

Notes on the Salamander, *Eurycea longicauda guttolineata*, in Florida¹

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But little work has been published on this subspecies. This study is based on a collection made with Richard E. Etheridge in the summer of 1949.

While Carr (1940) lists *Eurycea l. guttolineata* as uncommon in Florida, we were able to collect some 180 specimens in the northern part of the State. These are now deposited in our private collections, or in the Tulane University collection.

The stomach contents of 53 individuals in my own collection, with 12 other specimens lent by Tulane University, were analyzed. Sixty contained food; the following tabulations of food items are based on an examination of these. As most of the salamanders had been put into formalin on capture, but little digestion of recently-eaten food had taken place, and positive identification of food was possible in most cases. A total of 160 insects, 54 arachnids, and 26 miscellaneous items were taken from the stomachs. The distribution is as follows (percentages based on total number of specimens found in all stomachs):

Arthropoda

Insecta.—Coleoptera (13 families), totaling 29 specimens in 24 stomachs (12%); Diptera (11 families), totaling 32 specimens in 28 stomachs (12%). The Muscidae (3%) and Chironomidae (4%) were significant in the total. Hemiptera (2 families) with 3 specimens in 2 stomachs (1%); Homoptera (3 families) with 5 specimens in 4 stomachs (2%); Hymenoptera (4 families) with 29 specimens in 23 stomachs (12%). The Chalcididae (3%) and Formicidae (8%) were significant in the total. Lepidoptera (3 families) represented by larval and chrysalid stages, with 8 specimens in 7 stomachs (4%); Neuroptera (1 family) with one specimen (0.4%); Odonata (1 family) represented by a single naiad (0.4%); Orthoptera (4 families) with 50 specimens in 39 stomachs (21%). The Gryllidae (12%) and Locustidae

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(5%) were significant in the total. Collembola (1 family) with a single specimen (0.4%); Ephemeroptera (1 family) with a single specimen (0.4%).

Arachnida.—Represented by 48 specimens in 33 stomachs (20%); the Acarina represented by 5 specimens in 4 stomachs (2%); Pseudoscorpionida represented by one specimen (0.4%).

Diplopoda.—Represented by 4 specimens in 4 stomachs (1.6%).

Isopoda.—Represented by 1 specimen (0.4%).

In addition to the above, Annelida furnished 1 specimen (0.4%), Nematoda, 3 specimens in 3 stomachs (1%), and a single Gordius worm (0.4%). Snails were represented by 2 specimens in 2 stomachs (0.8%), and snail eggs by 14 specimens in 9 stomachs (6%).

Crickets, spiders and ants account for 40% of the total number of contents. This may reflect availability of the arthropod rather than any preference on the part of the salamander.

Of the major groups the arthropods constituted 90.5% of all stomach contents. The remaining 9.5% was miscellaneous items, with snails and snail eggs comprising 7%.

These percentages, however, indicate little in terms of bulk. As the orthopteran Gryllidae and Locustidae, and the Araneida were the largest in bulk (of those forms showing a high percentage), they comprised the bulk of the stomach contents.

The number of stomachs in which a certain food was found, with percentage of occurrence, were as follows:

TABLE
Showing orders, number of stomachs, and percentages

Coleoptera	21	35%
Diptera	21	35
Hemiptera	2	3
Homoptera	3	5
Hymenoptera	20	33
Lepidoptera	11	18
Neuroptera	1	1.7
Odonata	1	1.7
Orthoptera	35	58
Collembola	1	1.7
Ephemeroptera	1	1.7
Araneida	33	55
Acarina	4	6
Pseudoscorpionida	1	1.7
Miscellaneous	15	25

Insects were found in 56 stomachs (93%), arachnids in 38 (63%), and miscellaneous in 15 (25%).

I could not sex 9 of the 65 salamanders, because of very small size, or inadvertent emasculation during dissection. Of those sexed, 23 were males and 33 females.

The longest specimen examined was a female, 159 mm. in total length; the longest male, 150 mm. The tail represented 59.6% of the total length in the females, and 62% in the males.

The specimens agree well with Bishop's (1947) analysis. However, one specimen (DWT 246) is rather atypical of *Eurycea l. guttolineata*. It is much heavier-bodied and possesses stouter limbs than any of the other specimens examined. It also has a much broader head, and three intercostal spaces between the adpressed limbs. The characteristic yellow line on the dorsal surface of the tail is invaded by black spots which were not found in any of the other specimens. There are vertical dark bars interrupted by light areas on the sides of the tail, reminiscent of the northern race (*Eurycea l. longicauda*). This specimen was collected 3 miles east of Blountstown, Calhoun County, where State Highway 20 crosses the Apalachicola River. Until further collecting is done in this area, this specimen cannot be referred to its proper race.

In only one female did the ovaries show any signs of enlargement and differentiation. This specimen was collected July 12, 1950 (Tulane Univ. Coll. 13,314). All other female specimens examined showed little ovarian development.

Bishop (1947) calls this salamander nocturnal, and Dunn (1926) found it most active at night. Many of the specimens in this series, from Blue Lake, Jackson County (7 miles north of Marianna) were found actively crawling about above ground, apparently in search of food, on June 7, 1949.

The salamanders here studied were collected at the following localities: (a) Three miles east of Blountstown, where State Highway 20 crosses the Apalachicola River, Calhoun County (No. 246); (b) Blue Lake, two miles north of Marianna, Jackson County (Nos. 314-332; 656-657; 708-727); (c) One mile east of Clarksville, Calhoun County, State Highway 20 (Nos. 588-592; 646-648); (d) One mile south of Attapulcus, Decatur County, Georgia, State Highway 241 (Nos. 256-257); (e) East bank of Apalachicola

River, at crossing of State Highway 20, Liberty County (No. 704); (f) Nine miles south of Marianna, Jackson County. (Tulane Univ. Coll., 13,314, 12 specimens.)

LITERATURE CITED: CARR, A. F. (1940). *A Contribution to the Herpetology of Florida*. University of Florida Press, 118 pp.—BISHOP, S. C. (1947). *Handbook of Salamanders*. Ithaca, Comstock, 555 pp.—DUNN, E. R. (1926). *The Salamanders of the family Plethodontidae*. (*Smith College Anniversary Publ.*, 1-441)

Papers Presented at the 1952 Meeting of the Society of Student Geologists

George Waverly Hall, Jr.

Early this year, graduate students in the Geology Department of Southern Methodist University, aware that there was no adequate student group which could advocate and instigate a desired type of extracurricular geologic program, set about to put such a program in motion. They formed a club to be known as *The Society of Student Geologists*. They sought to begin a positive program of geologic activity, and to form a true honorary organization to recognize outstanding undergraduates in geology.

In the preamble of the constitution adopted, the Society's aim was thus set forth: "This organization is designed to provide for the initiation and perpetuation of geologic studies through voluntary individual and collective endeavor and to provide both academic instruction and ethical inspiration to prospective members of the profession."

In the first formal meeting the constitution was ratified by those who were to become charter members, and officers were elected: Eugene Herrin, president; Wilson Bryan and Waverly Hall, first and second vice presidents; Carl Roberts, secretary; and William Reid, treasurer.

To further the aims outlined in the preamble, the Society planned an open meeting for the presentation of geologic papers prepared by members of the Society. By agreement with the faculty of the Geology Department, it was decided also to have presentation of the Master's theses before the Society instead of before a faculty committee.

It is intended to make this meeting an annual affair. This year, meetings were held in Room 220, Fondren Science Hall, on May 15 and 16; and attendance of students and