

The Western Harvest Mouse (*Reithrodontomys megalotis*) Moves into Northeastern Illinois

Jon C. Pigage
Worsham College of Mortuary Science
Wheeling, IL 60090

and

Helen K. Pigage
Biology Department
Elmhurst College
Elmhurst, IL 60126

ABSTRACT

Three western harvest mice, *Reithrodontomys megalotis*, were collected in the Waterfall Glen Forest Preserve in DuPage County in June and July 1988. The mice were found in a grassy area of the preserve dominated by poverty grass (*Danthonia spicata*). This finding represents a northeastern extension of the range of *R. megalotis* in Illinois.

INTRODUCTION

The western harvest mouse, *Reithrodontomys megalotis*, was first reported in Illinois from northwestern Carroll County in 1953 (Hoffmeister and Warnock, 1955). Thereafter, *R. megalotis* was repeatedly found in surrounding northwestern counties north of the Illinois River (Klimstra, 1957; Stains and Stuckey, 1960; Verts, 1960). By 1962 *R. megalotis* was also found south of the Illinois River in Tazewell and Morgan counties (Stains and Turner, 1963) and continued to spread slowly south and east in the state (Birkenholz, 1967; Birkenholz, 1973; Pinkham and Meade, 1970). Stupka *et al* (1972) described the presence of *R. megalotis* in DeKalb County and mentioned a record of collection in DuPage County. This capture occurred in 1962 and is described by Hoffmeister (1989) as most likely in Lake (or possibly Cook) instead of DuPage County.

Whitaker and Sly (1970) first collected *R. megalotis* in Indiana in Newton County in 1969. Ford (1977) described the geographical distribution of *R. megalotis* in Indiana to be bounded on the south by Interstate 74, by the Tippecanoe River at the east, and by the Kankakee River at the north. No *R. megalotis* had been captured by Ford north of the Kankakee River despite 18,000 trap nights of effort. Becker (1975) reported the first record of *R. megalotis* east and north of the Des Plaines and Kankakee River systems in Illinois based on specimens trapped in Will County. No *R. megalotis* have been reported north of the Kankakee River in Indiana.

This paper reports the first records of *R. megalotis* in DuPage County and extends the known range of the species in Illinois.

MATERIALS AND METHODS

As part of a project on external parasites of the white-footed mouse (*Peromyscus leucopus*), three different habitats were live trapped periodically from June 4 through September 8, 1988. All trapping was done in the Waterfall Glen Forest Preserve in the southeast corner of DuPage County. The three habitats sampled have been referred to by the Forest Preserve District of DuPage County as savanna, pine plantation, and poverty (grass) prairie. The savanna is an open oak woods which was cleared leaving large oak (*Quercus* spp.) and shagbark hickory (*Carya ovata*) trees. The understory has moderate to dense cover including shrubby dogwoods (*Cornus* spp.), poison ivy (*Toxicodendron radicans*), blackberries (*Rubus* sp.), and various species of grasses. The pine plantation consists of secondary growth of pines (*Pinus* sp.). Many dead conifers are present, both standing and fallen. The understory consists mostly of forbs. Poverty prairie is an open field containing poverty oat grass (*Danthonia spicata*) as the dominant species along with prairie dock (*Silphium terebinthinaceum*), compass plant (*Silphium lacinatedum*), coneflowers (*Ratibida pinnata*) and wild strawberry (*Fragaria* sp.). The soil is sandy and also supports patches of dogwood (*Cornus* sp.) and honeysuckle (*Lonicera* sp.).

Each habitat was sampled using a ten by five trapping grid, with ten meters between trapping stations. Each trapping station within the grid contained two Sherman live traps (7.6 x 8.9 x 22.9 cm) baited with peanut butter. One hundred traps were set per trapping grid, and baited traps were left in place for three consecutive nights. Habitats were sampled on June 4-9, June 26-July 1, and September 3-8, 1988. Traps were checked each morning within two to three hours of sunrise.

Animals captured were identified to species, sexed, weighed, examined for external parasites and reproductive condition, given an identification number by toe clipping, and released.

RESULTS

Three *R. megalotis* were collected (one adult male on June 8, one adult female on June 30, and one adult female on July 1) from poverty prairie during 900 trap nights between June 4 and September 8, 1988. No *R. megalotis* were collected from the savanna or the pine plantation despite 900 trap nights per habitat over the same period of time. Other mammals collected from poverty prairie included the white-footed mouse (*P. leucopus*), the prairie vole (*Microtus ochrogaster*), the northern short-tailed shrew (*Blarina brevicauda*), and the eastern chipmunk (*Tamias striatus*).

DISCUSSION

Several maps of the distribution of *R. megalotis* in Illinois have been published (Stupka *et al*, 1972; Ford, 1977; Hoffmeister, 1989). The distribution of the mouse in the northeast corner of the state is spotty at best with records in Will (Becker, 1975) Lake (or Cook) and DeKalb counties (Stupka *et al*, 1972). This paper represents an extension of the range of *R. megalotis* in northeast Illinois into DuPage County.

The presence of *R. megalotis* in southeastern DuPage county most likely represents a movement of the species from the west rather than from the south. Hoffmeister (1989) reported a specimen from northeastern Kendall County. Representatives of these populations could have moved east across Will County into DuPage County. To us this represents a more likely scenario than a movement from the southern population reported by Becker (1975) in Will County which would represent a longer movement as well as the necessity of crossing the DesPlaines River and parallel Chicago Sanitary and Ship Canal.

We believe these results indicate a relatively recent extension of the range of *R. megalotis* into DuPage County. Small mammal surveys of Waterfall Glen Forest Preserve prior to 1988 failed to report any specimens of *R. megalotis* (D. Ludwig, personal communication). We also believe that the species is becoming established in the area although the numbers appear to be relatively low. After this study we collected other specimens from Waterfall Glen including a pregnant female with three embryos.

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