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# A Summary of the Status of Harvest Mice, Cricetidae: *Reithrodontomys*, in Arkansas

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## ABSTRACT

Although four species of harvest mice, *Reithrodontomys*, are known to occur in Arkansas, the distributional status of the genus in the state is poorly understood. Recent museum specimens significantly extend the range of *R. megalotis* and *R. fulvescens* in the state. *R. megalotis* is shown to range south through Phillips Co. in eastern Arkansas, and *R. fulvescens* is shown to range throughout most of the state, now including most of the Mississippi Alluvial Plain. A new specimen of *R. humulis* from Delaware Co., Oklahoma, suggests that this species probably ranges throughout northwestern Arkansas. *R. montanus* remains known only from Washington Co. in northwestern Arkansas.

## INTRODUCTION

Four species of harvest mice, *Reithrodontomys*, are now known to occur in Arkansas. However, the distributional status of these rodents is unclear for the state. Sealander (1956) reported three species from Arkansas. The fulvous harvest mouse, *R. fulvescens* (J. A. Allen), was reported to be widely distributed throughout the state, although no records existed east of White County. Hall and Kelson (1959) and Schwartz and Schwartz (1959) considered northeastern Arkansas to be beyond the range of this species. *R. megalotis* (Baird) was known only from extreme northeastern Arkansas (south only to Craighead Co.). At this time, *R. humilis* (Audubon and Bachman) was known only from Sebastian Co. in western Arkansas. Recently, Sealander (1977) reported a specimen of *R. humilis* from Mississippi Co. in northeastern Arkansas, and Sealander and Gipson (1974) recorded *R. montanus* (Baird) from northwestern Arkansas. Recent museum specimens in the Collection of Recent Mammals at Arkansas State University (200 specimens of *Reithrodontomys*), the Vertebrate Collections at the University of Arkansas at Little Rock (26 specimens), and the Collection of Mammals at the University of Arkansas at Monticello (14 specimens) further clarify the Arkansas ranges of three of these species (*R. humilis*, *R. megalotis*, and *R. fulvescens*).

## DISCUSSION

Sealander and Gipson (1974) reported three specimens of *R. montanus* from Arkansas. All were collected in Washington Co. in extreme western Arkansas. No additional specimens are known to us, and it appears that eastward colonization by the Plains Harvest Mouse has not extended beyond the western most tier of counties in northern Arkansas (Fig. 1).

Only two specimens of the Eastern Harvest Mouse, *R. humilis*, have been reported from Arkansas (Sealander, 1956, 1977). These specimens are from opposite sides of the state (Fig. 2), and indicate a need for an intensive search for additional specimens. Although we have no additional specimens of this rodent from Arkansas, we have a specimen of *R. humilis* collected in Delaware Co., Oklahoma, only a few kms west of Benton Co., Arkansas, and well north of the specimens from Sebastian County. Although Sealander (1977) reported a specimen from Mississippi County, several thousand trap-nights by us have netted over one hundred *R. megalotis*, but no additional specimens of *R. humilis* from northeastern Arkansas. It appears then, that a viable population of the Eastern Harvest Mouse exists in northwestern Arkansas, probably referable to *R. h. merriami* as is our Oklahoma specimen. Additional data are needed to determine if this population is isolated, or contiguous with populations of *R. h. humilis* east of Arkansas.

Sealander (1975) reported the Western Harvest Mouse, *R. megalotis*, from the northeastern corner of Arkansas, and indicated specimens only from Clay, Craighead, and Mississippi Counties. We have collected 120 additional specimens, significantly extending the range of this species in Arkansas. Our specimens, and an additional specimen from Phillips Co., collected by Dr. Gary Heidt at UALR, reveal a continuous population of this rodent throughout northeastern and east-central Arkansas (Fig. 3). Further, our records indicate that the most dense populations of this mouse occur along railroad rights-of-way. It is probable then, that these sites represent primary avenues of dispersal for this species in Arkansas, although several of our specimens were collected from other shrubby or grassy habitats. Interestingly, *R. fulvescens* has several times been collected side by side with *R. megalotis* in extreme northeastern Arkansas. Evidence is not available concerning possible competitive interaction between these two harvest mice. Our data strongly suggest that *R. megalotis* is expanding its range southward in Arkansas, primarily along railroad routes.

In 1956, Sealander reported specimens of the Fulvous Harvest Mouse, *R. fulvescens*, from locations in 18 counties. He concluded that the species was "undoubtedly ... state wide in distribution although it [had] not been recorded from the eastern one-fourth of the State." Hall and Kelson (1959) and Schwartz and Schwartz (1959) excluded eastern Arkansas from its range, and Sealander (1975) reported *R. fulvescens*, absent from most of the Mississippi Alluvial Plain. We have accumulated 90 specimens from 17 additional counties (Fig. 4). Again, these specimens expand the known range of this species in Arkansas. These specimens reveal that *R. fulvescens* ranges throughout the Mississippi Alluvial Plain, with the possible exception of the northeastern section (east of Crowley's Ridge). We have found it to be abundant and co-existent with *R. megalotis* along Crowley's Ridge in northeastern Arkansas, which, together with previous records, suggests that the range of *R. fulvescens* is statewide in Arkansas.

## SUMMARY

The range of *R. megalotis* in Arkansas is significantly greater than previously indicated. *R. megalotis* is abundant, and it is apparently expanding its range southward from northeastern and eastcentral Arkansas. *R. fulvescens* appears to range throughout most of Arkansas, including most of the Mississippi Alluvial Plain. *R. humilis* ranges over extreme northwestern Arkansas, and may extend eastward across the northern section of the state. *R. montanus* is presently known only from Washington Co., but probably occurs throughout northwestern Arkansas.

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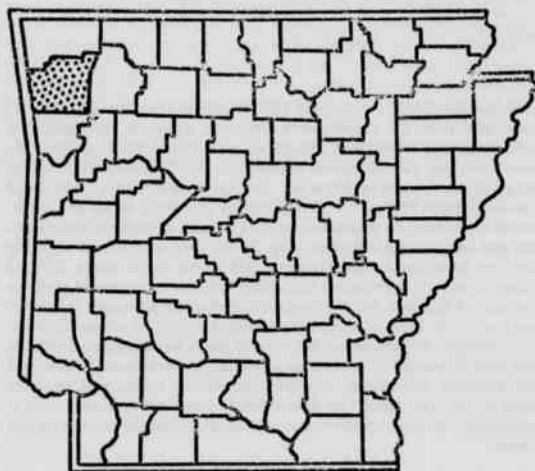


Figure 1. Counties from which specimens of *R. montanus* are known.

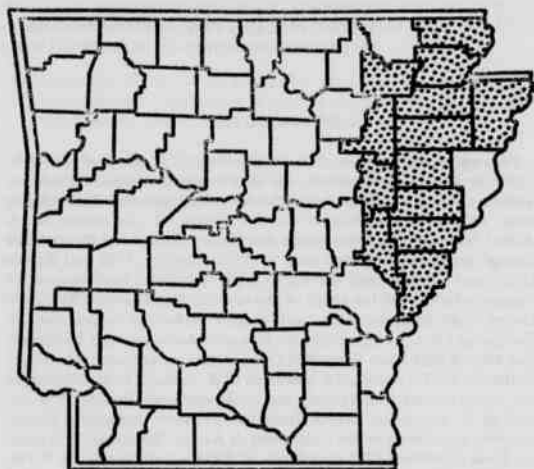


Figure 3. Counties from which specimens of *R. megalotis* are known.

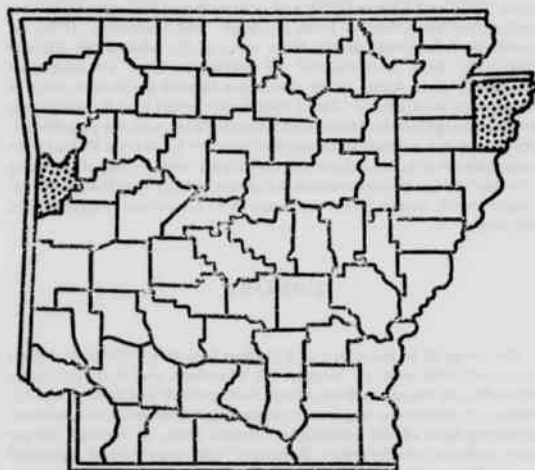


Figure 2. Counties from which specimens of *R. humulis* are known.

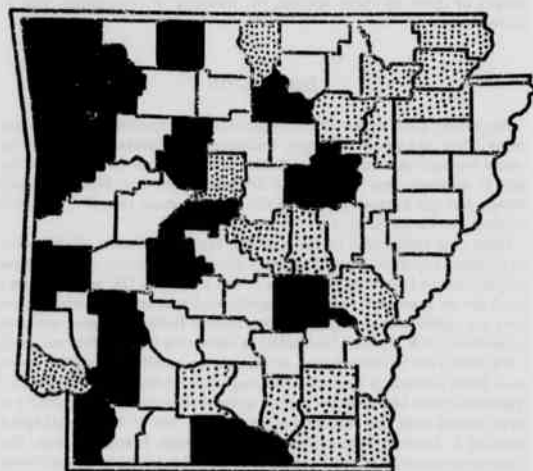


Figure 4. Counties from which specimens of *R. fulvescens* are known. Shaded counties are from Sealander (1956); stippled counties are new records.