of *Euanedwardsserpens subradiatus* (Schlegel, 1837), a species still more widely known as *Coelognathus subradiatus* (Schlegel, 1837) or *Elaphe subradiatus* (Schlegel, 1837), otherwise known as the Lesser Sundas Rat Snake.

Because of the significant variation in specimens both by age and within a single population, diagnosing the relevant species has not been attempted until now. However each of the following six species can be separated from one another as follows:

Euanedwardsserpens subradiatus (Schlegel, 1837) from Timor and immediately adjacent islands, including Roti Island to the south, is separated from the other five species by the following unique suite of characters:

Medium to light brown dorsally with a strong russet tinge, always a well defined black line running from the eye, posteriorly to the rear of the head at the upper labial, where there is an obvious break before one or more lines commence and run down the body in one or more longitudinal lines or rows of broken spots in a longitudinal manner. These markings usually stop or fade about 1/3 of the way down the body, after which the snake is generally unmarked. Top of head is brownish and unmarked. Upper labials are yellowish. Iris is a dark reddish brown in colour.

E. hoserae *sp. nov.* from Alor Island and possibly Pantar Island to the immediate west is separated from the other five species by the following unique suite of characters:

The dorsum is a light yellowish brown to beige in colour and without any russet tinge. The top of the head has a pair of distinct black spots on the central edge of each of the supraciliaries. The black line running posteriorly from the eye to the upper labial is relatively short and ends on the second upper labial past the eye. Back of head may have some semi-distinct black marks but the upper neck is unmarked. About two head lengths down the body irregular black markings arrange in a longitudinal manner in two irregular longitudinal lines on either side of the median line, before breaking up about a third of the way down the body.

A light yellowish-brown iris.

E. euanedwardsi *sp. nov.* from Sumbawa Island and Lombok to the west is separated from the other five species by the following unique suite of characters:

Dorsal surface of head and neck is an olive brown, becoming slightly reddish brown posteriorly from about a third of the way down the body.

The head is generally devoid of markings. There is a very indistinct and short, narrow dark brown streak running from behind the middle of the eye, posteriorly down the two adjacent labials to about halfway down the second labial. Lower parts of all upper labials are white, turning brown higher, but without a well-defined boundary. Commencing about 2-3 head lengths down the neck from the back of the head are two rows of spotted scales, forming broken longitudinal lines running down the first half of the body length, before disappearing. About five head lengths past the back of the head are two similar lines of dots running in similar dotted longitudinal lines along each of the flanks along the middle of each. These become as prominent as those near the mid-dorsal line but also fade lower down the body. Iris is a dull orange-brown colour.

E. floresensis *sp. nov.* from Flores, Komodo, Rinca, Adonara and Lembata is similar in most respects to *E. euanedwardsi* *sp. nov.* as described above, but is separated from that species by having a yellowish tinge in colour at the anterior end of the body, grading through brown to become a dark reddish brown posteriorly; lower flanks invariably have one or more dark blotches, sometimes in a longitudinal array; some black spots on the upper dorsum may be expanded to be significantly larger than most of the rest in the longitudinal array and the iris is a light yellow with orange tinge, to light orange in colour.

E. wetarensis *sp. nov.* from Wetar Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species by being olive brown dorsally, becoming slightly darker at the rear body, with spotting and broken lines and the like far more prominent on the flanks than on the dorsum, invariably aligned in a linear manner and far more prominent on the anterior third to half of the body; top of head brownish, upper labials yellowish and iris is a medium yellowish-brown colour.

E. sumbaensis *sp. nov.* from Sumba Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species (and *E. wetarensis* *sp. nov.*) by being a dark olive-brown dorsally, with spotting and broken lines and the like more prominent on the dorsum than the flanks, being well-defined and black, (versus dark-brown to off-black in the other two species) and a dark brown iris.

E. subradiatus (Schlegel, 1837), *E. adelynhoserae* *sp. nov.*, *E. euanedwardsi* *sp. nov.*, *E. floresensis* *sp. nov.*, *E. wetarensis*

sp. nov. and *E. sumbaensis sp. nov.* are separated from all other species within *Euanedwardsserpens* Hoser, 2012 by the following suite of characters:

Rostral much broader than deep; internasals as long as broad or a little broader, shorter than the prefrontals; frontal one and one sixth to one and a half as long as broad, as long as or a little shorter than its distance from the end of the snout, shorter than the parietals; loreal usually longer than deep; a subocular below the ocular; two postoculars; temporals usually 2+2; eight or nine upper labials, fifth and sixth labials entering the eye; four or five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior ones; scales in 23 or 25 rows (25 or 27 on the neck), more or less strongly keeled on the posterior half of the body, the outer series without a trace of a keel. 228-242 ventrals which have an obtuse lateral keel; anal entire; subcaudals 80-100 (all divided). A dorsum that is brownish above, with sometimes with black flecks, spotting or stripes that may tend to form a pair of black stripes along each side of the anterior third of the body, either on the dorsum, the flanks or both; a short black streak of some sort is usually seen behind the eye; lower parts uniform yellowish (effectively modified from Boulenger 1894 and De Lang 2011).

Snakes in the genus *Euanedwardsserpens* Hoser, 2012, were defined as follows:

“Diagnosis: A group large ratsnakes found in the Southeast Asian region, typified by a vertically compressed body and an angled relatively pointed head and snout. Often defensive (interpreted commonly as “aggressive”) to people when encountered and to a greater degree than most other ratsnake genera, with specimens commonly struggling against the handler if handled.

Helfenberger (2001) separated *Coelognathus* from the other Eurasian ratsnakes based on anatomical and osteological features as well as electrophoretic loci and used this to diagnose that genus *sensu lato*, including (in effect) the genera *Euanedwardsserpens gen. nov.* and *Cynophis* in terms of their common attributes.

This information is relied upon herein as part of this diagnosis as relevant.

These snakes are medium to large and relatively long and slender, have correspondingly high ventral scale and precaudal vertebra counts and have a distinctly long and slender head, which separates them from all other ratsnake genera except *Orthriophis*. However these genera are easily separated by viewing the head colouration. In *Orthriophis* the post-orbital stripe runs more-or-less parallel with the jawline, whereas in *Coelognathus* it distinctly points downwards towards the back of the jaw, although this may be either broken, or one of two such lines, the other running in an upward direction.

If in any doubt, *Orthriophis* is also separated from the genera *Coelognathus*, *Cyanophis* and *Euanedwardsserpens gen. nov.* by having a divided anal plate as opposed to a single one.

Snakes of the ratsnake genus *Gonyosoma* Wagler, 1828 also have a divided anal.

Separation of the three relevant genera (namely *Coelognathus*, *Cyanophis* and *Euanedwardsserpens gen. nov.*) is done as follows:

The species *Coelognathus radiatus* (now the entire content of that genus as defined herein) is separated from all other Asian ratsnakes (including those of genera *Cyanophis* and *Euanedwardsserpens gen. nov.*) by having a short interpulmonary bronchus (see plate 1A-D, Fig 4, Tables 1-2 in Utiger *et. al.* 2005).

Snakes of the genera *Coelognathus* and *Euanedwardsserpens gen. nov.* as defined herein always have three supralabials in contact with the eye. By contrast *Cyanophis helena* does not.

Coelognathus radiatus also differs from the other relevant taxa (*Cyanophis* and *Euanedwardsserpens gen. nov.*) by the possession of a relatively short and stout hemipenis, versus long, slender and subcylindrical (sometimes tapering distally

(particularly) in the snakes of the genus *Euanedwardsserpens gen. nov.*

If the snake does not identify as being within the genera *Coelognathus* or *Cyanophis* it will be in the genus *Euanedwardsserpens gen. nov.*”

E. subradiatus (Schlegel, 1837) from Timor and Roti Island is depicted in life in De Lang (2011) on pages 81 and 82 and online at:

<https://www.inaturalist.org/observations/5202489>

and

<https://www.inaturalist.org/observations/5202442>

E. hoserae sp. nov. from Alor island is depicted in life in Reilly *et al.* (2021) on page 270.

E. euanedwardsi sp. nov. from Sumbawa and Lombok is depicted in life online at:

<https://www.inaturalist.org/observations/14932611>

and

<https://www.inaturalist.org/observations/100236888>

E. floresensis sp. nov. from Rinca and Flores is depicted in life in De Lang (2011) on pages 77-79 and online at:

<https://www.inaturalist.org/observations/82422738>

E. sumbaensis sp. nov. is depicted in life in Maryanto *et al.* (2021) on page 68 top left.

Reilly *et al.* (2021) found a 1.3 MYA divergence of *E. wetarensis sp. nov.* from nominate *E. subradiatus* and a divergence of 3.6 MYA from their next nearest related species, confirming the sense in treating *E. wetarensis sp. nov.* as a full species rather than as a subspecies.

Distribution: *E. wetarensis sp. nov.* is a taxon confined to Wetar Island, Indonesia.

Etymology: The new species is named in reflection of the island from where it occurs and also in reflection of the (same) type locality.

EUANEDWARDSSERPENS SUMBAENSIS SP. NOV.

LSIDurn:lsid:zoobank.org:act:9D8DF9D1-79B1-47F1-9B4F-9373C4196484

Holotype: A preserved specimen at the Naturalis Biodiversity Center, The Netherlands, specimen number ZMA.RENA.16876 collected from Kambera, Sumba Island, Indonesia.

Paratype: A preserved male specimen at the Museum of Natural History, London, UK, specimen number BMNH 1897.6.21.47, collected from Sumba Island, Indonesia.

Diagnosis: Until now each of *Euanedwardsserpens sumbaensis sp. nov.*, *E. euanedwardsi sp. nov.*, *E. hoserae sp. nov.*, *E. floresensis sp. nov.* and *E. wetarensis sp. nov.* have all been treated as populations of *Euanedwardsserpens subradiatus* (Schlegel, 1837), a species still more widely known as *Coelognathus subradiatus* (Schlegel, 1837) or *Elaphe subradiatus* (Schlegel, 1837), otherwise known as the Lesser Sunda Rat Snake.

Because of the significant variation in specimens both by age and within a single population, diagnosing the relevant species has not been attempted until now. However each of the following six species can be separated from one another as follows:

Euanedwardsserpens subradiatus (Schlegel, 1837) from Timor and immediately adjacent islands, including Roti Island to the south, is separated from the other five species by the following unique suite of characters:

Medium to light brown dorsally with a strong russet tinge, always a well defined black line running from the eye, posteriorly to the rear of the head at the upper labial, where there is an obvious break before one or more lines commence and run down the body in one or more longitudinal lines or rows of broken spots in a longitudinal manner. These markings usually stop or fade about 1/3 of the way down the body, after which the snake is generally unmarked. Top of head is brownish and unmarked. Upper labials are yellowish. Iris is a dark reddish brown in colour.

E. hoserae sp. nov. from Alor Island and possibly Pantar Island

to the immediate west is separated from the other five species by the following unique suite of characters:

The dorsum is a light yellowish brown to beige in colour and without any russet tinge. The top of the head has a pair of distinct black spots on the central edge of each of the supraciliaries. The black line running posteriorly from the eye to the upper labial is relatively short and ends on the second upper labial past the eye. Back of head may have some semi-distinct black marks but the upper neck is unmarked. About two head lengths down the body irregular black markings arrange in a longitudinal manner in two irregular longitudinal lines on either side of the median line, before breaking up about a third of the way down the body.

A light yellowish-brown iris.

E. euanedwardsi sp. nov. from Sumbawa Island and Lombok to the west is separated from the other five species by the following unique suite of characters:

Dorsal surface of head and neck is an olive brown, becoming slightly reddish brown posteriorly from about a third of the way down the body.

the head is generally devoid of markings. There is a very indistinct and short, narrow dark brown streak running from behind the middle of the eye, posteriorly down the two adjacent labials to about halfway down the second labial. Lower parts of all upper labials are white, turning brown higher, but without a well-defined boundary. Commencing about 2-3 head lengths down the neck from the back of the head are two rows of spotted scales, forming broken longitudinal lines running down the first half of the body length, before disappearing. About five head lengths past the back of the head are two similar lines of dots running in similar dotted longitudinal lines along each of the flanks along the middle of each. These become as prominent as those near the mid-dorsal line but also fade lower down the body. Iris is a dull orange-brown colour.

E. floresensis sp. nov. from Flores, Komodo, Rinca, Adonara and Lembata is similar in most respects to *E. euanedwardsi* sp. nov. as described above, but is separated from that species by having a yellowish tinge in colour at the anterior end of the body, grading through brown to become a dark reddish brown posteriorly; lower flanks invariably have one or more dark blotches, sometimes in a longitudinal array; some black spots on the upper dorsum may be expanded to be significantly larger than most of the rest in the longitudinal array and the iris is a light yellow with orange tinge, to light orange in colour.

E. wetarensis sp. nov. from Wetar Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species by being olive brown dorsally, becoming slightly darker at the rear body, with spotting and broken lines and the like far more prominent on the flanks than on the dorsum, invariably aligned in a linear manner and far more prominent on the anterior third to half of the body; top of head brownish, upper labials yellowish and iris is a medium yellowish-brown colour.

E. sumbaensis sp. nov. from Sumba Island is similar in most respects to *E. subradiatus* as described above, but is separated from that species (and *E. wetarensis* sp. nov.) by being a dark olive-brown dorsally, with spotting and broken lines and the like more prominent on the dorsum than the flanks, being well-defined and black, (versus dark-brown to off-black in the other two species) and a dark brown iris.

E. subradiatus (Schlegel, 1837), *E. adelynhoserae* sp. nov., *E. euanedwardsi* sp. nov., *E. floresensis* sp. nov., *E. wetarensis* sp. nov. and *E. sumbaensis* sp. nov. are separated from all other species within *Euanedwardsserpens* Hoser, 2012 by the following suite of characters:

Rostral much broader than deep; internasals as long as broad or a little broader, shorter than the prefrontals; frontal one and one sixth to one and a half as long as broad, as long as or a little shorter than its distance from the end of the snout, shorter than the parietals; loreal usually longer than deep; a subocular below the ocular; two postoculars; temporals usually 2+2; eight or nine upper labials, fifth and sixth labials entering the eye;

four or five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior ones; scales in 23 or 25 rows (25 or 27 on the neck), more or less strongly keeled on the posterior half of the body, the outer series without a trace of a keel. 228-242 ventrals which have an obtuse lateral keel; anal entire; subcaudals 80-100 (all divided). A dorsum that is brownish above, with sometimes with black flecks, spotting or stripes that may tend to form a pair of black stripes along each side of the anterior third of the body, either on the dorsum, the flanks or both; a short black streak of some sort is usually seen behind the eye; lower parts uniform yellowish (effectively modified from Boulenger 1894 and De Lang 2011).

Snakes in the genus *Euanedwardsserpens* Hoser, 2012, were defined as follows:

“Diagnosis: A group large ratsnakes found in the Southeast Asian region, typified by a vertically compressed body and an angled relatively pointed head and snout. Often defensive (interpreted commonly as “aggressive”) to people when encountered and to a greater degree than most other ratsnake genera, with specimens commonly struggling against the handler if handled.

Helffenberger (2001) separated *Coelognathus* from the other Eurasian ratsnakes based on anatomical and osteological features as well as electrophoretic loci and used this to diagnose that genus *sensu lato*, including (in effect) the genera *Euanedwardsserpens* gen. nov. and *Cyanophis* in terms of their common attributes.

This information is relied upon herein as part of this diagnosis as relevant.

These snakes are medium to large and relatively long and slender, have correspondingly high ventral scale and precaudal vertebra counts and have a distinctly long and slender head, which separates them from all other ratsnake genera except *Orthriophis*. However these genera are easily separated by viewing the head colouration. In *Orthriophis* the post-orbital stripe runs more-or-less parallel with the jawline, whereas is *Coelognathus* it distinctly points downwards towards the back of the jaw, although this may be either broken, or one of two such lines, the other running in an upward direction.

If in any doubt, *Orthriophis* is also separated from the genera *Coelognathus*, *Cyanophis* and *Euanedwardsserpens* gen. nov. by having a divided anal plate as opposed to a single one. Snakes of the ratsnake genus *Gonyosoma* Wagler, 1828 also have a divided anal.

Separation of the three relevant genera (namely *Coelognathus*, *Cyanophis* and *Euanedwardsserpens* gen. nov.) is done as follows:

The species *Coelognathus radiatus* (now the entire content of that genus as defined herein) is separated from all other Asian ratsnakes (including those of genera *Cyanophis* and *Euanedwardsserpens* gen. nov.) by having a short interpulmonary bronchus (see plate 1A-D, Fig 4, Tables 1-2 in Utiger *et. al.* 2005).

Snakes of the genera *Coelognathus* and *Euanedwardsserpens* gen. nov. as defined herein always have three supralabials in contact with the eye. By contrast *Cyanophis helena* does not.

Coelognathus radiatus also differs from the other relevant taxa (*Cyanophis* and *Euanedwardsserpens* gen. nov.) by the possession of a relatively short and stout hemipenis, versus long, slender and subcylindrical (sometimes tapering distally) (particularly) in the snakes of the genus *Euanedwardsserpens* gen. nov..

If the snake does not identify as being within the genera *Coelognathus* or *Cyanophis* it will be in the genus *Euanedwardsserpens* gen. nov.”

E. subradiatus (Schlegel, 1837) from Timor and Roti Island is depicted in life in De Lang (2011) on pages 81 and 82 and online at:

<https://www.inaturalist.org/observations/5202489>

and

<https://www.inaturalist.org/observations/5202442>

E. hoseræ sp. nov. from Alor island is depicted in life in Reilly *et al.* (2021) on page 270.

E. euanedwardsi sp. nov. from Sumbawa and Lombok is depicted in life online at:

<https://www.inaturalist.org/observations/14932611>

and

<https://www.inaturalist.org/observations/100236888>

E. floresensis sp. nov. from Rinca and Flores is depicted in life in De Lang (2011) on pages 77-79 and online at:

<https://www.inaturalist.org/observations/82422738>

E. sumbaensis sp. nov. is depicted in life in Maryanto *et al.* (2021) on page 68 top left.

Distribution: *E. sumbaensis* sp. nov. is only known from Sumba Island, Indonesia.

Etymology: *E. sumbaensis* sp. nov. is named in reflection of its type locality and the only known or expected distribution.

CONSERVATION

Each of the preceding five new species and the other related taxon, *E. subradiatus* (Schlegel, 1837) are believed to be reasonably common where they occur and not under any known existential threat.

However it is common knowledge that island populations are most vulnerable to extinctions (see for example the cases in Hoser, 1991).

They are particularly vulnerable to introduced predators and/or competing species to which they may not have evolved adequate protection from.

Due to the range restricted nature of each species and their vulnerabilities, they should be treated as vulnerable species and managed accordingly.

Aspects of conservation of Australasian reptiles discussed by Hoser (1989, 1991, 1993 and 1996) apply to these species, as do the comments of Hoser (2019a, 2019b).

The lesser Sundas have been long neglected by zoologists and conservation agencies alike and there remains a huge amount of formally undescribed taxa on various islands including of prominent species (Hoser 2022, Reilly *et al.* 2017, 2019a, 2019b, 2021).

Identification of and naming of the relevant species is the first and most important step in terms of the long term conservation of each.

It is important that each species is named once and only once!

They should not be subjected to unwarranted taxonomic vandalism as being practiced by the Wolfgang Wüster gang as detailed by Cogger (2014), Dubois (2014), Dubois *et al.* (1988), Hoser (2007, 2009, 2012a-c, 2013, 2015a-f, 2017, 2019a-b), Hawkeswood (2021) and ICZN (2021).

The ICZN formally rejected the Wolfgang Wüster gang's many applications (e.g. Kaiser, 2012, 2013, 2014a-b, Kaiser *et al.* 2012, 2013 and Rhodin *et al.* 2015) to overwrite names of myself (Hoser) and others (ICZN 2021) and their other anti-science and anti-wildlife conservation actions.

The ICZN stated that all names of Hoser and others subject of the Wüster gang's unlawful attacks were valid and available, without need to formally make a plenary ruling to effect what was already in effect and obvious.

Separately Hawkeswood (2021) said exactly the same thing.

This is not the first time the ICZN have had to deal with the Wolfgang Wüster gang's immoral, anti-science and anti-conservation actions.

In 1991, the same gang of thieves were ruled against by the ICZN in the matter of names proposed by Wells and Wellington in 1984, 1985a and 1985b.

Notwithstanding the ruling of the ICZN in 1991 (ICZN 1991), in favour of Wells and Wellington's works and a second ruling in their favour in 2001 (ICZN 2001) arising from Sprackland *et al.*

(1997) and the ongoing availability of the Wells and Wellington names to the biological sciences, the group known as the Wolfgang Wüster gang of thieves have pressured publishing authors not to use or adopt the Wells and Wellington names (see Hoser 2007, 2009, 2012a, 2012c, 2013, 2015 a-f, 2017, 2019a-b) and more recently those I have formally proposed (see Hoser, 2001a, 2001b).

This attack has been at numerous levels, ranging from control of editors of journals, lies, defamation and a number of other anti-science tactics (see also Shine 1987, Sprackland *et al.* 1997).

Following on from the ICZN ruling of 2021 (ICZN 2021), the scourge of the Wolfgang Wüster's gang of thieves actions should now be removed from the biological sciences and before any of the five species newly named here become threatened with extinction as a result.

REFERENCES CITED

- Bethencourt, F. J. 1897. Sobre alguns reptis ultimamente enviados á secção zoologica do Museu de Lisboa. *Jornal de Sciencias Mathematicas, Physicas e Naturaes, Lisboa* 5(18):111-116.
- Boulenger, G. A. 1894. *Catalogue of the snakes in the British Museum (Natural History). Volume II, Containing the Conclusion of the Colubridæ Aglyphae.* British Museum (Natural History), London, UK:xi+382 pp.
- Boulenger, G. A. 1897. List of the reptiles and batrachians collected by Mr. Alfred Everett in Lombok, Flores, Sumba and Saru, with descriptions of new species. *Ann. Mag. Nat. Hist.* (6)19:503-509.
- Boulenger, G. A. 1898. A list of reptiles and batrachians from Ombaai, East Indian Archipelago. *Ann. Mag. Nat. Hist.* (7)1:122-124.
- Cogger, H. G. 2014. *Reptiles and Amphibians of Australia*, (Seventh edition). CSIRO Publishing, Australia:xxx+1033 pp.
- De Lang, R. 2011. *Snakes of the Lesser Sunda Islands (Nusa Tenggara), Indonesia.* Edition Chimaira, Germany:349 pp.
- Dubois, A., Bour, R., Brygoo, E. and Lescure, J. 1988. Comments on the proposed suppression for nomenclature of three works by R. W. Wells and C. R. Wellington (Case 2531: see BZN 44: 116-121; 257-261 and 45: 52-54). *Bulletin of Zoological Nomenclature* 45(2):146-149.
- Dubois, A. 2014. Email to Raymond Hoser, 14 May. Fitzinger, L. 1843. *Systema Reptilium. Fasciculus primus: Amblyglossae.* Vindobonae: Braumüller und Seidel:106 pp.
- Hawkeswood, T. J. 2021. Time to end taxonomic vandalism by Wolfgang Wüster *et al.*: The Snakeman, Raymond Hoser's publications are validly published and his names available according to the ICZN: Objective investigation finds Hoser's taxonomic works as scientific best practice and in every relevant case identifies valid entities. *Calodema*, 860:1-59.
- Helfenberger, N. 2001. Phylogenetic relationship of Old World Ratsnakes based on visceral organ topography, osteology, and allozyme variation. *Russian Journal of Herpetology (Suppl.)*:1-56.
- Hoser, R. T. 1989. *Australian Reptiles and Frogs.* Pierson and Co., Mosman, NSW, Australia:238 pp.
- Hoser, R. T. 1991. *Endangered Animals of Australia.* Pierson Publishing, Moss Vale, NSW, Australia:240 pp.
- Hoser, R. T. 1993. *Smuggled: The Underground Trade in Australia's Wildlife.* Apollo Books, Moss Vale, NSW, Australia:160 pp.
- Hoser, R. T. 1996. *Smuggled-2: Wildlife Trafficking, Crime and Corruption in Australia.* Kotabi Publishing, Doncaster, Victoria, Australia:280 pp.
- Hoser, R. T. 2001a. A current assessment of the status of the snakes of the genera *Cannia* and *Pailsus*, including descriptions of three new subspecies from the Northern Territory and Western Australia, Australia. *Boydii - Journal of the Herpetological Society of Queensland Incorporated*, July:26-60.
- Hoser, R. T. 2001b. *Pailsus* - a story of herpetology, science, politics, pseudoscience, more politics and scientific fraud.

- Crocodylian - Journal of the Victorian Association of Amateur Herpetologists* 2 (10):18-31.
- Hoser, R. T. 2007. Wells and Wellington - It's time to bury the hatchet! *Calodema Supplementary Paper*, 1:1-9.
- Hoser, R. T. 2009. Creationism and contrived science: A review of recent python systematics papers and the resolution of issues of taxonomy and nomenclature. *Australasian Journal of Herpetology* 2:1-34. (3 February).
- Hoser, R. T. 2012a. Exposing a fraud! *Afronaja* Wallach, Wüster and Broadley 2009, is a junior synonym of *Spracklandus* Hoser 2009! *Australasian Journal of Herpetology* 9 (3 April 2012):1-64.
- Hoser, R. T. 2012b. A division of the South-east Asian Ratsnake genus *Coelognathus* (Serpentes: Colubridae). *Australasian Journal of Herpetology* 12:9-11.
- Hoser, R. T. 2012c. Robust taxonomy and nomenclature based on good science escapes harsh fact-based criticism, but remains unable to escape an attack of lies and deception. *Australasian Journal of Herpetology* 14:37-64.
- Hoser, R. T. 2013. The science of herpetology is built on evidence, ethics, quality publications and strict compliance with the rules of nomenclature. *Australasian Journal of Herpetology* 18:2-79.
- Hoser, R. T. 2015a. Dealing with the "truth haters" ... a summary! Introduction to Issues 25 and 26 of *Australasian Journal of Herpetology*. Including "A timeline of relevant key publishing and other events relevant to Wolfgang Wüster and his gang of thieves." and a "Synonyms list". *Australasian Journal of Herpetology* 25:3-13.
- Hoser, R. T. 2015b. The Wüster gang and their proposed "Taxon Filter": How they are knowingly publishing false information, recklessly engaging in taxonomic vandalism and directly attacking the rules and stability of zoological nomenclature. *Australasian Journal of Herpetology* 25:14-38.
- Hoser, R. T. 2015c. Best Practices in herpetology: Hinrich Kaiser's claims are unsubstantiated. *Australasian Journal of Herpetology* 25:39-64.
- Hoser, R. T. 2015d. PRINO (Peer reviewed in name only) journals: When quality control in scientific publications fails. *Australasian Journal of Herpetology* 26:3-64.
- Hoser, R. T. 2015e. Rhodin *et al.* 2015, Yet more lies, misrepresentations and falsehoods by a band of thieves intent on stealing credit for the scientific works of others. *Australasian Journal of Herpetology* 27:3-36.
- Hoser, R. T. 2015f. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237; comments *BZN* 71:30-38, 133-135). *Australasian Journal of Herpetology* 27:37-44.
- Hoser, R. T. 2017. Taxonomic vandalism by Wolfgang Wüster and his gang of thieves continues. New names unlawfully coined by the rule-breakers for species and genera previously named according to the rules of the *International Code of Zoological Nomenclature*. *Australasian Journal of Herpetology* 35:57-63.
- Hoser, R. T. 2019a. 11 new species, 4 new subspecies and a subgenus of Australian Dragon Lizard in the genus *Tympanocryptis* Peters, 1863, with a warning on the conservation status and long-term survival prospects of some newly named taxa. *Australasian Journal of Herpetology* 39:23-52.
- Hoser, R. T. 2019b. Richard Shine *et al.* (1987), Hinrich Kaiser *et al.* (2013), Jane Melville *et al.* (2018 and 2019): Australian Agamids and how rule breakers, liars, thieves, taxonomic vandals and law breaking copyright infringers are causing reptile species to become extinct. *Australasian Journal of Herpetology* 39:53-63
- Hoser, R. T. 2022. A new species within the *Odatia timorensis* (Squamata: Varanidae) species complex. *Australasian Journal of Herpetology* 55:54-56.
- How, R., Schmitt, I. H. and Suyanto, A. 1996. Geographical Variation in the Morphology of Four Snake Species from the Lesser Sunda Islands, Eastern Indonesia. *Biological Journal of the Linnean Society* 59(4):439-456.
- International Commission of Zoological Nomenclature (ICZN) 1991. Decision of the commission. Three works by Richard W. Wells and C. Ross Wellington: proposed suppression for nomenclatural purposes. *Bulletin of Zoological Nomenclature* 48(4):337-338.
- International Commission of Zoological Nomenclature (ICZN) 2001. Opinion 1970. *Bulletin of Zoological Nomenclature* 58(1):74, (30 March 2001).
- International Commission of Zoological Nomenclature (ICZN) 2012. Amendment of Articles 8, 9, 10, 21 and 78 of the International Code of Zoological Nomenclature to expand and refine methods of publication. *Zootaxa* (PRINO) (Online)3450:1-7.
- International Commission of Zoological Nomenclature (ICZN) 2021. Opinion 2468 (Case 3601) - *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, Elapidae) and *Australasian Journal of Herpetology* issues 1-24: confirmation of availability declined; Appendix A (Code of Ethics): not adopted as a formal criterion for ruling on Cases. *Bulletin of Zoological Nomenclature* 78 (30 April 2021):42-45.
- Kaiser, H. 2012a. SPAM email sent out to numerous recipients on 5 June 2012.
- Kaiser, H. 2012b. *Point of view*. Hate article sent as attachment with SPAM email sent out on 5 June 2012 (Stated by Kaiser as having been written by Wolfgang Wüster).
- Kaiser, H. 2013. The Taxon Filter, a novel mechanism designed to facilitate the relationship between taxonomy and nomenclature, vis-à-vis the utility of the Code's Article 81 (the Commission's plenary power). *Bulletin of Zoological Nomenclature* 70(4) December 2013:293-302.
- Kaiser, H. 2014a. Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see *BZN* 70: 234-237). *Bulletin of Zoological Nomenclature* 71(1):30-35.
- Kaiser, H. 2014b. Best Practices in Herpetological Taxonomy: Errata and Addenda. *Herpetological Review*, 45(2):257-268.
- Kaiser, H., Crother, B. L., Kelly, C. M. R., Luiselli, L., O'Shea, M., Ota, H., Passos, P., Schleip, W. D. and Wüster, W. 2013. Best practices: In the 21st Century, Taxonomic Decisions in Herpetology are Acceptable Only When supported by a body of Evidence and Published via Peer-Review. *Herpetological Review* 44(1):8-23.
- Knight, S. 2009. Some Captive Observation Notes on The Timor Ratsnake - *Coelognathus subradiatus subradiatus*. *Litteratura Serpentiaria* 29(4):156-165.
- Maryanto, I., Hisheh, S., Maharadatunkamsi, How, R. A. and Schmitt, L. H. 2021. The impact of Pleistocene glaciations on population structure and systematics in five snake species in the Banda Arc islands of southern Wallacea: the views from genes, morphology and species assemblages. *Journal of the Royal Society of Western Australia* 104:65-84.
- Mecke, S. 2016. Unbekannte Artenvielfalt in einer "vergessenen Welt": die Herpetofauna von Ost-Timor. *Terraria-Elaphe* 2016(4):52-55.
- Mertens, R. 1930. Die Amphibien und Reptilien der Inseln Bali, Lombok, Sumbawa und Flores. *Senck. Naturf. Gesell., Frankfurt am Main, Abhandl.* 42(3):117-344.
- Pyron, R. A. and Burbrink, F. T. 2013. Early origin of viviparity and multiple reversions to oviparity in squamate reptiles. *Ecology Letters* 17(1):13-21 (published online 2013, in print 2014).
- Pyron, R. A., Burbrink, F. T. and Weins, J. J. 2013. A phylogeny and revised classification of Squamata, including 4161 species of lizards and snakes. *BMC Evolutionary Biology* 13:93:54 pp. Published online at: <http://www.biomedcentral.com/1471->

2148/13/93.

Reilly, S. B., Wogan, G. O., Stubbs, A. L., Arida, E., Iskandar, D. T. and McGuire, J. A. 2017. Toxic toad invasion of Wallacea: a biodiversity hotspot characterized by extraordinary endemism. *Glob. Change Biol.* 23:5029-5031.

Reilly, S. B., Stubbs, A. L., Karin, B. R., Bi, K., Arida, E., Iskandar, D. T. and McGuire, J. A. 2019a. Leap-frog dispersal and mitochondrial introgression: phylogenomics and biogeography of *Limnodynastes* fanged frogs in the Lesser Sundas Archipelago of Wallacea. *J. Biogeogr.* 46:757-769.

Reilly, S. B., Stubbs, A. L., Karin, B. R., Arida, E., Iskandar, D. T. and McGuire, J. A. 2019b. Recent colonization and expansion through the Lesser Sundas by seven amphibian and reptile species. *Zool. Scr.* 48:614-626.

Reilly, S. B., Stubbs, A. L., Karin, B. R., Arifin, U., Arida, E., Iskandar, D. T. and McGuire, J. A. 2021. Genetic divergence of the Sunda ratsnake (*Coelognathus subradiatus*) across the Lesser Sunda Islands (Squamata: Colubridae). *Amphibia-Reptilia* 42(2):269-273.

Rhodin, A. et al. (70 listed authors) 2015. Comment on Spracklandus Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published (Case 3601; see BZN 70: 234-237; 71: 30-38, 133-135, 181-182, 252-253). *Bulletin of Zoological Nomenclature* 72(1):65-78 (many listed authors later claimed their names had been added to the author list against their will and/or without their consultation or having even read the document they were alleged to have co-written).

Ride, W. D. L. (ed.) et al. (on behalf of the International Commission on Zoological Nomenclature) 1999. *International code of Zoological Nomenclature*. The Natural History Museum - Cromwell Road, London SW7 5BD, UK (also commonly cited as "The Rules", "Zoological Rules", "The Code" or "ICZN 1999").

Schlegel, H. 1837a. *Abbildungen neuer oder unvollständig bekannter Amphibien, nach der Natur oder dem Leben entworfen*. Düsseldorf (Arnz & Comp.), i-xiv+141 pp. [1837-1844].

Schlegel, H. 1837b. *Essai sur la physionomie des serpens*. Partie Descriptive. La Haye (J. Kips, J. HZ. et W. P. van Stockum), 606 S.+xvi.

Schulz, K. D. 1988. Die hinterasiatischen Klettermattern der Gattung *Elaphe*. Teil XIV *Elaphe subradiata* (Schlegel 1837) und *Elaphe erythrura* (Duméril & Bibron 1854). *Sauria* 10(3):17-20.

Schulz, K. D. 1996a. *Eine Monographie der Schlangengattung Elaphe Fitzinger*. Bushmaster, Berg (CH):1-460.

Schulz, K. D. 1996b. A monograph of the colubrid snakes of the genus *Elaphe* Fitzinger. Koeltz Scientific Books:439 pp.

Shea, G. M. 1987. Comment on the proposed suppression for nomenclatural purposes of three works by Richard W. Wells

and C. Ross Wellington. *Bulletin of Zoological Nomenclature* 44(4):257-261.

Shine, R. 1987. Case 2531. Three works by Richard W. Wells and C. Ross Wellington:

proposed suppression for nomenclatural purposes. (Written by the unnamed "President of the Australian Society of Herpetologists" who at that time was Richard Shine). *Bulletin of Zoological Nomenclature* 44(2):116-121.

Simpson, G. G. 1977. Too many lines; the limits of the Oriental and Australian zoogeographic regions. *Proceedings of the American Philosophical Society* 121:107-120.

Sprackland, R., Smith, H. M. and Strimple, P. 1997. Case 3043, *Varanus teriae* Sprackland, 1991 (Reptilia, Squamata): proposed conservation of the specific name. *Bulletin of Zoological Nomenclature* 54(2):100-102.

Vinciguerra, D. 1892. Rettili e batraci di Engano. *Ann. Mus. civ. stor. nat. Genova*, 2. Ser. 7(32):517-526.

Wagler, J. 1830. *Natürliches System der Amphibien, mit Vorangehender Classification der Säugethiere und Vögel. Ein Beitrag zur Vergleichenden Zoologie*. J.G. Cotta, München:354 pp.

Wallace, A. R. 1860. On the zoological geography of the Malay Archipelago. *Zoological Journal of the Linnean Society* 4:172-184.

Wallach, V., Williams, K. L. and Boundy, J. 2014. *Snakes of the World: A Catalogue of Living and Extinct Species*. [type catalogue] Taylor and Francis, CRC Press, USA:1237 pp.

Wells, R. W. and Wellington, C. R. 1984. A synopsis of the class Reptilia in Australia. *Australian Journal of Herpetology* 1(3-4):73-129.

Wells, R. W. and Wellington, C. R. 1985a. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series* 1:1-61.

Wells, R. W. and Wellington, C. R. 1985b. A synopsis of the Amphibia and Reptilia of New Zealand', *Australian Journal of Herpetology, Supplementary Series*, (1):62-64.

CONFLICT OF INTEREST

None.

Cite this paper as:

Hoser, R. T. 2022. *Euanedwardsserpens subradiatus* (Schlegel, 1837) revisited and formally divided into six allopatric species based on morphological and genetic divergence. *Australasian Journal of Herpetology* 58:28-39.

Australasian Journal of Herpetology®

Publishes original research in printed form in relation to reptiles, other fauna and related matters, including classification, ecology, public interest, legal, captivity, "academic misconduct", etc. It is a peer reviewed printed journal published in hard copy for permanent public scientific record in accordance with the *International Code of Zoological Nomenclature* (Ride et al. 1999 as amended online since), with sizeable print run and global audience and high impact.

Full details at: <http://www.herp.net>

Copyright. All rights reserved.

Online journals (this issue) do not appear for a month after the actual and listed publication date of the printed journals. Minimum print run of first printings is at least fifty hard copies.