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HISTORY AND STATUS OF WISCONSIN'S FISHER POPULATION

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Historically, fishers (*Martes pennanti*) were common in most forested areas of Wisconsin. Extensive logging, wildfires, and unregulated trapping resulted in their extirpation in the early 1900s. The last verified observation of a native fisher in Wisconsin occurred in 1932. From 1956-67, the U.S. Forest Service and the Wisconsin Conservation Department, now the Department of Natural Resources (DNR), cooperated to reestablish a fisher population in Wisconsin. Sixty animals from New York and Minnesota were released into the Nicolet National Forest, and 60 from Minnesota were released into the Chequamegon National Forest. "Fisher Management Areas" of 120,000 acres (Nicolet site) and 220,000 acres (Chequamegon site) were established around the release sites to reduce accidental trapping losses. In these areas, all trapping except "wet sets" was prohibited.

The DNR Bureau of Research and Bureau of Wildlife Management have monitored the status of the fisher population resulting from these reintroductions. Monitoring was informal until 1976, when a research project involving winter track counts was initiated in eastern Oneida County on 2 study areas: Monico (MSA) and Enterprise (ESA). In 1985, work was expanded to include monitoring harvests resulting from an experimental fisher trapping season. This article presents range maps, population trends, and an estimate of the current number of fishers in Wisconsin. The experimental trapping season and future management are also discussed.

Methods

Fisher range was determined from a survey of DNR wildlife managers in northern Wisconsin plus a careful examination of U.S. Geological Survey maps to determine suitable/unsuitable habitats. Fishers were mapped as common if they were thought to be present at a density of 1 or more per 4 square miles, less common if present at 1 per 4-8 square miles, and rare if density was less than 1 per 8 square miles.

Population trends were determined from 3 indices of abundance: (1) winter track counts conducted along road transects on the 2 research study areas during 1976-87, (2) winter track counts conducted by wildlife managers on northern Wisconsin road transects during 1977-87, and (3) a mammal observation survey sent to all DNR field personnel from 1980-87. Track counts in the research study areas were conducted along a 21.3-mile transect bisecting the MSA and a 21.4-mile transect through the ESA. Counts were conducted whenever possible along drivable roads one day after snowfall, and multiple crossings of what was considered to be the same animal were reduced to one tally. The wildlife management track counts were conducted once each winter along 35 10-mile transects in the northern one third of Wisconsin. Two transects were run per county. An average of 28 transects/year

have been run through 1987. Cooperators in the mammal observation survey recorded the number of fishers they saw during the course of the year, using an annual report form.

The population estimate of fishers in Wisconsin was extrapolated from a population estimate for the MSA, which was based on extensive trapping, marking, and telemetry work conducted from 1981 to 1983. The MSA estimate was used with track count results from all other counties in the fisher range for 1987 to estimate the current statewide population. The experimental trapping season was monitored through a permit and registration system.

Fisher Range

The fisher reintroduction effort was a success. Fishers were well established in 2 relatively small areas near the release sites by 1975. By 1981 fishers ranged to the southern edge of the northern forest although they were common over only one third of this area. In 1988 the total range remained about the same, but density had increased greatly. Fishers are now considered common over approximately 12,200 square miles and less common over about 7,000 square miles.

Population Trends

The number of fisher tracks observed along the 2 research area transects increased greatly from 4.8 tracks per 100 miles during the winter of 1976-77 to 34.1 tracks per 100 miles in 1984-85 (Fig. 2). Early, deep snow cover precluded track counting in 1985-86, but the number of tracks observed has remained relatively stable since the winter of 1984-85. Population trends for the northern Wisconsin transects are very similar to those found in the research areas. Number of tracks observed per transect increased steadily from 0.9 in 1977 to 2.2 in 1984, then stabilized. Results of the mammal observation survey also indicate a steadily increasing population.

Current Population

The extensive trapping and marking effort plus very intensive telemetry work produced an estimate of one fisher per 2.6 square miles on the MSA during 1981 and 1982. The number of fisher tracks observed

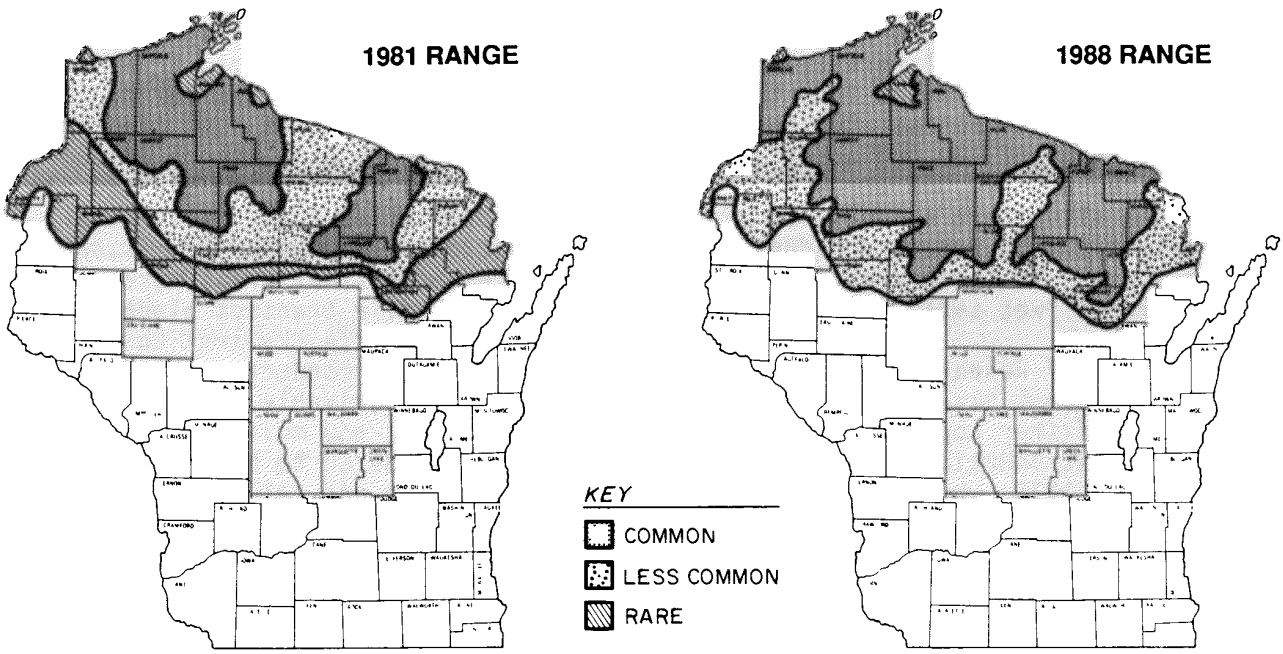
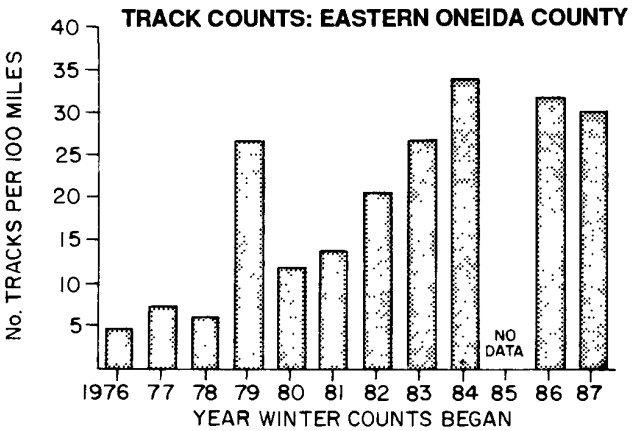
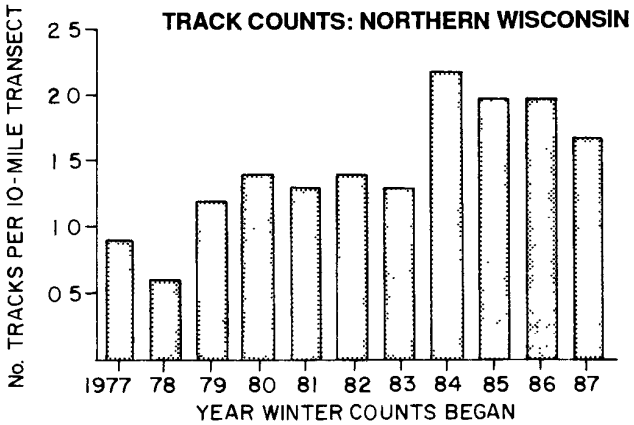


FIGURE 1. Distribution and relative abundance of fishers in Wisconsin in 1981 and 1988.





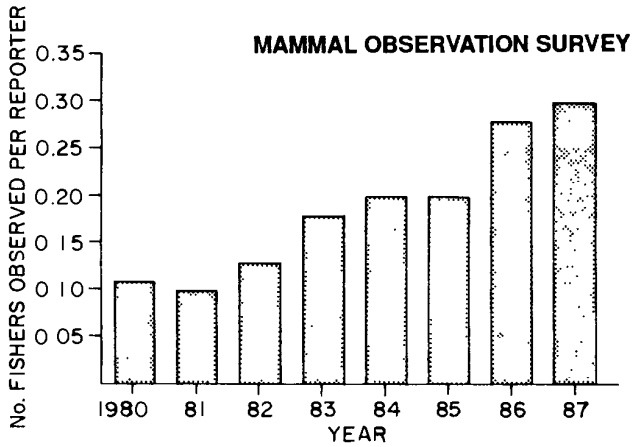


FIGURE 2. Trends in relative abundance of fishers based on winter track counts in the eastern Oneida County research areas, winter track counts throughout northern Wisconsin, and mammal observation survey results for counties within the fisher range.

there during the same period averaged 20.6 per 100 miles. Applying the 1987 track counts for the entire fisher range, we derived a statewide minimum population estimate of 3,500 fishers. We believe that the population has stabilized at that level, and that all of the suitable habitat is occupied.

Experimental Trapping Season

An experimental fisher trapping season was initiated in Wisconsin in 1985 due to the success of the fisher reintroduction program, the number of fishers being caught accidentally in traps set for other species, and the interest of trappers in harvesting this very valuable furbearer. The inaugural season was conservative with 300 harvest permits issued out of 1,387 applications received. The 300 successful applicants were allowed to trap for only 11 days (December 1-11) in 3 high fisher density areas (Fig. 3). Only 38 fishers were taken. The low harvest was primarily due to a heavy snowfall just prior to the season.

The 1986 fisher season followed exactly the same format, and 98 fishers were taken. In 1987, 904 harvest permits were issued in an attempt to increase harvest to 300 fishers. Total harvest that year was 308. This number represents a harvest rate of approximately 9%, based on the 3,500 population estimate. This rate is well below the 15% allowable harvest rate determined for fishers in Minnesota (Bill Berg, Minnesota Department of Natural Resources, pers. comm.).

Future Management

The DNR Fisher Advisory Committee has proposed that trappers be allowed to harvest fishers in 4 zones that make up Wisconsin's primary fisher range (Fig. 3). The Fisher Management Units in the Chequamegon and Nicolet National forests will continue to be closed to dry-land trapping. These closed areas should insure that we maintain a viable fisher population. This proposal will now be reviewed by the DNR Rules Committee, the Wisconsin Conservation Congress, and the Natural Resources Board. Wisconsin's fisher population will continue to be

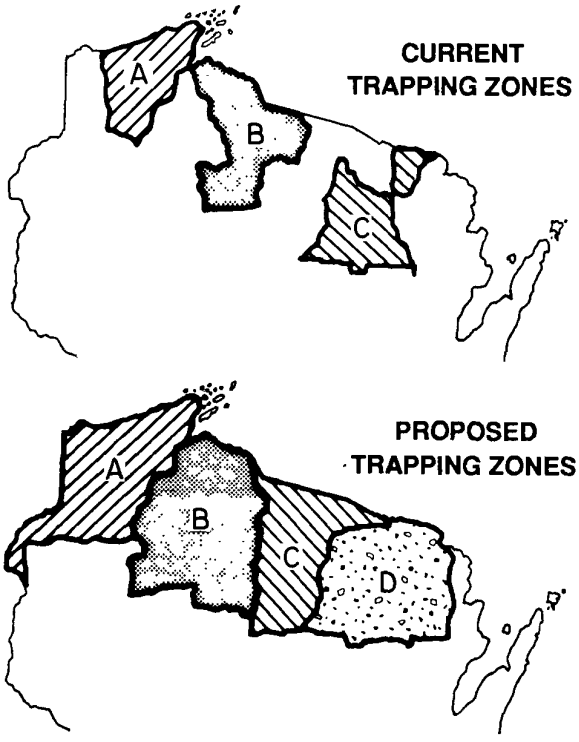


FIGURE 3. Wisconsin's current fisher trapping zones and proposed expansion.

monitored using winter track counts, observations by DNR personnel, and a population model presently being developed. The main goal of our fisher management program will be to safeguard the population and to provide trappers the opportunity to harvest this valuable furbearer.

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