



## Resurrection of *Pseudorabdion torquatum* (A.M.C. Duméril, Bibron & A.H.A. Duméril, 1854), a former synonym of *P. longiceps* (Cantor, 1847) (Colubridae: Calamariinae) from Sulawesi, Indonesia

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### Abstract

The colubrid snake species *Pseudorabdion torquatum* is resurrected from the synonymy of *P. longiceps*. Out of the three syntypes, only two were located and examined at Muséum national d'Histoire naturelle, Paris, France (MNHN-RA). *Pseudorabdion torquatum* differs from *P. longiceps* in having a larger SVL (227.0 mm vs. 132.0–193.0 mm in males); higher number of ventral in males, 141 (vs. 127–139); lower number of ventrals in females, 137 (vs. 139–145); lower number of subcaudals in both sexes, 12–17 (vs. 17–30); and six supralabials (vs. five). *Pseudorabdion torquatum* is thus regarded as a valid and endemic species to Sulawesi. The species is here redescribed and a lectotype is designated. Furthermore we provide an English translation of the original description of *Rabdion torquatum* which was originally written in French. Thus, besides unconfirmed records of *P. longiceps* from Sulawesi, there is a single known congener from that island, *P. sarasinorum*

**Key words:** Lectotype, *Pseudorabdion oxycephalum* complex, *Rabdion*, syntypes

### Introduction

Duméril *et al.* (1854) described the new genus *Rabdion* with two new species from Sulawesi (Indonesia) included, *Rabdion forsteni* and *Rabdion torquatum*. Later, Jan (1862) erected the new genus *Pseudorabdion* and transferred the latter species to the new genus. Thus the genus *Rabdion* remained monotypic, until recently, when a second species was described from Sulawesi, *Rabdion grovesi* Amarasinghe, Vogel, McGuire, Sidik, Supriatna & Ineich, 2015. *Pseudorabdion torquatum* is the type species of the genus *Pseudorabdion* by monotypy (see Leviton & Brown 1959) while 14 species are currently recognized in the genus (Doria & Petri 2010, Uetz & Hošek 2016). However, *P. torquatum* has been regarded as a junior subjective synonym of *P. longiceps* (Cantor, 1847) according to Boulenger (1894: 329) and subsequent authors accepted that (e.g. Leviton & Brown 1959, Brown *et al.* 1999, David & Vogel 1996).

*Calamaria longiceps* was described by Cantor (1847) from Penang Island, West Malaysia, based on a single specimen conserved in Natural History Museum, London, UK (BMNH 1946.1.2.13). Subsequent authors recorded this species from Borneo, Nias, Sumatra, Singapore, southern Malay Peninsula (Inger & Leviton 1961, 1966, Voris 1977, Iskandar & Colijn 2001, Malkmus *et al.* 2002, de Lang & Vogel 2005, Grismer *et al.* 2006, Teynié & David 2010, Norhayati *et al.* 2011, Chan-Ard *et al.* 2015), but also from Sulawesi (Leviton & Brown 1959, Manthey & Grossmann 1997, Brown *et al.* 1999, David & Vogel 1996, Doria & Petri 2010, Grismer 2011, Stuebing *et al.* 2014). The occurrence of *P. longiceps* on Sulawesi, however, was regarded as doubtful by de Lang & Vogel (2005) and Koch (2012). Beside the unconfirmed records of *P. longiceps* from Sulawesi (see references above), there is a single known congener from that island, namely *P. sarasinorum* (Müller, 1895) which seems to be endemic to northern Sulawesi and is distinct from *P. longiceps* and *P. torquatum* because of its anterior chin shields being separated from the mental, the prefrontal bordering the orbit, as well as a loreal shield touching the orbit.

The *Pseudorabdion oxycephalum* complex (characterised by the absence of a loreal scale) is represented by eight species (Doria & Petri 2010) among which seven species lack a preocular scale: *P. oxycephalum* (Günther, 1858), *P. atrum* (Taylor, 1922), and *P. montanum* Leviton & Brown, 1959 from the Philippines; *P. collare* (Mocquard, 1892) from Borneo; *P. eiselti* Inger & Leviton, 1961, *P. modiglianii* Doria & Petri, 2010, and *P. sirambense* Doria & Petri, 2010 from Sumatra. *Pseudorabdion longiceps* sometimes has a preocular. It is regarded as widely distributed species and most likely a complex of species.

In the course of a review of that genus, we were able to re-examine two of the three syntypes of *Rabdion torquatum* deposited in the Muséum national d'Histoire naturelle, Paris, France (MNHN-RA). In addition we compared them with the holotype and 15 additional specimens of *P. longiceps* from West Malaysia, Sumatra and Borneo (see Appendix I). We here present the results of this morphological comparison and provide a detailed description of *Pseudorabdion torquatum* after showing that it is a valid species of the *P. oxycephalum* complex.

## Materials and methods

We examined external morphological characters of 46 specimens of the genus *Pseudorabdion* (Appendix I) from the collections deposited in the Natural History Museum, London, UK (BMNH); California Academy of Sciences, San Francisco, USA (CAS); Field Museum of Natural History, Chicago, USA (FMNH); Muséum national d'Histoire naturelle, Paris, France (MNHN-RA); Naturhistorisches Museum Wien, Austria (NHMW); Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany (ZFMK); Museum für Naturkunde Berlin, Germany (ZMB); and Zoologische Staatssammlung, München, Germany (ZSM). Museum acronyms follow Sabaj Pérez (2014).

A total of 36 morphological and colouration characters were recorded for each specimen. Measurements, except SVL and tail length, were taken with a slide-calliper to the nearest 0.1 mm; all body measurements were made to the nearest millimeter. The number of ventral scales was counted according to Dowling's method (1951). Half ventrals were counted as one. The first subcaudal was defined as the first scale posterior to the vent that touched the first dorsal caudal scale row and the opposite subcaudal. The terminal scute is not included in the number of subcaudals. The dorsal scale row counts are given at one head length behind head, at midbody level (*i.e.*, at the level of the ventral plate corresponding to a half of the total number of ventrals), and at one head length before vent. Values for paired head characters are given in left/right order. The large plate behind the parietal that touches the last preocular is named paraparietal according to Inger & Marx (1965).

## Results

We separated all other Calamariid genera and assigned them to the genus *Pseudorabdion* based on the following character combination: head not distinct from neck, eye small, pupil round, nostril within a single small nasal in contact with the preocular, internasals present, tail short, 15 smooth dorsal scale rows throughout the body without apical pits, a single cloacal shield, subcaudal plates divided, and no more than six supralabials. We present diagnostic morphological, morphometric, and meristic data taken for the specimens in Tables 1 and 2.

The two examined syntypes of *Rabdion torquatum* proved to be morphologically very distinct from the examined holotype and other voucher specimens of *P. longiceps* from Sumatra, Borneo and the Malayan Peninsular (Table I). The former species is thus regarded as valid and the name *Pseudorabdion torquatum* has to be applied for the Sulawesi population. We here redescribe the species and designate a lectotype among the two remaining MNHN-RA syntypes. Furthermore, we provide a complete English translation of the original description of *Rabdion torquatum* that was originally written in French (Appendix II).

### ***Pseudorabdion torquatum* (A.M.C. Duméril, Bibron & A.H.A. Duméril, 1854)**

(Figs. 1, 2; Tables 1, 2)

**Lectotype (designated herein).** Adult male, MNHN-RA 2007.2456 [former MNHN-RA 7212A] (SVL 227.0 mm), collected from Macassar, Sulawesi, Indonesia by Dutch naturalists, and donated to MNHN collections by Leiden Museum before 1845 (according to the synonymy indicated in the original description).

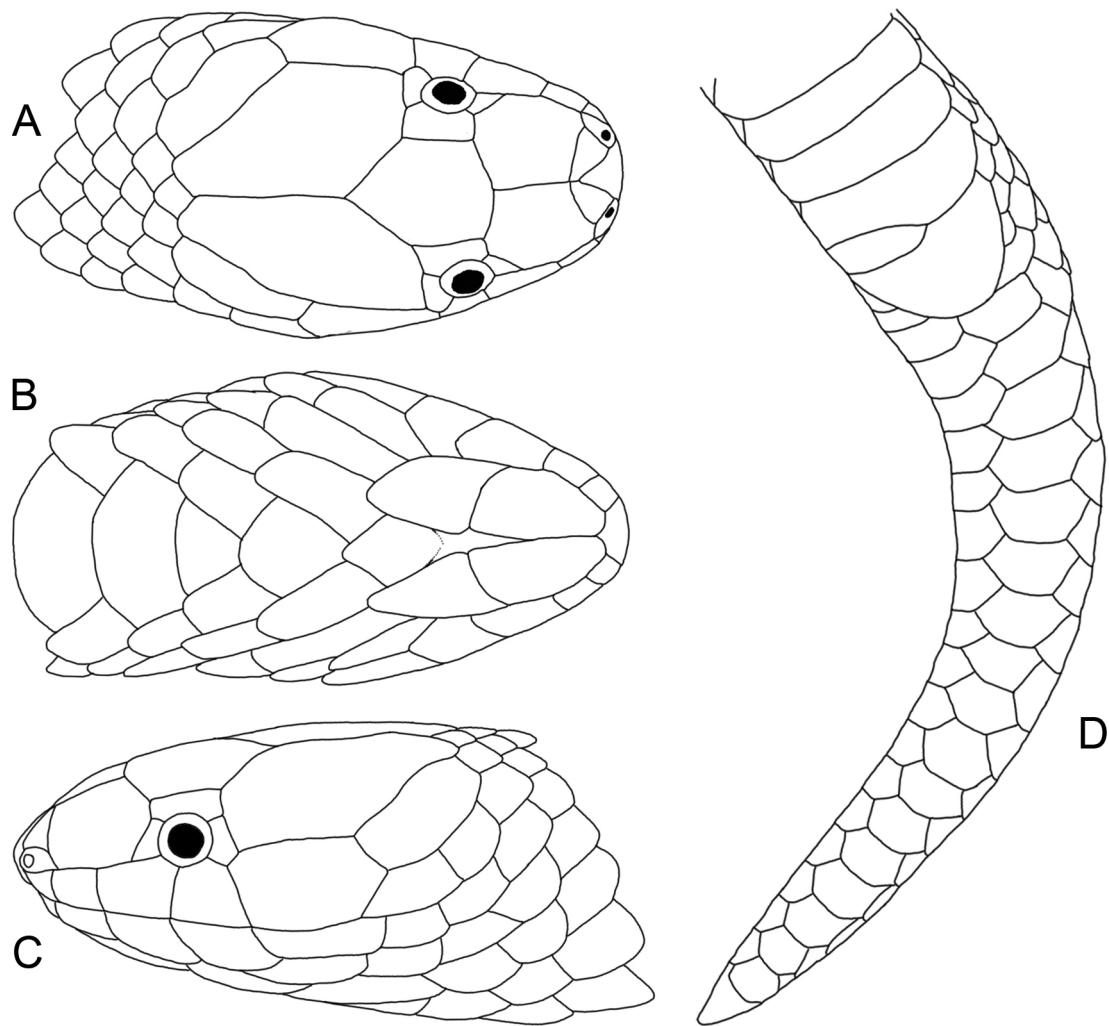
**Note.** The handwritten MNHN catalogue information that was added in 1975 (after a visit of A.F. Stimson), indicates this specimen as lectotype of *Pseudorabdion torquatum*. However we were unable to find a designation of a lectotype for this species in any published work. In the original description it was clearly stated that the species has a preocular. Only MNHN-RA 2007.2456 has a preocular, therefore, we here designate this specimen as the lectotype.

**Paralectotypes.** Female, MNHN-RA 7212 (SVL 205.0 mm), other locality and registry details the same as the lectotype. The MNHN catalogue handwritten information indicates that this specimen is a paralectotype according to A.F. Stimson who also erroneously identified this specimen as *P. eiselti*. However, the original label clearly indicates this specimen as syntype of *P. torquatum*. The third specimen of the original syntype series (indicated as without any locality in the original description) has also to be considered as a paralectotype; it was stated as being in Paris for a long time before and cannot be located in the collection anymore and thus must be regarded as lost.

**Diagnosis.** The following combination of characters distinguishes *Pseudorabdion torquatum* from all other known congeners: absence of loreal scale, 141 ventrals in the male and 137 in the female [140–165 indicated by Duméril *et al.* (1854) in the original description], 17 subcaudals in the male and 12 in the female, 11–14 maxillary teeth, supraocular and postocular plates not fused, and internasal not in contact with supralabials. Furthermore, *P. torquatum* can be clearly distinguished from its closest congener *P. longiceps* (Table 1) and other congeners of the *Pseudorabdion oxycephalum* complex according to the data summarized in Table 2.



**FIGURE 1.** Photograph of the *Pseudorabdion torquatum* lectotype (MNHN-RA 2007.2456; SVL 227.0 mm); dorsal view of the full body.



**FIGURE 2.** Sketches of the *Pseudorabdion torquatum* lectotype (MNHN-RA 2007.2456; SVL 227.0 mm); (A) dorsal, (B) ventral, and (C) lateral views of the head; (D) ventral view of the tail and cloacal area.

**TABLE 1.** Morphometric and meristic character comparison of two syntypes of *Pseudorabdion torquatum* and the holotype and 15 examined specimens of *P. longiceps* (Appendix 1); measurements are in mm; \* based on Cantor (1847); † including holotype.

Character	<i>P. torquatum</i> syntypes		<i>P. longiceps</i>		
	male MNHN-RA 2007.2456	female MNHN-RA 7212	male (holotype) BMNH 1946.1.2.13*	males (n=7)†	females (n=9)
snout–vent length (SVL)	227.0	205.0	127.0	127.0–193.0	160.0–215.0
tail length (TL)	18.0	11.0	19.1	13.0–32.0	13.0–22.0
TL/(SVL+TL)%	7.3	5.1	13.1	6.4–16.4	6.6–9.3
Ventrals	141	137	131	127–139	139–145
Subcaudals	17	12	26	26–30	17–23
Supralabials	6	6	5	5	5
Infralabials	6	6	5	5	5 (rarely 6)

**Description of the lectotype.** SVL 227.0 mm; tail length 18.0 mm; head elongate, bluntly pointed, slightly flattened, indistinct from neck; snout elongate, moderate, bluntly pointed in dorsal and lateral profiles.

**TABLE 2.** Comparison of the species of the *Pseudorabdion oxycephalum* complex; modified after Leviton and Brown (1959), Brown *et al.* (1999), Stuebing & Inger, 1999, Doria & Petri (2010), and examined material (Appendix). Measurements are in mm, ? = unknown, \* = source of maxillary teeth only.

Species (distribution)	Sex (m, male; f, female)	No. of specimens	Source based on					Ventrals	Subcaudals	Maxillary teeth	Supraocular & postocular fused (1) or separated (0)	Internasal & supralabial in contact (1) or separate (0)
			Leviton & Brown (1959)	Brown <i>et al.</i> (1999)	Stuebing & Inger (1999)	Doria & Petri (2010)	Examined material					
<i>P. oxycephalum</i> (Philippines)	m	7	†			†	132–144	22–24	8	1	1	
<i>P. atrum</i> (Philippines)	f	14				144–157	16–17					
<i>P. montanum</i> (Philippines)	m	1 (type)	†			113	33	10–12	no supraocular		1	
<i>P. montanum</i> (Philippines)	m	2	†			145–148	28	9			1	
<i>P. montanum</i> (Philippines)	f	2				154–161	21–22					
<i>P. collare</i> (Borneo)	m	1 (type)			†	116–122	28–41	22–25			1	
<i>P. collare</i> (Borneo)	f	?			†*	120–134	27–29					
<i>P. eiselti</i> (Sumatra)	m	7				118–134	18–28	9–10			0	
<i>P. eiselti</i> (Sumatra)	f	17			†	130–146	10–13					
<i>P. modiglianii</i> (Sumatra)	f	3 (types)			†	138–141	12–13	8–10			0	
<i>P. sirambense</i> (Sumatra)	m	1			†	112	21	8–9			0	
<i>P. torquatum</i> (Sulawesi)	m	1 (type)				141	17	11–1			0	
<i>P. torquatum</i> (Sulawesi)	f	1			†	137	12					
<i>P. longiceps</i> (species complex)	m	6	†*			127–139	26–30	11–12			0	
<i>P. longiceps</i> (species complex)	f	9			†	139–145	17–23					

Rostral shield large and triangular, distinctly visible from above, deep and pointed posteriorly; interorbitals broad; internasals subtriangular; nostrils small; nasals undivided, in contact with rostral anteriorly, first and second supralabials (2<sup>nd</sup> supralabial slightly) ventrally, prefrontal posteriorly, and internasal dorsally; loreal absent; prefrontal extremely large, in contact with internasal anteriorly, frontal, supraocular, preocular posteriorly, second and third supralabials ventrally; frontal large, pentagonal, and as long as wide; supraoculars small, narrow; parietals extremely large, elongate, in large contact with each other, penta- to hexagonal in shape, anteriorly wider, bordered anteriorly by frontal, supraoculars and postoculars, ventrally by fifth supralabials and paraparietals, and posteriorly by three occipitals; one preocular; eye small, rounded; pupil rounded; one postocular, small, pentagonal, in contact with supraocular, parietal, fourth and fifth supralabials; paraparietal large, in contact dorsally with parietal and laterally with fifth supralabial, ventrally with sixth supralabial. Supralabials 6 (fifth largest in size, 3<sup>rd</sup>–4<sup>th</sup> touching the eye); first supralabial in narrow contact anteriorly with rostral, dorsally with nasal; second supralabial in contact dorsally with prefrontal; third supralabial in contact dorsally with prefrontal, preocular, and eye; fourth supralabial in contact dorsally with eye and postocular; fifth supralabial in contact dorsally with postocular, parietal, and paraparietal; and sixth supralabial in contact dorsally with paraparietal.

Mental small in size, pentagonal; first pair of infralabials smaller than mental plate and separated from each other by anterior chin shields; six infralabials, 1<sup>st</sup>–3<sup>rd</sup> in contact with first chin shield pair on both sides, 3<sup>rd</sup>–4<sup>th</sup> in contact with second chin shields; fifth infralabial largest in size and in contact with gular scales, not in contact with any chin shield pair; two larger anterior chin shields, and two smaller posterior chin shields; posterior chin shields pair bordered posteriorly by seven gular scales.

Body robust, elongate and sub-cylindrical; dorsal scale rows 15-15-15, all smooth and bluntly pointed without apical pits; 141 ventral scales, three preventrals; cloacal plate entire. Tail extremely short, relative TL (TL / [SVL+TL]) 7.3%, robust and thick; subcaudals divided, 17.

**Coloration.** Dorsum brown, a pale colour collar band behind parietals; venter brown.

## Discussion

Two syntypes of *Rabdion torquatum* available at MNHN-RA labeled as from “Macassar”, as the type locality, were obtained as a gift or an exchange from Leiden Museum in The Netherlands (RMNH). Those specimens were examined by A.F. Stimson in 1975 and he made the following changes (handwritten annotation in MNHN registers and in jars): MNHN-RA 7212: one of the syntypes (paralectotype *vide* Stimson 1975) of *R. torquatum*, was erroneously identified as *Pseudorabdion eiselti* Inger & Leviton, 1961 despite the presence of a preocular scale; MNHN-RA 2007.2456 [former MNHN-RA 7212A]: the second syntype (lectotype *vide* Stimson 1975) of *R. torquatum* erroneously identified as *P. longiceps*. Since Stimson was unable to publish his recognized lectotype as well as other changes, thus his indications on the registers cannot be considered to be a valid lectotype designation. Furthermore, MNHN-RA 7212 has its skull removed and is in poor condition. The location of the skull is unknown and it was not found in MNHN-RA collections or in MNHN-AC (Comparative Anatomy) collections.

In the original description, A.M.C. Duméril *et al.* (1854: 122) indicated that they have examined three specimens (syntypes). Among them two were given to MNHN collections by the Leiden Museum and the third syntype was previously present in MNHN-RA collections but had no locality according to Duméril *et al.* (1854: 122). The range of the number of ventrals was indicated by Duméril *et al.* (1854) in the original description as 140–165. However, two examined syntypes have 137 and 141 ventrals (counts without preventrals). The least count of 140 ventrals in Duméril *et al.* (1854) (*vs.* our count 137 + 2 preventral) may reflect the classical variation often seen when one single, small, old specimen is examined by many different researchers over time. However, the greatest count of 165 ventrals in Duméril *et al.* (1854) definitely represents the ventral count of the third syntype which we have not located. Therefore, the identity of the third syntype remains a mystery. It may represent a different species, an erroneous scale count, or a typographical error.

There is no doubt that the examined syntypes of *Rabdion torquatum* are not identical when compared to specimens of *P. longiceps* from Sumatra, Borneo and Peninsular Malaysia (see Table 1). There are such obvious distinct characters between these two species, the question arises why these two taxa were synonymized by Boulenger (1894). As the syntypes are housed in MNHN-RA collections, it might be possible that Boulenger did not examine them when he was preparing his catalogue. This hypothesis is also supported by the fact that Boulenger did not include this species in his work about Sulawesi (Boulenger 1897).

The locality data for the syntypes of *Rabdion torquatum* is dubious. Other species reported from Sulawesi had obviously erroneous localities. Collections made by A. B. Meyer, a German ornithologist (Koch 2012) may have been collected on Java (de Lang & Vogel 2005). However, *P. longiceps* is unknown from Java. *Pseudorabdion longiceps* is not an uncommon species in its area of occurrence; therefore, the low number of museum specimens is more likely an artefact of collecting effort rather than a reliable indicator of biological rarity.

*Pseudorabdion torquatum* has never been reported again from Sulawesi, raising some doubts about origin. De Lang & Vogel (2005) reported a single specimen from Sulawesi. Esther Dondorp from RMNH was so kind to re-examine that specimen (RMNH 65) which seems to be a typical female of *P. longiceps*. Therefore, confirming the geographic origin of these species will require additional fieldwork. Species of the genus *Pseudorabdion* are small and secretive in their habits and might thus remain unnoticed in the field; they are thus uncommon in collections.

Sulawesi remains largely unstudied and additional fieldwork will have to focus on exploring remote areas. This effort will surely uncover further undescribed species and add to our knowledge of species known from only few specimens. However, the distribution of *P. torquatum* may be restricted to a very small part of the island, as is the case for several other endemic Sulawesi reptile species (Hamilton 1979, Koch 2012, Amarasinghe *et al.* 2015).

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## References

- Amarasinghe, A.A.T., Vogel, G., McGuire, J.A., Sidik, I., Supriatna, J. & Ineich, I. (2015) Description of a second species of the genus *Rabdion* Duméril, Bibron & Duméril, 1854 (Colubridae: Calamariinae) from Sulawesi, Indonesia. *Herpetologica*, 71, 234–239.  
<http://dx.doi.org/10.1655/HERPETOLOGICA-D-14-00058>
- Boulenger, G.A. (1894) *Catalogue of the Snakes in the British Museum (Natural History). Vol. II. Containing the conclusion of the Colubridae aglyphae*. Taylor and Francis, London, 382 pp.
- Boulenger, G.A. (1897) A catalogue of the reptiles and batrachians of Celebes, with special reference to the collections made by Drs. P. and F. Sarasin in 1893–1896. *Proceedings of the Zoological Society of London*, 1897, 193–237.
- Brown, R.M., Leviton, A.E. & Sison, R.V. (1999) Description of a new species of *Pseudorabdion* (Serpentes: Colubridae) from Panay Island, Philippines with a revised key to the genus. *Asiatic Herpetological Research*, 8, 7–12.  
<http://dx.doi.org/10.5962/bhl.part.24610>
- Cantor, T. (1847) Catalogue of reptiles inhabiting the Malayan peninsula and islands. *Journal of the Asiatic Society of Bengal*, 16, 607–656, 897–952, 1026–1078.
- Chan-Ard, T., Parr, J.W.K. & Nabhitabhata, J. (2015) *A Field Guide to the Reptiles of Thailand*. Oxford University Press, New York, 346pp.
- David, P. & Vogel G. (1996) *The snakes of Sumatra. An annotated checklist and key with natural history notes*. Edition Chimaira, Frankfurt am Main, 260 pp.
- de Lang, R. & Vogel, G. (2005) *The snakes of Sulawesi. A field guide to the land snakes of Sulawesi with identification keys*. Frankfurter Beiträge zur Naturkunde, 25, Edition Chimaira, Frankfurt am Main, 312 pp.
- Doria, G. & Petri, M. (2010) *Pseudorabdion* in the museum of Genova with a description of two new species from Sumatra and a revised key to the genus. *Annali del Museo Civico di storia naturale "G. Doria"*, 102, 187–201.
- Dowling, H.G. (1951) A proposed standard system of counting ventrals in snakes. *British Journal of Herpetology*, 1, 97–98.
- Duméril, A.M.C., Bibron, G. & Duméril, A.H.A. (1854) *Erpétologie Générale ou Histoire Naturelle Complète des Reptiles. Tome Septième. Première Partie, Comprenant l'Histoire des Serpents non Vénimeux*. Librairie Encyclopédique de Roret, Paris, xvi + 780 pp.
- Grismer, L.L. (2011) *Amphibians and Reptiles of the Seribuat Archipelago (Peninsular Malaysia): A field guide*. Edition Chimaira, Frankfurt am Main, 239 pp.
- Grismer, L.L., Youmans, T.M., Wood, P.L. Jr. & Grismer, J.L. (2006) Checklist of the herpetofauna of the Seribuat

- Archipelago, West Malaysia with comments on biogeography, natural history, and adaptive types. *The Raffles Bulletin of Zoology*, 54, 157–180.
- Günther, A.C.L.G. (1858) Catalogue of Colubrine Snakes of the British Museum, London. I–XVI. British Museum of Natural History, London, xvi + 281 pp.
- Hamilton, W. (1979) Tectonics of the Indonesian Region. *US Geological Survey professional paper*, 1078, 1–356.
- Inger, R.F. & Leviton, A.E. (1961) A new colubrid snake of the genus *Pseudorabdion* from Sumatra. *Fieldiana Zoology*, 44, 45–47.
- Inger, R.F. & Leviton, A.E. (1966) The taxonomic status of Bornean snakes of the genus *Pseudorabdion* Jan and of the nominal genus *Idiopholis* Mocquard. *Proceedings of the California Academy of Sciences*, 34, 307–314.
- Inger, R.F. & Marx, H. (1965) The systematics and evolution of the colubrid snakes of the genus *Calamaria*. *Fieldiana Zoology*, 49, 1–304.
- Iskandar, D.T. & Colijn, E. (2001) *A checklist of Southeast Asian and New Guinean reptiles. Part 1: Serpentes*. Biodiversity Conservation Project (Indonesian Institute of sciences, Japan International Cooperation Agency, The Ministry of Forestry), The Gibbon Foundation and Institute of Technology, Bandung, Java, 195 pp.
- Jan, G. (1862) Prodrómo della iconografia generale degli ofidi. V. Gruppo: Calamaridae. *Archivio per Zoologia*, 2, 1–76.
- Koch, A. (2012) *Discovery, diversity, and distribution of the amphibians and reptiles of Sulawesi and its offshore islands*. Edition Chimaira, Frankfurt am Main, 374 pp.
- Leviton, A.E. & Brown, W.C. (1959) A review of the snakes of the genus *Pseudorabdion* with remarks on the status of the genera *Agrypophis* and *Typhlogeophis* (Serpentes: Colubridae). *Proceedings of California Academy of Science*, 29, 475–508.
- Malkmus, R., Manthey, U., Vogel, G., Hoffmann, P. & Kosuch, J. (2002) *The amphibians and reptiles of Mount Kinabalu*. Koeltz Scientific Books, Königstein, 404 pp.
- Manthey, U. & Grossmann, W. (1997) *Amphibien und Reptilien Südostasiens*. Natur und Tier Verlag, Münster, 512 pp.
- Mocquard, F. (1892) Nouvelle contribution à la faune herpétologique de Bornéo. *Mémoires de la Société Zoologique de France*, 5, 190–206.
- Müller, F. (1895) Reptilien und Amphibien aus Celebes. *Verhandlungen der Naturforschenden Gesellschaft in Basel*, 10, 825–869.
- Norhayati, A., Farah, A.D., Chan, K.O., Daicus B. & Muin, M.A. (2011) An update of herpetofaunal records from Bukit Fraser, Pahang, Malaysia. *Malaysian Applied Biology Journal*, 40, 9–17.
- Sabaj Pérez, M.H. (2014) Standard Symbolic Codes for Institutional Resource Collections in Herpetology and Ichthyology: An Online Reference, Version 5.0 (22 September 2014). American Society of Ichthyologists and Herpetologists, USA. Available from: <http://www.asih.org/resources/standard-symbolic-codes-institutional-resource-collections-herpetology-ichthyology> (accessed 4 May 2016)
- Stuebing, R.B. & Inger, R.F. (1999) *A field guide to the snakes of Borneo*. Natural History Publications (Borneo), Kota Kinabalu, 254 pp.
- Stuebing, R.B., Inger, R.F. & Lardner, B. (2014) *A field guide to the snakes of Borneo. 2<sup>nd</sup> Edition*. Natural History Publications (Borneo), Kota Kinabalu, 310 pp.
- Taylor, E.H. (1922) Additions to the herpetological fauna of the Philippine Islands, volume 1. *The Philippine Journal of Science*, 21, 161–205. <http://dx.doi.org/10.5962/bhl.part.25389>
- Teynié, A. & David, P. (2010) *Voyages naturalistes au Laos. Les reptiles*. Editions Revoir, Nohanent, France, 315 pp.
- Uetz, P. & Hošek, J. (Eds.) (2016) The Reptile Database. Available from: <http://www.reptile-database.org> (accessed 15 April 2016)
- Voris, H.K. (1977) Comparison of herpetofaunal diversity in tree buttresses of evergreen tropical forests. *Herpetologica*, 33, 375–380.

#### APPENDIX I. Examined material of *Pseudorabdion*.

- P. albonuchalis*** (1 specimen): **Malaysia**: Tangap, Niah, Sarawak, Borneo: CAS 101500.
- P. collare*** (1 specimen): **Indonesia**: Sebruang Valley, West Kalimantan, Borneo: MNHN-RA 1891.0065 (holotype).
- P. eiselti*** (23 specimens): **Indonesia**: Padang, Sumatra: NHMW 16806 (holotype), NHMW 27162:1–15; Padang?, Sumatra: FMNH 134724; Bukitsabalah, Sumatra: BMNH 1974.4223; Balelutu, Sumatra: BMNH 1973.3463; Nias: BMNH 84.1.8.39, ZFMK 13384; Siberut: BMNH 1979.250; **Malaysia**: Penang?: NHMW 27161:2.
- P. longiceps*** (15 specimens): **Indonesia**: Sukuranda, Oberlangkat, Sumatra: NHMW 27160:1–2; Goenoeng Rinteh, Sumatra: ZSM 219/1999; Tanjungmorawa, Sumatra: ZSM 278–279/1999; Sumatra: NHMW 27159: 1–2, NHMW 27160:3, ZSM 277/1999; Pontianak, West Kalimantan, Borneo: CAS 64256, BMNH 65.6.12.24; Borneo, BMNH 80.4.6.2; **West Malaysia**: Kendong, Nigiri Sembilan: BMNH 1924.9.18.1; Penang: BMNH 1946.1.2.13 (holotype); Close to Kemanan, Trengganu: NHMW 39505; Gunung Benom: BMNH 1967.2272.
- P. cf. longiceps*** (1 specimen): **Indonesia**: Siboelabngit, Sumatra: ZMB 31404.
- P. mcnamarae*** (1 specimen): **Philippines**: Cuernos de Negros, Negros: BMNH 1963.922.
- P. oxycephalum*** (1 specimen): **Philippines**: Cuernos de Negros, Negros: BMNH 1964.668.
- P. sarasinorum*** (1 specimen): **Indonesia**: Masaray, Sulawesi: BMNH 94.9.28.2.



**APPENDIX II.** English translation of the original description of *P. torquatum* (A.M.C. Duméril, Bibron & A.H.A. Duméril, 1854); our translation's notes are underlined.

2. THE COLLARED RABDION. *Rabdion torquatum*. Nobis.

CHARACTERS. A yellowish spot on each temple; neck adorned with a half-collar of the same colour. Preocular plates very small, randomly confused with prefrontals, which extend onto the second and third pairs of supralabials. First pair of infralabials not in contact behind the chin shield.

SYNONYMY. 1845. *Calamaria conica*. Leyden Museum. [\[end of page 119\]](#)

DESCRIPTION

SCALATION. Rostral plate is small, equitriangular and slightly indented at its base.

Internasals, each about as little developed than rostral, are trapezium-shaped.

The pre-frontal, which are extremely large, extend downwards along the frenal areas to lean on the second and third pairs of supralabials (sic); they would be squared if they would not offer posteriorly, as in front and on each side, one unique border instead of three, which is in contact respectively with the frontal, the subocular and the pre-ocular.

The frontal has six edges; two lateral ones, which are straight and parallel, two rear ones forming an acute angle, and two anterior sides some shorter than others and all meeting under a very open angle.

Each of the two suboculars is elongate and barely narrower at its front end as at its rear end, which are both totally abruptly cut; laterally and outside, each subocular offers two very small sides leant on the pre- and post-ocular, independently of the one fairly large by which it is related to the eye.

Parietal plates have exactly the same size and shape as in the former species [= *Rabdion forsteni*].

Nasal plate, which has the appearance of a rectangular trapezium, is in contact with the prefrontal, unless it is prevented from doing so by the internasal.

The preocular is an extremely small quadrangular plate, yet relatively high, which tapers from its base to its top.

The postocular differs from the preocular in offering a little lower smallness and has a lower edge broken at an obtuse angle, which inserts between the fourth and fifth supralabials.

The temporal plate is similar to that observed by *Rabdion Forsteni* [sic]

Also as far as the first and the last three supralabial plates are concerned, nothing distinguishes that species [*Rabdion forsteni*] from *Rabdion torquatum*; but it is not the same with the third supralabial, which instead of having its vertical and longitudinal diameters [lengths] equal, has this one much greater than the other: this third supralabial, which is widely elongated and pentagonal and consequently, offers at its top two very unequal sides, the shortest touching the eye and the longest acting as a lean for the preocular and to the second half of the bottom edge of the prefrontal.

At first glance, the chin plate seems triangulo-equilateral but, after examining it more carefully, we recognize that it is pentagonal, since its two lateral edges are broken each [end of page 120] at a very obtuse angle; it does indistinctly insert between inter-submaxillary plates placed just after it.

Here, the infralabial plates of the first pair being square, they cannot be entirely in contact behind the mental plates. Those of the second pair are relatively short, quadrilateral rectangles. Those of the third pair, which are elongate, enlarged from front to back and more enlarged than the previous ones and that of the last two pairs, sometimes have five sides; but more often, their shape is trapezoidal. Those of the fourth pair offer two unequal lateral side edges, straight and parallel, one oblique anterior and two posterior forming an obtuse angle. Those of the fifth and sixth pairs are oblong quadrilateral shaped.

Nor the anterior inter-submaxillary plates, or the posteriors differ from those of the Forsten's *Rabdion*. The plate arrangement of the throat is also similar to that last species.

Scales: 15 longitudinal rows on trunk; 5 on the tail.

Plates: 2 gulars; 140–165 ventrals, 1 entire anal plate, 12–18 subcaudals.

TEETH. Maxillaries 11–12/13–14 Palatines, 9–10; Pterygoidians, 21–22.

COLORATION. One of the three individuals of this species at hand only offers the trace of a yellowish spot on the middle of the temple [this is MNHN-RA 7212], which is in contrast very distinct by the other two [among them MNHN-RA 2007.2456], where one also sees a yellowish line, also placed as a half-collar across the neck. The first specimen [MNHN-RA 7212] has the rest of its body uniform blackish-brown; the second and third ones have their body reddish-brown or purplish, iridescent with blue; but this hue is less dark or lighter on the lower than the upper parts.

DIMENSIONS. The head length is twice as wide, its width taken in the middle of temple, and four times as wide as the width of the snout above the nostrils.

The eyes have a diameter just over a quarter or a little less than a third of the distance through the overlying inter-orbital region.

The trunk is as high as, and from 32 to 38 times as long, as it is wide at midbody.

Tail length varies between the twelfth and the twentieth of total length.

The latter, measured by the largest of our specimens, indicates 24.8 centimeters; as:

*Head* length 0.008 m [i.e 8 mm]. *Trunk*, length 0.222 m. *Tail*, length 0.018 m.

[\[end of page 121\]](#)

DISTRIBUTION. This species was sent from Macassar to Leyden Museum by the naturalist travelers from that institution, who were kind enough to give to our museum two of the three specimens on which we have based our description. The third was present since a long time in our collection, without any indication on its origin.

[\[end top of page 122\]](#)