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Movement of Franklin's Ground Squirrel Into Northeastern Minnesota

JEROME D. ROBINS*

ABSTRACT—Specimens of Franklin's ground squirrel have been obtained in several localities in St. Louis County, Minnesota. The movement of this prairie-dwelling rodent into the montane coniferous forest region of northeastern Minnesota may be related to recent man-made changes in the habitat.

Franklin's ground squirrels (*Spermophilus franklinii*) inhabit the tall grass and mixed grass prairies of North America from Kansas and Missouri on the south, and Indiana on the east, north through Minnesota and the Dakotas to east-central Alberta, Canada (Howell, 1938; Hall and Kelson, 1959). In Minnesota (Gunderson and Beer, 1953) Franklin's ground squirrels are found primarily south and west of the montane coniferous forest. The southern and western half of Minnesota was grown to tall grass prairie prior to cultivation (Shelford, 1963:

330) and probably presented ideal conditions for Franklin's ground squirrels.

The northeastern portion of Minnesota is classified by Shelford (1963: 121) as originally having a southern arm of montane coniferous forest vegetation (pinc-hemlock faciation). A zone of hardwood forest extending from the northwest to southeast corners of the state separated the coniferous and prairie elements (Upham, 1884). A similar distribution of Franklin's ground squirrel exists in Wisconsin (Jackson, 1961), where it appears to be limited to the southern and western part of the state below the "tension zone" of Curtis (1959: 20), which divides the state into prairie and boreal regions.

De Vos (1964) recently reviewed range changes of mammals in the Great Lakes region. He reported that the prairie dwelling thirteen-lined ground squirrel (*S. tridecemlineatus*) had expanded its range fairly rapidly

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in an easterly and northerly direction in Minnesota to Duluth during this century. Gunderson and Beer (1953) have likewise reported the presence of thirteen-lined ground squirrels as far east in Minnesota as Duluth. Heretofore there has been no evidence of similar movement on the part of the closely related prairie dwelling Franklin's ground squirrel. The presently known northeasternmost distribution of Franklin's ground squirrel in Minnesota is from Anoka and Sherburne counties just north of Minneapolis, northwest to Cass County in the center of the state, and from there north to Lake of the Woods County on the northern border (Gunderson and Beer, 1953).

On two occasions during July and August of 1965 this writer observed several Franklin's ground squirrels in the roadside rest area at Saginaw, in St. Louis County, Minnesota. As their presence in this part of the state was unknown (Gunderson and Beer, 1953; De Vos, 1964), it was surmised that they may have been artificially introduced from farther west. No specimens were collected. Saginaw is about 12 miles northwest of Duluth and located on U.S. Highway 2, a major east-west route across northern Minnesota. In August 1970 the writer was again in the area and took one male (KU - 124816: length, 325 mm; tail, 127 mm; hind foot, 49 mm; ear 15 mm; weight, 253.3 grams) and two females (KU - 124817: 327 mm; 122 mm; 50 mm; 15 mm; 247.7 g and KU - 124818: [324 mm]; [105 mm]; 52 mm; 15 mm; 342.4 g) which are in the collection at the Museum of Natural History at The University of Kansas. Three additional specimens from St. Louis County are in the collection at the University of Minnesota, Duluth. One male was collected in October, 1966, at Hibbing (UMD - 632: 350 mm; 120 mm; 50 mm; 7 mm; 299.6 g) which is near the east-central border of the county. A second specimen (UMD - 792: 264 mm; 86 mm; 32 mm; 6 mm; no weight or sex) was obtained in August of 1967 at Meadowslands, about 32 miles northwest of Duluth. The third specimen (UMD - uncatalogued) was taken on 10 June 1970 by Milton Sundquist at his home on the western edge of Duluth, where these rodents are considered common pests by the local residents. One Franklin ground squirrel was observed in the Sundquist yard in August 1970. Sundquist (*in litt.*) first noticed them near his home in the spring of 1968, when six individuals were destroyed. There are no published observations of Franklin's ground squirrel between St. Louis County and Cass, Sherburne, or Anoka counties. However, this writer found them to be numerous in the mid-1960's in several public campgrounds on the west side of Lake Winnibigoshish and around Cut-Foot Sioux Lake in Itasca County, considerably west of Duluth.

Although Franklin's ground squirrels are residents of prairies, they seem to prefer habitats on the edges of the prairies or, conversely, on the edges of forests. According to Gunderson and Beer (1953) in Minnesota they are found in brushy fields or near the edges of woods. The new records in St. Louis County extend the known range about 120 miles, which is about 160 miles into the montane coniferous forest region delineated by Shelford (1963). Due to extensive modification of the coniferous forest element through farming, lumbering, and fires, much of northeastern Minnesota is now in successional stages dominated by quaking aspen (*Populus tremuloides*) and white birch (*Betula papyrifera*). Thus, much edge habitat is available for colonization and further range expansion seems likely in northeastern Minnesota and possibly northern Wisconsin.

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