Canada lynx

Status

Federal status: G5 N4, Threatened
NH state status: S1, Endangered
ME state status: S2, Special Concern

In 2000 the Canada lynx was designated as threatened in the U.S. In 2002, the province of New Brunswick, Canada listed it as an endangered species. The global population size is unknown, but varies cyclically with availability of snowshoe hares, and is probably in the hundreds of thousands during peaks. In the lower 48 states, population size is unknown, but probably less than 2,000. The contiguous U.S. is the southern periphery of the range, and presence of lynx is often because of dispersal from Canada. It is possible that most of the U.S. may never have supported a self-sustaining population. Currently resident populations only exist in Maine, Montana, Washington and Minnesota. It may be extirpated from New Hampshire, Vermont, New York, Pennsylvania and Massachusetts.

The expert panel indicated that the current outcome range-wide is A, declining to B over the next 20 years. On the WMNF and GMNF, outcome is E (extirpated) currently. Over the next 20 years outcomes could be C or less. Panelists questioned the relationship between viability and resident populations. It is not known if there ever was a resident breeding population of lynx at the periphery of range, or whether it was a result of dispersal. Panelists noted that in the next 20 years for both the GMNF and the WMNF bobcat and fisher may become more abundant if the climate remains warm. This could reduce potential for lynx.

Distribution

Lynx occurs throughout Alaska and Canada (except arctic Islands), south through Montana, northern Minnesota, and northern Maine. It also occurs in northern Eurasia when regarded as conspecific with *Lynx lynx.* Northern New England is at the southern edge of its range. Historically, it also occurred in Washington, Oregon, Idaho, Utah, Wyoming, Colorado, Wisconsin, Michigan, New Hampshire, Vermont, Massacusetts, New York, and Pennsylvania.

Currently, northeastern U.S. lynx and snowshoe hare habitat and populations are contiguous with those south of the St. Lawrence River in southeastern Quebec and western New Brunswick. Lynx are considered extirpated in New Hampshire and Vermont. In 1994, it was estimated that 200 or fewer lynx exist in Maine, all in Aroostook County. Lynx is considered extirpated from the WMNF.

Habitat

Habitat is northern forests, and other diverse forest landscapes with significant composition of early successional habitat from logging, fire, or insect outbreak. Lynx also favors swamps, bogs, and rocky areas. Deep winter snow cover favors large-pawed lynx over smaller-pawed and shorter-legged bobcat, and may limit northern expansion of bobcat. Lynx rear their young in a den among rocks, under fallen trees, in hollow logs or

other sheltered places. Extensive areas of contiguous suitable habitat are needed to ensure viable lynx populations.

Lynx prey primarily on snowshoe hare throughout their range. Snowshoe hare habitat is dense cover of coniferous and mixed forests with abundant understory cover. Coniferous swamps and second-growth areas that are adjacent to mature forests, and alder fens and conifer bogs, are used. In Maine, dense cover usually results from regeneration after crown-replacing fires or wind in natural systems, and following certain timber harvest practices such as clearcut logging. Early-successional forest stages have greater understory structure than do mature forests, and therefore support higher snowshoe hare populations. However, mature forests can also provide habitat as openings develop in the canopy of mature forests when trees succumb to fire, wind, ice, insects and the understory grows.

When considering mean snowfall, forest cover, bobcat density, and road density, the area with the best lynx habitat in the northeastern United States is in northern Maine and the adjacent areas in Canada (Gaspé peninsula in Quebec, northern New Brunswick, Cape Breton Island in Nova Scotia). The Adirondack Mountains in New York, the Green Mountains in Vermont, and the White Mountains in New Hampshire have little potential lynx habitat because they have a large amount of deciduous forest.

Limiting Factors

Habitat has been lost due to suppression of forest fires and ecological succession to habitats that no longer support snowshoe hare and lynx. Decreases in specific timber management practices could also reduce lynx habitat. Habitat has also been lost to agriculture and urban development in southern Canada. This may hinder connectivity to lynx habitat with the north. Habitat changes and increased access into lynx habitats has resulted in increased competition and displacement of lynx by bobcat and coyote in some areas.

In the western United States, increasing recreational snowmobile use may fragment lynx habitat and provide access to generalist predators. However, this has not been demonstrated in the East, where crusting of snow is common and snowmobile trails may not enhance access for generalist predators to the same degree.

Lynx may also be vulnerable to overtrapping, particularly during lows in the snowshoe hare population cycle. Incidental harvest while trapping other species may be a problem in some areas.

Climate change may also affect distribution of lynx in the northeastern United States. A decrease in snow depth might cause lynx distribution to shift northward.

Viability concern

Canada lynx is a federally listed species and must be evaluated for viability. It is extirpated from the WMNF.

Management activities that might affect populations or viability

Currently, no management activities would affect lynx on the WMNF because they are extirpated from the Forest. Any future lynx population on the Forest would require dispersal from northern Maine or a reintroduction effort.

The Forest is responsible for maintaining habitat suitability on the Forest in case lynx do return. Logging that regenerates softwood or mixedwood forest could increase prey habitat. Harvest that would result in conversion of softwood or mixedwood to hardwood habitat would remove suitable habitat. New over-the-snow trails, such as snowmobile or cross-country ski trails, could increase access for competitors and reduce habitat suitability.

References

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