

1980

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Recommended Citation

Bowles, John B. and Gladfelter, H. Lee (1980) "Movement of Moose South of Traditional Range in the Upper Midwestern United States," *Proceedings of the Iowa Academy of Science*: Vol. 87: No. 4 , Article 4.
Available at: <http://scholarworks.uni.edu/pias/vol87/iss4/4>

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Movement of Moose South of Traditional Range in the Upper Midwestern United States

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There have been several recent records of moose in southern Minnesota and Iowa, south of their traditional range. Additionally, a bull moose from southern Minnesota crossed Iowa in a southeasterly direction and entered northeastern Missouri, traveling a distance of about 900 km.

INDEX DESCRIPTORS: Mammals, moose, Iowa, Minnesota, Missouri.

The traditional moose (*Alces alces*) range in the upper Midwest included eastern North Dakota, northern Minnesota, Wisconsin, and Michigan (Peterson, 1955; Hall and Kelson, 1959). In the 1970's, several moose have been recorded from southern Minnesota, Iowa, and northeastern Missouri. Moose movements into southern Minnesota were outside the traditional range bordered by Kanabec, Mill Lacs, Ottertail, and Pine counties (Ledin and Karns, 1963; Idstrom, 1965).

In the fall of 1973, a cow moose traveled south and east along the Red and Minnesota rivers in Minnesota. Subsequently, there were sightings (presumably the same individual) in a wooded area near Burnsville, Dakota County, and shortly thereafter, in a pasture in Olmstead County, Minnesota. In January 1974, a 2-year-old bull moose was observed and later involved in an automobile accident near the Walnut Lake Wildlife Management Area, Faribault County, Minnesota.

Moose previously may have wandered south of Minnesota into Iowa (e.g., an unverified record in Worth County in 1971). However, the first documentation of moose in Iowa appears to be a 3 October 1974 Des Moines Register newspaper story telling of a bull seen by the public on 1 October along Iowa Highway 3 near Readlyn, Bremer County, and later the same day near Dunkerton, Black Hawk County. Subsequently, it was observed near Belle Plaine, Chelsea, and Tama, in Tama County by Iowa Conservation Commission personnel. On 31 October, the Des Moines Register reported that a bull moose (probably the same animal) weighing more than 450 kg was shot in a corn field east of Gilman, Marshall County, about midway between the Iowa and South Skunk rivers. Other verified moose records in Iowa include single bulls in Winnebago County (September 1977) and Winneshiek County (April 1978).

Another bull, estimated to be 3 years old and to weigh 450 kg, traveled from Minnesota, through Iowa, and into northeastern Missouri (Fig. 1). This individual, first reported in southern Minnesota in mid-November 1976, entered Iowa on 27 November and spent the winter and following summer near Emmetsburg, Palo Alto County. In the fall of 1977, the moose moved southeast across Iowa along the Des Moines and South Skunk rivers and entered the northeastern corner of Missouri in December 1977. Later, the bull moved through several counties adjacent to the Mississippi River in that region. By February 1979, the moose had ceased its southerly movement of about 900 km near Bowling Green, Pike County. The last sign of its presence was a pair of antlers found on 1 April 1979, one mile east of Bowling Green.

During its movements, the bull moose not only followed rivers but traversed agricultural land, crossed fences and major highways (including Interstates 35 and 80), and entered several towns (Gilbert, 1979). His rate of travel was about 13-16 km a night but he often stayed in one area for several days.

The Minnesota moose population, under complete protection since the 1922 hunting season, increased rapidly during the 1940's and 1950's, and stabilized in the mid-1960's (Idstrom, 1965; Berg, 1976).

Since 1971, population levels have been high enough to allow a hunting season in alternate years in northern Minnesota (Ledin and Karns, 1963; L. Rutske, Minnesota Department of Natural Resources, personal communication). It is uncertain whether southerly movements of moose are related to harassment by hunters, higher population levels and consequent wandering of individuals, or to some other factors.

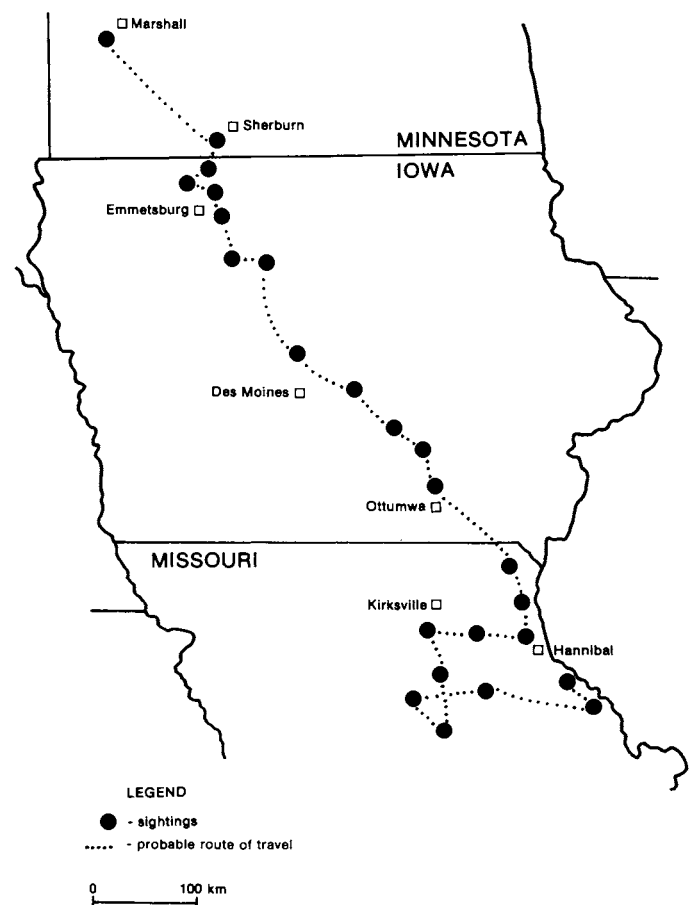


Fig. 1. Route traveled from southern Minnesota to northeastern Missouri by a bull moose, 1976-1979.

Such wanderings south of peripheral ranges have been reported for moose in Washington (Dalquest, 1948) and Colorado (Armstrong, 1972). However, we know of no records of individuals moving distances reported herein.

Fragments of moose found in association with prehistoric human activity in Iowa (Van Hyning and Pellett, 1910) may have been Pleistocene wanderers from the north. Thus, moose were not considered part of the recent mammalian fauna of Iowa (Bowles, 1975). The long distance movements of individuals reported herein, however, suggest at least an occasional occurrence of moose in the Iowa and Missouri region prior to European settlement.

ACKNOWLEDGEMENTS

We are grateful to W.H. Longley, Minnesota Department of Natural Resources, and W.R. Porath, Missouri Department of Conservation, for recent moose records in their respective states. Documentation and sightings in Iowa were provided by conservation officers and biologists of the Iowa Conservation Commission. Evelyn Loynachan prepared the map for Figure 1.

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