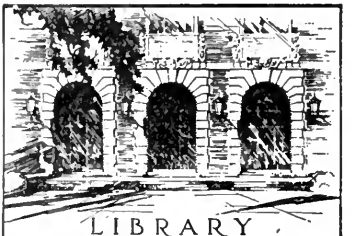

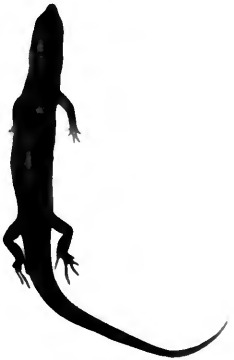

Emoia flavigularis *Sphenomorphus bignelli* *Sphenomorphus cranei*

TYPES OF NEW SPECIES OF LIZARDS
Natural size

FIELD MUSEUM OF NATURAL HISTORY
FOUNDED BY MARSHALL FIELD, 1893

PUBLICATION 311

ZOOLOGICAL SERIES VOL. XVIII, No. 9

REPTILES AND AMPHIBIANS FROM THE SOLOMON ISLANDS

BY

KARL P. SCHMIDT

ASSISTANT CURATOR OF REPTILES

REPORTS ON RESULTS OF
THE CRANE PACIFIC EXPEDITION

WILFRED H. OSGOOD
CURATOR, DEPARTMENT OF ZOOLOGY
EDITOR

CHICAGO, U. S. A.
JULY 8, 1932

PRINTED IN THE UNITED STATES OF AMERICA
BY FIELD MUSEUM PRESS

REPTILES AND AMPHIBIANS FROM THE SOLOMON ISLANDS

BY KARL P. SCHMIDT

The Crane Pacific Expedition of Field Museum of Natural History, sailing in the brigantine yacht *Illyria*, belonging to Mr. Cornelius Crane of Ipswich, Massachusetts, spent twelve days in the Solomon Islands, from April 10 to April 22, 1929. Collections made on the islands of Ugi, Tulagi, Malaita, Ysabel, Kulambangra, and New Georgia include seven additions to the herpetological fauna of the archipelago, which was reviewed by Mr. J. R. Kinghorn in 1928.

The Solomon Islands have been a center of herpetological interest since the remarkable character of their reptiles and amphibians became known in the 1880's through G. A. Boulenger's descriptions of the collections made by Guppy and Woodford. New and remarkable forms continue to be discovered, and numerous titles can already be added to Kinghorn's bibliography. Subsequent to his summary of the fauna in 1928, two species of the lizard genus *Tribolonotus* were described by Dr. Charles E. Burt, and one of these was later made the type of a new genus by Dr. Jean Roux of Basel, Switzerland. A joint paper by Dr. Burt and myself describes a new skink from the New Hebrides, and records it from the Solomons also. Burt's preliminary descriptions of new forms from the collections made by the Whitney South Sea Expedition will be amplified in a catalogue of the amphibians and reptiles of the Pacific islands represented in the collections of the American Museum of Natural History.

The wealth of the Solomon Island fauna in other groups of vertebrates is illustrated by the paper by Mr. Colin C. Sanborn on the bats collected by the Crane Pacific Expedition (Field Mus. Nat. Hist., Zool. Ser., 18, No. 2, 1931). The interiors and higher altitudes of the larger islands are still very little known, and further additions to the fauna may be expected.

The Crane Pacific Expedition is greatly indebted to the local officials at Tulagi, at Auki, and especially to Captain and Mrs. Hill at Tunnibuli, Ysabel Island, for friendly aid. Mr. and Mrs. Charles R. Bignell of Fulakora Point, Ysabel, are already known in the history of zoological collecting in the Solomons for their hospitality

to Dr. William M. Mann in 1912. Prepared by this experience for the vagaries of naturalists, they took an active and most helpful interest in the work of our expedition. Three members of the scientific staff of the expedition were entertained at the Lady Lever Plantation at Webster Cove, on Kulambangra, by Messrs. Quintal and Keane. I am much indebted to Messrs. Walter A. Weber and Frank C. Wonder, of the staff of Field Museum, who found time, in addition to their work on birds and mammals, to render effective aid in the collection of amphibians and reptiles.

Thanks to the kindness of Dr. Thomas Barbour, Director of the Museum of Comparative Zoology at Harvard, and to the friendly aid of Mr. Arthur Loveridge at that institution, I have been able to examine specimens in the Mann Collection from the Solomons in the course of the present study.

AMPHIBIA

Ceratobatrachus guentheri Boulenger.

Ceratobatrachus guentheri Boulenger, Proc. Zool. Soc. Lond., **1884**, p. 212, 1884.

One specimen from Tulagi; four from Auki, Malaita; and one from Tunnibuli, Ysabel.

These are all males, collected while croaking, and found sitting on the ground among dead leaves. The voice of the single Tulagi specimen so much resembled the "squunk-squunk" of a foot in a wet boot that Mr. Weber and I at first referred the sound to each other. The sounds produced by the Malaita frogs were comparable to a yelp or bark, with considerable variation. One of them introduced the barking note by a distinct mew. Evidently there is much variation in this frog's call, some of which may be geographical and indicative of the first step toward species formation by isolation. Extended observation would be required for any satisfactory conclusion on this point.

Batrachylodes vertebralis Boulenger.

Batrachylodes vertebralis Boulenger, Proc. Zool. Soc. Lond., **1887**, p. 337, pl. 28, fig. 3, 1887.

Ten specimens from Ugi; one from Tulagi; four from Auki, Malaita; three from Tunnibuli, Ysabel; and twelve from Webster Cove, Kulambangra.

Variation in the voice of this species from island to island is not satisfactorily connected with any other character. On Ugi the note

was a single isolated honk, repeated at short intervals. On Tulagi my notes describe it as a series of muffled clicks, like beating on metal. The single specimen taken was sitting on a leaf about four feet from the ground. On Malaita the note resembled that of Ugi specimens. Both types of voice were heard at Tunnibuli, on Ysabel, but the only specimens taken were calling with isolated notes. The singing males sit on fresh vegetation or on dwarf palm stems, usually from one to three feet above the ground. Ventriloquy is often extreme in the voice of this species.

Cornufer guppyi Boulenger.

Cornufer guppyi Boulenger, Proc. Zool. Soc. Lond., **1884**, p. 211, 1884.

A single specimen of this species was taken at Tunnibuli, Ysabel, sitting on vegetation at a height of about six feet, not singing.

Platymantis solomonis (Boulenger).

Cornufer solomonis Boulenger, Proc. Zool. Soc. Lond., **1884**, p. 212, 1884.
Platymantis solomonis Boulenger, Ann. Mag. Nat. Hist., (9), **1**, p. 373, 1918.

One specimen from Auki, Malaita; three from Tunnibuli, Ysabel; and three from Webster Cove, Kulambangra.

The call of this species is distinctive and invariable from island to island. It consists of a loud "whoo-ee," rising from a rather low first note to a second much higher in pitch. The specimens secured were calling males. Each of the Malaita and Ysabel specimens was calling from the top of a fallen log. The three from Kulambangra called from similar slightly elevated and exposed positions, one from the top of a pile of coconut trash, one from a rock, and one from the ground.

Boulenger records two species of *Platymantis* from the Solomons, in which he is followed by Van Kampen (1923, p. 190); while Barbour (1921, p. 96, pls. 2–4) and Kinghorn (1928, p. 129), though commenting on the variation displayed among the specimens before them, agree in uniting the two supposed forms under the name *solomonis*. So far as the examination of museum specimens is concerned, the latter course might well be justified. Field observation, however, proves at once that there are two species readily distinguishable by voice and habits and, with these clues, by structural characters as well.

Boulenger's species *solomonis* was founded on large specimens; his type may be assumed to be the female specimen 75 mm. in length, mentioned in the original description. The two very large specimens

mentioned by Barbour (77 and 84 mm. long respectively) evidently belong here. I infer that the relative smoothness of the backs of the largest specimens is a sex as well as an age character. There is a further slight difficulty in associating our males with these females, for the latter have longer and more sharply defined series of vomerine teeth. It seems best to assume that this is also an age and sex and, to some extent, individual character. The seven male specimens of *solomonis* mentioned above range in length from snout to anus from 43 to 54 mm. Boulenger's, Barbour's, and Kinghorn's measurements for adult females range from 75 to 85 mm. The distinction of *solomonis* from the allied species will be discussed below.

Platymantis weberi sp. nov.

Type from Tulagi, Solomon Islands. No. 13723 Field Museum of Natural History. Adult male. Collected April 12, 1929, by Karl P. Schmidt.

Range.—Certainly known from Tulagi and Ysabel Islands; presumably widespread in the Solomon group.

Diagnosis.—A *Platymantis* with short groups of vomerine teeth, shorter than the space which separates them; with numerous straight longitudinal dorsal folds, some of which are nearly continuous for the length of the back; snout somewhat more acute and upper eyelid much more rugose than in *solomonis*. Distinguished by more elongate and more numerous dorsal folds and by smaller size from the common species of *Platymantis* of New Britain and northern New Guinea which are lumped under the name *rugata* by Van Kampen.

Description of type.—Habitus frog-like, limbs long, the tibiotarsal joint reaching the nostril; heels overlapping when the limbs are placed at right angles to the body; head large, snout pointed; snout longer than the eye, the nostrils much closer to its tip than to the eye. Vomerine teeth in short oblique series, close to the choanae, and separated from each other by an interspace greater than the length of one of the series; upper eyelids rugose, wider than the interorbital space; tympanum circular, with a strong curved fold above it, slightly more than half the diameter of the eye (14 : 23); loreal region flaring, concave; canthus rounded but easily distinguishable; tips of fingers and toes slightly dilated, the disks with a horizontal groove between their upper and lower surfaces; no webs; first finger slightly longer than the second; metacarpal and

subdigital tubercles well-defined; inner and outer metatarsal tubercles present, subequal, rounded; tarsal fold feebly marked; throat smooth, belly granulate posteriorly; dorsum with about six series of elongate glandular ridges, three on each side, some nearly continuous, enclosing somewhat shorter ridges on the mid-dorsal area; sides with small rounded tuberculation.

Dark brown above with a dorsolateral band of dull purplish red on each side and a bright spot of the same color on the upper lip between the eye and nostril; limbs barred, the lighter interspaces tinged with red; ventral surfaces light, unmarked except for faint dusky spots along the edge of the lower jaw.

Measurements.—Three male specimens. F.M.N.H. Nos. 137, type, 13757, paratype, and 13832, *Platymantis solomonis*, for comparison: snout to vent 32.3, 37.7, 50 mm.; snout to posterior border of tympanum 14.2, 15.9, 21.6; greatest width of head 13, 14.5, and 21.7; length of eye 4.6, 5.2, 8.2; diameter of tympanum 2.8, 2.8, 4.2; hind limb from anus 57, 62, 77; tibia 17.3, 19.1, 23.3; fore limb 20, 22, 31.

Notes on paratypes.—The series of eleven paratypes exhibits great uniformity of size and of dorsal rugosity. All were calling males, singing from every variety of situation. The call is a series of uniformly repeated unmusical squawks. The suffusion of red or reddish purple which appears in the upper parts of the type is variable in intensity and is absent in some specimens. The ratio of the width of the head to its length from the tip of the snout to the posterior border of the tympanum varies from .86 to .96, averaging .91. These two measurements are equal or nearly so in *Platymantis solomonis*.

Remarks.—This is plainly the form recorded by Boulenger as *Cornufer corrugatus* (1888, p. 88) from Guadalcanar and New Georgia, and Van Kampen's inclusion of the same form as *Rana rugata* in his Solomon Island list (1923, pp. 191, 287) is evidently based on Boulenger's record. It is probably directly allied to the common and widespread species of *Platymantis* of New Britain and New Guinea, but I see no reason for including it with the forms of these islands. The specimens from New Britain and from New Guinea, which are available to me for comparison, certainly do not indicate specific identity. The species is named for Mr. Walter A. Weber, artist and ornithologist for the Crane Pacific Expedition, my companion on many nocturnal frog-collecting tramps.

Rana krefftii Boulenger.

Rana krefftii Boulenger, Cat. Batr. Salientia, Brit. Mus., p. 64, pl. 3, fig. 2, 1882.

Two specimens from Auki, Malaita, and three from Tunnibuli, Ysabel.

The Malaita specimens were found on the forest floor near a creek, not singing. The Ysabel specimens were singing in mats of wet vegetation, the note a loud quack, repeated a dozen times or continuous for a considerable period. The species was extremely shy.

Rana guppyi Boulenger.

Rana guppyi Boulenger, Proc. Zool. Soc. Lond., 1884, p. 211, 1884.

One specimen from Tunnibuli, Ysabel, was obtained from a native.

Rana bufoniformis Boulenger.

Rana bufoniformis Boulenger, Proc. Zool. Soc. Lond., 1884, p. 210, 1884.

One specimen from Tunnibuli, Ysabel, and one from Webster Cove, Kulambangra.

These specimens were calling from situations on the forest floor where shallow water overlay mud and leaves. The call of the Ysabel specimen was a hoarse croak, somewhat like that of the American *Rana pipiens*, but with the individual notes more distinctly isolated and uniform.

These two specimens differ in a number of respects which, if constant in a series, would amply warrant specific distinction. The web between the toes is full in both, but is more deeply incised in the Kulambangra specimen; the breadth of the tibia is contained about 2.6 times in that of the one from Kulambangra; the tympanum is smaller and more obscure in the Ysabel specimen; the vomerine teeth are more widely separated and closer to the choanae in the Kulambangra specimen; and the latter is much smoother than the other specimen, though fine horny spinules are present posteriorly and on the hind limbs. The Ysabel specimen is covered with much larger warts which are made up of groups of distinct spinules like those of the Kulambangra specimen. The internal vocal sacs in both specimens have very distinct round openings well forward on the floor of the mouth, the mucous membrane around them being distinctly thickened and puckered.

Of these two specimens, the one from Kulambangra corresponds fairly well with *Rana opisthodon* and the Ysabel specimen with

Rana bufoniformis. I am deterred from reviving *Rana opisthodon* by lack of material, and by the conviction that such closely allied forms require discrimination by field study together with the check on sexual differences which can only be supplied by mated pairs.

REPTILIA

Gymnodactylus pelagicus (Girard).

Heteronota pelagica Girard, Proc. Acad. Nat. Sci. Phila., 1857, p. 97, 1857.

Gymnodactylus pelagicus Boulenger, Cat. Lizards Brit. Mus., 1, p. 40, 1885.

One from Auki, Malaita; seven from Tunnibuli, Ysabel; and six from Webster Cove, Kulambangra.

Lepidodactylus lugubris (Duméril and Bibron).

Platydactylus lugubris Duméril and Bibron, Erpétologie Général, 3, p. 304, 1836.

Lepidodactylus lugubris Fitzinger, Systema Reptilium, p. 98, 1843.

Four specimens from Fulakora Point, Ysabel.

It is curious that this extremely widespread species has not previously been recorded from the Solomon group. The present specimens were collected from the walls of the plantation house of Mr. C. R. Bignell.

Varanus indicus (Daudin).

Tupinambis indicus Daudin, Hist. Nat. Rept., 3, p. 46, pl. 30, 1802.

Varanus indicus Boulenger, Cat. Lizards Brit. Mus., 2, p. 316, 1885.

One specimen from Tunnibuli, Ysabel, and a second from Webster Cove, Kulambangra.

These two specimens differ strikingly in coloration, and neither agrees with Mertens' recent definition of *Varanus indicus douarrha* (Lesson) as the subspecies of *indicus* characteristic of the Bismarck Archipelago and the Solomon Islands. I have accordingly avoided the question of subspecific designation for the Solomon Island monitor, hoping to return to this subject in connection with New Guinean specimens collected by the Crane Pacific Expedition.

Corucia zebrata Gray.

Corucia zebrata Gray, Proc. Zool. Soc. Lond., 1855, p. 218, pl. 8, 1855; Shurcliff, Jungle Islands, p. 198, pl. facing p. 182, 1930.

Three specimens of the species were secured from a native collector at Tunnibuli, Ysabel Island.

The largest of them served as model for a watercolor by Mr. Weber. The well-developed prehensility of tail, an unusual charac-

ter in lizards in general, is the more surprising in a member of the family Scincidae because of the bony armor which underlies the skin. The strongly clawed, compressed, and hooked digits also adapt this creature for arboreal life.

The length of F.M.N.H. No. 13726 is 715 mm., tail 398, leg 110, arm 90, snout to posterior border of ear 57, greatest width of head 50. The disposition of the head shields is highly variable. All three specimens exhibit a well-defined transverse white band on the throat.

Riopa albofasciolata (Günther).

Eumeces albofasciolatus Günther, Ann. Mag. Nat. Hist., (4), **10**, p. 370, 1872.
Riopa albofasciolatum Barbour, Mem. Mus. Comp. Zool., **44**, p. 187, 1912.

A single specimen from Pava, Hathorn Sound, New Georgia.

Sphenomorphus solomonis (Boulenger).

Lygosoma solomonis Boulenger, Proc. Zool. Soc. Lond., **1887**, p. 334, 1887.
Sphenomorphus solomonis Barbour, Mem. Mus. Comp. Zool., **44**, p. 185, 1912.

A single specimen from Tunnibuli, Ysabel, found under a log.

Sphenomorphus concinnatus (Boulenger).

Lygosoma concinnatum Boulenger, Proc. Zool. Soc. Lond., **1887**, p. 335, 1887.
Sphenomorphus concinnatus Barbour, Mem. Mus. Comp. Zool., **44**, p. 185, 1912.

One specimen from Auki, Malaita; two from Tunnibuli, Ysabel; and one from Webster Cove, Kulambangra.

Sphenomorphus cranei sp. nov.

Type from Tunnibuli, Ysabel, Solomon Islands. No. 13776 Field Museum of Natural History. Collected April 16, 1929, by Karl P. Schmidt.

Diagnosis.—A *Sphenomorphus* with elongate snout, two series of transversely enlarged dorsal scales, relatively large ear opening, without auricular lobules; color dark brown with narrow transverse yellow bands; allied to *S. maindroni* (Sauvage).

Description of type.—Body slender, with well-developed limbs; head elongate, with narrow snout; lower eyelid scaly; ear opening large, without auricular lobules; nostril in a single large nasal; rostral extended on the upper surface of the snout, forming a suture with the frontonasal; prefrontals forming a broad suture; frontal elongate, in contact with the two anterior supraoculars; four supraoculars,

followed by a small scale which might be interpreted as a fifth; ten supraciliaries; frontoparietals distinct, subequal to the interparietal; no enlarged nuchals; eight upper labials; a single postmental followed by two pairs of chin shields in contact; parietals forming a suture behind the interparietal; no enlarged nuchals; twenty-eight smooth lamellae beneath the fourth toe; thirty-two scales around the body; the two mid-dorsal rows largest; seventy-nine scales from parietal border to a point opposite the posterior face of the thigh; preanals slightly enlarged.

Pale yellow beneath, throat, chin, and breast with dark brown spots; dark brown above, the head shields with small yellow spots, the dorsum with narrow transverse yellow bands; the sides reticulate with dark markings enclosing spots of the yellow ground color; about fifteen transverse bands on back; tail lighter than back, also with narrow transverse bands.

Measurements.—Snout to anus 49 mm.; snout to posterior border of ear 10.8; arm 12.5; leg 20; width of head 6.1.

Remarks.—The type is unfortunately unique. The species seems to be amply distinguished from the New Guinean *S. maindroni* by its more elongate snout and larger ear opening. The species is named for Mr. Cornelius Crane, leader and patron of the Crane Pacific Expedition of Field Museum of Natural History.

Sphenomorphus bignelli sp. nov.

Type from Webster Cove, Kulambangra, Solomon Islands. No. 13841 Field Museum of Natural History. Collected April 21, 1929, by Karl P. Schmidt.

Diagnosis.—A small *Sphenomorphus* allied to *S. minutus* (Meyer), from which it is distinguished by having fewer scales around the body, a more pointed snout, larger prefrontals, and a larger number of subdigital lamellae.

Description of type.—Habitus rather stocky, body subquadrangular in cross section; limbs moderate, overlapping when pressed along the side; head a little wider than body, snout pointed; lower eyelid scaly; ear opening large, without auricular lobules; nostril in a single nasal; no supranasals; rostral forming a long straight suture with the frontonasal; frontonasal narrowly in contact with the frontal; prefrontals well developed; frontal elongate, in contact with the two anterior supraoculars; four supraoculars; seven supraciliaries; frontoparietals distinct, somewhat larger than the interparietal; a

few postparietal scales enlarged, but no large transverse nuchals; parietals broadly in contact behind the interparietal; six upper labials; one pair of chin shields in contact behind the single postmental; eighteen smooth lamellae beneath the fourth toe; twenty-two scales around the body; thirty-nine scales from the parietals to the posterior face of the thigh; a pair of enlarged preanals.

General color dark reddish brown above, pale yellow beneath; a somewhat ill-defined narrow black dorsolateral line is bordered above between the hind limbs by a sharply defined lighter band, as wide as a scale-row; the sides below the dorsolateral band have scattered light spots occupying, usually, a single scale; the labial border has alternate brown and pale yellow spots; a fairly well-defined brown latero-ventral line separates the pale under side of the tail from the spotted sides.

Measurements.—Total length 68 mm.; snout to anus 33; snout to posterior border of ear 7.5; width of head 4.7; arm 8; leg 12.

Notes on paratypes.—Among the four paratypes, F.M.N.H. Nos. 13842–5, all from the type locality, two have the prefrontals more widely separated than the type, while in the remaining two these scales are broadly in contact; the subdigital lamellae beneath the fourth toe are eighteen in one, twenty in three. The scales around mid-body are uniformly in twenty-two rows.

Remarks.—This is plainly the Solomon Island representative of *Sphenomorphus minutus* (Meyer), of New Guinea. The species is named for Mr. Charles R. Bignell of Fulakora Point, Ysabel, whose aid to our party and to other naturalists in the Solomons has been mentioned above.

Dasia smaragdinum perviridis Barbour.

Dasia smaragdinum perviridis Barbour, Proc. New Eng. Zool. Club, 7, p. 106, 1921.

Dasia smaragdinum perviride Mertens, Zool. Anz., 84, p. 219, 1929.

One specimen from Tunnibuli, Ysabel.

Leiolopisma noctua (Lesson).

Scincus noctua Lesson, Voy. Coquille, Zool., 2, p. 48, pl. 3, fig. 4, 1830.

Leiolopisma noctua Stejneger, Proc. U. S. Nat. Mus., 21, p. 805, 1899.

A single specimen from the coconut plantation at Webster Cove, Kulambangra.

Emoia atrocostata (Lesson).

Scincus atrocostatus Lesson, Voy. Coquille, Zool., **2**, p. 50, pl. 4, fig. 3, 1830.

Emoia atrocostatum Barbour, Mem. Mus. Comp. Zool., **44**, p. 94, 1912.

A single specimen from Tunnibuli, Ysabel, adds this species to the Solomon Island list.

Emoia nigra (Hombron and Jacquinot).

Eumeces niger Hombron and Jacquinot, Voy. au Pole Sud, Zool., **3**, Rept., p. 11, pl. 4, fig. 2, 1853.

Emoia nigrum Barbour, Mem. Mus. Comp. Zool., **44**, p. 187, 1912.

Two specimens from Auki, Malaita, and nine from Tunnibuli, Ysabel.

Emoia flavigularis sp. nov.

Type from Tunnibuli, Ysabel. No. 13793 Field Museum of Natural History. Adult female. Collected April 19, 1929, by Karl P. Schmidt.

Diagnosis.—An *Emoia* allied to *E. nigra*, from which it is distinguished by having a higher number of subdigital lamellae, parietal fused with interparietals, prefrontals normally forming a suture, temporals 2–2 instead of 2–3, and a bright yellow throat, distinct in color from the rest of the venter.

Description of type.—Body stout, head short, limbs well developed, tail moderate. A pair of small supranasals; rostral and frontonasal in contact; prefrontals forming a broad suture; frontal in contact with two anterior supraoculars; four supraoculars with a very small fifth; eight supraciliaries; interparietals and parietal fused into a single shield behind which the parietals are broadly in contact; a single pair of large nuchals; temporals 2–2, the lower temporal of the second row large; ear opening large, without auricular lobules; nine upper labials; one pair of chin shields in contact behind the single postmental; dorsal scales smooth; scales around mid-body forty; from parietal to posterior border of thigh fifty-eight; subdigital lamellae of the fourth toe forty-three; no enlarged preanals.

Dark reddish brown above on back and limbs, with brilliant iridescence, darker on sides with no light spots; venter lighter than sides, dark gray with yellowish suffusion; chin and throat nearly as far back as the arms bright yellow.

Measurements.—Length from snout to anus 65 mm.; snout to posterior border of ear 16.1; breadth of head 9.5; arm 23; leg 36.

F.M.N.H. No. 13794 measures 58 from snout to anus, with a total length of 163; arm 22; and leg 34.

Notes on paratypes.—The three paratypes, F.M.N.H. Nos. 13781, 13785, and 13794 are all from the type locality. They agree with the type in the diagnostic characters mentioned. The subdigital lamellae are forty-two in two, forty-one in one. The scales around the body are forty in a second female, thirty-six in a small male.

Remarks.—In spite of its great similarity to *Emoia nigra*, there seems no doubt that this is a perfectly distinct species. Two of the specimens are adult females with well-developed eggs, so that *flavigularis* is evidently a much smaller form than *nigra*. There does not appear to be any close relative of this species in New Guinea, and it may be supposed to have developed from *E. nigra* to fill some ecological niche rather than to be a product of geographic isolation like *Sphenomorphus bignelli*.

Emoia cyanogastra (Lesson).

Scincus cyanogaster Lesson, Voy. Coquille, Zool., 2, p. 47, pl. 3, fig. 3, 1830.
Emoia cyanogaster Barbour, Mem. Mus. Comp. Zool., 44, p. 94, 1912.

One specimen from Ugi, and four from Tunnibuli, Ysabel.

Emoia triviale (Schüz).

Lygosoma werneri triviale Schüz, Abh. Ber. Mus. Dresden, 17, No. 2, p. 8, 1929.

Two specimens from Webster Cove, Kulambangra.

This name is used for the form defined as *kordoanum* by Sternfeld and as *lessoni* by Parker, but the status of *werneri* (from the Mariannas) and its subspecies is by no means clear.

Emoia cyanura (Lesson).

Scincus cyanurus Lesson, Voy. Coquille, Zool., 2, p. 49, pl. 4, fig. 2, 1830.
Emoia cyanura Stejneger, Proc. U. S. Nat. Mus., 21, p. 807, 1899.

Two specimens from Ugi, eight from Auki, Malaita, and fifteen from Tunnibuli, Ysabel, represent the normal color form of this species.

In these twenty-five specimens the median stripe is sharply defined on the head and anterior portion of the back. It is sharply defined to the base of the tail in seven specimens, while in the remaining eighteen it broadens and becomes diffuse before it reaches the middle of the back, and may be quite indistinguishable posteriorly. This difference does not seem to be in any way an age character.

No specimen in this series exhibits median dorsal scales with the mid-dorsal stripe confined to them, as elsewhere so often shown as a variation in *Emoia cyanura*.

Two further series of specimens, seven from Ugi and thirteen from Kulambangra, differ radically from the normal *cyanura* in lacking the mid-dorsal stripe on the head (and back as well) at all ages. In these, furthermore, the dorsolateral stripes are wider, on two scale-rows instead of one, so the number of scale-rows between the outer borders of these dorsolateral stripes is eight instead of six, as in normal *cyanura*. This color character is so stable and clearly defined that it is possible that this unstriped form represents a species or series of insular forms distinct from *cyanura*. It seems best to leave this question for local field investigation, for the study of much larger series, and especially for the examination of sets of newly hatched young, which are required to clear up the taxonomic questions involved. The matter is still more complicated by an invariable difference between the Ugi and Kulambangra specimens. The former have the dorsal area between the dorsolateral stripes variegated black, spotted with green and frequently with a wide diffuse greenish band on the middle portion of the back. In the Kulambangra series the dorsal space is uniform brown, with a notably greater tendency to iridescence, and with only a narrow unspotted black border above the dorsolateral stripe.

Typhlops aluensis Boulenger.

Typhlops aluensis Boulenger, Proc. Zool. Soc. Lond., 1887, p. 336, pl. 28, fig. 2, 1887.

One specimen from Webster Cove, Kulambangra, April 21, 1929, F.M.N.H. No. 13836, has 22 scales about the body and 273 in a dorsal row from the rostral to a point above the anus, with 21 more on the tail.

Enygrus carinatus (Schneider).

Boa carinata Schneider, Hist. Amphib., Fasc. 2, p. 261, 1801.

Enygrus carinatus Duméril and Bibron, Erpétol. Gén., 6, p. 479, 1844.

One specimen from Ugi and three from Tunnibuli, Ysabel.

Chersydrus granulatus (Schneider).

Hydrus granulatus Schneider, Hist. Amphib., Fasc. 1, p. 243, 1799.

Chersydrus granulatus Gray, Cat. Snakes Brit. Mus., p. 61, 1849.

One specimen, from Tunnibuli, Ysabel, appears to furnish the second record of this species from the Solomon Archipelago.

Ahaetulla calligastra salomonis (Günther).

Dendrophis salomonis Günther, Ann. Mag. Nat. Hist., (4), **9**, p. 25, 1872.

Four male specimens, one from Ugi, one from Auki, Malaita, one from Tunnibuli, Ysabel, and one from Webster Cove, Kulambangra.

I have retained Mertens' subspecific classification in spite of the fact that the present specimens fail to support his tentative diagnosis of the Solomon Island form (Mertens, 1926, p. 278). The Kei Island subspecies appears to be well founded so that some partition into subspecies will, in any case, be necessary. The Solomon Island specimens have a yellow chin and throat, while New Guinean specimens are white, but this character evidently appears in other parts of the range of the species.

In the order listed above, these specimens have 192, 190, 181, and 183 ventrals, 128, 142, (tail incomplete), and 132 subcaudals; upper labials 9–9, 8–9, 8–9, and 8–8; lower labials 10–10, 10–11, 10–10, and 9–9; oculars uniformly 1–2; and temporals in the first row 2–2, 2–2, 2–1, and 2–2.

If all the ventral scale counts of this species available from the Solomons are listed, they appear to fall into two series, one (ten specimens, female) from 178 to 188, the other (three specimens, female) from 200 to 203, while the counts of the small number of males available also break into a series of four from 177 to 183 and another of four from 190 to 194. Therefore, one might suspect that the series with the higher number of ventrals in both sexes belongs to the southeastern Solomons, while the other ranges through the larger islands from Guadalcanar and Ysabel to New Georgia and Faro. Additional specimens are required to substantiate this possible further subdivision of the species. Ventral counts of specimens from New Britain range from 189 to 195.

Denisonia par (Boulenger).

Hoplocephalus par Boulenger, Proc. Zool. Soc. Lond., **1884**, p. 210, 1884.

Denisonia par Boulenger, Cat. Snakes Brit. Mus., **3**, p. 345, 1896.

One female specimen from Tunnibuli, Ysabel.

Ventrals 168, anal divided, subcaudals 47, upper and lower labials 7 on each side, oculars and temporals 1–2 on each side, total length 914 mm., tail 144 mm.

Denisonia woodfordii (Boulenger).

Hoplocephalus woodfordii Boulenger, Proc. Zool. Soc. Lond., **1888**, p. 89, 1888.

Denisonia woodfordii Boulenger, Cat. Snakes Brit. Mus., **3**, p. 346, 1896.

One female specimen from Webster Cove, Kulambangra, has 164 ventrals, 42 subcaudals, 7 upper and lower labials on each side, and oculars and temporals 1–2 on each side.

Laticauda colubrina (Schneider).

Hydrus colubrinus Schneider, Hist. Amphib., Fasc. 1, p. 238, 1799.

Laticauda colubrina Stejneger, Bull. U. S. Nat. Mus., **58**, p. 406, 1907.

Fourteen specimens from Tunnibuli, Ysabel.

Crocodilus porosus Schneider.

Crocodilus porosus Schneider, Hist. Amphib., Fasc. 2, p. 159, 1801.

A fragment of a very large skull of this species was presented to the Museum by Mr. Charles R. Bignell of Fulakora Point, Ysabel. This crocodile had been killed many years before by a dynamite bomb, which broke up the skull; according to Mr. Bignell it measured 18 feet 9 inches. The greatest premaxillary breadth of the fragment is 170 mm., the breadth at the fifth maxillary tooth is 231 mm., and the diameter of the alveolus of the fifth maxillary tooth is approximately 37 mm.

REFERENCES[1]

AHL, ERNST

1927. Ueber neue oder seltene Froschlurche aus dem Zoologischen Museum Berlin. Sitzber. Ges. Naturf. Freunde, Berlin, **1927**, pp. 111–117.

BURT, CHARLES E.

1930. Herpetological Results of the Whitney South Sea Expedition. IV. Descriptions of New Species of Lizards from the Pacific Islands (Scincidae). Amer. Mus. Novit., **427**, pp. 1–3.

KINGHORN, J. R.

1928. Herpetology of the Solomon Islands. Rec. Australian Mus., **16**, pp. 123–178, pls. 13–15, 35 text figs.

1931. Herpetological Notes. No. 2. Rec. Australian Mus., **18**, pp. 85–91.

MERTENS, ROBERT

1926. Uber die Rassen einiger indo-australischer Reptilien. Senckenbergiana, **8**, pp. 272–279.

1929. Zur Synonymie der Froschgattung Batrachylodes Boulenger. Zool. Anz., **80**, pp. 266–268.

1929. Die Rassen des Smaragdskinkes, Dasia smaragdinum Lesson. Zool. Anz., **84**, pp. 209–220.

PARKER, H. W.

1925. Notes on Lizards from the South Pacific Islands. Ann. Mag. Nat. Hist., (9), **15**, pp. 298–300.

[1]Supplementary to the bibliography in Kinghorn, 1928, together with the newer literature.

ROUX, JEAN

1930. Note sur un reptile scincidé des iles Salomon, presentant des pores pediaux. Verh. Naturf. Ges. Basel, **41**, pp. 129–135, pl. 3, 1 text fig.

SCHMIDT, KARL P.

1930. Essay on the Zoogeography of the Pacific Islands. Appendix in SHURCLIFF, SIDNEY N.: Jungle Islands, G. P. Putnam's Sons, New York, pp. 275–292.

SCHMIDT, KARL P. and BURT, CHARLES E.

1930. Herpetological Results of the Whitney South Sea Expedition. V. Description of Emoia sanfordi, a New Lizard from Islands of the Western Pacific (Scincidae). Amer. Mus. Novit., **436**, pp. 1–3.

SCHÜZ, ERNST

1929. Verzeichnis der Typen des Staatlichen Museums fur Tierkunde in Dresden. 1. Teil Fische, Amphibien und Reptilien mit einem Anhang: Die Schlangen der papuanischen Ausbeute Dr. Schlaginthaufens 1909. Abh. Berichte Mus. Dresden, **17**, No. 2, pp. 1–16, 1 fig.

SHURCLIFF, SIDNEY N.

1930. Jungle Islands. The Illyria in the South Seas. The record of the Crane Pacific Expedition of Field Museum of Natural History, Chicago, Illinois. G. P. Putnam's Sons, New York, XV and 298 pp., 2 maps, 90 illus.

STERNFELD, RICHARD

1920. Zur Tiergeographie Papuasiens und der pazifischen Inselwelt. Abh. Senckenbergischen Naturf. Ges., **36**, pp. 373–436, pl. 31.

VOGT, THEODOR

1912. Beitrag zur Reptilien- und Amphibienfauna der Südseeinseln. Sitzber. Ges. Naturf. Freunde, Berlin, **1912**, pp. 1–13.

WERNER, FRANZ

1900. Die Reptilien- und Batrachierfauna des Bismarck-Archipels. Mitt. Zool. Mus., Berlin, **1**, No. 4, pp. 1–132, 46 figs.