

Article XII.—DESCRIPTIONS OF NEW AMPHIBIANS AND
REPTILES FROM SANTO DOMINGO AND NAVASSA

BY KARL PATTERSON SCHMIDT

The Department of Herpetology of The American Museum of Natural History has acquired fairly large collections from the West Indies in recent years. Through the cooperation of various departments of the Museum valuable collections of reptiles and amphibians have been received from several islands. Mr. C. R. Halter was sent to Santo Domingo in the summer of 1916 and brought back a considerable collection from the northeastern part; and to this a small but valuable collection from the Province of Azua made by Mr. R. H. Beck in 1916 and 1917 has been added. Mr. Beck also collected in Haiti and on the island of Navassa, between the southern peninsula of Haiti and Jamaica, adding a number of species to the fauna of this little-known and exceptionally interesting island. Through the kindness of Dr. A. H. Wright, of the Zoological Laboratory, Cornell University, a small collection made in Santo Domingo by Mr. Axel Olsson and the author during a geological reconnaissance of the northwestern Yaqui Valley (Maury, 1917, Bull. Amer. Paleont., V, p. 3 *et seq.*) is available for study in connection with the Santo Domingo material in this Museum. It is intended to supplement the following list of new species with a more extended paper on the West Indian collections.

***Eleutherodactylus montanus*, new species**

Diagnostic Characters

Size moderate; snout obtuse; nostril much nearer the end of the snout than the eye; vomerine teeth in two oval patches well behind the choanæ; tympanum distinct, about one-third the diameter of the eye; toes free; tibio-tarsal articulation reaching the posterior border of the eye; tips of digits considerably dilated; skin rugose above, without longitudinal folds; belly uniformly granular.

Detailed Description

Type: A. M. N. H. No. 6434, ♂.

Head considerably broader than long, broader than the body; snout short, obtuse, its length equal to the interorbital space; canthus rostralis well defined; elbow and knee pressed along sides, overlap slightly; heels overlapping when legs are placed vertically to the body; nostrils closer to the end of the snout than to the eye; tympanum distinct, small, separated from the border of the eye by its own diameter; disks of fingers and toes well developed, about as large as the tympanum; toes with only a vestigial web; inner and outer metatarsal tubercles well developed; a distinct

inner and a shorter outer tarsal fold; vomerine teeth in two oval patches, well behind the choanæ, the space between them less than their diameter; tongue small, oval, very slightly nicked behind; skin rugose above, without glandular folds; belly and lower side of thighs uniformly granular; a very faint median dorsal ridge from end of snout to anus; a subgular vocal sac.

Dorsum light brown with more or less longitudinal darker markings; a broad dark band from eye to eye; venter grayish yellow; a light yellow spot on the anterior proximal part of the thigh; a similar spot on the distal posterior half, and the inner face of the tibia similarly colored; a line of the dark dorsal color extends along the upper side of the thigh, representing the exposed part when the legs are folded; concealed parts of arms also light colored.

Length, 24 mm.; head, 9 mm. long, 10 mm. broad; leg, 34 mm.; arm, 15 mm.

Comparison of Paratypes

Four paratypes, one large female and three smaller specimens, agreeing closely with the description of the type. The female is somewhat larger, total length, 28 mm.; leg, 43 mm.; arm, 18 mm.

Collected in the mountainous interior of the Province of Azua, Santo Domingo, by R. H. Beck, January to June 1917.

***Sphærodactylus becki*, new species**

Diagnostic Characters

Scales large, imbricate; dorsal scales keeled, a vertebral row of small granular scales; ventral scales smooth; dorsal and ventral scales subequal, caudal scales larger; five upper and four lower labials; uniform grayish brown above, light gray below.

Detailed Description

Type: A. M. N. H. No. 12595.

Head pointed, snout as long as the distance between eye and ear opening; ear opening oval, small, oblique; rostral large, with a median cleft above; five upper labials; four lower labials; scales of head small, granular, larger on the snout, gradually passing into the imbricate dorsals; mental large, followed by a pair of small postmentals; dorsal scales as large as the ventrals, imbricate and keeled; one or two vertebral series of small granular scales; ventrals perfectly smooth; caudals transversely enlarged below on the proximal half of the tail; caudal scales about twice as large as the dorsals, smooth; ventral scales perfectly smooth.

Uniform grayish brown above, lighter gray below; dorsal scales are narrowly but sharply dark-edged producing a finely reticulated appearance; throat faintly marbled with darker gray; labials and sides of the head faintly spotted with white; a narrow white line on the canthus rostralis continued from the posterior border of the eye, converging with its fellow on the parietal region, uniting on the neck.

Length, 42 mm.; body, 22 mm.; head, 6 mm. long, 3.5 mm. broad; arm, 6 mm.; leg, 8 mm.

A single specimen from the island of Navassa, collected by R. H. Beck, July 15, 1917.

Anolis longiceps, new species*Diagnostic Characters*

Dorsal and lateral scales granular, juxtaposed, the ventrals imbricate, scarcely larger than the dorsals; vertebral rows of dorsals keeled, laterals faintly keeled, ventrals distinctly keeled; a dorsonuchal fold; scales of the vertebral line not enlarged; snout extremely elongate; tail round without crest or denticulation; frontal ridges distinct, supraorbital semicircles in contact; head scales all strongly keeled; two enlarged postanal scales.

Detailed Description

Type: A. M. N. H. No. 12597, ♂.

Habitus somewhat similar to that of *A. porcatus*; body round; hind legs strong, fourth toe reaching the posterior edge of the orbit; head elongate, longer than the tibia, the distance from the nostril to the snout contained five times in its length; tail round.

Head scales all strongly keeled; frontal ridges distinct; supraorbital semicircles in contact, separated from the occipital by two scales, from the supraorbitals by one row of small scales; about six enlarged supraorbitals; ear opening small; three loreals in a vertical row; seven canthal scales; ten upper labials to the middle of the eye; twelve enlarged lower labials; four series of enlarged scales parallel with the lower labials.

Ventral scales small, round, imbricate, keeled, dorsal and lateral scales a little smaller than the ventrals, the median dorsals keeled but not enlarged; a slight fold along the back from the neck to the base of the tail; caudal scales strongly keeled, those of the lower side elongate, the keels forming continuous lines; tail faintly verticillate, three dorsal and four lateral scales in a verticil; two enlarged postanals separated by two small scales.

Color green, back with brown patches, probably uniform green in life; gular fan probably white; venter very light green.

A single specimen, collected on the island of Navassa, July 16, 1917, by R. H. Beck.

Anolis latirostris, new species*Diagnostic Characters*

Body depressed, head short and broad, snout spatulate; tail round; dorsal scales granular; ventrals imbricate and keeled; no trace of dorsonuchal fold; supraorbital semicircles separated by about four scales; no frontal ridges; postanals present.

Detailed Description

Type: A. M. N. H. No. 12598, ♂.

Body stout, slightly depressed, head broad; snout strongly depressed, broad anteriorly; hind leg reaching the orbit; tail round, with no trace of dorsal keel or denticulation.

Head scales smooth or faintly keeled; canthus rostralis sharp, canthal scales eight; no frontal ridges; supraorbital semicircles separated by four rows of scales; separated from the occipital by four scales; from the supraorbitals by one row of

small scales; about twelve enlarged keeled supraoculars; six loreals in a vertical row; nine upper labials to the middle of the eye; twelve enlarged lower labials; four rows of enlarged scales parallel to the labials.

Dorsal and lateral scales very small, granular, about half as large as the imbricate, keeled ventrals; no trace of enlarged vertebral scales or of a dorsonuchal fold; tail without keel or denticulation, round, faintly verticillate; four or five dorsal scales in a verticil; keels of inferior caudal scales continuous; two large postanals, separated by a single very narrow scale.

Dark bluish green above, mottled with darker; light green with black markings below; throat fan dark; a very distinct white line on the upper lip, beginning below the eye, continued faintly through the ear; sides with light transverse markings.

A single specimen, collected by R. H. Beck on Navassa Island, July 13-19, 1917.

Anolis olssoni, new species

Diagnostic Characters

Habitus very slender, tail round, more than three times as long as the body; dorsal and ventral scales large, subequal, imbricate, keeled; lateral scales granular; supraorbital semicircles in contact; scales on snout large, flat.

Detailed Description

Type: A. M. N. H. No. 13400, ♂.

Habitus of *Anolis semilineatus*, to which it is very closely allied, but more elongate, the tail much longer, body .23 of the total length, .26-.30 in *A. semilineatus*.

Head scales slightly keeled; frontal ridges faint; canthus rostralis very distinct, three canthal scales; five loreal rows; supraorbital semicircles in contact; occipital large, separated from the supraorbital semicircles by two or three scales; five enlarged supraoculars, separated from the supraorbital semicircles by a single row of scales; ear opening small, oval, oblique; scales of frontal region about twice as large as in *A. semilineatus*.

Nuchal scales granular, followed by about twelve rows of large, keeled, imbricate dorsals; about eighteen rows of imbricate, keeled ventrals, as large as the dorsals; lateral scales small, granular; keels of caudal scales continuous, the median dorsal keel slightly more distinct; limbs covered with large strongly imbricate and keeled scales; posterior face of the thighs covered with granular scales; twelve transversely dilated lamellæ under the fourth toe.

Dorsum light grayish brown; a sharply defined white vertebral line from the enlarged occipital scales to the base of the tail; a similar white lateral line on the upper labials, below the ear, just above the arm, to the groin; arms and legs gray; venter and gular fan pure white.

Length, 169 mm.; body, 39 mm.; arm, 13 mm.; leg, 32 mm.; head, 10.5 mm. long, 5.5 mm. broad.

Type collected by Axel Olsson on the slopes of the Moro of Monte Cristi, Santo Domingo. Several other specimens seen by the author in the arid environs of Monte Cristi; the only additional specimen collected is very poorly preserved. A third specimen in the collection of R. H. Beck, 1917, is probably from Navassa Island.

CHAMÆLINOROPS,¹ new genus

Body compressed, dorsal and ventral scales sharply distinct from the minutely granular laterals; cranial ridges highly developed; tympanum distinct; no dorsal or caudal crest; a gular fan, as in *Anolis*; digits slightly depressed, slightly dilated, the distal phalanx strongly compressed, not raised; no femoral or preanal pores; lateral teeth tricuspid; palate toothless.

Differs from *Anolis* in having the compressed distal phalanges inserted at the end of the expanded part of the digit; from *Norops* in the highly developed cranial crests, the modified lepidosis, and the type of coloration: differs from *Tropidodactylus* in the smooth digital lamellæ, the dilation of the digits, and the toothless palate; widely different from *Chamaleolis* in lepidosis and digits, but related to it in having a circular eyelid with radiate pattern.

Type: *Chamælinorops barbouri*, new species.

Chamælinorops barbouri,² new species*Diagnostic Characters*

Characters of the genus.

Detailed Description

Type: A. M. N. H. No. 12602, ♂.

Body extremely compressed, the sides vertical or concave, two and a half times as deep as wide at mid-body; head with rugose cranial ridges; tail long; legs large, the adpressed hind limb reaching the anterior border of the orbit, the adpressed front limb reaching the insertion of the leg.

Lepidosis heterogeneous. Six rows of large dorsal scales, with no trace of crest; the two middle rows narrower, and with more or less distinct keels, the next two rows wider than long, with very distinct keels forming a continuous line; the lateral rows with horizontally directed keels, forming a sharp angle between the dorsum and the sides; twelve rows of strongly keeled imbricate ventrals, slightly mucronate, the keels forming continuous lines; lateral scales minute, granular, smooth, 30-35 between the ventrals and dorsals; scattered large keeled scales especially on the lower half of the sides; a row of small keeled scales borders the dorsals below the dorsolateral angle; limbs entirely covered with imbricate keeled scales, the keels usually continuous; head covered with flat keeled scales; throat with rows of small keeled scales; edge of gular fan with two rows of almost spinose scales. Tail covered with imbricate keeled scales, not at all verticillate; two enlarged, multicarinate postanals.

Digits long, slightly depressed, and very slightly expanded, the terminal phalanges strongly compressed and strongly clawed, inserted at the end of the expanded portion; third and fourth fingers nearly equal; fourth toe much the longest; fifth toe set at right angles to the others.

Head sharply V-shaped in outline, strongly ridged; canthus rostralis sharp, with three large scales; loreal region concave; a large anterior supraciliary scale, followed by smaller ones; about six enlarged keeled scales on the supraorbital area; supra-

¹Named for its apparent relations with *Chamaleolis* and *Norops*.

²Named for Dr. Thomas Barbour of the Museum of Comparative Zoology at Harvard, well known for his contributions to Antillean Herpetology.

orbital semicircles separated by two scale rows; separated from the occipital by three or four rows of scales. No frontal ridges; supraorbital ridges sharp, slightly rugose; two nearly straight ridges from the posterior corners of the supraorbital ridges to the occiput, where they end in two closely approximated tubercles; a very strong lateral ridge from the middle of the orbit posteriorly, extending horizontally backwards, set with strong tubercular scales; a faint vertical ridge from the end of the latter in front of the ear opening; eight upper and nine lower labials to below the center of the eye; eyelid circular, its opening about twice the diameter of the ear opening, covered with very minute uniform granules.

General color light brown. A dark chocolate-brown line along the lateral ridge, along the under side of the dorsolateral angle, to the base of the tail. A dark spot above the insertion of the arm, one in the axilla, and two vertically elongate spots on the sides between the arm and leg; a similar spot above the insertion of the hind limb, extending along the lateral ridge, and sending down a vertical process to the leg; a dark spot on each side of the base of the tail; a faint cross-band between the eyes, and two dark cross-marks on the back; a dark line from eye to ear; tip and sides of snout darker; a faint oblique line on the loreal region from the orbit to the labial border; eyelid with seven radial brown lines; gular fan probably black; throat, roof of mouth, and base of tail black.

Length, 181 mm.; body, 47 mm.; leg, 36 mm.; arm, 22 mm.; head, 15 mm. long, 10 mm. broad.

Comparison of Paratypes

The single paratype, a juvenile specimen of 80 mm. total length, has a very dark venter, the back almost white, the three dorsal transverse markings very distinct, the lateral marks absent, except for the one above the hind leg; the radial markings of the eyelid continue to the labial border below; and are continuous with the line from eye to ear and the line along the lateral ridge behind; chin transversely barred; tail with irregular dark rings.

Both specimens collected on the island of Navassa by R. H. Beck, July 13-19, 1917.

***Ameiva navassæ*, new species**

Diagnostic Characters

Caudal scales straight, keeled; ventral plates in ten longitudinal and thirty-four transverse series; three supraoculars; three tibials much enlarged; mesoptychium with enlarged scales; ventral color light bluish, throat and collar yellow; seven light narrow dorsal lines.

Detailed Description

Type: A. M. N. H. No. 12607, ♂.

Profile of head strongly curved, ear-opening small. Rostral forming an acute angle behind; anterior nasals narrowly in contact behind the rostral; frontonasal longer than wide, in contact with the large loreal; prefrontals broadly in contact; frontal in contact with two supraoculars on one side, with three on the other; three large supraoculars, and a very small fourth behind them; frontoparietals separated from the third supraocular by a row of granules; six supraciliaries, the first between the first supraocular and the loreal, separated from the posterior supraoculars by a

row of granules; five occipitals, the outer smallest, followed by about two rows of irregular postoccipitals; six large upper labials to the middle of the eye; five enlarged lower labials to the same point; wedge of granular scales between the chin shields and the lower labials extending to the first pair of chin shields; chin and throat covered with granular scales, a distinct band of enlarged scales across the middle.

Dorsal scales minute, granular, uniform; ventral plates in ten longitudinal series, including the small lateral series, and thirty-four transverse series; collar with transverse rows of enlarged scales; seven brachials, in a single series; antibrachials in two rows, eight in the upper, which is continuous with the brachials; anterior face of the thigh covered with seven rows of flat scales; tibia with two or three rows, three scales of one row much larger than the others; a pair of posterior postanals, and two median ones in front of them; twenty-eight scales in the fifteenth verticil of the tail.

Ventral plates and under sides of the hind legs light blue; breast washed with yellow; collar, throat, and chin shields straw-color, with a tinge of pink; dorsum black; a sharp dorsolateral white line on each side extending from the supraciliaries on to the basal half of the tail; between these a pair of sharp white lines, slightly narrower, from the postoccipitals to the base of the tail; a vertebral line between these more or less distinct, but not sharply defined, beginning at the shoulders and extending to the base of the tail; a lateral line on each side, beginning at the ear, absent above the arm, continued along the side half-way between the dorsolateral line and the ventral plates; this lower line continues on the proximal anterior face of the thigh; posteriorly it is replaced by a line on the posterior face of the thigh, extending along the tail, gradually fading; upper sides of arms and legs brown, vermiculated with black.

Length, 240 mm.; body, 83 mm.; arm, 29 mm.; leg, 60 mm.; head, 22 mm., long, 13 mm. broad.

A single specimen collected on the island of Navassa by R. H. Beck, July 13-19, 1917.

