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A NEW SCINCID LIZARD FROM THE NORTHERN SOLOMON ISLANDS

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During a term of duty by Parker (1962-1963) and a subsequent (1966) collecting trip by him to Bougainville and neighboring islands in the extreme northern Solomon Islands, a previously undescribed species of skink was discovered on Bougainville and Shortland Islands. A single specimen of the new species from Choiseul is also known but has previously been reported in the literature as *Sphenomorphus solomonis* (Burt and Burt, 1932:544).

On the basis of current, but not necessarily phylogenetically correct, generic concepts, the new species is assigned to the genus *Sphenomorphus* and may be known as

SPHENOMORPHUS TANNERI² new species

Holotype: Museum of Comparative Zoology 76551; collected by Fred Parker at Kunua, Bougainville, on 8 June 1963.

Paratypes (423 specimens): NORTHERN BOUGAINVILLE: KUNUA (100 feet above sea level): MCZ 76483, 76484, 22.vi, 11.vii.1962; MCZ 76486-76487, 25-30.xii.1962; MCZ 76488-76550, 76552-76623, 77308-77361, 78091, 78299, 84140, + 2 untagged specimens, 12.v-29.vii.1963; MELILUP (*ca.* 3000 feet a.s.l.): MCZ 89593, 92295, 92326-92339, 92366-92368, 12-20.v.1966; MUTAHI (2700 \pm 500 feet a.s.l.): MCZ 87570-87577, 88799, 89102-89126, 89594, 91430-91437, 92203-92228, 92269-92294, 92296-92302, 92304-92325, 92340-92365, 92372-92377, 9-20.v.1966; RAMAZON RIVER (1600-2400 feet a.s.l.):

¹ Department of District Administration, Kundiawa, Territory of New Guinea.

² The new species is named for Charles Tanner, Honorary Curator of Reptiles at the National Museum, Melbourne, who introduced one of us (Parker) to reptiles several years ago and has since helped in many ways.

MCZ 92229-92236, 19.v.1966; TOPANAS (500 feet a.s.l.): MCZ 88443-88453, 8.v.1966.

SOUTHERN BOUGAINVILLE: MATSIOGU (2100 feet a.s.l.): MCZ 92379-92382, 92522, 2.iv. 24.iii.1966; PAMAUITA (1200 feet a.s.l.): MCZ 92521, 92523, 23.ii, 2.iv.1966; TURI-BOIRU (260 feet a.s.l.): MCZ 87578-87580, 87727-87732, 92496-92501, 92520, 92990-92992, 9-21.iii.1966; MCZ 92369-92371, 26-27.iv.1966.

SHORTLAND: KOLIAI (10 feet a.s.l.): MCZ 89736, 11.iv.1966.

CHOISEUL: American Museum of Natural History 44004.

Diagnosis: *S. tanneri* differs from all other species with 28-32 midbody scales in its species group (Table 4) in the following combination of characters: small size (snout-vent length 52 mm or less); prefrontals forming a median suture; adpressed limbs widely separated; no symmetrical pairs of nuchal scales; middorsal scales subequal rather than with the scales of the two vertebral rows transversely enlarged; dorsum rich dark brown to brownish black with small paler spots on body which often coalesce on the anterior dorsolateral line to form a distinct light line.

S. tanneri is most similar in squamation to *S. nigriventre* de Rooij (1915: 214-215) from southern New Guinea, and *S. antoniorum* Smith (1927: 216-217) from Timor. It differs from *S. nigriventre* in being much smaller in size (snout-vent length 90 mm for *nigriventre*) and lacking the dorsal transverse series of light, dark-edged spots of this species. It differs from *S. antoniorum* in having the prefrontals meeting medially (prefrontals separated or just touching one another in *antoniorum*), and in lacking the light brown dorsum with a heavy clustering of darker brownish spots along the dorsolateral line.

Description (Fig. 1): A cryptic skink ranging in snout-vent length from 23-52 mm; tail slightly longer than snout-vent length; head obtusely conical; limbs pentadactyl, failing to meet when adpressed to body.

Rostral slightly wider than deep, projecting well onto dorsal surface of snout; external naris placed well forward and ventral in a single large nasal; supranasals lacking; frontonasal wider than long, forming a short suture with rostral but separated from frontal by prefrontals, i.e., prefrontals paired and meeting medially (except in one individual); single anterior and posterior loreals; frontal about as long as frontoparietals and interparietal measured along midline, obtusely rounded posteriorly and in contact with

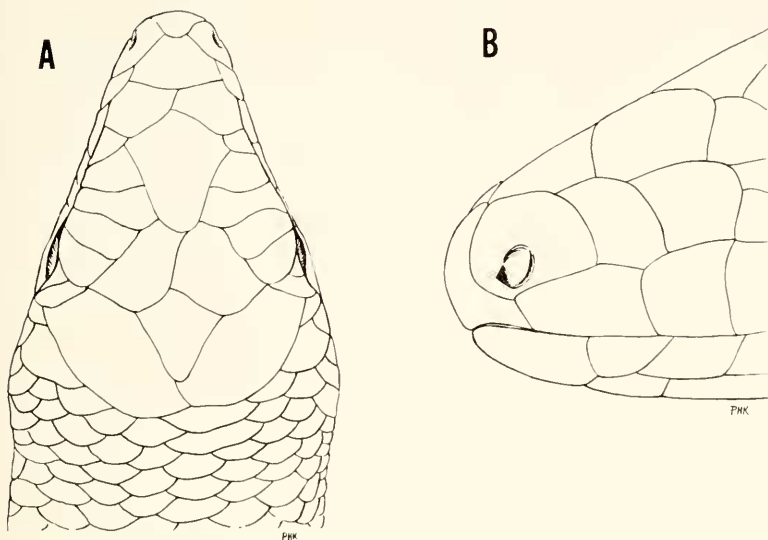


Figure 1. *Sphenomorphus tanneri* (MCZ 92304, paratype): (A) Dorsal view of the head and nape, showing two successive "nuchal" scales on the right side of the nape; (B) nasal area on the left side of the head, showing the external naris situated anteroventrally in the large nasal scale.

2 anteriormost supraoculars; 4 supraoculars; lower eyelid scaly, scales of eyelid separated from supralabials by a complete row of subocular scales; frontoparietals and interparietal distinct, approximately subequal in size; parietals meet behind interparietal; no distinct, symmetrical series of nuchals; 6-7 supralabials, 4th or 5th supralabial below center of eye (Table 1).

Ear opening oval, tympanum slightly sunk below surface; auricular lobes lacking; midbody scales smooth, in 28-32 (usually 30-32, see Table 1) longitudinal rows; midbody scales of dorsum subequal in size; a pair of enlarged preanals; 3 median rows of subcaudal scales subequal in size; 13-20 (usually 15-19, see Table 1) obtusely keeled lamellae beneath 4th (longest) toe; dorsal surface of 4th toe covered distally by a few single scales, medially by 3 longitudinal rows of scales and proximally by 4 or 5 rows (Group IV of Brongersma, 1942).

Color (Fig. 3): In life the color pattern is relatively constant. The dorsum is a rich dark brown to brownish black with small paler spots on the body and tail. Larger light spots on the anterior

dorsolateral line often coalesce to form a noticeably distinct line. The flanks are marked as the dorsum but usually lighter. The chin and throat are heavily marked with black to brown; the anterior venter is whitish to yellowish; the posterior venter and ventral surface of the tail are occasionally translucent yellow, but more often, translucent dull reddish. Some specimens have dark spots under the tail and others show a bar of fine spots on the posterior part of the throat. Preserved specimens lose the yellowish and reddish colors.

Some individuals from the southern Bougainville (Turiboiru, Pamautita and Matsiogu) populations lack the light dorsal spotting and tend to have the dark pigment of the dorsum and sides concentrated through the center of the scales. This gives the appearance of dark longitudinal stripes on an only slightly lighter background.

Distribution (Fig. 2): *S. tanneri* has been collected at both the north and south ends of Bougainville (422 specimens), as well as on Shortland (1 specimen) and Choiseul (1 specimen). Altitudinally, the species is known to range from the coastal lowlands up to about 3000 feet.

Variation: The variation of several meristic characters is summarized in Table 1.

The degree of contact between the prefrontals ranges from a broad median suture to a bare "point contact" at their inner angles. In only a single specimen of the whole series, however, do the prefrontals just fail to meet at their inner angles. In the majority of specimens, the line of contact is at least one-third to one-half the length of the prefrontal.

Large, symmetrical nuchal scales are definitely lacking, although the sporadic occurrence of one or more (serial) large, transverse scales in the 4-5 scale rows posterior to the parietals (Fig. 1) suggests that perhaps the genetic basis for the formation of nuchal scales is still being variably expressed. Such a high degree of variability might well obtain in a previously well-ordered structure that was being secondarily lost.

Either the 4th or 5th supralabial may be below the center of the eye. When it is the 4th supralabial, either the 2nd or 3rd supralabials have fused to form a scale as long as the first supralabial or a small wedge-shaped scale may project between the 2nd and 3rd supralabial, thus separating them except along the edge of the lip where they remain in contact. In most individuals, however, the 5th supralabial is below the center of the eye.

The 4th supralabial occurs below the center of the eye with greater frequency in the populations from southern Bougainville (Turiboiru, Pamauita and Matsiogu = 37%) than in the populations from northern Bougainville (Kunua, Mutahi, Topanas, Ramazon River, Melilup).

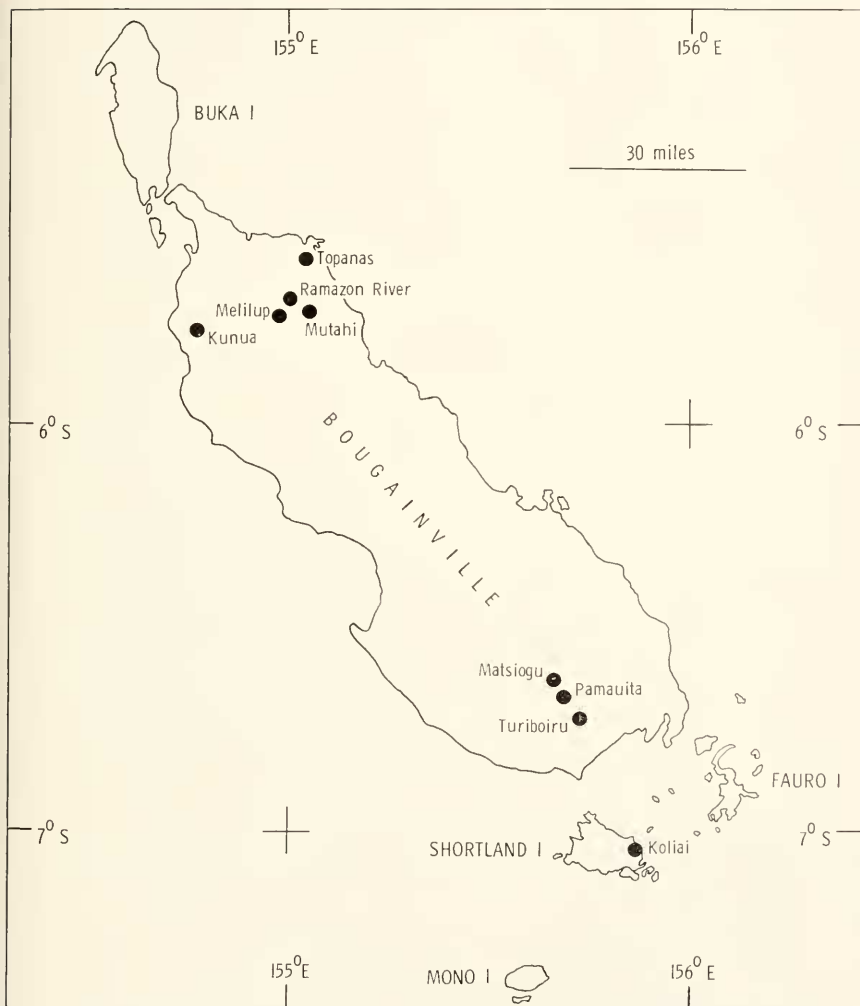


Figure 2. Bougainville and surrounding islands, showing the localities from which *Sphenomorphus tanneri* is presently known. There is also a single specimen from an unknown locality on Choiseul.

Melilup and Ramazon River = $11\frac{1}{2}\%$). The frequency of this trait is probably subject to clinal variation from one end of Bougainville to the other, but the rate of change per unit distance will not be known until populations from the central two-thirds of Bougainville are sampled.

This particular difference in squamation between northern and southern populations on Bougainville is made even more interesting by noting its correlation with the difference in color patterns between the two populations (see above) — the striped pattern occurring in some individuals in the south but never in the north. These differences may be taxonomically important, but their significance can not be properly evaluated until populations from intervening localities are studied.

Type specimen: The holotype has 30 scales around midbody, 16-16 lamellae beneath the 4th toe, and the 5th supralabial is below the center of the eye.

Shortland Island specimen: The single specimen from Shortland Island (Fig. 2), the only other island besides Bougainville and Choiseul from which the species is known, does not differ substantially from the Bougainville specimens. There are 30 scales around midbody and 17-17 lamellae beneath the 4th toe.

Comparisons between the Shortland population and the northern and southern populations on Bougainville would be interesting, but can hardly be carried very far at present with only one specimen available to represent the Shortland population. It is interesting to note, however, that while the Shortland specimen lacks the striped pattern characteristic of some individuals from southern Bougainville, it does have the 4th supralabial below the center of the eye on both sides of the head. This condition, as discussed above, tends to occur more frequently in lizards from southern Bougainville (37%) than those from northern Bougainville ($11\frac{1}{2}\%$).

Choiseul Island specimen: The single specimen from an unknown locality on Choiseul (AMNH 44004) is poorly preserved but appears to differ in no significant way from Bougainville and Shortland specimens.

Habitat: On Bougainville the species is found in its greatest numbers in the swampy lowlands near the coast where small creeks spread out and intermix and where the swampy species of the *Pandanus* plant grows. The land is subject to occasional inundation during heavy rains, but there are always dry knolls onto which the reptiles and amphibians can retreat. The usual microhabitat in the swampy lowlands is under and in rotten logs and

thicker layers of decaying vegetable matter, while on higher ground and in the mountain ranges the species is usually found only living under and in rotten logs.

The Shortland Island specimen was found under a pile of decaying fronds in a coconut plantation.

Habits: *S. tanneri* is a burrower and shows a preference for very damp country. Other than this, little is known about the species' habits. No individual was ever seen out in the open of its own accord. It escapes by burrowing when cover is removed and it is disturbed.

Reproduction: *S. tanneri* is oviparous and remarkably consistent in laying only 2 eggs at a time. Of the 49 females found to be gravid with oviducal eggs, 47 had snout-vent lengths ranging from 41-50 mm (Table 1). Given the large total sample size (424 specimens) from which these females were taken, the low end of the size distribution may represent the size at which females become capable of reproducing.

Of the 49 gravid females, 47 contained 2 eggs; 46 of these held 1 egg in each oviduct and a single specimen contained 2 eggs in the right oviduct alone. Of the 2 remaining females, one contained 3 eggs, 2 in the right oviduct and 1 in the left, and a second female contained only a single well-developed egg in the right oviduct. In all cases in which there were eggs in both oviducts (47), those eggs in the right oviduct were invariably situated more anteriorly; this is apparently an accommodation for the stomach, which lies on the left side.

The 49 gravid females were collected in March (2), May (20), June (5), July (21), and December (1).

Eggs collected in the field on 17 May 1966 measured 14.8 x 8.0 (with an embryo), 13.0 x 7.5, 13.4 x 7.0 mm (unopened).

Morphological comparisons with Bougainville relatives: The only other sympatric members of *tanneri*'s species group (Table 4) on Bougainville are *Sphenomorphus solomonis* and *S. cranei*. Both species can be easily distinguished on the basis of the characters listed in Table 2.

Tanneri and *solomonis* are similar in their dorsal color patterns which consist of white flecking on a dark ground color. In *tanneri*, however, the ground color is a rich dark brown to brownish black while in *solomonis* the color of the dorsum ranges from brownish black to gray. The white spots along the dorsolateral line never coalesce to form a light line in *solomonis* as they do in *tanneri*.

The ventral color patterns of *tanneri* and *solomonis* are quite distinctive. In *tanneri* the venter of the body is immaculate while

the chin and throat are heavily pigmented. *Solomonis*, on the other hand, usually has the venter of the head and body uniformly spotted throughout, each ventral scale of the body containing a central dark spot.

The dorsal ground color in *cranei* varies from very dark dull brown to blackish brown and is patterned with thin, whitish to yellow transverse bars from the nape of the neck onto the tail.

In life the belly and underside of the tail in *tanneri* and *cranei* are often suffused with a translucent reddish color. In *solomonis* the ventral surfaces lack any reddish coloration.

Ecological comparisons with Bougainville relatives: The species most similar in ecology to *tanneri* on Bougainville is *Sphenomorphus solomonis*, one of *tanneri*'s closest relatives on the island. Both species, along with two species of *Tribolonotus* (*blanchardi* and an as yet unnamed species), are the most extreme burrowers in the Bougainville lizard fauna. *Solomonis* is much more common than *tanneri* and has a slightly greater altitudinal range — from the coast to at least 3000 feet (and perhaps up to 4000 feet) in the mountains.

Solomonis occurs in a wider variety of habitats than *tanneri*, being most commonly found in the top few inches of soil and humus and under logs in open gardens, secondary scrub, tall primary forest, dry coastal country and swampy areas. In the mountains, *solomonis* is much reduced in numbers as the altitude increases and is found mainly on the ridges and in secondary scrub. In the lowlands very large numbers of *solomonis* can be taken when logs and vegetation are being cleared off the ground for native gardens and when the topsoil is first worked.

As fewer *cranei* have been collected than *solomonis* and *tanneri*, field observations for this species are less complete than for its two closest relatives on Bougainville. *Cranei*, however, also seems to be a burrower, although much less so than *solomonis* and *tanneri*. Unlike *solomonis* and *tanneri*, *cranei* has not been collected in the lowlands, but is known from the mountains and steep-sided valleys above 500 feet where there is tall, cool primary forest. *Cranei* is much more highly dependent on water and moisture than *tanneri* and *solomonis* and is most usually found under stones, wood, or debris in small creek beds with running water or soaked beds. In this habitat it is found in company with *Tribolonotus blanchardi* and *Sphenomorphus (Parotosaurus) concinnatus*, but *cranei* is by far the least common of the three species.

Tanneri and *solomonis* are both oviparous, but the mode of reproduction in *cranei* is unknown. As noted above, *tanneri* is remarkably consistent in producing only two eggs at a time. *Solomonis*, on the other hand, produces clutches with 3-6 eggs.

Discussion: Current research (by Greer) on the delimitation and relationships of skink taxa indicates that there are several species groups now included in the genus *Sphenomorphus*. The two largest species groups of the genus are discussed below.

One of these, which may be called the *variegatus* species group (Table 3), also includes skinks of the genera *Otosaurus*, *Parotosaurus*, and *Insulasaurus* and is characterized by the following suite of external characters: well developed digits and limbs, which overlap in most species when adressed to the body; frontal generally in contact with 3 or more of the anteriormost supraoculars; generally 5 or more supraoculars; supranasal scale (large in *Otosaurus*, small in *Parotosaurus*) or double anterior loreal present in most species, but some species with no supranasals and only a single anterior loreal¹; nuchals lacking; high number of scales around midbody (usually 32 or more); dorsal scales subequal in size.

The other large species group within *Sphenomorphus*, the one to which *tanneri* belongs and which may be called the *fasciatus* species group (Table 4), is characterized by the following external characters: digits and limbs usually less well developed, the limbs generally not overlapping, or just slightly overlapping when adressed to the body; frontal in contact with the anterior 2 supraoculars; 4 (much less frequently 5) supraoculars; a single anterior loreal; no supranasals; usually a series of two or more symmetrical nuchal scales; fewer scales around midbody (generally 36 or fewer); scales of the 2 vertebral rows usually broader than the other dorsal scales, i.e., they are transversely enlarged.

Whole skulls of several species of both species groups have also been examined. Both species groups display several important similarities in their skull morphology, but a discussion of these

¹ As the small supranasal of some *Parotosaurus* and the double anterior loreal of some *Sphenomorphus* may be variable in shape and form, or even present on one side of the head and absent on the other in a single individual (*Parotosaurus concinnatus*, personal observation and Burt and Burt, 1932:542), it does not seem justifiable to exclude from the *variegatus* species group those species which agree with the diagnosis except for lacking a supranasal or a double anterior loreal.

similarities is best deferred to a later date. The three important differences in skull morphology between the *variegatus* and *solomonis* groups are as follows:

<i>variegatus</i> group	<i>solomonis</i> group
1.) Postorbital bone lacking or very small.	1.) Postorbital bone usually long and thin.
2.) Supratemporal fenestra usually lacking or very small.	2.) Supratemporal fenestra generally well developed.
3.) No anteriorly projecting ectopterygoid process to the palatine which would exclude the palatal ramus of the pterygoid from a position on the edge of the infraorbital vacuity.	3.) Two subgroups within the <i>fasciatus</i> group: <i>solomonis</i> subgroup (Greer, 1967) with ectopterygoid process to palatine which excludes all or most of pterygoid from a position on infraorbital vacuity; <i>fasciatus</i> subgroup without anteriorly projecting ectopterygoid process to palatine. ¹

The two species groups may also be distinguished ecologically and geographically. The skinks of the *variegatus* group appear to be primarily surface dwellers, while those of the *fasciatus* group are, by and large, secretive burrowers as is *tanneri*.

Geographically, the *variegatus* group ranges from southeast Asia and the Greater Sunda Islands northeast to the Philippines and east through Celebes and the Lesser Sunda Islands to New Guinea and the Solomons. The group is not found, however, in Australia. The center of abundance for the group appears to be the western part of the Indo-Australian archipelago and, perhaps to a lesser extent, New Guinea.

The *fasciatus* group has its center of abundance on New Guinea, but extends northwest to the Philippines (*fasciatus*), west into the Lesser Sunda Islands (*emigrans* and *antoniorum*), south into northern and eastern Australia (e.g., *crassicauda*, *elegantulum*, *punctulatum* and *njöbergi*), and east into the Solomon Islands (*cranei*, *solomonis* and *tanneri*).

¹ *S. tanneri* lacks the ectopterygoid process to the palatine and is therefore a member of the *fasciatus* subgroup of the *fasciatus* species group of *Sphenomorphus*.

The two species groups considered here appear to be monophyletic, although convergent tendencies in both groups (e.g. the loss of nuchal scales, of transversely enlarged vertebral scales, and of the postorbital bone in the *fasciatus* group and the presence of only 4 supraoculars in the *variegatus* group) make formal taxonomic treatment difficult. For this reason the ranking and further delimitation and subdivision of the species groups will be considered at a later date.

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Mrs. Patricia H. Kerfoot made the line drawing for Figure 1 and Mr. Rick Stafford took the photograph for Figure 3.

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TABLE 1

Frequency distribution for several meristic characters in *Sphenomorphus tanneri*. N = number of specimens examined.

Midbody Scales (N = 156)										
x	28	29	30	31	32					
f(x)	5	5	115	11	20					
Supralabial below Center of Eye (N = 415)										
x	5-5	4-5	4-4							
f(x)	337	43	35							
Number of Lamellae beneath 4th Toe (N = 228)										
x	13	14	15	16	17	18	19	20		
f(x)	2	3	20	62	90	32	17	2		
Snout-Vent Length of Gravid Females (N = 47)										
x	41	42	43	44	45	46	47	48	49	50
f(x)	1	3	5	8	7	6	7	5	3	2

TABLE 2

Morphological differences between *S. tanneri* and its two closest relatives on Bougainville.

	<i>tanneri</i>	<i>solomonis</i>	<i>cranei</i>
Snout-vent length	23-52 mm	27-72 mm	29-71 mm
Scales around mid-body	28-32 (usually 30)	24-30 (usually 26-30)	32-41 (usually 34, 36)
Prefrontals meet	Yes, except in 1 of 424 specimens	No	Yes, except in 2 of 23 specimens
Supralabial below center of eye	4th (13%) or 5th (87%)	4th (< ½%) or 5th (> 99½%)	5th (11%) or 6th (89%)
Nuchal scales	Absent	Present, 2-4 pairs	Present, 3-5 pairs
Subdigital lamellae (4th toe)	13-20, usually 15-19	13-17	20-29, most usually 22-28

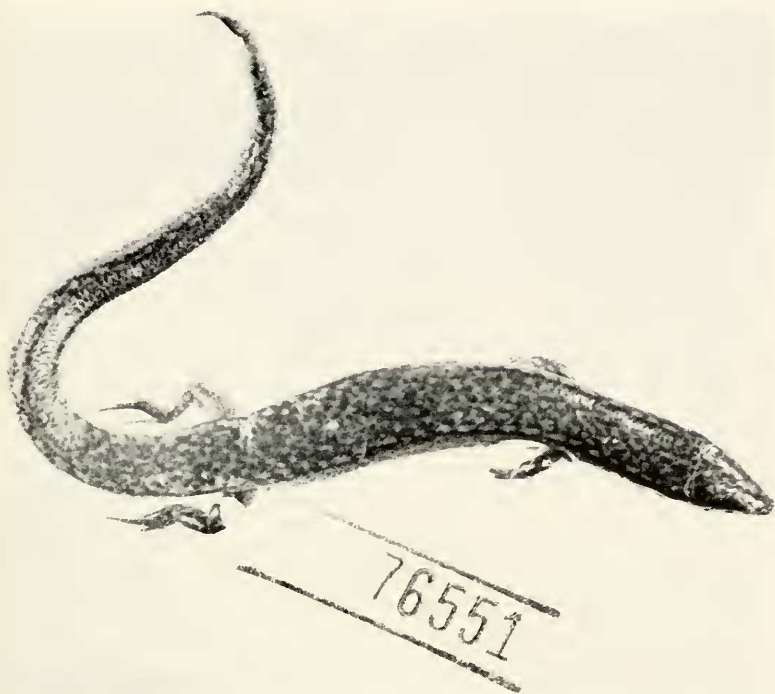


Figure 3. Holotype of *Sphenomorphus tanneri* (MCZ 76551), showing the light spotting on the dark brown dorsum.

TABLE 3

The *variegatus* species group of the scincid genus *Sphenomorphus* (and including the species referred to the genera *Otosaurus*, *Parotosaurus* and *Insulasaurus*). Species which we have examined are marked by an asterisk (*). In those instances in which no reliable data on meristic characters have been available in the literature, only data from the type description are given. The fragmented head scales of *Sphenomorphus taylori* make it meaningless to try to determine if the prefrontals meet or not.

SPECIES WITH A SUPRANASAL AND / OR DOUBLE ANTERIOR LOREAL

	Author	Range	Scales around midbody	Subdigital lamellae on 4th toe	Adpressed limbs meet	Prefrontals meet	Number of supraoculars (touching frontal)	Nuchal pits
<i>taylori</i> *	Burt, 1930	Bougainville	53-61	27-35	+	?	5-7 (3)	+ 1-2
<i>totocarinatus</i>	Vogt, 1932	New Guinea	50	20	+	-	6 (3)	-
<i>annectens</i> *	Boulenger, 1897	New Guinea	50	21	+	-	9 (3)	-
<i>nigrolabris</i>	Günther, 1873	Celebes	40-50	20-27	+	+	6 (3)	-
<i>multisquamulatus</i> *	Inger, 1958	Borneo	40-49	16-22	+	+	6-7 (3)	-
<i>sarasinorus</i>	Boulenger, 1897	Celebes	44-46	22-24	+	+	7-8 (3-4)	-

<i>jobiense</i> *	Meyer, 1874	New Guinea & islands	38-46	18-29	+	+	5 (2-3)	-
<i>stickell</i> *	Loveridge, 1948	New Guinea	38-44	22-29	+	+	6-8 (3)	-
<i>tropidonotus</i>	Boulenger, 1897	Celebes	42-44	27	+	-	6 (3)	-
<i>haasi</i>	Inger & Hosmer, 1965	Sarawak	41-42	16-18	+	±	6 (3)	-
<i>cyanolaemus</i> *	Inger & Hosmer, 1965	Sarawak	37-42	16-19	+	+	6 (3)	-
<i>sabanus</i>	Inger, 1958	Borneo	38-42	18-22	+	+	6-7 (3)	-
<i>wolff</i> *	Sternfeld, 1920	Buka	38-42	22-25	+	+	4 (2)	-
<i>variegatus</i> *	Peters, 1867	Philippines	37-41	21-27	+	±	6-8 (3)	-
<i>antblyplacodes</i>	Vogt, 1932	New Guinea	41	27	+	+	5 (2)	+ 1
<i>sinus</i>	Sauvage, 1879	New Guinea	40	25	+	+	6 (3)	-
<i>mimikanus</i>	Boulenger, 1914	New Guinea	40	15-16	+	+	7 (3)	-
<i>concinatus</i> *	Boulenger, 1887	Solomon Islands	40	22-25	+	+	4 (2)	-
<i>atomidlopus</i>	Boulenger, 1890	Sumatra	38	16	+	+	4 (3)	-
<i>wrighti</i> *	Taylor, 1925	Palawan	38	25	+	+	5 (2)	-
<i>granulatus</i> *	Boulenger, 1903	New Guinea	36	20	+	+	7 (3)	-
<i>maculicollis</i>	Bacon, 1967	Sarawak	36	17-18	+	-	8 (4)	-

<i>darlingtoni</i> *	Loveridge, 1945	New Guinea	34-36	12-15	-	+	5 (2)	-
<i>kinabaluensis</i> *	Bartlett, 1945	Borneo	32-35	15-17	+	+	5-6 (2-3)	-
<i>marudensis</i>	Smith, 1925	Borneo	30-32	16	+	+	6 (3)	-
SPECIES WITHOUT A SUPRANASAL OR DOUBLE ANTERIOR LOREAL								
<i>florense</i> *	Weber, 1890/1	Flores	44-50	27-29	+	+	6-7 (4)	-
<i>kühnei</i>	Roux, 1910	Kei Islands	42	34	+	+	7 (4)	-
<i>misolense</i>	Vogt, 1928	Misol	42	22	+	+	7 (3)	-
<i>arborens</i> *	Taylor, 1917	Philippines	40-42	21	+	+	5 (3)	-
<i>maculatus</i> *	Blyth, 1853	S. E. Asia	38-42	16-22	+	-	5 (2-3)	-
<i>striolatus</i> *	Weber, 1890/1	Flores	40	26	+	+	7 (4)	-
<i>dussumieri</i> *	Duméril & Bibron, 1839	India	40	20-25	+	+	4-5 (2-3)	-
<i>boulengeri</i> *	Van Denburgh, 1912	Formosa, Hainan, S. E. China	36-40	18-20	+	±	4 (2-3)	-

<i>formosensis</i> *	Van Denburgh, 1912	Formosa, S. E. China	32-38	16-20	+	±	4 (2-3)	-
<i>lineopunctulatus</i>	Taylor, 1962	Thailand	38	22	+	-	4 (3)	-
<i>indicum</i> *	Gray, 1853	E. Asia	30-38	16-22	+	±	6 (2-3)	-
<i>melanochlorus</i>	Vogt, 1932	New Guinea	36	21	+	-	5 (3)	-
<i>aiguanus</i>	Boulenger, 1898	St. Aignan	32-36	40-42	+	+	5 (3)	-
<i>sanctus</i> *	Duméril & Bibron, 1839	Sumatra, Java	32-34	25-30	+	+	5 (3)	-
<i>milbense</i>	Boulenger, 1903	New Guinea	30-32	35-37	+	+	5 (3)	-

TABLE 4

The *fasciatus* species group of the scinid genus *Sphenomorphus*. The conventions adopted for this table are the same as for Table 3. Question marks indicate that specimens of the species were not available to us and the state of the character could not be determined from the literature.

	Author	Range	Scales around midbody	Subdigital lamellae on 4th toe	Adpressed limbs meet	Prefrontals meet	Number of supraoculars (touching frontal)	Nuchal pairs	Snout-vent length (mm)	Vertebral scales transversely enlarged
<i>neuhaussi</i>	Vogt, 1911	New Guinea	34-38	14	-	-	4 (1)	+ 1	89	?
<i>cranei</i> *	Schmidt, 1932	Solomon Islands	32-41	22-31	+	+	4 (2)	±	71	+
<i>pratti</i> *	Boulenger, 1903	New Guinea	36	13-14	-	-	4 (2)	-	87	+
<i>mülleri</i> *	Schlegel, 1837	New Guinea	34	18-20	-	-	4 (2)	+ 1-2	170	+
<i>derooyae</i>	de Jong, 1927	New Guinea	34	24-26	?	+	4 (2)	+ 5	54	+
<i>jendei</i>	Boulenger, 1914	New Guinea	34	18	-	+	4 (2)	-	61	+
<i>wollastoni</i>	Boulenger, 1914	New Guinea	32	17	-	-	4 (2)	+ 1	90	+
<i>rufus</i>	Boulenger, 1887	Aru Islands	32	20	+	+	4 (2)	-	60	+

<i>loriae</i> *	Boulenger, 1897	New Guinea	30-32	16-17	-	+	4 (2)	-	66	+
<i>tanneri</i> *	new species	Solomon Islands	28-32	13-20	-	+	4 (2)	-	52	-
<i>antonioris</i> *	Smith, 1927	Timor	28-32	15-19	-	±	4 (2)	± 1-2	55	-
<i>ketensis</i>	Kopstein, 1926	Kei Islands	31	14	-	-	4 (2)	+ 3	79	?
<i>torrieri</i>	Vogt, 1911	New Guinea	31	16-18	+	-	6 (2)	+ 2	71	+
<i>nigriventre</i>	de Rooij, 1915	New Guinea	30	16-20	-	+	4 (2)	-	90	-
<i>matindroni</i> *	Sauvage, 1878	New Britain	30	28	+	+	4 (2)	+ 5	60	+
<i>dammermani</i>	Kopstein, 1927	Sulu Islands	30	23	+	+	5 (2)	-	61	+
<i>unilineatus</i>	de Rooij, 1915	New Guinea	30	15	-	-	4 (2)	+ 1-2	92	?
<i>fasciatus</i> *	Gray, 1845	Philippines	28-30	22-25	-	+	4 (2)	+ 4-5	73	+
<i>brevipes</i>	Boettger, 1895	Halmahera, Ternate	28-30	14-16	-	-	4 (2)	+ 4-6	58	+
<i>nigricaudus</i> *	Macleay, 1877	New Guinea & N. E. Queensland	26-30	16-20	-	-	4 (2)	+ 2-5	80	+
<i>schoedel</i> *	Vogt, 1912	Valise	26-29	16	-	-	4 (2)	+ 1-3	60	+
<i>nigrolineatus</i>	Boulenger, 1897	New Guinea	28	18	+	-	4 (2)	+ 6	57	+
<i>aruanus</i>	Roux, 1910	Aru Islands	28	16	-	+	4 (2)	+ 4	52	+
<i>undulatus</i>	Peters & Doria, 1878	New Guinea & Mysore	28	20	+	+	5 (2)	+ 3-4	68	+
<i>moszkowskii</i>	Vogt, 1912	New Guinea	28	18	-	-	5 (?)	+ 1	31	+
<i>longicaudatus</i>	de Rooij, 1915	New Guinea	28	18-20	-	+	4 (2)	+ 4-5	92	+

<i>amboinense</i>	Kopstein, 1926	Ambon	28	18	+	+	5 (2)	+ 3-4	45	+
<i>wirzi</i>	Roux, 1919	New Guinea	28	18	—	—	4 (2)	+ 3	75	?
<i>beauforti</i>	de Jong, 1927	New Guinea	26	12	?	+	4 (2)	—	46	?
<i>emigrans*</i>	Lidh de Jeude, 1894	Sumba, Samoa	26	18-20	—	—	4 (2)	+ 1	58	?
<i>solomonis*</i>	Boulenger, 1887	Solomon Islands	24-26	15-17	—	—	4 (2)	+ 4-6	57	+
<i>forbesi</i>	Boulenger, 1888	New Guinea	24-26	10	—	—	4 (?)	+ 4	59	+
<i>oligolepis</i>	Boulenger, 1914	New Guinea	24	12-13	—	—	4 (2)	+ 3-5	55	+
<i>pardalis*</i>	Macleay, 1877	Cape York Peninsula & Islands	24	18	—	—	4 (2)	+ 3	59	+
<i>nototaenia</i>	Boulenger, 1914	New Guinea	24	18	+	—	4 (2)	+ 3	48	+
<i>alhodorsale</i>	Vogt, 1932	New Guinea	24	25	+	—	?	+ 3	45	?
<i>schultzei*</i>	Vogt, 1911	New Guinea	20-24	9-12	—	±	4 (2)	+ 4	30	+
<i>crassicaudus*</i>	Duméril, 1851	New Guinea to 22 N. E. Australia	20-22	15-18	—	—	4 (2)	+ 4	46	+
<i>contus</i>	Roux, 1927	New Guinea	22	15-17	—	—	4 (2)	+ 3-4	30	+
<i>njöbergi*</i>	Lönnerberg & Andersson, 1915	N. Queensland	22	12-15	—	—	4 (2)	+ 4	71	?
<i>pumilus*</i>	Boulenger, 1887	Cape York	20	17-18	—	—	4 (2)	+ 4	45	+
<i>australis*</i>	Gray, 1839	S. W. Australia	18-20	21	—	±	4 (2)	+ 2-3	80	—
<i>punctulatus*</i>	Peters, 1871	Queensland	18-20	12-14	—	—	4 (2)	+ 1-3	55	—