THE LIZARDS OF THE MARQUESAS ISLANDS

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The Pacific Entomological Survey, conducted by E. P. Mumford and A. M. Adamson, under the auspices of Bernice P. Bishop Museum, began its work in the South Pacific in 1928, concentrating chiefly on the Marquesan archipelago. In the course of the Crane Pacific Expedition of Field Museum of Natural History the senior author met Mr. Mumford and Mr. Adamson at Atuona, their headquarters in the Marquesas. In conversation with them, the opportunity for study offered by the lizard fauna was a topic of mutual interest; and the suggestion was made by the senior author that if sufficient series of specimens of each of the species from the individual islands were available for statistical examination, some clue to the beginnings of species formation by isolation might be detected. The numbers of specimens required for such a study would be large, and it would be necessary to have them especially prepared for rapid examination. Such a collection was felt to be beyond the scope of the Pacific Entomological Survey. In the course of their work, however, Mr. Mumford and Mr. Adamson and others at their direction collected 223 specimens of lizards. These were forwarded to Field Museum for identification and study. The following list records this material with its distribution. The highlight of the collection lies in its record of the presence in the Marquesas of the gecko *Hemiphyllodactylus leucostictus*, hitherto known only from Hawaii. The writers are indebted to E. H. Bryan, Jr., Curator of Collections, Bernice P. Bishop Museum, for the opportunity to examine this material, and to Mr. Mumford and Mr. Adamson for their interest in collecting it.
The senior author \(^1\) has recorded his impressions of the distribu-
tional significance of the Polynesian lizards, six species of which
range from island to island throughout the Pacific. The species of
*Hemiphylodactylus* in the Hawaiian islands apparently afforded a
reptilian element of faunal distinctness to that most remote of
oceanic island groups; but with the present records of this species
from the Marquesas, the uniformity of the lizard fauna of the
Pacific islands is more emphasized than ever.

The collection at hand includes two species of geckos and one of
skinks from Tahiti; these are *Gehyra oceanica* from Tuarua Valley,
September 6, 1928, a *Lepidodactylus lugubris* from Fautaua Valley,
September 13, 1928, and a second specimen of the same species
from Paea, August 29, 1928, and one *Leiolepis noctua* from Tuarua
Valley, September 6, 1928, all collected by A. M. Adamson. These
species have previously been recorded from Tahiti.

The remainder of the collection comes from the Marquesas, with
nine islands represented. With the exception of the few specimens
recorded from Nukuhiva and Hivaoa by the senior author,\(^2\) actual
records of the species of lizards in this archipelago appear to be
wanting. The present list accordingly fills a conspicuous gap in our
knowledge of the Polynesian lizard fauna.

To increase the usefulness of the present paper to visitors to
the South Sea islands who may interest themselves in the lizards,
we have included a key to the species as an aid to their identifica-
tion, inserting figures to illustrate the technical characters employed.
These illustrations, with the exception of figures 1a, 3c, and 4c, are
from Stejneger’s report \(^3\) on the Hawaiian lizards.

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\(^1\) Schmidt, K. P., *Essay on zoogeography of the Pacific islands:* appendix in

\(^2\) Schmidt, K. P., *A list of the lizards collected by R. H. Beck in the southern
secured by the Whitney South Seas Expedition:* *Copea,* pp. 23-24, 1922.

\(^3\) Stejneger, Leonard, *The land reptiles of the Hawaiian islands:* *U. S. Nat. Mus.,
Proc.*, vol. 21, pp. 763-813, 1899.
KEY TO THE SPECIES

a. No large symmetrical shields on top of head; body covered with small granules or minute scales; digits dilated; pupil vertical...GEKKONIDAE

Figure 1. Top of head: a, gecko (Gephyra) showing granular scales; b, skink (Emoia), showing large symmetrical shields.

b. Compressed distal phalanx of digits adhering to the dilated portion and extending somewhat beyond it, but not rising angularly from within the edge; chin shields not differentiated...Lepidodactylus lugubris

Figure 2. Side view of digit: a, Lepidodactylus; b, Hemidactylus.

bb. Compressed distal phalanx of digits free, rising angularly from within the edge of the dilated portion.

c. Inner digits with distal phalanx compressed and clawed...Hemidactylus garnotii

Figure 3. Underside of foot: a, Hemidactylus garnotii, showing lamellae in two series; b, Hemphyllodactylus leueostictus; c, Gephyra oceonica, showing single lamellae.
cc. Inner digits without a distal compressed phalanx.

d. Chin-shields large; a series of transverse plates under tail.

e. Subdigital lamellae in two series.................Peropus mutilatus

ee. Subdigital lamellae single..........................Gehyra oceanica

dd. Chin-shields not differentiated; no transverse plates under tail.............

..............................................Hemiphylodactylus leucostictus

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**Figure 4.** Chin-shields: a, Hemidactylus garnotii; b, Peropus mutilatus; c, Gehyra oceanica; d, Lepidodactylus lugubris. Showing variously enlarged plates.

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aa. Top of head with large symmetrical shields; body scales large, cycloid; digits not dilated; pupil round........................SCINCIDAE

b. Eyelids well developed, movable.

c. Nostril pierced in the nasal; no supranasal; frontoparietals and interparietals distinct; two or three pairs of nuchals...Leiolopisma noctua

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**Figure 5.** Head: side view, a, Leiolopisma noctua, showing lower eyelid with transparent disk; b, Ablepharus bottoni poecilopleurus, showing eyelid indistinguishable; top, c, Leiolopisma noctua; d, Enoia cyanura.

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cc. Nostril pierced between three small shields, a nasal, a postnasal, and a supranasal; frontoparietal and interparietal fused into a single large shield; a pair of nuchals..........................Enoia cyanura

bb. Eyelids indistinguishable, not movable........................................

..............................................Ablepharus bottoni poecilopleurus
GEKKONIDAE

**Lepidodactylus lugubris** (Duméril and Bibron). Mourning Gecko


*Lepidodactylus lugubris* Fitzinger, Syst. Rept., p. 98, 1843.

This common species is represented by 33 specimens from seven islands. It may usually be distinguished at a glance from the other Polynesian geckos by its pale coloration with black spots or markings.

Mohotani: altitude 700 feet, 1 specimen, February 2, 1931, Le-Bronnec and H. Taura.


Uapou: Hakahetau Valley, sea level, 8 specimens, December 4, 1931, LeBronnec.

Eiao: altitude 1,600 feet, 3 specimens, April 23, 1931, LeBronnec and H. Taura. Middle of island, altitude 1,400 feet, 1 specimen, October 20, 1929; uplands, northeast, altitude 1,850 feet, 1 specimen, September 29, 1929; altitude 1,600 feet, 3 specimens, September 29, 1929, A. M. Adamson. Altitude 1,600 feet, 1 specimen, April 30, 1931, LeBronnec and H. Taura.

Hivaos: Atuona, 1 specimen, February 16, 1928, Mumford and Adamson.

Uahuka: Teamataaki, altitude 750 feet, 3 specimens, March 19, 1931, LeBronnec and H. Taura.

**Hemidactylus garnotii** Duméril and Bibron. Fox Gecko


This species is represented by six specimens from four islands. The development of calcareous deposits in the post-auricular region is noteworthy in the larger specimens. *H. garnotii* is distinguished most easily by its longer head and distinctive chin-shields.

Uapou: Hakahetau Valley, sea level, 3 specimens, December 4, 1931, LeBrunnc.
Eiao: altitude 1,600 feet, 1 specimen, April 30, 1931, LeBrunnec and H. Tauraa.
Hivaooa: Tepehi, altitude 1,500 feet, 1 specimen, June 1, 1929, Mumford and Adamson.

**Peropus mutilatus** (Wiegmann).

Stump-toed Gecko


Seventeen specimens from six islands. The combination of elongate chin-shields with divided lamellae on the subdigital expansions suffices to distinguish this species.

Mohotani: altitude 350 feet, 2 specimens, February 4, 1931; altitude 700 feet, 2 specimens, February 2, 1931; LeBrunnec and H. Tauraa.

Tahuata: Vaitahulu Valley, 1 specimen, November 15, 1929, Victor Doom.


Hatutu [Hatutaa]: altitude 1,080 feet, near middle, 1 specimen, September 3, 1929, A. M. Adamson. Altitude 1,000 feet, 1 specimen, April 28, 1931, LeBrunnec and H. Tauraa.

Fatuuki: altitude 990 feet, 1 specimen, September 13, 1931, H. Tauraa.

**Gehyra oceanica** (Lesson).

Polynesian Gecko


Forty specimens from six islands. Seven eggs of this species were collected at Omoa [Oomoa] Valley, Fatuhiva Island, by LeBrunnec, on September 16, 1930. These vary in length from 13.2 mm. to 14.3 mm., and in shorter diameter from 12.0 mm. to 12.6 mm. They are laid separately, like those of _Gehyra vorax_, not in pairs as in _Lepidodactylus lugubris_. *Gehyra oceanica* is the largest lizard
of the Marquesas. The broad expansion of its toes, with curved un-
divided lamellae on the under side, are characteristic.

Mohotani: altitude 700 feet, 1 specimen, February 2, 1931, Le-
Bronnec and H. Tauraa.

Tahuata: Vaitahu, 10 specimens, May 31, 1931, LeBronnec and
H. Tauraa.

Fatuhiva: Omoa [Oomoa] Valley, altitude 350 feet, 1 specimen,
September 16, 1930; altitude 150 feet, 5 specimens, September, 1930,
LeBronnec.

Uapou: Hakahetau Valley, sea level, 20 specimens, December 4,
1931, LeBronnec.

Eiao: altitude 1,600 feet, 2 specimens, April 30, 1931, LeBronnec
and H. Tauraa.

Hivaoa: Atuona, 1 specimen, February 15, 1920, Mumford and
Adamson.

**Hemiphyllodactylus leucostictus** Stejneger. Stejneger’s Gecko

*Hemiphyllodactylus leucostictus* Stejneger, U. S. Nat. Mus.,
Proc., vol. 21, p. 800, fig. 7-9, 1899.

Three specimens from three islands form the first record of this
species outside the Hawaiian archipelago. These agree in detail with
both generic and specific diagnosis given by Stejneger for Hawaiian
specimens. The agreement in such details of coloration as the five
white spots on the bases of the digits and the transverse white mark
at the base of the tail convinces us that the Marquesan specimens
should unquestionably be referred to the Hawaiian species. Two of
the Marquesan specimens lack the median brown marbling of the
underside of the tail mentioned by Stejneger, but this is indicated
in the third specimen. The coloration of the adult *H. leucostictus*
corresponds closely with that of juvenile *Gekyra oceanica*.

The occurrence of this species in the Marquesas suggests that it
should be looked for in Tahiti and other Polynesian Islands. It
may most readily be distinguished by the absence of chin-shields,
brown color with white spots, and the shortness of the expanded
portion of the fingers and toes.

Without East Indian material for comparison we are not ready
to accept the reference of this species to the synonymy of
*Hemiphyllodactylus typus* (Bleeker) as has been suggested by Brongersma.4

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Fasc. 2, pp. 1-39, 1 map, pls. 1-4, 1931.
Mohotani: altitude 700 feet, 1 specimen, February 2, 1931, LeBrunnec and H. Tauraa.
Eiao: altitude 1,600 feet, 1 specimen, April 23, 1931, LeBrunnec and H. Tauraa.
Hivaoa: Kopaaafaa, altitude 2,800 feet, 1 specimen, August 3, 1929, Mumford and Adamson.

SCINCIDAE

Leiolopisma noctua (Lesson).


This species is represented by no less than 87 specimens from seven islands. The usual recognition character for this species is a median light line on the back which stops on the occiput with a distinct expansion into a spot. The edges of the line are diffused, never sharp as in _Emoia_. Rare specimens may have the dorsal line and spot obscure.

Mohotani: 2 specimens, February, 1931; altitude 700 feet, 17 specimens, February 2, 1931; altitude 325 feet, above Anaofa, 2 specimens, August 13, 1929; altitude 700 feet, coconut plantation, 1 specimen, January 31, 1931, LeBrunnec and H. Tauraa.
Uapou: Hakahetau Valley, sea level, 8 specimens, December 4, 1931; Koputukea, altitude 1,150 feet, 1 specimen, November 16, 1931, LeBrunnec.
Hivaoa: Atuona, 1 specimen, February 16, 1928, Mumford and Adamson.
Fatukhu: altitude 990 feet, 4 specimens, September 19, 1930, H. Tauraa.
Eiao: altitude 1,600 feet, middle of island, 1 specimen, September 28, 1929, A. M. Adamson.
Emoia cyanura (Lesson).

Twenty-three specimens from four islands. This species is immediately distinguishable from the other skinks by the sharply defined, light mid-dorsal line which extends to the tip of the snout, and the bright blue tail. Six specimens have the mid-dorsal line to a varying extent confined to a single mid-dorsal row of scales; this variation, however, appears to be erratic, for it is represented in the series from each island.

Mo'otana: 2 specimens, February 1, 1931; 1 specimen, February 2, 1931; altitude 1,700 feet, 1 specimen, February 1, 1931, LeBronec and H. Tauraa.

Ablepharus boutonii poecilopleurus (Wiegm.). Snake-eyed Skink

Two specimens from Hatutu [Hatuta] are the only ones secured by the Pacific Entomological Survey. These agree excellently with the recent diagnosis of this form by Mertens, and we have followed his nomenclature. Specimens from the Fiji Islands are distinguished as A. b. crinius by Mertens, and the validity of this form is supported by the characters of Field Museum specimens from Fiji.

The snake-eyed skink is at once distinguished by the apparent absence of eyelids and the lack of a mid-dorsal light line.

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