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The mole salamander, *Ambystoma talpoideum*, is a small-bodied and relatively large-headed ambystomatid species distributed throughout much of the southeastern United States and is one of six species of *Ambystoma* that occurs in Arkansas (Conant and Collins, 1991). Our knowledge of the distribution of *A. talpoideum* has increased substantially during the past few decades, and gaps in its range have been filled in other states as well as in Arkansas (see distribution maps in Conant, 1958, 1975; Conant and Collins, 1991). Following its initial discovery from Clay County in northeastern Arkansas (Parker, 1947), five additional county records have been established during the last 15 years (Robison and Winters, 1978; Sutton and Paige, 1980; Meshaka and McLarty, 1988; Meshaka et al., 1989; Plummer and Dye, 1992). This species exhibits a disjunct distribution in Arkansas according to these records and as illustrated by Conant and Collins (1991); furthermore, most of the previous records are from localities along or near Crowley's Ridge in the northeast with only one record represented in the south (Fig. 1). Other than the county records mentioned above, there have been few studies on this species in Arkansas (e.g., Trauth and Wilhide, 1988); nothing about the biology of *A. talpoideum* in Arkansas has been published. A life-history attribute documented in *A. talpoideum* in other parts of its range is the capability to reproduce in the larval stage, a condition known as paedomorphosis (see Semlitsch, 1987). Because paedomorphic populations of *A. talpoideum* occur syntopically with other *Ambystoma* in Arkansas (discussed below) and can be misidentified with other ambystomatid larvae, discovery of new localities for this species may have been hampered in the past. Consequently, the status of *A. talpoideum* (as a species of special concern in Arkansas) requires additional scrutiny (Reagan, 1974; Smith, 1984).

Since 1985, we have been conducting field investigations into the distribution and life history of several poorly-known amphibian species in Arkansas (e.g., Butterfield et a, 1989; Trauth et al., 1989; Trauth et al., 1990; Trauth and Robinette, 1990; Saugey and Trauth, 1991; Trauth, 1992; Trauth et al., 1992; Jamieson et al., 1993). During our field studies, we have encountered populations of *Ambystoma talpoideum* that begin to bridge a distributional hiatus between northeastern and southern populations (Fig. 1); in addition, recent collections have extended the range of the species into the Ouachita Mountains of Arkansas. In the following, we report on these new localities for *A. talpoideum* and also include comments on several paedomorphic populations. Voucher specimens are deposited in the Arkansas State University Museum of Zoology (ASUMZ).

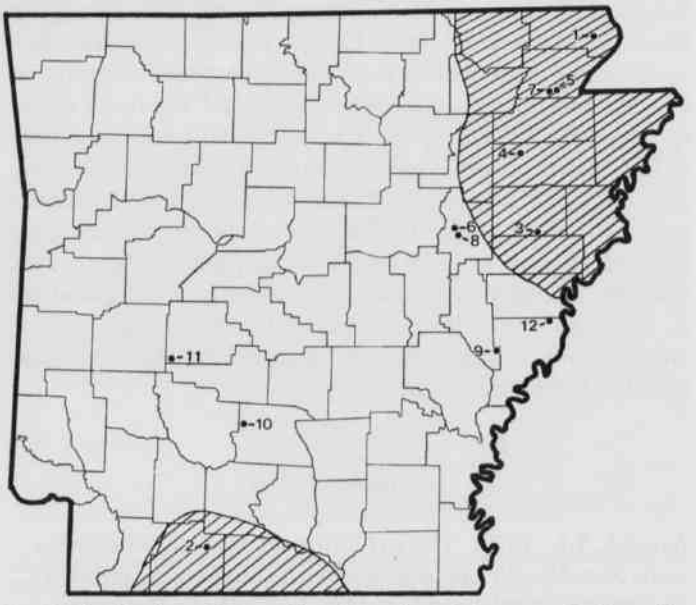

Fig. 1. Distribution of the mole salamander, *Ambystoma talpoideum*, in Arkansas. Diagonal lines depict range as illustrated by Conant and Collins (1991). Numbers 1-6 represent published county records (listed below), whereas numbers 7-12 are additional records discussed in text. 1-Clay (Parker, 1947); 2-Columbia (Robison and Winters, 1978); 3-Cross (Sutton and Paige, 1980); 4-Poinsett (Meshaka and Mclarty, 1988); 5-Greene (Meshaka et al., 1989), and 6-Woodruff (Plummer and Dye, 1992).

Locality 7 (Greene Co., T16N, R5E, S17).–This site, a cluster of gravel pits containing temporary pools of murky water, has been visited on several occasions since the discovery of *A. talpoideum* on 8 February 1988. Only paedomorphic individuals have been collected from these ponds.

Locality 8 (Woodruff Co., T6N, R3W, S27).–At this site, within the Black Swamp Wildlife Management Area (Arkansas Game & Fish Commission), researchers from the U. S. Army Engineer Waterways Experiment Station (Vicksburg, MS) conducted studies in 1988 and 1990 of terrestrial vertebrates using pitfall traps. Although over 650 amphibians were taken during the studies, only a single adult specimen of *A. talpoideum* (ASUMZ 16985) was collected on 5 November 1990.

Locality 9 (Monroe Co., T3S, R1E, S4).–On 11 April 1987, dip net sampling along St. Hwy 1 yielded a number of central newts (*Notophthalmus viridescens*) and small ambystomatid larvae that were later identified as *A. talpoideum*. The larvae possessed the distinctive pigmentary pattern of light stripes on the side of the head and gills with an irregularly outlined mid-lateral stripe (Volpe and Shoop, 1963). This larval sample represents a new county record for the species and places the species in the lower White River Basin of Arkansas.

Locality 10 (Dallas Co., T8S, R17W, S19).–While road cruising at night on 5 February 1991, two of us (BGC and DAS) collected an adult specimen crossing St. Hwy 7. The specimen represents a new county record and places the species within the Ouachita River Basin of southcentral Arkansas.

Locality 11 (Garland Co.; T3S, R22W, S34).–The collection by seining on 5 January 1993 of both adult and paedomophic specimens of *A. talpoideum* (ASUMZ 18625-18639) breeding in a wildlife pond in the Ouachita National Forest is the first record that extends the range of the species into a mountainous terrain in Arkansas. The pond, created in 1990 by the Forest Service, is situated in a clearing among pine trees; the area of the pond is approximately 0.1 and has a maximum depth of around 1.5 m. Eggs masses of transformed *A. talpoideum* and possibly those of *A. annulatum* and/or *A. maculatum* were present in the pond; we identified species based upon ovum/embryo size (Walls and Altig, 1986). Egg masses laid by paedomorphic individuals were loosely attached to vegetation and were distinguished mainly by their fragility, a characteristic observed in egg masses at other pond sites (e.g., Locality 5). The collection of egg masses and breeding individuals in early January at this site places the breeding phenophase of this population within the breeding interval observed in northeastern Arkansas (unpubl. data) and is similar to the breeding activity for the species in northwestern Louisiana (Hardy and Raymond, 1980).

Locality 12 (Phillips Co.; T1S, R4E, S1).–On 17 April 1993, a single paedomorphic adult was collected in a shallow roadside ditch within the St. Francis National Forest. This individual represents a new county record for the species.

In summary, our observations establish six new localities and four new county records for the mole salamander in Arkansas and extend the range of the species into the Ouachita Mountains. Paedomorphic populations of this species were found at three of the six new localities (in Greene, Garland, and Phillips counties). We recommend that the Forest Service now include *A. talpoideum* when addressing habitat considerations for salamanders (sensu Raymond and Hardy, 1991) in order to meet the goals outlined in the Amended Land and Resource Management Plan for the Ouachita National Forest (USDA-Forest Service, 1990).

Walter E. Meshaka, Brian P. Butterfield, Rusty B. McAllister, Chuck Long, Alan Christian, and Brady Richards are thanked for their field assistance. We dedicate this paper to the memory of Robert L. Cox, Jr., whose diligence in the field provided the initial Greene Co. records for *Ambystoma talpoideum* and whose compassion for herpetological pursuits was an inspiration to us all.

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