

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

ADDITIONAL NOTES ON WEST INDIAN REPTILES
AND AMPHIBIANS.

BY THOMAS BARBOUR.

Since I published in these proceedings a short paper entitled "Recent Notes on West Indian Reptiles and Amphibians,"* material from this region has kept accumulating in the Museum of Comparative Zoology. As the appearance of my Herpetology of the West Indies is still more of a hope than an accomplishment I have decided to put these additional observations upon record now.

***Anolis albipalpebralis* sp. nov.**

Type an adult male, M. C. Z. No. 11954, from Grand Turk, Turks Islands, B. W. I., collected by Louis A. Mowbray during the summer of 1916.

There has long been a question as to what was the identity of the common *Anolis* of Turks Island. Stejneger cited the record simply as "*Anolis* sp.?" in his Batrachians and Land Reptiles of the Bahamas (in Shattuck, Bahama Islands, 1905, p. 334). As a matter of fact it appears to be a recent derivative from *Anolis cristatellus* of Porto Rico and the Virgin Islands. It is more closely related to this species than it is to *A. monensis* Stejneger which is itself but slightly differentiated.

Similar to *A. cristatellus* but differing in having the ventrals weakly but perfectly distinctly keeled and the scales of the supraorbital discs almost perfectly smooth instead of keeled or tubercular. Compared with specimens from Porto Rico the head is distinctly narrower and flatter but in neither of these respects does it differ conspicuously from Stejneger's figure, Nos. 92 and 93 of the Herpetology of Porto Rico (Washington, 1904).

* Proc. Biol. Soc. Wash., 28, 1915, pp. 71-78.

***Ameiva griswoldi* sp. nov.**

Type an adult, M. C. Z. No. 11945, from St. John, Antigua, B. W. I., collected in the summer of 1916 by Dr. Don. W. Griswold, Director of the Rockefeller West Indian Hookworm Commission.

This species belongs among those having the caudal scales of the adult straight dorsally, the nostril anterior to the nasal suture and having ten longitudinal rows of ventrals. This brings it into an assemblage rather remote geographically, viz. *dorsalis* of Jamaica, *thoracica* of the Northern Bahamas and *auberi* of Cuba. In color the new species recalls *A. cinerea* Barbour and Noble from Guadeloupe (Cf. Revision of *Ameiva*, Bull. M. C. Z., 49, 1915, p. 425).

Rostral forming approximately a right angle behind; nostril in the posterior part of the anterior nasal; anterior pair of nasals in contact; frontonasal almost as wide as long, widely in contact with posterior nasal and just touching the loreal; frontal in contact with the first, second and third supraoculars; a pair of frontoparietals in contact with the third supraocular for a very short distance and then separated by a single or double row of granules (in the other examples they are wholly separated); four (three in one other example) occipitals in a transverse row; seven supraciliaries; three supraoculars, the first separated from the loreal; two posterior supraoculars separated from the superciliaries by a single row of granules; last supraocular separated from the outer occipital by a double row of small scales; five large and one small supralabial to below the center of the eye; four infralabials, the second enormous, the third next largest; between the infralabials and chin shields a series of granules extends forward and just separates the extreme posterior portions of the third infralabial and the first paired chin shield; the throat granules extend forward and just separate the posterior portions of the first pair of chin shields; chin and throat covered with minute granules, a wide transverse zone of which are considerably enlarged; a single series of very conspicuously enlarged scales and two rows less enlarged across the throat between the two folds; under side of body with ten longitudinal and thirty-two complete transverse rows of plates; preanal plates in a roughly rectangular area, two at the vent margin, with a few small enlarged scales at each side, a single larger scale surmounting the two and a few other slightly enlarged scales surrounding the three very large ones; on the lower arm four rows of antebrachials, the two outer rows very small and of the two inner rows one is much larger and more strap-like than the other; on the upper arm a series of brachials which increases in size and becomes multiple toward the shoulder; no considerably enlarged postbrachials; under side of thigh with four rows and many scattered enlarged plates, the outer row largest, the others successively smaller; 29 femoral pores on each side; on the under side of the tibia about three rows of plates, the outer with the two upper plates enormous; upper side of foot with regular series of transverse enlarged plates; tail covered with approximately straight keeled scales; about 38 scales in the fifteenth ring from the base of tail.

Color, dirty brown above with irregular wavy cross bands of bluish green; throat yellowish, chest dark blue green, belly light blue green, limbs flecked or speckled above, thighs marked posteriorly with a conspicuous longitudinal light stripe on a dark, almost black field.

Doctor Griswold, for whom the species is properly named, sent three specimens of this *Ameiva*, the type and two smaller examples to the Museum of Comparative Zoology, as well as additional and most welcome specimens of *Anolis antiquae* Barbour and *Eleutherodactylus martinicensis* D. & B. We had frequently remarked upon how strange it was that no *Ameiva* was known from Antigua. Doctor Griswold finds it present but rare. He writes "The mongoose was introduced here about 20 years ago to combat 'cane rats.' These rats were very destructive and caused considerable damage. The local government paid £1000 for the importation of 1000 mongoose. The result is that the rats left the fields and are now in human habitations. If plague were ever introduced here, I dread to think of the results.

"The mongoose has driven the rats from the cane fields, exterminated the 'guanas' and snakes, and is now doing its best to do the same with the chickens.

"The local government now pays a bounty of 'tu'pence' for males and four pence for females."

So much for the history of the introduction of the mongoose to Antigua. With a little variation it would serve equally well as the story for a host of other islands.

***Ameiva dorsalis* Gray.**

In spite of many searches we have never been able to learn anything in the field regarding the breeding habits of any of the Antillean species of *Ameiva*. It was, therefore, with great delight that I received a letter not long ago from my friend Dr. M. Grabham of Kingston, Jamaica, telling of the finding of the eggs of *A. dorsalis* and their transmission to me here. They have come to hand safely. Doctor Grabham writes: "The eggs (of *A. dorsalis*) are rarely met with. We have often followed the burrows for considerable distances without success. These were found among the roots of a tree about three feet below the surface. * * * I believe the specimens may be of interest; two young hatched out a few hours after we got the eggs. This fine lizard is very plentiful in my own garden because we have no cats or dogs to hunt it down and the mongoose does not come into Kingston. It is a most useful scavenger devouring many insect pests and snails and bugs. The males, like those of many other species we have here, are great fighters.'" The eggs measure 27 x 15 mm. The young measure from snout to vent 36 mm. and from vent to tip of tail, 78 mm.

***Liocephalus arenarius* sp. nov.**

Type an adult M. C. Z. No. 11948 from Bastion Cay, Turks Islands, B. W. I., collected by Louis A. Mowbray in June, 1916.

Related closely to *L. melanochlorus* Cope with the types of which it has

been compared (they are M. C. Z. 3598). It differs conspicuously, however, in having much smaller and less heavily keeled dorsal scales. The pattern of the coloration is similar to that of *melanochlorus* but the quality is wholly different. The new species is light sandy gray with more or less irregular black cross bars and spots. In the Haitian species the ground color is deep olive so that the dark marks are much less conspicuous. In *arenarius* the belly is ashy white, the throat only with a few faint marblings; in *melanochlorus* the belly is dark drab, the throat with black markings, the thighs white spotted.

A fine series of paratypes show that, as is, I think always, the case in this genus, the color characters are perfectly diagnostic even were not this conspicuous difference in squamation so striking.

***Cyclura carinata* Harlan.**

The type of this species was distinctly stated to have come from Turks Island, so also the specimen collected by Bickmore and now in the Museum of Comparative Zoology (Cf. Barbour and Noble, Bull. M. C. Z., 60, 1916, p. 157, Pl. 8, fig. 3-4, pl. 13, fig. 3-4). It has long been supposed that the Iguana probably was exterminated upon Turks Island and I had feared that the species might be in danger of extinction. It was a pleasant surprise to receive specimens and news of this species from two sources. Both the Commissioner of the Turks and Caicos Islands, The Honorable G. Whitfield Smith and Mr. Louis A. Mowbray, exploring for the New York Aquarium, have found that *C. carinata* was abundant upon Ambergris Cay, one of the Caicos group, and report its probable presence upon other islands. The Museum has two excellent specimens from each of these sources.

***Epicrates chrysogaster* (Cope).**

When Cope described this species (Proc. Amer. Phil. Soc., 11, 1871, p. 557) he evidently had but a single example. No subsequent record of the capture of the boa upon Turk's Island has since appeared in the literature so far as I am aware. Mr. L. A. Mowbray caught four boas upon Ambergris Cay which are surely very closely related to *E. chrysogaster*, if not identical with it, which is probably the case. We do not know anything about variation within this species so that for the present I shall simply remark that in this series the scale rows vary from 39-43, the number of ventrals from 251-264, of subcaudals from 72-82 and of dorsal spots on body (only) 57-59. One specimen is longitudinally striped, not spotted. The type had 43 rows, 255 ventrals, 78 subcaudals and 54 dorsal spots. The number of dorsal spots serve to separate this species from *E. fordii*, which has from 69-78; while if the figure which Stejneger copies from Zenneck is accurate (Stejn., Ann. Rep. U. S. Nat. Mus., 1902 (1904), p. 692, fig. 153-157) these snakes may be distinguished from *E. monensis* by the smaller and more numerous head scales. The figures also show lateral series of spots which are not present in the suite from Ambergris Cay.

The specimens arrived alive, except one small one well preserved. All were gravid females and they had become injured and diseased during their journey to Cambridge so that only the small individual and one of the adults make really satisfactory material for the study of details of squamation.

Mabuya sloanii (Daudin).

Cope recorded a scinc from Turks Island in Abell's collection first as *M. cepedei* (Proc. Amer. Phil. Soc. 11, 1871, p. 558) and later mentioned it again as *M. agilis* (Proc. U. S. Nat. Mus., 10, 1887, p. 438). Stejneger (Shattuck's Bahama Islands, 1905, p. 332) suspected that if there really were a Turks Island *Mabuya* it would prove to belong to the same species as is found in Porto Rico and Haiti, viz. *M. sloanii*. Mr. Mowbray secured two beautifully preserved adult scincs at Grand Turk in June, 1916. He says that they are very rare. They are not precisely typical of *sloanii*, in that in both examples the supranasals fail to meet behind the rostral. However, knowing West Indian scincs to be variable and with such scanty material it seems wisest simply to confirm Stejneger's surmise. In their color, which is exceptionally brilliant, these lizards agree well with *sloanii*.

Nothing has hitherto been known concerning the herpetological fauna of the Exuma group of the Bahama Islands. Mr. C. J. Maynard visited these cays during the spring of 1915. The collection which he made and which is now the property of the Museum of Comparative Zoology furnishes the following records. From the same series a new iguana (*Cyclura inornata* Barbour and Noble) has already been described (Bull. M. C. Z., 60, 1916, p. 151, pl. 14).

HYLA SEPTENTRIONALIS Boulenger.—Conch Cut Cay; Sampson's Cay.

SPHAERODACTYLUS NOTATUS Baird.—Cay opposite Roseville, Exuma. Stocky Island, Exuma.

SPHAERODACTYLUS CORTICOLUS Garman.—Nassau, 1 example, new to New Providence Island.

SPHAERODACTYLUS DECORATUS Garman.—Little Woman's Cay.

SPHAERODACTYLUS ALOPEX Cope.—Two examples from Stocky Island, near Exuma Island, and one from the Cay opposite Roseville, Exuma. These examples have been compared with Cope's types of *alopez* also in the Mus. Comp. Zool. and while these are not in perfect condition nevertheless there does not seem to be much doubt as to the identity of the specimens. It is not very surprising to add this Haitian *Sphaerodactylus* to the fauna of the Bahamas.

TARENTOLA CUBANA G. & P.—Many years ago when I was, as a youth, more or less constantly at the New York Zoological Park I remember

well the return of one Gustave Sabille from the Bahamas. I had met the man in Nassau and if I remember correctly returned with him once upon a Ward Liner from the islands. He was a professional gatherer of living birds and animals and went to the Bahamas to catch young flamingos. On this occasion he returned to the Zoological Park with many birds of various sorts and a few reptiles, among them one which I took at first to be an old world *Tarentola*. He assured me that he got it in the Southern Bahamas. I concluded finally that as he had been over, I think to Nipe Bay, in Cuba, that it really probably represented *T. cubana*, then very little known. The specimen finally came into my possession but now I can not find it, and I think I threw it away fearing confusion if I kept it with so much question regarding the locality. Naturally I have always been half expecting that perhaps I myself or some one else might after all find *Tarentola* in the Bahamas. I find one now in Mr. C. J. Maynard's 1915 collection from U Cay, in Allen's Harbor, near Highborn Cays in the Northern part of the Exuma chain. After a very careful comparison with a large series of Cuban specimens of the same size I have come to the conclusion that this specimen though slightly aberrant in a few characters is really true *Tarentola cubana*, which is by this note added to the Bahaman fauna.

AMEIVA THORACICA Cope.—Little Exuma; Great Exuma; Highborn Cay; Cay opposite Roseville, Exuma.

ANOLIS ORDINATUS Cope.—“Exuma Cays,” East Hawk's bill Cay, Cay opposite Roseville, Exuma; Little Woman's Cay; Highborn Cay.

LEIOCEPHALUS CARINATUS Gray.—“Exuma Cays,” Little Woman's Cay.

ALSOPHIS VUDII Cope.—Bird Cay and 3d Cay south of Highborn Cay.