ABSTRACT

Fishers (Martes pennanti) were extirpated in Wisconsin during the early 1900’s and reintroduced into the state during 1956-67. All dry-land trapping was prohibited near the 2 release sites to protect the fishers from accidental trapping losses. This reintroduced fisher population was studied from 1976-91 to develop appropriate habitat and harvest management strategies. Most of the field activities for this study were conducted in eastern Oneida County at a 70.5 mile² site (Monico Study Area) and a nearby 30.5 mile² site (Enterprise Study Area).

Twenty-three fishers were radio-collared during 1981-83. These fishers were located 1,666 times (mean = 72 locations/fisher), and mean annual home ranges were 15.3 mile² for males and 3.2 mile² for females. Home ranges of males were largest during spring (9.7 mile²) while those of females were largest in fall (2.8 mile²). Substantial overlapping of home ranges occurred, most of which (67%) involved juvenile males.

Mean daily distances moved by males (1.4 miles) was greater than by females (0.8 mile). Fishers moved farther in summer than in fall or winter, and during the night than day. Snowfall and snow depths >18 inches hindered fisher movements.

Fishers most often used closed-canopy, forested areas. Most forest types were used in proportion to their availability, but lowland mixed types were used more than expected while lowland conifer and shrub types were avoided. Interspersion of forest types provided high prey diversity and abundance.

Fisher abundance increased dramatically during the study period. In 1975, fishers were considered common only near the release sites. By 1988, they had expanded their range, and were well established in all areas with suitable habitat. Numbers of fisher tracks observed on winter track counts increased from 0.93 tracks/10-mile transect in 1977 to 3.10 in 1990, and the percentage of transects with fisher tracks present increased from 23% to 72%.

A conservative fisher trapping season was initiated in 1985 with about 300 animals harvested annually in the last 4 study years. Carcasses obtained from 919 fishers harvested during 1985-89 showed a sex ratio of near 50:50 and a mean age of 1.9 years. Calculated mean annual mortality rate was 46%, based on life table analyses. Pregnancy rates were 59% for yearlings and 81% for adults, and mean litter sizes were 2.13 for yearlings and 2.55 for adults.

The statewide fisher population was estimated by comparing the frequency of tracks on the statewide surveys to that observed on the Monico Study Area during 1981-83, which represented a “known” density of fishers. This provided a density estimate of 1 fisher/2.5 mile² or a total population of 6,000 fishers in 1991. We incorporated Wisconsin’s harvest, age, and reproductive data into Minnesota’s Furbearer Population Model. The resulting simulation showed the fisher population increased from 2,650 animals in 1977 to 6,000 in 1991, a trend similar to that suggested by the statewide track counts. It was estimated that the present population could withstand annual harvests up to 900 fishers.

Major management recommendations include further standardization of the statewide track counts, periodic updating of the fisher distribution map, continued refinement of the population model, lengthening the trapping season, and allowing trappers to take >1 fisher/year.

Key Words: Fisher, Martes pennanti, fisher population monitoring, fisher reintroduction, fisher habitat, telemetry, fisher movements, fisher distribution, fisher harvest strategies.