FIELDIANA · ZOOLOGY

Published by
FIELD MUSEUM OF NATURAL HISTORY

Volume 51 FEBRUARY 27, 1967 No. 4

Systematic Status of Three Scincid Lizards (Genus *Sphenomorphus*) from Borneo

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Scincid lizards of the genus *Sphenomorphus* are not commonly collected in numbers because of their small size, secretive habits, and propensity for low population densities within the rain forest. Two years of intensive work by six to eight collectors in four ecologically and geographically diverse areas in Sarawak yielded but 58 specimens of six species. Fifty-three of these individuals are samples of species unknown a decade ago. Inger and Hosmer (1965) described two new species (*S. cyanolaemus* and *S. haasi*) from this material. As identification of the collection was completed, six skinks remained to which names could not be readily assigned. These six specimens are easily separable into three morphologically distinct groups. After careful comparison of these groups with the known forms of this genus from Southeast Asia and the East Indies, I believe that the evidence warrants the recognition of one new species. The remaining two groups are apparently conspecific with two previously known species. One, described in 1900 by Boulenger, is reported from Borneo for the first time. The second is apparently conspecific with a species described by Lidth in 1905 from Indonesian Borneo and heretofore known only from the holotype.

The genus *Sphenomorphus* is large and vaguely delimited. Whether or not it represents a natural group in any sense of the word is not known and will not be pursued in this brief report. These samples exhibit characters which place them in the partially synonymous taxa of the following authors: Boulenger (1887), subgenus *Hinulia* of *Lygosoma;* de Rooij (1915), section *Hinulia* of *Lygosoma;* Taylor (1922),

Library of Congress Catalog Card Number: 66-30675

genus *Sphenomorphus;* Smith (1937), section *Sphenomorphus* of *Lygosoma.* The following character states constitute the evidence for this generic assignment: supranasals absent, no fusion of dorsal head scales, frontal not broader than supraocular region, no auricular lobules, eyelids present and lower lid scaly, length of hind limb greater than distance from arm to center of eye and less than distance from arm to tip of snout.

The following abbreviations have been used: BM(NH)—British Museum (Natural History); FMNH—Field Museum of Natural History. Dr. A. G. C. Grandison kindly examined British Museum specimens and forwarded critical data to the author.

Acknowledgments.—My thanks go to Dr. R. F. Inger and Mr. Hymen Marx for their criticism and suggestions; my wife Betty and Mrs. Marion Anderson for typing of the manuscript. Mr. H. K. Voris and Miss Wilma Wallace kindly took the time to test the key.

This study was supported by the National Science Foundation (grant nos. G-6257, G-20867, and GB-1049).

Sphenomorphus maculicollus new species. Figure 1.

Holotype.—Field Museum of Natural History no. 161484. An adult male collected by Mr. William Hosmer near Sungei Pesu, Bintulu District, Fourth Division, Sarawak, Malaysia on May 22, 1964 (fig. 4).

Diagnosis.—Two anterior loreals; 8 supraoculars; a distinct dark spot on each side of the neck; no auricular lobules; 36 scale rows.

Description of holotype.—Habitus slender; snout short; head deep; limbs and digits well developed.

Head scales smooth but not polished, iridescent; rostral broad, nearly trapezoidal, forming long slightly curvilinear suture with frontonasal; latter twice as broad as long, not touching frontal, meets anterior upper loreal laterally; prefrontals well developed, separated by an azygous scale middorsally; frontal long, broadest between first supraoculars and with posterior apex between fourth supraoculars, equal to frontoparietals and interparietal in length; 8 supraoculars (counting inclusively to that scale which touches both parietal and frontoparietal), 2–3 small scales follow eighth; frontoparietals not fused, longer than interparietal; interparietal nearly as broad as long; parietals meet behind interparietal, greatest length less than twice greatest width; no nuchals.

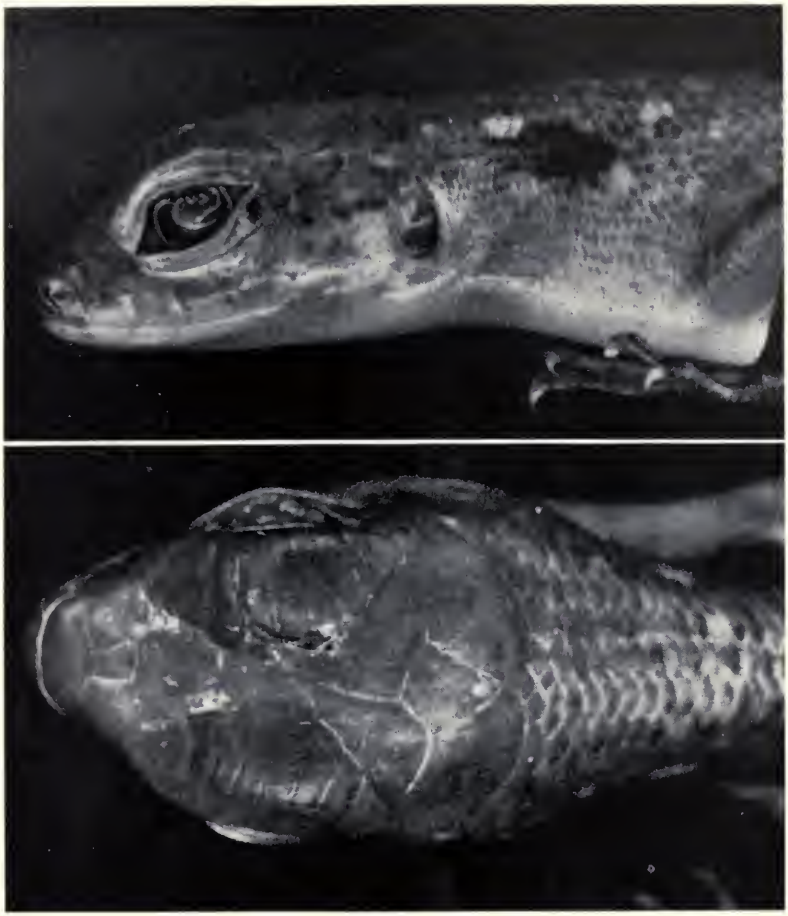

FIG. 1. Holotype of *Sphenomorphus maculicollus* (FMNH 161484).

Nostril in single nasal; no supranasal; 2 anterior loreals; 2 posterior loreals; one preocular; 5 supralabials (to posterior corner of eye), first smallest, fourth below lens of eye; circumorbital ring of small scales separates the supralabials from lower eyelid; 15/16 supraciliaries; one slightly enlarged temporal borders parietal laterally; tympanum slightly ovoid, erect, slightly sunken, height equals half length of eye opening and three-fourths distance from nostril to anterior corner of eye.

Posterior border of mental straight, closer to posterior than to anterior edge of first supralabial along margin of mouth; 6 infralabials

(to infralabial touching last supralabial), first longest, sixth shortest; azygous postmental two-thirds as long as broad; 3 pairs of chin shields, first pair longest, juxtaposed, second pair separated by one scale, third pair separated by 3 scales.

Scales of body in 36 rows at point midway between vent and axilla, shiny, iridescent, with very fine striae or pitting; lateral scales slightly smaller than dorsals and ventrals; 90 scales between mental and vent; 2 enlarged preanal plates, width equal to that of anterior chin shield.

Scales of ventral surfaces of limbs slightly smaller than those of dorsal surfaces; palms and soles covered with smooth, flat, polygonal to ovoid, juxtaposed scales; 17/18 broad, smooth lamellae beneath fourth toe, 13 beneath fourth finger.

Proximal 10 rows of subcaudals small; posterior to this point, subcaudals larger than neighboring scales.

Description of coloration taken from field notes and laboratory observations; specimen only slightly faded in alcohol. Head light brown dorsally, all scales sprinkled with minute dark brown spots, laterally brown grades to white on supralabials, some aggregations of dark spots along labial margins. Chin and throat immaculate white.

Scales of dorsal and dorsolateral surfaces light brown; varying density of pigment spots gives appearance of irregular pattern; dorsolaterally there is a row of small white spots; below and between first two spots on side of the neck is a single dark spot roughly 13 scales in area; laterally there are some scattered white spots; ventrolaterally the tan ground color gives way to the lighter ventral coloration; dorsal surfaces of limbs are light brown with small irregular white spots; white spotting on tail forms closely spaced vertical bars, flecked with dark brown, posteriorly the bars meet middorsally, interspaces are lighter brown. All ventral surfaces are immaculate white except posterior two-thirds of tail with dark brown mottling, and gray palms and soles.

Measurements (mm.).—Snout-vent, 49; tail, 107; hind limbs, 20; axilla-snout, 20; head length (to ear opening), 9.7; head depth (behind eye), 6.2.

Comparisons.—For comparative tables of data on Bornean *Sphenomorphus* see Inger and Hosmer (1965). This is the first specimen of *Sphenomorphus* from Borneo to possess eight supraoculars; 50 per cent of specimens of *S. multisquamatus* and occasional specimens of *cyanolaemus* and *sabanus* have seven. Number of scale rows clearly

distinguishes *multisquamatus* (42–49) and *haasi* (41–42) from *maculicollus* (36). The species *sabanus* and *cyanolaemus* sometimes have as few as 37–38 scale rows; *sabanus* has strongly barred labials and no dark markings of any kind on the neck, while the males of *cyanolaemus* have a dark blue throat and no white spots dorsally. The Bornean species *S. shelfordi* (Boulenger), *S. buttikoferi* (Lidth), *S. hallieri* (Lidth), *S. alfredi* (Boulenger), and *S. tenuiculum* (Mocquard) all possess but four supraoculars. The Papuan forms *S. stickeli stickeli* Loveridge, *S. s. melanopleurus* Inger, and *S. jobiensis* Meyer have 21 fourth toe lamellae as does *S. variegatus* (Peters) from Mindanao. A few specimens of *stickeli* have eight supraoculars.

Sphenomorphus stellatus (Boulenger)

Lygosoma stellatum Boulenger, 1900, Ann. Mag. Nat. Hist., **6**, p. 192—type locality: Perak: Larut Hills; 1912, Fauna Malay Pen., p. 87; Smith, 1921, Proc. Zool. Soc. London, **1921**, p. 431; 1935, Fauna Brit. India, Rept. Amph., **2**, p. 284.

Sphenomorphus stellatus, Mittleman, 1952, Smithsonian Misc. Coll., **117**, p. 30; Taylor, 1963, Univ. Kansas Sci. Bull., **44**, p. 1008.

Lygosoma annamiticum Boettger, 1901, Ber. Senckenberg. Ges., **1901**, p. 47—type locality: Annam: Phuc-Son.

Taxonomic notes.—This form was described from specimens collected in the Larut Hills of Perak, Malaya (Boulenger, 1900). It has 24 scale rows, the two dorsalmost rows twice as broad as long, oval ear opening slightly smaller than eye with no auricular lobules, and "Bronze-colour above, spotted all over with black and white . . . lower parts bluish or greenish white." According to the measurements given by Boulenger (1900) the ratio of the fore and hind limbs to body length are high (see Table 1).

On December 14, 1962, Mr. F. W. King collected a specimen of *Sphenomorphus* in Sarawak which is similar to *S. stellatus* (Boulenger). The specimen from Sarawak possesses 24 rows of smooth scales with the dorsalmost rows enlarged. The example from Sarawak differs from the syntypes in possessing the following character states: nearly immaculate bronze dorsum, strongly patterned chin and throat, fewer subdigital lamellae on fourth toe and fourth finger, and shorter limbs (see Table 1). The magnitude and number of these morphological differences along with the geographical isolation of these populations suggests genetic differentiation to the extent that population interbreeding would not be possible. This would warrant specific recognition of the Sarawak specimen.

TABLE 1.—Ratios, scale counts, and relationships of five populations of *Sphenomorphus stellatus* (Boulenger).

	South Viet Nam (Dalat and Phuc-Son)	Thailand	Borneo	Malaya
Fourth toe lamellae	20–22	18	19	20–23
Fore limb/snout-vent	0.21–0.26	0.28	0.24	0.33
Hind limb/snout-vent	0.36–0.38	0.35	0.36	0.45
Ear opening > or < ½ eye opening	<	>	<	<
Frontal touching fronto-nasal	+	−	−	−
Dorsal pattern rows of spots	+	+	−	+
Venter immaculate	−	+	−	+
Pairs nuchals	3–4	2–3	3	2–3
Scale rows	24	22	24	24
Upper temporal	large	large	large	large
Middorsals	broad	broad	broad	broad

Smith (1935) synonymized *L. annamiticum* Boettger with *L. stellatum*. Boettger's sample (2 individuals) has 24 scale rows, dorsalmost two rows enlarged, and the distinctive dorsal color pattern. These specimens, from Phuc-Son, N. Annam are characterized by the separation of the prefrontals and the presence of markings on the throat.

Taylor (1963) collected a specimen in the isolated highland region of southeastern Thailand at Khao Sa Bap (=Khao Sebap or Khao Sabap), Chanthaburi Province. He noted some differences between his specimen and Smith's (1935) description of *L. stellatum* Boulenger, but considered the specimen conspecific with those of Boulenger and Smith.

Grandison (*personal communication*) has provided the following data on the syntypes and a specimen from Annam. Both syntypes, BM(NH) 1946.8.3.26 and 1946.8.17.10, have enlarged temporals (see fig. 2) and the height of the tympanum is less than one-half the length of the eye opening. The tympanum is described as "broadly oval." The example from Dalat, Annam, BM(NH) 1921.4.1.158, also has enlarged temporals and there is some "dark banding at the edges of the labials and gulars." The tympanum is "round" and equal in height to one-half the length of the eye opening.

Grandison also notes that the enlarged vertebral series is anteriorly more distinct from the adjoining rows in the Annam specimen when compared with the syntypes. That the characters form a mosaic distribution among these five small samples is shown by Table 1.

There is no way at present to determine whether these five populations represent five species, a single polytypic species, or some intermediate combination of genetic relationships. The presence of the following suite of characters in all five geographic areas suggests that this may be a single species: enlarged temporals, low number of scale rows, enlarged middorsal scale rows, four supraoculars, and nuchals present. The hypothesis that these populations represent a polytypic species seems biologically reasonable and taxonomically conservative. The apparent mosaic of some characters may be the result of evolution in response to differing selective pressures upon relatively small populations in isolated or partially isolated upland communities. The Bornean population is not recognized as differing taxonomically from the mainland populations. The mosaic nature of the character state distributions and small sample sizes are persuasive arguments in favor of this treatment.

Diagnosis.—Scales in 22–24 rows midway between axilla and groin; upper posterior temporals greatly enlarged; 4 supraoculars; enlarged middorsal scale rows; throat with or without barred pattern; dorsum light brown, with or without rows of spots; limbs moderate.

Description of Bornean example.—Habitus slender, body long, limbs moderately strong, head with moderately steep loreal region, snout pointed, head distinguishable from neck, tail (broken) round.

All scales smooth and polished, somewhat iridescent, except on palms and soles; rostral large, curves onto dorsal and lateral surfaces of snout, suture with frontonasal short, one-third width of frontonasal; width of latter less than twice length, touches anterior loreal laterally; prefrontals large, juxtaposed, suture more than one-half length of scale; frontal longer than parietals and interparietal, blunt posterior apex between second supraoculars; 4 supraoculars, first longest, second widest; frontoparietals not fused, contact supraoculars 2–4 laterally; interparietal shorter than frontoparietals, only slightly longer than broad; parietals meet behind interparietal along short suture, greatest length more than twice greatest width.

Nostril low in nasal; no supranasal; 2 loreals, anterior taller than long, posterior roughly as tall as long; 3 presuboculars, first large, beneath lower preocular; upper and lower preocular present, latter largest; 8 supraciliaries, first and eighth largest; 2 anterior and 3 posterior suboculars; 5/6 supralabials, fourth or fifth beneath lens of eye; 2 small lower temporals; one small anterior and one very large posterior upper temporal; tympanum round, diameter less than half length of eye opening.

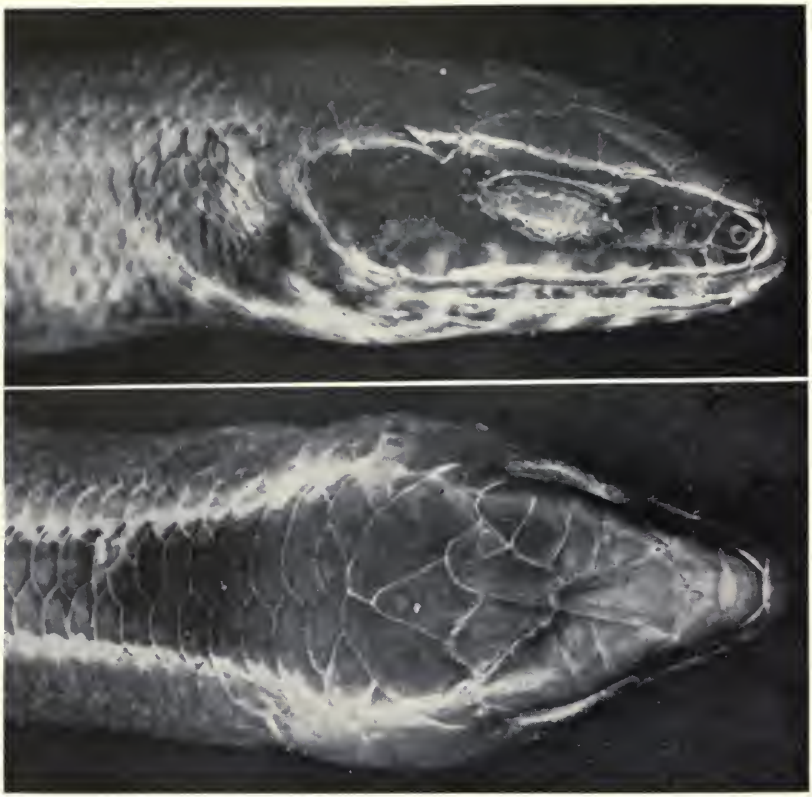

FIG. 2. *Sphenomorphus stellatus* (FMNH 138544).

Mental width roughly twice length, posterior border straight, at margin of mouth meets first supralabial at midpoint; 6 infralabials, first shortest, fifth longest; single postmental, length more than twice width; 3 pairs of chin shields (enlarged scales bordering infralabials), first pair juxtaposed, second separated by one scale, third separated by 3 scales; one pair of elongate postgenials follows last pair of chin shields, separated by 6 scales.

Six nuchals in 2 transverse rows; 2 middorsal scale rows more than twice as broad as long, laterals and ventrals roughly equal, length more than one-half width, scales in 24 rows midway between axilla and groin; scales of anterior surfaces of limbs larger than those of posterior surface; palms and soles with elongate, juxtaposed, obtusely keeled scales; subdigital lamellae obtusely keeled, 19 beneath fourth toe, 12 beneath fourth finger, a bluntly bicarinate scale precedes the subdigital lamellae of digits 3 and 4 of the hand (see Boettger, 1901).

Two enlarged preanal plates; subcaudals broader than neighbors.

Color in preservative: all scales of dorsal surfaces bronze, covered with pinpoints of dark pigment, no spots or pattern.

Labials dark, all except first with a white spot; mental, postmental, and chin shields white with dark bands on posterior one-third which overlaps onto anterior tip of following scale; throat with 7–8 distinct longitudinal, dark bands between scale rows, bands fade in pectoral region; abdomen whitish with some pinpoints of dark pigment on each scale; preanals darkened by concentration of pigment; some light flecks appear on side of neck and thorax, tan coloration gives way to whitish ventrolaterally.

Limbs bronze with white flecks dorsally, whitish ventrally; palms and soles gray; tail stump bronze with fairly distinct vertical rows of 3–4 white spots laterally, whitish ventrally with irregular dark line of pigment spots between subcaudals and neighboring scales.

Comparison.—Five other species of Bornean *Sphenomorphus* have four supraoculars. They are *S. tenuiculus* (Mocquard), *S. shelfordi* (Boulenger), *S. buttikoferi* (Lidth), *S. hallieri* (Lidth), and *S. alfredi* (Boulenger). None of these species has enlarged middorsal rows. *Sphenomorphus shelfordi* has 32 scale rows and 28 fourth toe lamellae; *tenuiculus* has 26 scale rows, 24 fourth toe lamellae and no nuchals; *buttikoferi* has 21–23 fourth toe and 15–16 fourth finger lamellae. *Sphenomorphus hallieri* has very small parietals which do not contact the supraoculars and two pairs of chin shields; *alfredi* has 7–12 fourth toe lamellae and 28–30 scale rows. Inger has recently re-examined the types of all five species and the counts given here are his.

Four species from New Guinea have four supraoculars and nuchals. *Sphenomorphus minutus* (Meyer) has 22 scale rows, 15 fourth toe lamellae, prefrontals very small and widely separated, and a dorsal pattern of spots and streaks; *Sphenomorphus nototaenius* (Boulenger) has 24 scale rows with two enlarged vertebral rows and 18 fourth toe lamellae; however, the prefrontals do not meet, there is no greatly enlarged temporal, and there is a dorsal pattern of streaks and an immaculate venter. *Sphenomorphus elegantulus* (Peters and Doria) and *S. nigrolineatus* (Boulenger) have 26–28 rows and both have divided subdigital lamellae.

Localities.—FMNH no. 138554; an adult male collected by Mr. F. W. King near Nanga Tekalit on the Mengiong River, Kapit District, Third Division, Sarawak, Malaysia on December 14, 1962; see Figure 4.

Sphenomorphus hallieri (Lidth)

Lygosoma hallieri Lidth, 1905, Notes Leyden Mus., **25**, p. 197—type locality: Borneo: Putus Sibau; de Rooij, 1915, Rept. Indo-Austr. Arch., **1**, p. 210.

Taxonomic notes.—The third sample, consisting of four specimens, was similar enough to the original description of *Sphenomorphus hallieri* (Lidth) to warrant further investigation. Dr. Hoogmoed kindly allowed me to examine the holotype, Leiden 4456, the only known specimen. The species is distinguished from all other known Bornean skinks by the separation of the parietals from the supraoculars. I

FIG. 3. *Sphenomorphus hallieri* (FMNH 161486).

believe the sample from Sarawak to be conspecific with the holotype of *hallieri* (see Table 2 and following redescription). Measurements and ratios of holotype are in parentheses. Also see Figure 3.

Diagnosis.—Prefrontals juxtaposed; parietals small, separated from supraoculars; tympanum slightly sunken, without auricular lobules; 4 supraoculars; 36–39 scale rows; limbs moderately developed, hind limbs longer than distance between anterior corner of eye and the forelimb; 2 pairs of chin shields.

Description.—Habitus slender; tail round (slightly compressed in type), head scarcely distinct from neck; snout blunt; limbs and digits not greatly reduced.

All scales except those of palms, soles and lamellae smooth and polished; rostral hexagonal, breadth equals 3 times height, suture with frontonasal straight, roughly equal to two-thirds width of frontonasal; latter nearly trapezoidal, length equals one-half width, meets anterior loreal and nasal laterally; prefrontals juxtaposed, suture

TABLE 2.—Measurements (mm.) of known specimens of *Sphenomorphus hallieri* (Lidth).

	Leiden 4456	FMNH 161486	FMNH 161485	FMNH 161488	FMNH 161487
Snout-vent	41	41	40	44	21
Axilla-groin	21	21	21	23	10
Axilla-snout	16	15	16	16	9
Head (to posterior edge of tympanum)	7.9	7.6	7.3	8.1	5.2
Fore limb	10	9	9	10	5½
Hind limb	14	13	15	15	7½
Fore limb to anterior corner of eye	12.5	12.9	12.9	13.4	7.2
Sex	?	♀	♀	♂	juv.

length more than half scale length, meet anterior and posterior loreals laterally; frontal width 0.60–0.67 (0.60) times its length, posterior apex blunt, length roughly equals length of frontoparietal and interparietal together, but greater than interparietal and parietal together; 4 supraoculars (to suture between frontoparietal and scale separating parietals from the supraoculars); 2 frontoparietals; interparietal 4-sided, width roughly 0.8 length; parietals small, meet behind interparietal, diagonal length equals 1.5–2.1 times greatest width, diagonal length less than diagonal length of frontoparietals; a slightly enlarged scale separates the parietal from the fourth supraocular; one specimen (FMNH 161485) has one nuchal, the others have none.

Nostril in single nasal; no supranasal; two loreals, both taller than long, posterior slightly longer than anterior; 5–6 (5) supralabials, fourth or fourth and fifth below lens of eye; 9–10 (9/10) supraciliaries; 3–4 small preoculars; 2 slightly enlarged presuboculars precede a complete subocular ring of small scales which separates the supralabials from the lower eyelid; no enlarged temporals; tympanum definitely but not deeply sunken, height is slightly more than half the length of the eye opening and more than three-fourths the distance between the nostril and the anterior corner of the eye.

Posterior border of mental nearly straight, meets first supralabial near its anterior edge; 5 infralabials, second longest, fifth shortest; azygous postmental, length 0.57–0.71 width; 2 pairs of enlarged chin shields, first juxtaposed anteriorly, second and posterior portion of first separated by a single scale; elongate postgenials follow 6 of 7 undamaged chin shields series, contact infralabials, roughly one-third width of and equal to length of second chin shield.

Scales of the body are in 36–39 (36) rows, smooth, polished (iridescent in Sarawak specimens); ventrals 66–76 (76) mental to preanal inclusively, slightly larger than dorsals; 68–70 (70) dorsal scales

FIG. 4. Triangles show localities of *Sphenomorphus stellatus;* stars show localities of *Sphenomorphus hallieri;* circle shows type locality of *Sphenomorphus maculicollus.*

between parietal and the level of the posterior surfaces of the thigh; 2 scales which precede the vent are slightly larger than adjoining scales.

Scales of the anterior surface of the hind limb larger than those of posterior surface; palms and soles covered with polygonal, juxtaposed scales, each with a blunt, low, distally directed elevation; 12–14 (14) broad, smooth lamellae beneath fourth toe, distal ends slightly elevated; 8 lamellae beneath fourth finger; claws neither strong nor long.

Proximal two-thirds of tail without any enlarged subcaudals, distal one-third with enlarged subcaudals.

Coloration in life of FMNH 161485: medium dark brown above, anterior part of body reddish-brown; flanks white, some scales brown, side of head posterior to eye intensely pink, fading toward forelimb; white spot on each supralabial; lower parts white, throat pinkish; infralabials margined with dark brown.

The pink has faded in all preserved specimens; each dorsal scale is light brown with irregular concentrations of dark pigmented spots, on the neck these concentrations give the appearance of fine irregular lines in FMNH 161485; the other Sarawak specimens are more uniform, each dorsal scale is outlined by dark pigment; holotype much faded but retains a dark band behind the eye, interrupted by white spots and gradually fading on thorax.

Ecological note.—FMNH nos. 161486–8 were captured in hill forest under rocks and logs between 8:00 A.M. and 4:30 P.M. FMNH no. 161485 was found moving about quickly in the leaves along the bank of a stream (S. Pesu) at 8:00 P.M.

Localities.—FMNH nos. 161485–8 were collected by Mr. William Hosmer near Sungei Pesu, Bintulu District, Fourth Division, Sarawak, Malaysia. The holotype is from Putus Sibau, Indonesian Borneo (fig. 4).

Sphenomorphus multisquamatus Inger

The measurements cited by Inger (1958) as those of the holotype of *S. multisquamatus* Inger BM(NH) 1929.12.22.99 are in error. The following corrections should be noted: 5 infralabials; 101 scales between mental and vent; 20 subdigital fourth toe lamellae; snout-vent 63.5 mm.

KEY TO THE *SPHENOMORPHUS* OF BORNEO.

1a.	Four supraoculars	2
b.	Five or more supraoculars	7
2a.	Parietals in contact with supraoculars	3
b.	Parietals not in contact with supraoculars	*S. hallieri**
3a.	Scale rows 28 or more	4
b.	Scale rows 27 or less	5
4a.	Fourth toe lamellae 7–12; 28–30 scale rows	*S. alfredi***
b.	Fourth toe lamellae 28; 32 scale rows	*S. shelfordi***
5a.	Width of posterior upper temporal less than interparietal length, no nuchals	6
b.	Width of posterior upper temporal greater than interparietal length, 4–6 nuchals	*S. stellatus***
6a.	Twenty-six scale rows, 24 fourth toe lamellae	*S. tenuiculus***
b.	Twenty-four scale rows, 21–23 fourth toe lamellae	*S. buttikoferi***
7a.	Eight supraoculars, 36 scale rows	*S. maculicollus**
b.	Five to seven supraoculars, scale rows 30–49	8
8a.	Scale rows less than 36	9
b.	Scale rows 36 or more	10

* Holotype examined by Bacon.
** Holotype examined by Inger and his notes studied by Bacon.

9a. Supraoculars usually 5 (rarely 6), scale rows 32–35 . . . *S. kinabaluensis***
b. Supraoculars 6, scale rows 30–32 . . . . . *S. murudensis***

10a. Dorsum dark with scattered, small, whitish (in preservative) flecks . . . . . *S. haasi**
b. Dorsum not as in 10a 11

11a. Dark dorsolateral band beginning behind eye . . . . . *S. cyanolaemus**
b. No dark dorsolateral band 12

12a. Dark bars on labials absent, or when present narrower than light bars, scale rows 42–49 . . . . . *S. multisquamatus**
b. Labials strongly barred, dark bars always wider than light, scale rows 38–42 . . . . . *S. sabanus**

* Holotype examined by Bacon.
** Holotype examined by Inger and his notes studied by Bacon.

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