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Vasco M. Tanner
Brigham Young University

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PACIFIC ISLANDS HERPETOLOGY NO. IV ADMIRALTY ISLANDS (1)

VASCO M. TANNER
Professor of Zoology and Entomology
Brigham Young University
Provo, Utah

INTRODUCTION

This is the fourth report on the South Pacific Islands Herpetology. It is concerned with specimens collected on Los Negros Island of the Admiralty group.

The Admiralty Islands are located between 1° 30′ and 3° 10′ South Latitude and 146° and 148° East Longitude, being the most northerly of the Melanesion Islands. This group was discovered in 1616 by Schouten and Lemaire and consists of Manus, Los Negros, Los Reyes, Pak, Naura, Rambutyo, Baluan, Sauwai, Lou, Tong, and other small islands. All these islands are small except Manus which has an area of more than seven hundred square miles and has mountains that rise to a height of over three thousand feet. Los Negros, the next largest island of this group, forms an arc around the eastern end of Manus: the two being separated by a narrow channel. Within this arc is a good harbor, the Seeadler, which has depths ranging up to 120 feet. The central part of Los Negros was made into the large Momote airfield which was an important base in General Douglas MarArthur's campaign to win back the Philippine Islands and move on to Japan.

The Admiralties lies about 200 miles north and east of New Guinea and 260 miles west of New Ireland. New Hanover Island is between New Ireland and the Admiralties on an arc which extends through these Islands southward to the Solomon Islands. In 1940 there were about 14,000 natives on the islands, most of them en-

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gaged in cultivating the coconut, the only commercial crop produced there. They are worthy sea fareing people fishing and diving for pearl shells. Their food consists principally of coconut, taro, sago, yams, bananas, breadfruit, and sugar cane.

The herpetological fauna of this group is poorly known. Boulenger, 1887; Hediger, 1937; Mertens, 1934; Peters and Doria, 1878; Sternfield, 1918; and Vogt, 1912, have made some valuable reports on the reptiles of this area. However, their efforts have been confined mainly to the Bismarck archipelago. Sternfeld lists 16 species as having been collected on the Admiralty Islands, none of which were reported from Los Negros.

Mr. Reimschiissel landed on Los Negros August 27, 1944, and left on September 16, 1944. Collecting was possible only a part of his stay on the Island. He reports as follows concerning his camp and general conditions on the Island:

"My camp was located on a very bare part of the island where coral sand and coral rock made up the soil, mixed with old and decayed parts of plants which accumulated where the water puddled. Plant life is not as luxuriant as on Guadalcanal, the insects do not seem as numerous, but the bird life is plentiful. It rains one to two times each day. The water when in still pools has a milky color. Sometimes in small drainage areas the streams are also milky in color.

"My time was very limited and even at night the lights were turned off, forcing me to hold off with my record keeping or other writing. During these long hours of darkness I went hunting for frogs with a flashlight. Many of them were croaking and calling to one another. One species I observed is a small brownish one which hides under the coral rocks and amongst the plants. A beam of light would not frighten them so with their continual croaking I was able to catch five specimens."

I wish to extend my thanks to Mr. Reimschiissel for his interest and care in making collections of the reptiles and insects he encountered. The species listed below are, for the most part, new records for Los Negros Island.

AMPHIBIANS

Family Hylidae

HYLA INFRAFRENATA INFRAFRENATA GUNTHER

Gunther, Ann. Mag. Nat Hist., (3) XX, 1867, p. 56.

BYU 7309, 7314 Admiralty Islands (E. Reimschiissel) Sept. 16, 1944
BYU 7315, 7316 Los Negros
7326

These specimens agree in measurements and color with those reported from Morotai Island. Two adult specimens (7309, 7316) are dark lavender blue in spirits. From Mr. Reimschiissel's notes I record the following: "I saw a large green frog which eluded my grasp: it landed on an elephant's ear and I managed to catch it. It was green, long legged, with golden colored eyes—the pupil going longitudionally with the body. These were a number of small green frogs of which three or four were caught. I do not know whether these were immature or mature frogs but they were found in the forest area during the day time, out in the sun or shade or on the tops of leaves which would hold their weight. Another small greenish brown frog was caught in the forest living under logs."

Family Ranidae

PLATYMANTIS sp.

BYU 7310-11, 7320 Admiralty Islands (E. Reimschiissel) Sept., 1944
BYU 7321-22, 7323 Los Negros
7324

It is not possible to make a specific determination of this species at present. I have compared it with specimens of *P. papuensis weberi* Schmidt from the Tenaru River on Guadalcanal, collected by Robert C. Pendleton, and *P. corrugatus papuensis* collected at Hallandia, New Guinea by Mr. Reimschiissel. Dr. Walter C. Brown now has specimens BYU 7310-11 and 7320, making a study of them in comparison with *Platymantis* species now contained in some of the American collections. The four specimens before me are all about 30 mm. in length.

LIZARDS

Family Gekkonidae

GEHYRA OCEANICA (LESSON)

Lesson, Voyage Coquille, Zool. II, I, 1830, p. 42 pl. II, fig. 3.

BYU 7179 Admiralty Islands (E. Reimschiissel) Sept. 7, 1944
Los Negros

One female specimen of this wide spread species was reported for the Admiralty Islands by Sternfeld.

Family Scincidae

DASIA SAMARAGDINUM PERVIRIDIS BARBOUR

Barbour, Proc. N. Eng. Zool. Club, Vol. VII, p. 106, 1921

BYU 7162, 7207-18 Admiralty Islands (E. Reimschiissel) Sept., 1944
Los Negros

Rostal two times as broad as high, in contact with the first supralabial, nasal and frontonasal; no internasals present; prefrontals contact the frontonasal, two loreals, anterior supraocular, frontal, and meet at a point dorsally; frontal extends back to the frontoparietals and contacts three supraoculars; two pair of nuchals; lower eyelid scaly; ear-opening small with two small lobules anteriorly; supralabials six and seven in contact with subocular; eight supralabials and seven infralabials; mental twice as broad as high in contact with the first lower labial and the first large transverse chin-shield, which is in contact with the two lower labials on both sides. Dorsal scales not keeled, in 22-24 rows around the middle of the body. Fingers and toes quite long, with claws; fourth toe with 29-31 lamellae. Heel with a large oval scale. Body length 76-78 mm.; tail length 117-122 mm. Specimens in alsohol are a bluish green color throughout. Mr. Reimschiissel recorded the following concerning this skink: "The large green lizards turned slightly blue when in solution, are usually found on trees, especially where a Philodendron vine is growing. One of these green lizards, when caught, vomited a part of a grasshopper which is still in the bottle. September 5, caught three more green lizards on trunks of trees; fellows in the office say they run about in the early morning, even jumping for flies."

This subspecies is a geographical race distributed south from the Admiralty Islands throughout the Bismarck Archipelago, Solomon Islands to North East New Guinea. Loveridge (1948) reports it from many localities in New Guinea. Barbour's type was an adult from Fulkora, Ysabel Island, Solomon Islands. The thirteen specimens from Los Negros are fairly uniform in size and color; also in scale counts. Four specimens have a 22 scale ring around the body at the middle; seven (23) and two (24). Twelve have eight supralabials; one (9). All have seven infralabials, and two have 29 lamellae under the fourth toe; seven (30) and two (31). The scalation is similar in the Philippine, Morotai and Los Negros specimens. The Los Negros specimens lack the dark spots and gray color found on the body of the Morotai and Philippine specimens. The dorsal surface

of the hind legs of the Los Negros specimens is brown in color with some white spots. The thirteen Los Negros specimens average less in body measurements and are not as robust in body build as specimens of this genus from Morotai and Philippine Islands.

LYGOSOMA (LEIOLOPISMA) FUSCUM LUCTUOSUM (PETERS & DORIA)

Heteropus luctuosus Peters & Doria, Ann. Mus. Civ. Stor. Nat. Genova, Vol. 13, p. 364, 1878.

BYU 7163-66, 7172-78 Admiralty Islands (E. Reimschiissel) Aug. 25-
BYU 7221-26, 7228-30 Los Negros 30, 1944
BYU 7240-44

Rostral twice as broad as high, with a broad contact between the frontonasal and the nasal; frontonasal one and one half times as broad as high, nostril in the nasal; no supranasals; frontal as long as the frontoparietal and in contact with the two anterior supraoculars; 4 supraoculars; 7 supraciliaries; interparietal present but small; parietals in contact; a pair of nuchals and temporals; 7 supralabials, 4 before the subocular; 6 infralabials; submental large and in contact with the first and second infralabials, 31-34 mid-body scale rows; 29-33 lamellae under the fourth toe; total length, specimen BYU 7228, 160 (55-105) mm.; average body length 50 mm., tail length 81 mm. Color in spirits dark brown above, whitish on underside of body and the tail, otherwise there are no other color markings on the specimens.

Reimschiissel notes that these lizards are dark brown in color above and yellowish white beneath. He also records finding this brown colored species, and specimens that were dark colored with yellow body stripes, associated together on the coral rocks.

For the present I am inclined to follow Loveridge and consider the subspecies of *fuscum* in this area to be *luctuosum*. The Los Negros specimens under consideration agree very closely in body measurements and scale counts with Loveridge's description and key of the subspecies *luctuosum*. Loveridge considered one specimen, from New Britain archipelago, and now in the Museum of Comparative Zoology, as belonging to this subspecies.

Robert Sternfeld, 1918, reported *Lygosoma* (*Liolepisma*) *fuscum* from New Britain and Galwan Island, one of the Admiralty group. He reports that the eight Galwan Island specimens have 32 mid-body scale rows, and 28 to 30 lamellae under the fourth toe.

EMOIA MIVARTI BOULENGER

Boulenger, Cat. Liz. III, p. 292, pl. XXIII, fig. 1, 1887.

BYU 7167-7171	Admiralty Islands	(E. Reimschiissel)	Aug., 1944
BYU 7186-7206	Los Negros		Sept., 1944
7234-7239			

Rostral twice as broad as high, in contact with first upper labial, two small nasal scales and frontonasal; frontonasal one and one half times as broad as long; prefrontals widely separated by the frontal; frontal as long as the undivided frontoparietal; parietals and temporals large, nuchals small; four supraocular, two loreals between the nostril and preocular; seven supraciliaries; lower eyelid with a transparent disk; ear opening oval, with two short anterior lobules; supralabials seven to eight, five before the large subocular; seven to eight infralabials, submental larger than the mental. Scale rows at the middle of the body 33 to 36 (4-33, 7-34, 7-35, 2-36), smooth and smaller laterally. Preanals only slightly enlarged. Length of body and tail 120 mm. (50+70). Limbs well developed; fourth toe with 40 to 46 lamellae.

The color of preserved specimens is dark brown dorsally, bordered by two whitish lines which involve part of two rows of scales. These two white lines have their origin in the supraciliaries and pass backward through the temporals and nuchals along the body above the bind legs and on to the tail. Another pair of white lines extend from the supralabials to the groin. In some specimens there are two to five lines radiating out from the axilla. The ventral part of the body is light in color.

Mr. Reimschiissel reports that live specimens of this species had white and yellowish stripes on the dark brown dorsal body wall and were white in color on the venter and tail.

Loveridge, 1948, considers Boulenger's *Tygosoma mivarti* (part?) from Admiralty Islands as a synonym of *Emoia baudinii boudinii D & B.* I have not followed Mr. Loveridge in this treatment of the Los Negros specimens since the scale rows around the middle of the body, the lamellae of the fourth toe, the body and tail length, and general color agrees more with Boulenger's description than that set forth for *baudinii* by Loveridge. Sternfeld lists *mivarti* from the Admiralty Islands. He reports the body scale rows as 31 to 36 and the lamellae of the fourth toe as 35 to 42.

Specimens number BYU 7196 and 7235 are, through an exchange, in the Stanford University Natural History Museum.

EMOIA ATROCOSTATA (LESSON)

Lesson, Voy. Coquille Zool. II p. 50, pl. IV, Fig. 3, 1830

BYU 7180 Admiralty Islands (E. Reimschiissel) Sept. 7, 1944
Los Negros

Rostral two times as broad as high, in contact with the first supralabial, two nasal and frontonasal scales; frontanasal not as high as the frontal with which it forms a broad contact; a small interparietal separated from the frontoparietal; two loreals; lower eyelid with a transparent disk; ear opeing as large as the palpebral disk; mental larger than the submental; first infralabial wedge shape between the mental and second infralabial, not in contact with the submental. Seven lower and seven upper labials; 39 scale rows, about the same in size, around the body at the middle; scales smooth; preanal scales enlarged. Limbs well developed; fourth toe with 37 smooth lamellae below.

Color greyish above, with small black dots irregularly placed over the body; under surface of body and tail whitish. Total length of specimen is 182 mm. (63+119). Only one specimen of this species collected.

Sternfeld lists two specimens from Ilim Island of the Admiralty group. The body scale rows are reported as 38 and the lamellae of the fourth toe 36-38. This species has a wide distribution according to Nelly de Rooij.

EMOIA CYANOGASTER (LESSON)

Lesson, Zool., in Duperry, Voyage autour du Monde sur La Coquille, Vol. 2, pt. 1, p. 47, pl. III, fig. 3, 1830.

BYU 7181, 7233 Admiralty Islands (E. Reimschiissel) Sept., 1944
Los Negros

Snout long, pointed, rostal broader than high, frontonasal as broad as high, frontal narrowly in contact with the frontonasal; internasals not longer than the frontal; interparietal not present; parietals large and in contact behind the frontoparietals; nuchals and temporals small; loreals, second about twice as long as the first; four supraoculars; six superciliaries; lower eyelid with transparent disc; supralabials, seven to eight; infralabials, six; submental larger than the mental. Ear opening small, guarded with one or two short lobules; body scales smooth, longer dorsally than laterally, 24 rows around middle of body; two preanal scales enlarged; total length of specimen BYU 7181, 178 mm. (50+128), the tail is more than two

and one half times as long as the body; legs well developed, especially the hind ones which may be extended to reach the axilla of the front ones; lamellae under the fourth toe, 82-87.

Color above brown with two greenish blue lines extending from back of the eyes to the thighs; iridescent with small black dots, under color a blue-green.

Sternfeld reports one specimen of *cyanogaster* from the small island of Pak; de Rooij records it from the Bismarck Archipelago and Loveridge lists one specimen from New Britain. This species has very fine lines and is one of the most interesting species of the genus Emoia. Sternfeld lists *iridescens* Blgr. from Pak island, while Loveridge considers *iridescens* as a synonym of *cyanogaster*.

EMOIA CYANURA (LESSON)

Lesson, Zool. in Duperry, Voyage autour du Monde sur La Coquille, Vol. 2 pt. 1, p. 49, 1830.

BYU 7182 Admiralty Islands (E. Reimschiissel) Sept., 1944
Los Negros

Rostral about twice as broad as high; nortril between three small scales; frontonasal broader than long, forming a broader suture with the rostral than the frontal; no internasals present; frontal not as long as the frontoparietal which is single; interparietal not present; parietals large; nuchals a little broader than the temporals; lower eyelid with a transparent disk; ear opening oval with two or three short anterior lobules; supralabials seven, four before the large subocular, infralabials seven; mental two times as broad as long; scales smooth, the dorsal ones larger than the lateral ones, 30 rows around the middle of the body; preanal scales slightly enlarged, 69 lamellae under the fourth toe. Total length 129 (46+83).

Color black with three cream white iridescent streaks on the back; the dorsal stripe covers the inner positions of the two dorsal scale rows while the two lateral stripes are on the outer two thirds of a scale row. The ventral color is white under the chin becoming bluish around the hind legs and the tail.

Eight specimens of this species were reported from Olim Island of the Admiralty group by Sternfeld. Reimschiissel collected only a single specimen on the Island of Los Negros. The lamellae of the fourth toe on the specimen before me are greater in number than is usually reported for this species. The other characteristics seem to justify considering it as *cyanura*.

EMOIA CAERULEOCAUDA de VIS

deVis, Ann. Queensland Mus., No. 2, p. 12, 1892.

BYU 7183, 7219-20 Admiralty Islands (E. Reimschüssel) Sept., 1944
Los Negros

This species is represented by three specimens which agree with Loveridge's findings. The prefrontals are broad and fused with the interparietal; parietals large, temporals and nuchals small; lower eyelid with a transparent disk; ear-opening oval, same size as the palpebral disc. Body with 31-34 smooth scales around the middle, the dorsal scales larger than the lateral ones; fourth toe with 46-50 smooth lamellae below.

Color in life and spirits similar to *cyanura*, except the light stripes are not as iridescent in *caeruleocauda* and the under parts and tail are not as blue green.

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