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Observations on the Incidence of Chiggers, Eutrombicula alfreddugesi (Oudemans) on Crotaphytus (Sauria: Iguanidae) in Izard County, Arkansas

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General Notes

OBSERVATIONS ON THE INCIDENCE OF CHIGGERS, *EUTROMBICULA ALFREDDUGESI* (OUDEMANS) ON *CROTAPHYTUS* (SAURIA:IGUANIDAE) IN IZARD COUNTY, ARKANSAS

During an ecological investigation of the eastern collared lizard, *Crotaphytus collaris collaris*, data were obtained on the incidence of ectoparasites infesting this lizard at an abandoned rock quarry in Izard County, near Myron, Arkansas (T.18N, R.7W, Sec. 26).

Collared lizards emerging from hibernation in early April, 1979, were free of ectoparasites, and remained so until June. Infestation by chiggers (larval trombiculid mites) extended from June through October, with the greatest density in July (Fig. 1). Sixty-seven chiggers were identified and found to be *Eutrombicula alfreddugesi*. Eleven (27%) of 41 lizards were infested with *E. alfreddugesi*. The majority of chiggers were attached under scales on the nuchal folds, on folds around the axilla, and near the post-femoral pockets and ear openings, with 13 found near the cloaca. Other lizards collected near the study site which were infested with *E. alfreddugesi* included: *Eumeces fasciatus*, *Eumeces laticeps*, and *Sceloporus undulatus*.

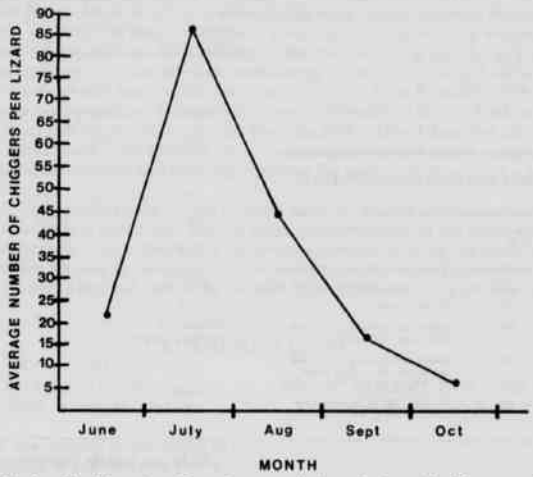

Figure 1. The occurrence of *Eutrombicula alfreddugesi* on *Crotaphytus collaris collaris* at the Myron study site, from June through October 1979.

Distribution of trombiculid mites is known to be localized and sporadic and may not be constant throughout a particular study area (Baker, et al., Natl. Pest Control Assoc. Tech. Pub., New York, 170 pp, 1956; Allred and Beck, Herpetologica 18:47-50, 1962; Spoecker, Amer. Midl. Nat. 77:539-542, 1967). At the Myron site, chigger infestation was locally variable, being more closely associated with some plant communities (eg., mixed grasses) than with others.

Wolfenbarger (Ann. Ent. Soc. Amer., 45:645-677, 1952) reported *E. alfreddugesi* from *S. undulatus* in Crawford and Newton counties, Arkansas. To my knowledge, this report represents only the second published record on the ectoparasites of Arkansas lizards.

This investigation is based on a portion of a thesis prepared in partial fulfillment of the requirements for a Master's degree in Biology at Arkansas State University. I thank Dr. V. R. McDaniel for reading the manuscript. Dr. J. O. Whitaker, Jr., Indiana State University, and Dr. R. B. Loomis, California State University-Long Beach, aided in the identification of the chigger mites. I also thank Mr. L. Ferguson for allowing me to carry out the study on his property.

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GROWTH AND YEAR CLASS COMPOSITION OF WHITE BASS *(MORONE CHRYSOPS)* IN DEGRAY LAKE, ARKANSAS

DeGray Lake was impounded in 1969 on the Caddo River, 11.3 km north of Arkadelphia in west-central Arkansas. At normal pool elevation (124.4 m above mean sea level), the lake has an area of 5,427 ha, a maximum depth of 57 m and a mean depth of 15 m.

White bass *(Morone chrysops)* have been important predators and sport fish since 1971, following the stocking of 460 adults in the fall of 1969. We conducted electrofishing surveys on the spawning grounds each spring, 1975-79, to obtain basic information on the population dynamics of this species. Spawning concentrations occurred in the upper end of the lake and extended a short distance upstream in the Caddo River. Spawning usually took place during the last two weeks in March at water temperatures of 12 to 17°C. A total of 550 fish were collected by electrofishing, representing nine year classes (1970-1978). Fish of the 1970 year class were also collected as young-of-the-year in September by biologists of the Arkansas Game and Fish Commission *(unpublished data)*. Length, weight, sex, and maturity were recorded for all fish, and scale samples were taken from most of the fish.

There have been no reproductive failures since 1970. Our collections indicated that strong year classes were established in 1971, 1974 and 1977 (Table 1). However, moderately strong year classes tend to mask the true strength of strong year classes. Year class strength was not correlated with Caddo River inflows during the spawning period.