Notes on the Habits of Microhyla carolinensis olivacea (Hallowell)

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It has been known for some time that the western narrow-mouthed frog feeds largely if not entirely on ants (Smith, 1934). This food preference was forcefully brought to my attention on the afternoon of May 18, 1947, while collecting on a rocky slope approximately one mile east and five miles north of Lawrence, Douglas County, Kansas (this locality is now included in the University of Kansas Natural History Reservation). During the afternoon, five narrow-mouthed frogs were collected, three from under rocks and two under a partly-decayed plank. One, a small female, was found beneath a flattened rock which was covering the main entrance to a colony of small ants. It appeared as though the frog had worked itself into the loose soil, for it was surrounded by soil except for its back which was in contact with the underside of the rock. The head was free and only a few inches away from one of the openings leading to the subterranean ant galleries. The moving of the rock did not disturb the frog. However, within seconds the ants had scurried out of the galleries and were hurrying over and about the frog. During the few minutes of observation, the ants made no attempt to bite the frog and there were no indications that the frog was at all disturbed by the activities of the ants. In fact, it was not possible to detect any differences in the activities of the ants, when walking across the frog or across the moist soil. The disturbance presumably prevented any feeding activities, but there is every reason to believe that the frog was a real predator on the ant colony.
The next morning numerous round objects were observed in the bottle containing the frog taken from the ant nest. On examination the objects were found to be ant heads, and it was possible to identify over fifty, many of which were still in possession of complete mouth parts and antennae: In a second bottle containing the four other frogs taken the same day from the same locality there were also numerous ant heads.

Specimens taken from the same locality on May 10 and June 13, 1947, and in May and June of 1948, all showed a large number of ant heads in their excrement. During May and June of 1949 a large number of these frogs were examined from Douglas, Riley, Pottawatamie, and Geary Counties, Kansas, and in each case only ants could be detected in the digestive tract and in the excrement.

Wood (1948) infers that the eastern narrow-mouthed frog mates prior to May 24. This is not the case with the western form, although it is active in rocky habitats the latter part of April and until heavy rains occur, usually in June. During three years of observation in eastern Kansas the first storms to bring large numbers of males into the breeding ponds occurred June 20, 1947; June 18, 1948, and May 1, 1949.

The observed breeding habitats and activities were essentially as reported by Bragg (1943). However, much remains to be done before a complete picture of the feeding and breeding habits of the narrow-mouthed frog is available.

LITERATURE CITED


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NUMBER OF YOUNG OF LIODYTES ALLENI. — Schmidt and Davis, "Field book of the snakes of the United States and Canada," 3 ed., report six as the number of young of this secretive snake. A gravid female measuring 25 3/4 inches was caught crawling about the bank of a drainage ditch during the evening following a late rain near Okeechobee City, Florida by R. Marlin Perkins on the 20th of March, 1948. The specimen died shortly after arrival at the Lincoln Park Zoo. Dissection revealed 34 three-fourths-inch embryos in the oviducts. The female and embryos are now in the Chicago Academy of Sciences.—BERT TSCHAMBERS, Lincoln Park Zoo, Chicago, Ill.