Journal of the Arkansas Academy of Science

Volume 30 Article 7

1976

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Edmond J. Bacon Jr.
University of Arkansas at Monticello

Zane M. Anderson
University of Arkansas at Monticello

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EDMOND J. BACON and ZANE M. ANDERSON
Department of Biology, University of Arkansas at Monticello,
Monticello, Arkansas 71655

ABSTRACT

Distribution of amphibians and reptiles in the West Gulf Coastal Plain and Mississippi Alluvial Plain is not well known because extensive collecting has not been done in these areas and data in museums have not been published. New distributional records for three salamanders (*Desmognathus fuscus brimleyorum, Manculus quadridigitatus, Plethodon glutinosus glutinosus*), two anurans (*Rana areolata circulosa, Scaphiopus holbrooki holbrooki*), and one snake (*Lampropeltis doliata amaura*) are presented. Additional collecting will be necessary to determine the exact range and status of the secretive species.

INTRODUCTION

The herpetofauna of Arkansas is only moderately well known, and a vast amount of fieldwork is needed to define specific and subspecific ranges. The most complete description of amphibians and reptiles in Arkansas was compiled by Dowling (1957), and this work has been used to determine geographic ranges (Conant 1975) even though Dowling made no attempt to do so because of insufficient data. This report summarizes new records of amphibians and reptiles from the Gulf Coastal Plain and Mississippi Alluvial Plain. Additional collecting in these areas will be necessary to define geographic ranges, especially for the more secretive species. Additional records pending further investigation will be presented at a later date.

MATERIALS AND METHODS

Field trips were made throughout the year, but most of the collecting was conducted during late winter and spring. Several specimens, especially the rarer species, were photographed and released. After collection the animals were returned to the laboratory and frozen in water for later preparation. After thawing, they were injected with 10% formalin and pinned in a dissecting tray. Enough 10% formalin was added to cover the specimens. After fixation for 24 hours, the specimens were labeled, catalogued, and placed in 50% isopropyl alcohol or 25% sokal solution for permanent storage. Voucher specimens were placed in the UAM Collection of Vertebrates. Common and scientific names are in agreement with those proposed by the Committee on Herpetological Names (1956).

CLASS AMPHIBIA

Order Caudata (Salamanders)

Distributional records for three salamanders have been found, and these species apparently are much more widespread than previously thought.

Central Dusky Salamander
Desmognathus fuscus brimleyorum Stejneger

Ouachita Co: UAM 1275-1280 (S1, T11S, R18W; S11, T11S, R18W).

Dowling (1957) considered *Desmognathus fuscus brimleyorum* to be statewide and reported on numerous localities in the Ouachita Mountain region and three questionable localities north of the Arkansas River. However, Conant (1958) restricted the range to the Ouachita Mountains and southern Arkansas. Conant (1975) recognized *Desmognathus fuscus brimleyorum* as the Ouachita dusky salamander and revised its distribution to include only the Ouachita Mountain region. Populations in Ouachita County are locally abundant in small springs in the northern part of the county. Dowling (1957) listed a single specimen from nearby Nevada County, and one individual was sighted on 12 March 1976 but was not collected.

Dwarf Salamander
Manculus quadridigitatus (Holbrook)

Bradley Co: UAM 1259-1262, 1272-1274 (S5, T12S, R10W; S26 T13S, R9W); Calhoun Co: UAM 1263-1264 (S32, T13S, R12W); Cleveland Co: UAM 1267-1269 (T12S, R10W); Drew Co: UAM 1116-1125 (T12S, R7W; S13, T13S, R7W; S12, T13S, R7W); Nevada Co: UAM 1270-1772 (S22, T11S, R20W); Ouachita Co: UAM 1126-1127, 1265-1266 (S1, T11S, R13W; S11, T11S, R18W).

The dwarf salamander previously has been reported from Lafayette and Miller Counties (Dowling 1957). This distribution was given by Conant (1975), although he reported a questionable record in northwest Arkansas. The dwarf salamander is one of the most abundant and widespread salamanders in southern Arkansas. Apparently it is most abundant in Bradley County, and during a thunderstorm on 23 January 1976 more than 100 specimens were captured along the highways in less than two hours. The dwarf salamander is locally abundant in Ouachita County and has been found in upland wooded areas as well as in low swampy areas. It is also locally abundant in Drew and Cleveland Counties. Collecting trips to Ashley, Chicot, Desha, Lincoln, Union, and Dallas Counties have not yielded any specimens, but it is expected to be found in most of these areas in the near future because of similarity of habitats.

Slimy Salamander
Plethodon glutinosus glutinosus (Green)

Bradley Co: UAM 717-719, 1272-1284 (S27, T12S, R10W; S5, T12S, R10W; S17, T13S, R11W; S14, T13S, R9W); Calhoun Co: UAM 1257-1258 (S3, T14S, R12W; S32, T13S, R12W).

The slimy salamander, *Plethodon glutinosus glutinosus*, has long been considered to be confined to the Interior Highlands, but Dowling (1957) suggested that its apparent absence in the Coastal Plain may have been due to insufficient collecting. This appears to be the case, and it is locally abundant in some areas. Eighteen specimens were collected in Bradley County and two specimens were found in adjacent Calhoun County, but the slimy salamander has not been collected in nearby counties despite many attempts. It is believed to be scattered throughout the Coastal Plain and locally abundant in only a few areas. In southern Arkansas, *Plethodon glutinosus glutinosus* apparently is not restricted to upland habitat, although it appears to be more common in these areas. One locality in Calhoun County was a lowlying drainage valley near a small stream.

Order Anura (Frogs and Toads)

The distributions of secretive anurans such as the northern crawfish frog and spadefoot toad are difficult to determine. Consequently, these two species are probably more widespread and locally abundant than present data indicate.

Northern Crawfish Frog

Rana areolata circulosa Rice & Davis

Bradley Co: UAM 985 (S13, T13S, R9W); Chicot Co: NELSU 16680 (T19S, R1W); Drew Co: UAM 980-984, 1249-1255 (S10, T13S, R7W; S11, T13S, R7W).

The northern crawfish frog was reported from Washington County by Dowling (1957). Byrd and Hanebrink (1974) collected four individuals in Craighead County, and Dr. Neil H. Douglas (pers. commun.) collected a single specimen in Chicot County in 1967. A single specimen was collected in Bradley County, and a large population breeds annually on the UAM campus in Drew County. It probably is present in Ashley and Desha Counties as well. Collecting in these areas has been unsuccessful.

Breeding of the northern crawfish frog in southeastern Arkansas begins in late January and is greatly dependent on temperature and precipitation. After heavy thunderstorms, males were observed moving to breeding ponds on 29 January 1976. Ambient temperature ranged from 1.7 to 14.4 C. Males called only at night for at least two weeks before the females arrived. Females were found at the ponds on 23 February 1976 and ambient temperature ranged from 0.6 to 11.1 C. Approximately 50 individuals were at the ponds by 23 February. Two individuals in amplexus were captured and taken to the laboratory. Egg masses were found in the aquarium the following day, and the eggs hatched in 3-4 days. The tadpoles were reared on a diet of boiled spinach. Calling had subsided at the ponds by 29 February. No calls were reported until 10 March after approximately 8.2 cm of rainfall, when a few individuals called during a two-day period. One individual called on 31 March after 5.0 cm of rainfall on 29 and 30 March. The height of the breeding season was during late February.

Eastern Spadefoot Toad

Scaphiopus holbrooki holbrooki (Harlan)

Chicot Co: UAM 561-577 (S31, T13S, R3W).

The eastern spadefoot toad, *Scaphiopus holbrooki holbrooki*, was reported by Dowling (1957) from Lawrence County. The revised distribution by Conant (1975) included only the northeastern counties of Arkansas. Eighteen specimens were found at Dermott, Arkansas, in Chicot County during late March and early April 1972. Hurter's spadefoot toad, *Scaphiopus holbrooki hurteri*, is present in the western part of the state, and several specimens in the UAM Collection of Vertebrates were collected at El Dorado, Arkansas, in Union County in 1964. Neither the eastern spadefoot toad nor Hurter's spadefoot toad has been collected in the areas between Chicot County and Union County. There may be a line of intergradation but it is unknown at this time.

CLASS REPTILIA

Order Squamata (Lizards and Snakes)

Louisiana Milksnake

Lampropeltis doliata amaura (Cope)

Ashley Co: UAM 178 (T17S, R5W); Bradley Co: UAM 46 (T13S, R10W); Ouachita Co: NELSU 10734 (S11, T13S, R7W).

The Louisiana milksnake, *Lampropeltis doliata amaura*, has been reported from scattered localities south of the Arkansas River. Dowling (1957) listed only one specimen from each of Garland, Logan, and Union Counties. Conant (1975) considered the range to be limited to southwestern Arkansas. Specimens in the UAM Collection of Vertebrates from Bradley and Ashley Counties suggest that the Louisiana milksnake is widely scattered but rare in southern Arkansas. Dr. Neil H. Douglas (pers. commun.) found a single specimen near Camden in Ouachita County. No other specimens from Arkansas are known.

ACKNOWLEDGEMENTS

The authors are grateful to the Department of Biology at the University of Arkansas for the use of space and facilities. We are indebted to the late Dr. Claud M. Ward for his contributions to the knowledge of the herpetofauna of southeastern Arkansas. Dr. Neil H. Douglas, Northeast Louisiana University, generously provided data on localities in Arkansas. We are also appreciative of distributional records and specimens collected by various individuals of the Taxonomy and Natural History of Vertebrates classes at UAM during the past few years. Special recognition is due Algie Jolly, Gale McFarland, Steve Lipton, Gary Thornton, Kneath Loomis, Errol Barrett, and Jim McDaniel.

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