

The Southeast Asian scincid lizard *Siaphos tridigitus* Bourret, 1939 (Reptilia, Scincidae): a second specimen

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KEY WORDS

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ABSTRACT

A scincid lizard recently collected in Boloven Highlands, South Laos, proved to be the second known specimen of *Siaphos tridigitus* Bourret, 1939. This species was previously known only from its holotype obtained at Bach Ma, central Vietnam. The new specimen is described and depicted, and compared with the holotype. Relationships of this species are discussed. It is tentatively placed in the genus *Sphenomorphus* Fitzinger, 1843.

RÉSUMÉ

Deuxième spécimen connu du scinque d'Asie du Sud-Est Siaphos tridigitus Bourret, 1939 (Reptilia, Scincidae).

Un spécimen de scincidé récemment collecté dans les monts Boloven, au sud du Laos, représente le deuxième spécimen connu de *Siaphos tridigitus* Bourret, 1939. Cette espèce n'était connue que par son holotype originaire de Bach Ma, au centre du Vietnam. Le nouveau spécimen est décrit et illustré, et comparé avec l'holotype. Les relations de cette espèce sont examinées. Elle est provisoirement placée dans le genre *Sphenomorphus* Fitzinger, 1843.

MOTS CLÉS

Reptilia,
Lacertilia,
Scincidae,
Siaphos tridigitus,
Sphenomorphus,
Laos,
Vietnam,
morphologie.

INTRODUCTION

Bourret (1939) described, as *Siaphos tridigitum*, a small skink from “Bach Ma, Annam”, now Bach Ma, Thua Thien-Hue Province, Vietnam. The description was based on a single specimen (MNHN 1948.0060, Paris) found dead on the road and presented to him by Monsieur Poilane. The specimen was probably not in a good state of preservation when found to judge from the circumstances of its discovery and certain aspects of shape in the original figure (Bourret 1939: fig. 7), which when seen in the actual specimen are clearly due to moderate desiccation and perhaps a mild degree of putrefaction. The unique specimen was unusual in several regards, most notably in having only three digits on the front foot. The species has not been seen again (see for example, Nguyen & Ho 1996), and under the IUCN “50 year rule” (if a species has not been seen for 50 years, a presumption of extinction is warranted) might have been thought extinct. However, a second specimen has recently come to light in South Laos (Teynié *et al.* 2004), which not only demonstrates that the species is still extant but also provides a basis for a more detailed description and an assessment of possible relationships. The genus *Siaphos* Gray, 1839, an emendation of *Saiphos* Gray, 1831, being masculine, the species should be known as *Siaphos tridigitus*.

The second specimen (MNHN 2003.3367; sex unknown) was obtained during a herpetological survey of the herpetofauna of South Laos conducted by members of the association “Société d’Histoire naturelle Alcide d’Orbigny” (Clermont-Ferrand, France). It was collected in Sepian, Boloven Highlands, Champasak Province, Laos, at about 1200–1250 m a.s.l. (Fig. 1). The animal was collected at day, hidden inside a log lying on grass near a small creek in an open forest.

ABBREVIATIONS

Morphological abbreviations

Measurements

HL head length;
SVL snout-vent length.

Scalation

C chin scale;
F frontal;

FN frontonasal;
FP frontoparietal;
IL infralabial;
IP interparietal;
L loreal;
M mental;
N nasal;
NU nuchal;
P parietal;
PF prefrontal;
PM postmental;
PO preocular;
PSL postsupralabial;
PSO presubocular;
PT pretemporal;
R rostral;
SC supraciliary;
SL supralabial;
SO supraocular.

Abbreviations of collections

BMNH British Museum of Natural History (now The Natural History Museum), London;
MNHN Muséum national d’Histoire naturelle, Paris;
NHMB Naturhistorisches Museum Basel;
RMNH Rijksmuseum van Natuurlijke Historie (now National Museum of Natural History), Leiden.

SPECIMENS EXAMINED. — *Sphenomorphus alfredi*: BMNH 1946.8.19.40 (holotype). — *Sphenomorphus butleri*: BMNH 1946.8.17.7-9 (syntypes). — *Sphenomorphus cophias*: BMNH 1946.8.3.15 (holotype). — *Sphenomorphus parvus*: NHMB 4738 (holotype). — *S. sananus*: RMNH 5508 (syntype).

RESULTS

DESCRIPTION OF THE SECOND SPECIMEN OF *SIAPHOS TRIDIGITUS* (FIGS 2; 3)*Morphology*

In general aspect, a small (SVL 36.5 mm), medium brown skink with a thin darker brown dorsolateral stripe and relatively short limbs, the anterior pair of which are tridactyle and the posterior pair pentadactyle.

In detail, HL 6.35 mm; SVL 36.5 mm, 5.7 times length of head (= elongation index); front limb 5 mm, 13.7% of snout-vent length and with three digits; rear limb 8.5 mm, 23.6% of SVL and with five digits; on pes, digit four slightly shorter

than digit three; dorsal scales on fourth digit of pes, in two rows basally and in single row of three scales distally; subdigital lamellae on fourth digit of pes 7-8.

Scalation

Rostral a half circle in apical view; supranasals absent; frontonasal wider than long; prefrontals widely separated; supraoculars four, first two contact frontal on each side; frontoparietals present; interparietal present, larger than either frontoparietal; parietal eyespot present; parietals meet posterior to interparietal; wide nuchals two on each side.

Nasal and first supralabial fused; nostril in dorsal central position in combined nasal and first supralabial; loreal single; presuboculars two, upper much smaller than lower; preocular single; supraciliaries seven, first contacts frontal, first three contact first supraocular on each side, sixth large and projecting slightly between third and fourth supraoculars; pretemporals two; postsuboculars two; upper palpebrals in contact with supraciliaries, last large and projecting medially; lower eyelid moveable, scaly, its lowermost row of scales becoming pigmented and extending outside eyelid proper; primary temporal single; secondary temporals two, upper overlaps lower; tertiary temporal single; supralabials six (counting supranasal fused to nasal as first); postsupralabials two; external ear opening absent, its position indicated by scaly depression.

Mental a half oval in apical view; postmental wider than long; infralabials five on each side, first (only) contacts postmental; pairs of large chin scales three, members of first pair in contact, members of second pair separated by one scale and members of third pair separated by three scales.

Body scales smooth, glossy; longitudinal scale rows at midbody 18; paravertebral scale rows 50, slightly larger than more lateral scales; inner pre-anals overlap outer; mid-ventral caudals in six pairs basally and in single wide row distally.

Colour in preservative

Dorsum medium brown; a thin diffuse dark brown dorsolateral stripe; lower sides brown spotted; sides

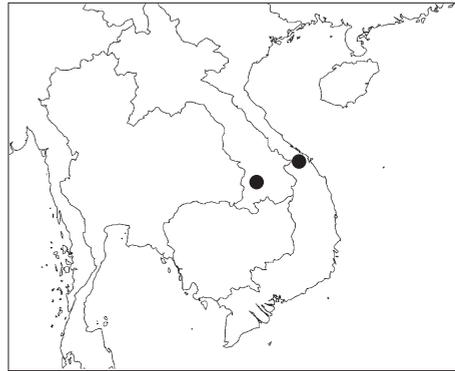


FIG. 1. — Distribution of *Sphenomorphus tridigitus* Bourret, 1939 in Southeast Asia.



FIG. 2. — The second specimen of *Sphenomorphus tridigitus* Bourret, 1939 (MNHN 2003.3367).

of chin dark spotted; venter of neck and body plain; venter of tail dark spotted basally, suddenly becoming gray over regenerated portion.

Osteology

Presacral vertebrae 27; phalanges of manus/pes **0.3.4.4.0/2.3.4.4.3** (bold shows digits reduced from the phalangeal configuration that is almost certainly primitive for Squamates [Romer 1956], skinks and *Sphenomorphus*: 2.3.4.5.3/2.3.4.5.4).

TABLE 1. — Small species of *Sphenomorphus* Fitzinger, 1843 from Southeast Asia that share four or more derived character states with *Siaphos tridigitus* Bourret, 1939.

Character	<i>S. alfredi</i> (Boulenger, 1898)	<i>S. parvus</i> (Boulenger, 1897)	<i>S. butleri</i> (Boulenger, 1912)	<i>S. cophias</i> (Boulenger, 1908)	<i>S. sananus</i> (Kopstein, 1926)
Prefrontals separated	+	–	–	+	–
Anterior supraciliary contacts frontal	+	+	+	?	–
Nasal and first supranasal fused	–	–	–	–	–
Loreal single	+	–	–	–	–
Supralabials six	+	+	+	+	+
Ear opening absent	–	+	–	+	+
Infralabials contacting postmental one	+	+	+	–	+
Manus phalanges	+	+	+	+	+
≤ 2.3.4.4.3	2.3.4.4.3	2.3.4.4.3	2.3.4.4.3	2.3.4.4.3	2.3.4.4.?
Pes phalanges	–	+	–	–	–
≤ 2.3.4.4.3	2.3.4.5.4	??.4.4.3	2.3.4.5.4	2.3.4.5.4	2.3.4.5.4
Distribution	North Borneo	Sulawesi, Indonesia	Larut Hills, Perak, Malaysia	Gunung Tahan, Pahang, Malaysia	Sula Is., Indonesia

DISCUSSION

COMMENTS ON THE ORIGINAL DESCRIPTION OF *SIAPHOS TRIDIGITUS*

The original description does not conform to the actual specimen in two important regards. First, and perhaps most importantly, there were said to be a pair of symmetrical scales in place of the frontonasal and prefrontals. These scales were given the rather distinctive name of “boucliers”, which is actually the French term for the carapace of crustaceans, and were figured as two rather oblong scales lying in the position of the frontonasal and prefrontals. However, the actual specimen has a frontonasal and two small, widely separated prefrontals; in other words, a totally normal morphology. And strangely, three lines later in the description, the existence of prefrontals is acknowledged in using the prefrontal to help describe the location of another scale.

The second significant error in the description is the separation of the nasal and first infralabial instead of their fusion. These two scales are not described, but the figure clearly shows the two scales as being separate.

COMPARISON OF THE TWO SPECIMENS OF *SIAPHOS TRIDIGITUS*

In the manus of MNHN 2003.3367, the metacarpals of digits 1 and 5 are obvious, demonstrating

unequivocally that it is these digits that have been lost. The two specimens of *Siaphos tridigitus* are fairly similar to one another when the poor state of preservation of the type is taken into account. The two differ unequivocally in two regards. The number of longitudinal scale rows at mid-body is 20 in the holotype and 18 in the new specimen. Although skinks with very low mid-body scale row counts tend to show little variation in this variable, this difference is not significant. Similarly, the number of paravertebral scales is 51 in the holotype and 50 in the new specimen. Again, this difference is trivial.

The poor state of preservation of the holotype makes other possible differences between it and the second specimen more equivocal. For example, the holotype appears to have the loreal fused to the preocular, whereas the second specimen has the two scales separate.

RELATIONSHIPS OF *SIAPHOS TRIDIGITUS*

Siaphos tridigitus is clearly a member of the *Sphenomorphus* group of lygosomine skinks (Greer 1979) on the basis of supranasals absent and inner preanals overlapping the outer preanals. The species has several clearly derived character states within the *Sphenomorphus* group and at least some of these characters, if not all, might be expected to be shared with its closest relative. These characters are:

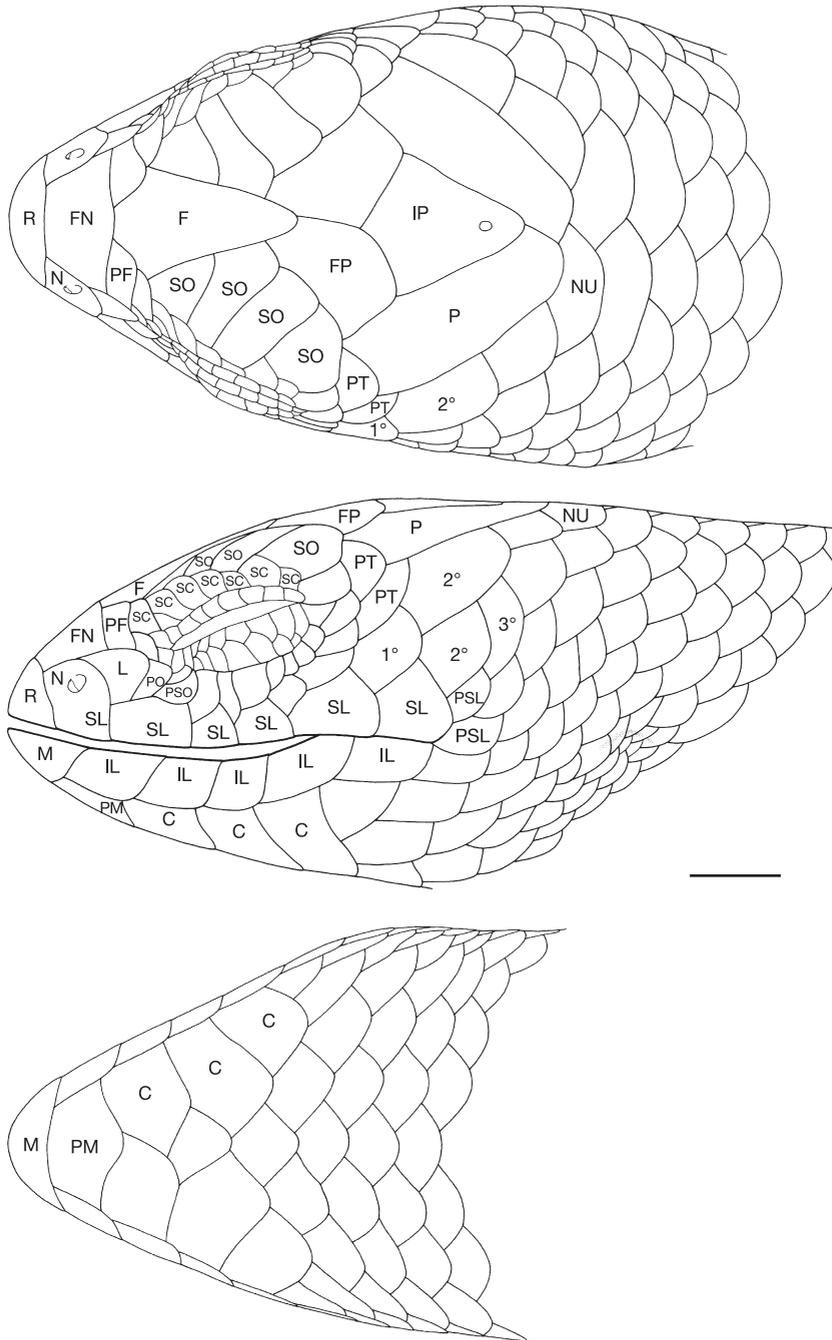


FIG. 3. — Head of the second specimen of *Sphenomorphus tridigitus* Bourret, 1939 (MNHN 2003.3367), with the taxonomically important head scales labelled. See Abbreviations for the scale nomenclature, and: 1°, primary temporal; 2°, secondary temporal; 3°, tertiary temporal. The small upper presubocular scale is not labelled. Scale bar: 1 mm.

prefrontals small and widely separated (instead of contacting); anterior supraciliary contacting frontal (separated); nasal and first supralabial fused (distinct); loreal single (two); supralabials six (seven); external ear opening absent (present); infralabials contacted by postmental one (two); presacral vertebrae 27 (26); digits of manus three, with phalanges 0.3.4.4.0 (2.3.4.5.3), and digits of pes with phalanges 2.3.4.4.3 (2.3.4.5.4).

Unfortunately, all but one of these characters are common in the *Sphenomorphus* group, especially among small species living in the litter. The exception is the fused nasal and first supranasal. This character occurs elsewhere in the *Sphenomorphus* group only in *S. schultzei* (Vogt, 1911) from New Guinea. However, this latter species is part of the species group *Sphenomorphus maindroni* (Sauvage, 1878), which has a unique character not seen in *Siaphos tridigitus* (a pretemporal scale) and is centred well to the east in New Guinea (Greer & Shea 2004).

The genus *Saiphos* (as was the original spelling [Gray 1831] and not the emended spelling *Siaphos* [Gray 1839] used by Bourret [1939]) is now restricted to a single species from southeastern Australia, the semi-fossorial *Saiphos aequalis* (Gray, 1825). The two species share a number of derived characters, but the wide geographical separation between the two species would suggest that the similarity is convergent. Furthermore, most of the semi-fossorial and fully fossorial species of southeast Asia such as *Isopachys* Lönnberg, 1916, *Larutia* Böhme, 1981, *Leptoseps* Greer, 1997 and *Parvosцинus* Ferner, Brown & Greer, 1997 also share many of the species' derived characters and on geographical grounds are more likely to be related to it.

There are also a few small species in southeast Asia (Table 1) that are not as modified as some of the more fossorial species in the area and also share several of the derived characters of *Siaphos tridigitus*. These species are currently placed in the catch-all genus *Sphenomorphus* Fitzinger, 1843, and we rec-

ommend that *Siaphos tridigitus* be relegated to this group pending its taxonomic subdivision.

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REFERENCES

- BOURRET R. 1939. — Notes herpétologiques sur l'Indo-Chine française. XVIII. Reptiles et batraciens reçus au laboratoire des Sciences naturelles de l'Université au cours de l'année 1939. Descriptions de quatre espèces et d'une variété nouvelles. *Bulletin général de l'Instruction publique*, Hanoi, 19^e Année (4, décembre), Annexe: 5-39, 1 pl.
- GRAY J. E. 1831. — A synopsis of the species of the class Reptilia, in GRIFFITH E., *The Animal Kingdom Arranged in Conformity with its Organization by the Baron Cuvier*. Volume 9. Whittaker, Treacher and Co., London: 1-110.
- GRAY J. E. 1839. — Catalogue of the slender-tongued saurians, with descriptions of many new genera and species (contd.). *Annals and Magazine of Natural History* 2: 331-337.
- GREER A. E. 1979. — A phylogenetic subdivision of Australian skinks. *Records of the Australian Museum* 32 (8): 339-371.
- GREER A. E. & SHEA G. 2004. — A new character within the taxonomically difficult *Sphenomorphus* group of lygosomine skinks, with a description of a new species from New Guinea. *Journal of Herpetology* 38 (1): 79-87.
- NGUYEN V. S. & HO T. C. 1996. — *Danh lục bò sát và êch nhái Việt Nam [= A Checklist of the Reptiles and Amphibians of Vietnam]*. Nhà xuất bản khoa học và kỹ Thuật, Hà Nội [= Faculty of Science and Technology Publishing House, Hanoi], 264 p. (in Vietnamese).
- ROMER A. S. 1956. — *Osteology of the Reptiles*. University of Chicago Press, Chicago, 772 p.
- TEYNIÉ A., DAVID P., OHLER A. & LUANGLATH K. 2004. — Note on a collection of amphibians and reptiles from South Laos, with a discussion of the occurrence of Indo-Malayan species. *Hamadryad* 29 (1): 33-62.

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