

Canada Lynx

A Northern Species

Canada lynx, as their name implies, are found primarily in Canada but also in several northern states, where habitat and weather patterns are similar to their northern neighbor's (Figure 3). The region's boreal forest and winter snow pack are essential components for supporting lynx. Like snowshoe hare, lynx have large, well-furred feet that give them a competitive advantage in deep snow. Thus, lynx are able to thrive in the harsh winter conditions associated with northern latitudes. In Maine, lynx are found primarily in northern Maine's spruce/fir forest, where snow depth often remains above a foot for at least three months of the year.

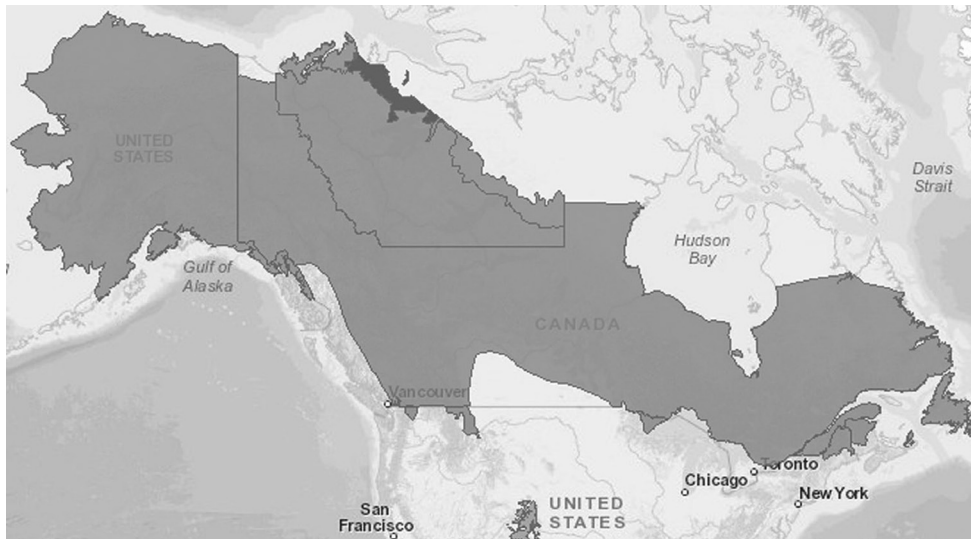


Figure 3. Canada lynx range. (Photo by IUCN Red List)

Maine is Home to the Largest Lynx Population in the Lower 48

Maine's lynx population has been growing since the 1990s in response to favorable habitat conditions that support an abundance of prey. Estimates suggest there are more than 1,000 adult lynx in northern Maine, and, when their offspring are included, their population may approach 2,000. Lynx are prey specialists, and their diet is composed primarily of snowshoe hare. Snowshoe hare are most abundant in young, dense spruce/fir forests. These dense forests provide both cover and food for hare. Hare can also be found in older forests, if the forest has a dense understory of trees. Lynx do well in forests following natural or human disturbance (e.g., wind damage or forest cutting) because it promotes the regrowth of the forest and the dense forest structure snowshoe hare need.

Over the last 15 years, people living in northern Maine, or recreating there, have been seeing lynx more regularly. Since lynx are naturally calm animals, and are generally ambivalent to the presence of people, lynx often remain in the area long enough for the viewer to snap a photograph or capture a video. This opportunity to watch a lynx in their natural environment makes for a truly unique and memorable experience.

Why are Lynx in Maine Thriving?

With more than 90% of Maine's land area classified as forest, Maine is the most forested state in the continental U.S. and supports the greatest acreage of spruce/fir forest. Much of Maine's spruce/fir forest is found in northern Maine, where snow conditions are ideal for lynx and human development is low. Most of northern Maine is privately-owned and managed for forest products. The commercial harvest of spruce and fir has benefitted lynx by promoting regeneration of dense thickets of spruce and fir. In particular, a major insect outbreak in the 1980s impacted most of northern Maine's spruce and fir forest and extensive areas were cut to salvage dead or diseased trees. This combination of natural and human disturbance created a record high level of habitat for lynx and has allowed snowshoe hare and lynx populations to thrive.

Lynx Management in Maine

Lynx are a federally-threatened species and a state species of special concern. MDIFW's management efforts include monitoring lynx status and distribution, monitoring habitat conditions, maintaining closed hunting and trapping seasons, law enforcement to reduce illegal activities, implementing measures to minimize accidental take of lynx while trapping other species, and sharing information with private land managers so they can continue to provide habitat for lynx in Maine.

The Department began collecting baseline information on the status of lynx by conducting winter snow track surveys along the Maine/Quebec border in the 1990s. This effort was expanded to most of northern and western Maine during the next decade to document the distribution of lynx in the state. In 1999, a 12-year telemetry study, that involved capturing and radio collaring lynx in a four township area in northern Maine, was initiated. This study was instrumental in documenting the status of Maine's growing lynx population and providing habitat recommendations to private forest landowners. Biologists used this information to develop a species assessment and produce the first data-driven population estimate for Maine lynx in 2006.

With an increase of reliable observations of lynx and kittens in eastern and western Maine, the Department began updating lynx population estimates in 2015. This includes systematically resurveying more than 90 towns in northern, western, and eastern Maine during the winter months to identify areas with lynx based on detecting their tracks in the snow. Biologists also began a second telemetry study, in which lynx are being equipped with GPS collars to identify the habitats lynx are using across Maine. The GPS collars not only allow biologists to compare the types of habitats being used by collared lynx to previous telemetry studies, but also will enable biologists to locate lynx denning sites to estimate how many young are being born each year.



Lynx are similar in appearance to bobcats but have more pronounced features, with larger ruff around the face, long black tufts on the ears, noticeably large feet, and a completely black tipped tail. (Photo by C. Gail Smith)

Snow Track Surveys - Past vs. Present

Between 2003 and 2008, MDIFW biologists surveyed 91 towns in northern Maine and found lynx in 43 towns (47% were occupied by lynx). Preliminary results from the current survey effort suggest that the lynx are occupying a greater percentage of the available habitat in Maine (lynx were found in 37 of 42 [88%] towns surveyed to date). Current plans are to complete the survey effort this winter and determine both the statewide distribution of lynx and the percentage of towns in which they reside.

Telemetry Studies – Past vs. Present

Between 1999 and 2012, the Department captured 191 lynx near the Allagash Wilderness Waterway in northern Maine and monitored 85 of these lynx with either GPS or VHF collars. This study identified habitats and size of areas being used by lynx. Lynx spent most of their time in the regenerating spruce/fir clearcuts that supported some of the highest snowshoe hare densities in Maine. In these areas, a male shared an area with two to three female lynx, and most adult females produced kittens each year (litters ranged from one to five kittens). Lynx densities and the proportion of occupied areas, as determined by Department snow track surveys, were used to generate lynx population estimates for the state.

Since the fall of 2016, Department biologists have put GPS collars on eight lynx. Most of these lynx have been along the southern periphery of lynx range. All eight lynx have established home ranges, indicating that these areas support resident lynx. This spring, two female lynx, equipped with GPS collars, both produced a litter of two kittens. The Department plans to equip an additional 10 lynx with GPS collars during the fall of 2017 to obtain more information on habitat use and lynx productivity across the state. From this information, the Department should be able to determine which forest conditions continue to support lynx and update its population estimates. This information will be made available to forest managers and the general public.

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-- Jennifer Vashon

Furbearers

Overview of Trapping Season

Trapping effort, as indicated by the number of active trappers or traps being set, appeared to be lower than normal this past year. The low harvest of furbearers this past trapping season (Table 8) is likely a reflection of this low trapping effort. Trapping effort was impacted by low fur prices and additional trapping regulations (e.g., exclusion devices statewide when setting body gripping traps on dry land, chain and swivel configurations for foothold traps). Although the overall trend was for fewer animals to be trapped, there was an upswing in the marten harvest compared to last year (Table 8). Upon discussion with the trapping community, it seems that more trappers have adopted the use of the exclusion devices for marten and have found that they work well for harvesting this species. The adoption of the same devices for fisher seems to be less positive, and the Department will continue to monitor how this tool affects the harvest of fisher.

Table 8. Annual harvest of Maine's furbearing species from the 2007 to the 2016 trapping and hunting seasons.

Species	16-17	15-16	14-15	13-14	12-13	11-12	10-11	09-10	08-09	07-08
Beaver	3,267	4,953	3,578	7,841	9,063	15,769	6,976	10,765	9,119	6,357
Bobcat	190	236	126	124	205	239	305	281	407	410
Coyote	878	1,281	868	1,237	1,670	2,037	1,623	1,743	1,901	1,819
Fisher	329	302	653	617	1,242	925	1,207	1,078	1,456	993
Red fox	407	575	269	642	991	989	922	932	893	1,030
Grey fox	140	287	496	279	426	308	332	250	163	161
Marten	1,084	380	1,145	996	3,805	1,317	3,559	2,613	2,291	2,401
Mink	454	1,148	1,041	1,398	2,184	2,339	1,926	1,465	1,297	1,888
Otter	296	486	261	464	646	1,234	754	696	528	493