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A NEW *SPHAERODACTYLUS* FROM THE DOMINICAN REPUBLIC

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In 1935, Mr. William G. Hassler made a large and varied collection of reptiles in Hispaniola. It proved to include, when identification was undertaken a few years ago, a number of valuable specimens representing species that were new to the American Museum collection. Among the geckos of the genus *Sphaerodactylus* from Santo Domingo were two unidentified specimens which appear to belong to a species hitherto unknown.

The opportunity to describe representatives of the new form was made possible by Mr. Charles M. Bogert of the American Museum of Natural History. Dr. Doris M. Cochran, of the United States National Museum, whose published studies of Hispaniolan reptiles have been of much help in the preparation of this description, provided much needed assistance in making comparisons, and I take pleasure in naming the lizard in her honor.

Sphaerodactylus cochranae, new species

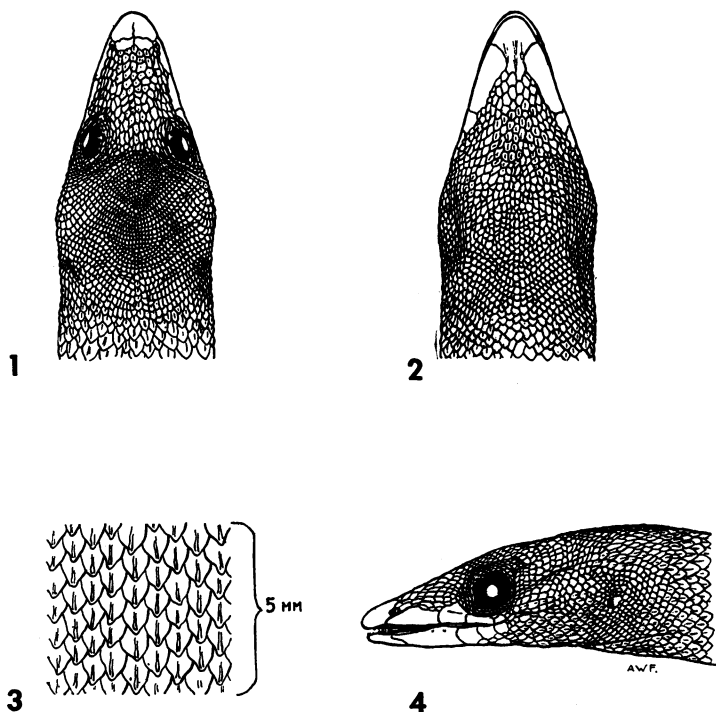
TYPE: No. 50233 in the collection of the American Museum of Natural History, collected by William G. Hassler at San Lorenzo Bay, on the south side of Samana Bay, in the Dominican Republic. In his field notes Mr. Hassler has the following concerning the specimen: "One longitudinally striped *Sphaerodactylus* from break-water . . . July 24, 1935."

DIAGNOSIS: A medium-sized (28 mm., snout to vent) *Sphaerodactylus* related to *S. macrolepis*, but differing from it in three major respects: in having relatively larger dorsal scales, longer snout, and three distinct longitudinal stripes.

DESCRIPTION: An adult with a partially regenerated tail. Head relatively narrow, and elongate. The distance from the center of the eye to the tip of the snout is one-

seventh of the distance from the snout to vent. The distance from the center of the eye to the ear opening is 1 mm. less than the distance from the center of the eye to the tip of the snout. (Length of snout about 2.5 times the diameter of the eye.) The rostral is large with a median groove; two large supranasals are in contact directly behind this median groove. Scales on the snout moderately large (measuring, longitudinally, four scales to 1 mm.), non-imbricate but slightly keeled; scales on top of head and sides smaller (measuring longitudinally, six to eight to 1 mm.), and tuberculate, some with faint keels. A superciliary spine is present. The dorsal scales (that is, those with keels) are disposed in approximately 26 rows at mid-body, large, imbricate, and about five of them are equal to the distance from the center of the eye to the tip of the snout. No granular middorsal zone is present. The nostril is pierced in a scale situated between the rostral, the first labial, and the supranasal. There are four upper and four lower labials, the posterior one in each series small (see fig. 2). The mental is large and elongate, probably abnormally fused with the first two posterior scales; the region directly behind the mental is covered with enlarged scales, lightly keeled; posteriorly on the chin the scales become smaller, and all are smooth. The scales in the gular region are moderately large, and are smooth only at the center in an area about five scales wide. The scales of the chest and belly are large, imbricate, and smooth, the belly scales being larger than those of the chest. Six belly scales longitudinally are equal to the distance from the center of the eye to the tip of the snout.

The scales on the anterior surface of the forelimbs are like those of the belly; on



Figs. 1, 2, and 4. Dorsal, ventral, and lateral views of head ($\times 4$) of the type specimen.
Fig. 3. Dorsal scales of the type specimen.

the posterior and ventral surfaces of the forelimbs they are granular and much smaller. On the hind limbs, anteriorly and ventrally, the scales are like those on the belly scales but posteriorly they are granular and smaller. There are 13 smooth lamellae under the fourth toe, plus the enlarged distal scale.

The original part of the tail has keeled scales similar to the dorsal scales, but smaller; ventrally there is a single series of large, smooth scales that extend the length of the original tail, bordered on each side by three rows of smaller, smooth scales. On the regenerated portion there are broader, flatter, median scales.

DIMENSIONS: Snout to vent, 28 mm.; tail, 22 mm., of which the distal 13.2 mm. is regenerated; width of head, 4.6 mm.; center of eye to tip of snout, 4.0 mm.; tip of snout to ear, 7.3 mm.; foreleg, 7 mm.; hind leg, 9 mm.

COLORATION: (In alcohol.) A middorsal stripe extending from the frontal region to

the base of the tail varies in width but at mid-body embraces three scale rows. It is flanked on either side by a light stripe approximately two scales wide at mid-body. Dorsolateral blackish stripes extend from the nostril, through the eye, broadening above the ear opening, and continuing onto the sides of the tail. At mid-body the dorsolateral stripes fall on the ninth and tenth row of keeled scales. Ventrally the lizard is immaculate, although scattered melanophores are present on the lighter areas on the dorsum.

The legs are mottled with brownish, the hind legs having a light-colored spot on the femur and the knee. Due to the preservative, however, these markings may have faded. Mr. Hassler in his field notes described the fresh specimen as having "longitudinal black stripes on a pale tan or yellowish brown ground color; hind legs with slightly reddish spots; belly white."

PARATYPE: The only other representative of this species known to be available

is A.M.N.H. No. 50133. The single paratype measuring 29 mm. from snout to vent was collected by William G. Hassler at San Lorenzo and in his field notes he states: "July 22, 1935 . . . from a wall of limestone near caves." The paratype is mutilated, and differs in minor respects from the type. In the paratype the supranasals are separated by a smaller scale directly behind the median groove of the

S. samanensis of Hispaniola. *S. samanensis* represents the only Hispaniolan *Sphaerodactylus* that has large, keeled scales that are in any way comparable to those of *S. cochranæ*. Though the new species has larger dorsal scales than *samanensis*, the heavy keels and general shape of the scales show a marked similarity in the two species. *S. copei*, the only Hispaniolan species having scales as large as those of *cochranæ*, is separable from it in having a granular middorsal zone. Moreover, the shape and keels of the scales in *copei* differ from those of the new species.

In coloring, *cochranæ* is not similar to any Hispaniolan *Sphaerodactylus*. The distinct stripes of the new species can be compared only to the longitudinal markings that are found in some specimens of *macrolepis*. In *macrolepis*, however, the stripes, when present, are not as in *cochranæ*, for they are brown instead of black in color, and instead of a single dark middorsal stripe there are a pair of paravertebral stripes.

The scalation of *macrolepis* and *cochranæ* suggests that the two are closely related. Most specimens of *macrolepis* examined have slightly smaller dorsal scales than those of the new species. However, a few specimens of *macrolepis* prove to have dorsal scales as large as those of *cochranæ*. (In the *macrolepis* having such large scales there were four dorsal scales to the standard distance.)

The large dorsal scales of *cochranæ* begin in the nuchal region. This feature of the scalation offers further evidence of a close relationship of *cochranæ* to *macrolepis*, for in the latter the large dorsal scales also begin upon the nuchal region, while in *samanensis* they commence at the shoulders.

Definitely separating *cochranæ* from *macrolepis*, aside from pattern differences, is the longer snout found in the new species. In *macrolepis* the standard distance (tip of snout to center of eye) is one-eighth the body length (tip of snout to vent), while in *cochranæ* the standard distance is one-seventh the body length. The measurements were made on 16 specimens of

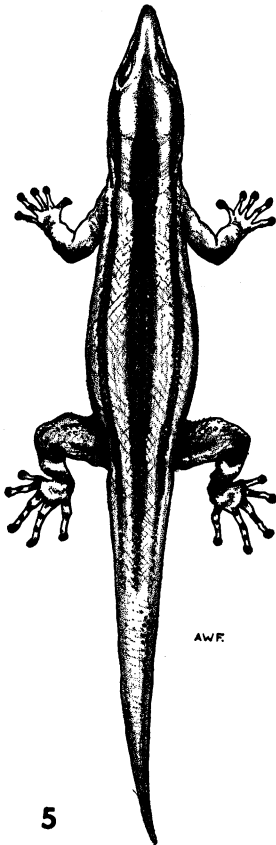


Fig. 5. Dorsal view of type specimen ($\times 2$) showing color pattern.

rostral. In addition to this the paratype has slightly smaller dorsal and ventral scales, the standard distance being equal to almost six dorsal scales and to about seven ventral scales.

RELATIONSHIPS: The new species appears to be more closely related to *Sphaerodactylus macrolepis* of Puerto Rico, and to

macrolepis varying in size from 18.9 mm. to 31.3 mm. All showed the 1 to 8 ratio except the smallest specimen.

PARASITES: Three small mites of an unidentified species were present in the fold in the skin below the eye on the type.