NUMBER 40 30 JUNE 1971

OCCASIONAL PAPERS OF THE MUSEUM OF ZOOLOGY

LOUISIANA STATE UNIVERSITY

BATON ROUGE, LOUISIANA

A NEW SPECIES OF *DIPLOGLOSSUS* (SAURIA: ANGUIDAE) FROM HISPANIOLA

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Hispaniolan anguid lizards include members of the genus *Diploglossus* Wiegmann and the monotypic *Wetmorena* Cochran. Structurally most specialized are the semifossorial, long-bodied, short-limbed forms: *Wetmorena haetiana* Cochran and *Diploglossus sepsoides* (Gray). The latter was long considered to form another monotypic genus, *Sauresia* Gray. Underwood (1959) regarded *Sauresia* as not generically distinct from *Diploglossus*, and Schwartz (1964, 1970) has used the combination *Diploglossus sepsoides*.

In the summer of 1969, Robert K. Bobilin and I sampled a population of *sepsoides*-like galliwasps inhabiting the region of the isolated, zoologically little-known Sierre de Martín García in the southern Dominican Republic. Although obviously related to *D. sepsoides*, these lizards are in some respects more extreme morphologically and are set off from that form by several features.

The scutellation of the new *Diploglossus* is like that of *D. sepsoides* in details of arrangement (see Cochran, 1941: 257). In both the supraoculars form part of an incomplete circumorbital series, which I have counted beginning with the anteriormost supraocular (abutting on the prefrontal) and ending with the scale contacting the angular subocular dorsoposteriorly. I have used the term "loreal series" for the scales between the nasal and the anterior margin of the eye (Figure 1).

The new galliwasp may be known as

DIPLOGLOSSUS AGASEPSOIDES new species

Holotype.—USNM 166964, one of a series taken at Barreras, Provincia de Azua, República Dominicana, on 25 July 1968 by native collectors. Original number ASFS V21437.

Paratypes.—ASFS V21135, 2 km NW Barreras, Prov. Azua, República Dominicana, 16 July 1969, Richard Thomas; USNM 166963, ASFS V12360, same locality as holotype, 22 July 1969, natives; ASFS V21434-36, V21438, V21441, V21446, V21448, CM45893-94, KUMNH 93387-88, MCZ R-19399-400, LSUMZ 21938, same locality as holotype, 25 July 1969, natives.

Diagnosis.—A species related to *Diploglossus sepsoides* but distinguished from that form in the following respects: fewer longitudinal scale rows (27-29 vs. 32-41); three, as opposed to four, scales in the loreal series (Figure 1); flattened, nontuberculate subdigital scales; lower head-body ratio (Figure 2); smaller limbs (Figure 3); smaller size and more slender build; a more contrasting pattern consisting of a pale middorsal zone set off sharply from dark lateral zones; and modally fewer scales in the circumorbital series (Table II).

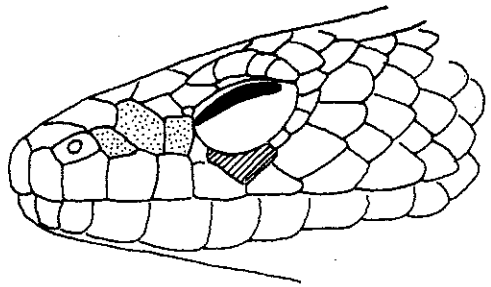

FIGURE 1. Head of holotype of *D. agasepsoides* (USNM 166964); stippled scales indicate "loreal series"; crosshatched scale is angular subocular. Line represents 5 mm.

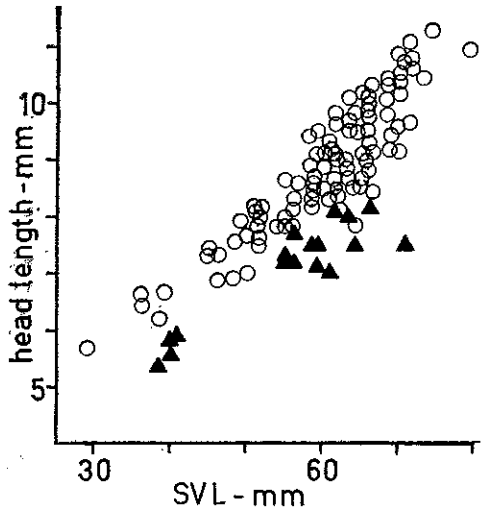

FIGURE 2. Scatter diagram of head length (snout to anterior border of ear opening) versus snout-vent length (SVL); circles represent values for *D. sepsoides*; triangles, values for *D. agasepsoides*.

Distribution.—Known only from the region of the Sierra de Martín García in the southern Dominican Republic (Figure 4).

Description of holotype.—Snout-vent length 59 mm, tail 44 mm (regenerated); head length 7.1 mm, head width 5.5 mm; scales mental to vent 114, midbody scale rows 29, circumorbitals 9/9, upper labials 9/9, angular subocular between labials 5 and 6 on both sides, scales in loreal series 3/3. Four digits on each limb; subdigital lamellae flattened, unkeeled, and nontuberculate. Middorsal zone pale gray with scattered fleckings of dark pigment and sharply set off from dark brown sides along a dorsolateral line of juncture extending posteriorly from canthus rostralis along body and tail (sharpness of juncture obscured on regenerated portion); dorsum of head suffused with dark pigment somewhat obscuring line of juncture from eyes forward. Solid dark color of sides fades ventrally because of increased retriction of pigment to centers of scales, resulting in a finely lineate pattern ventrolaterally; midventralmost scales (3-4 rows) lightly flecked with dark pigment. Infralabial and lateral gular regions transversely barred; limbs dark above, lighter below.

Variation.—Meristic variation in the type series is shown in Table I. Coloration of the paratypes is similar to that of holotype; some have more ex-

TABLE I. MIDBODY SCALE COUNTS AND SCALES IN LOREAL SERIES OF TYPE AND PARATYPES OF *D. AGASEPSOIDES* AND OF SPECIMENS EXAMINED OF *D. SEPSOIDES*. THE BOLD FACE NUMBERS 1-8 INDICATE GEOGRAPHIC SAMPLES OF *D. SEPSOIDES* (SEE FIGURE 4).

		agasepsoides	Samples of *sepsoides*							
			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Number of scale rows at midbody	27	8								
	28	1								
	29	9								
	30									
	31									
	32									1
	33				1		1			1
	34		2					1		
	35		38	4	1	2		2		
	36		21	2		1			4	
	37		15					2	2	
	38								10	
	39								4	
	40								6	
	41								1	
Loreal Series left	3	18	3	0	0	0	0	0	0	0
	4	0	75	6	2	3	1	5	31	2
Loreal Series right	3	18	1	0	0	0	0	0	1	0
	4	0	77	6	2	3	1	5	29	2

digital lamellae—tuberculate in *sepsoides* and laminate in *agasepsoides* with no suggestion of tuberculations or even keeling (the tubercules of *sepsoides* are ontogenetically derived from keels). The separation of the parietal scales on the posterior border of the interparietal is typically greater in *agasepsoides* than in *sepsoides*, in which the parietals are closer or in apical contact. The number of scales in the circumorbital series of *sepsoides* ranges from 8 to 11. Considering all circumorbital series without regard to pairing, 8 scales are found in 1 series, 9 in 77, 10 in 167, 11 in 2, and 12 in 1. *D. agasepsoides* has either 8 (23 series) or 9 (12 series) scales in the circumorbital series. Thus 83 percent of the specimens of *D. agasepsoides* have fewer scales in at least one circumorbital series than do all but one specimen of *sepsoides*. However, 53 percent of *agasepsoides* and 45 percent of *sepsoides* have at least one circumorbital series containing 9 scales. Differences in body proportions are less easily expressed, but indications of these differences are seen

in Figures 2 and 3. Patterns in the two species are similar, but the darker pigmentation of the middorsal zone of *sepsoides* obscures the pattern, whereas the contrasting coloring of the two zones in *agasepsoides* accentuates it. Also, despite the overall darker dorsal pigmentation of *sepsoides*, the venter is nearly immaculate (although there is some variation in amount of lateral encroachment of pigment). As noted, pigment extends well onto the midventral surface in *agasepsoides*, although the intensity varies. Although contrastingly patterned, the coloration of *D. agasepsoides* is composed of different intensities of gray, gray-brown, or tan. *D. sepsoides* shows a greater chromatic range; it is characteristically reddish ventrally (pink, faintly orange, deep reddish orange, deep orange, or orange-red) including the underside of the tail. Dorsally, this species in life ranges from plain brown to bronzy brown, coppery greenish, olive, or silvery gray; the sides are dark brown. Ventrally *D. agasepsoides* may appear faintly reddish but it is difficult to tell whether the coloring is pigmentary or vascular. Dorsally *agasepsoides* was noted as being either pale tan or pale gray; the sides are darker brown.

Remarks.—Diploglossus sepsoides is widespread in Hispaniola (Figure 4), although infrequently noted in abundance. The species has nearly always been collected in mesic habitats, but its occurrence is unpredictable: even in an apparently appropriate situation, one cannot be certain of finding it. This lizard's presence on xerophytic Île Grande Cayemite is, in my experience, the major exception to the occurrence of the species in mesic situations. In all likelihood, however, Grande Cayemite has been rendered xerophytic by the activities of man and domestic animals; the adjacent mainland at Corail is mesic. *D. sepsoides* occurs in an area near Juanillo, which is heavily wooded, although less mesic than seems typical for the species. Elevation records for *D. sepsoides* range from sea level to 2,200 feet.

Diploglossus sepsoides shows no trenchant geographic variation, although the specimens from the extreme western Tiburon Peninsula, at least those from the north slopes, have high midbody counts (Table I). In contrast, the two specimens from adjacent Île Grande Cayemite are at the lower extreme for the species in midbody counts. Further collections will be necessary to clarify this situation.

Diploglossus agasepsoides is to all appearances a geographical isolate in the Sierra de Martín García. This mountain range in the southern Dominican Republic is set off from the Cordillera Central to the north and the Sierra de Baoruco to the southwest. Although the Sierra de Martín García rises

to elevations of over 4,000 feet and supports mesic forest, the surrounding lowlands are xeric cactus scrub; thus the mountain range is an ecological island. It seems unlikely that either *D. agasepsoides* or *D. sepsoides* occurs in the desert interposed between the Sierra de Martín García and adjacent ranges. The type and paratypes of *D. agasepsoides* came from within or near the town of Barreras, which sits on the lower slopes of the range. The surrounding region has been heavily cut for charcoal. Consequently, a low, dense, woody second growth presently predominates. Semixeric woods, which probably once characterized the lower slopes around Barreras, occur in nearby areas where charcoal manufacturers are now working. At higher elevations the semixeric woods grade into mesic forest. ASFS V21135 was taken in the second growth that surrounds Barreras; we obtained no *D. agasepsoides* on a visit to the high elevations of the Sierra de Martín García.

The Hispaniolan diploglossines form three divisions: (1) five relatively large, long-limbed species (although there are tendencies towards limb reduction) including *Diploglossus stenurus* Cope, *D. costatus* Cope, *D. warreni* Schwartz, *D. darlingtoni* Cochran, and *D. curtissi* Grant; (2) two small, short-limbed, tetradactylous species, *D. sepsoides* Gray and *D. agasepsoides* Thomas; and (3) the long-bodied, short-limbed, tetradactylous, earless *Wetmorena haetiana* Cochran. In the sequence listed, the divisions form a more or less graded series showing progressively greater adaptation to burrowing. The lack of ear openings in *Wetmorena* probably indicate greater burrowing specialization than in the other Hispaniolan diploglossines. However, although short limbed, *Wetmorena* is somewhat longer limbed than either *D. sepsoides* or *D. agasepsoides* (Figure 3). One could reasonably argue that the genus *Sauresia* should be resurrected for *sepsoides* and *agasepsoides*, but such action should be deferred until they have been studied in relation to all diploglossines, with the use of more characters than studies to date have employed.

Specimens examined.—*DIPLOGLOSSUS SEPSOIDES.* **Sample 1**, all from localities in República Dominicana. Prov. Valverde: ASFS V1239, 9 km N La Cruz de Guayacanes, 1,600′. Prov. Puerto Plata: ASFS V18102-05, 1 km N La Cumbre, 2,000′. Prov. Santiago: ASFS V18106-21, V18218-58, 1 km S La Cumbre, 2,000′; ASFS V18173, 4 km S La Cumbre, 1,700′. Prov. Espaillat: ASFS V1875-84, 2 km SW José Contreras, 2,000′; ASFS V1695, 8 km E Gaspar Hernandez; ASFS V1888, 2 km N Puesto Grande, 2,200′. Prov. María Trinidad Sánchez: ASFS V4255, 4.8 km S Cabrera. **Sample 2**, all localities in República Dominicana. Prov. Sánchez Ramirez: ASFS V609-10, 12.3 km E Cotuí. Prov. María Trinidad Sánchez: ASFS V16077-79, 4 km N Azucey. Prov. San Cristóbal: ASFS V3137, 10 km NE Gonzalo, 600′. **Sample 3**, all localities in República Dominicana. Prov. Samaná: ASFS V21933, ca. 5 km E Las Galeras; ASFS V21945, Samaná. **Sample 4**, all localities in República Dominicana. Prov. El Siebo: ASFS X9323, 1.4 mi SE Miches. Prov. La Romana: ASFS V944, 4.5 km W Higüey; ASFS V878, 4 mi SE San Rafael del Yuma. **Sample 5**, República Dominicana. Prov. La Altagracia: ASFS V21810, Juanillo. **Sample 6**, Haiti, Dépt. de l'Ouest: ASFS V9661-62, est. 3.5 mi NW Trouin, 800′; ASFS V9818-20, ca. 1.5 mi S Trouin, 800′. **Sample 7**, all localities in Haiti, Dépt. du Sud: ASFS V9342-47, ca. 5 km (airline) SE Marchá Leon, 2,200′; ASFS V9496-513, ca. 7.5 km (airline) SSE Roseau, est. 2 km W La Bastille; ASFS V9520-24, ca. 3 km (airline) SW Corail; ASFS X2987, Camp Perrin, 750′. **Sample 8**, Haiti, Dépt. du Sud: ASFS V9460-61, Île Grande Cayemite, vicinity of Pointe Sable.

DIPLOGLOSSUS AGASEPSOIDES. As recorded for holotype and paratypes.

WETMORENA HAETIANA MYLICA. ASFS V2870-93, V2909-10, V4414-15, V20480-83, all from the vicinity of the type locality in the eastern Sierra de Baoruco.

ACKNOWLEDGMENTS

Collecting in the Dominican Republic in the summer of 1969 was financed by NSF grant GB-7977 to Dr. Albert Schwartz, whom I wish to thank for the opportunity to describe this new *Diploglossus*. I also express my appreciation to Mr. Bobilin for his assistance in the field. ASFS designates specimens in the Albert Schwartz Field Series; type material has been deposited in collections of the U. S. National Museum (USNM), the Museum of Comparative Zoology at Harvard (MCZ), the University of Kansas Museum of Natural History (KUMNH), the Carnegie Museum (CM), and the Louisiana State University Museum of Zoology (LSUMZ).

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