

CANADA LYNX

An elusive and increasingly rare cat of northern forests struggles to hold its place amidst human activities.

Phantom Feline

The Canada lynx (*Lynx canadensis*) is like a gray ghost of the north—elusive, evading human contact. It stands about 20 inches tall at the shoulder but weighs about 20 pounds—scarcely more than a large house cat. It is readily recognized by its long, black ear tufts; short, black-tipped tail; and large, rounded feet with furry pads, which permit it to walk on the snow's surface.

Historically, the Canada lynx ranged from Alaska across Canada and into many of the northern U.S. states. In eastern states, it lived in a transition zone in which boreal coniferous forests yielded to deciduous forests. In the West, it preferred subalpine coniferous forests of mixed age. It would den and seek protection from severe weather in mature forests with downed logs but hunt for its primary prey, the snowshoe hare, in young forests with more open space.

In the northern part of its range, the lynx serves as one half of a classic predator-prey relationship, feeding almost exclusively on the snowshoe hare, a large northern rabbit that wears a brown coat in summer and a white one in winter. The two species evolved together; the cat becoming a specialist in killing the hare, the hare becoming adept at eluding the lynx. The lynx kills an average of one hare every two or three days. It will turn to killing grouse, rodents, and other animals if hares become scarce.

The link between lynx and hare is so tight in the north that the two species' populations fluctuate in almost perfect synchrony. Hare populations follow a natural cyclical pattern, changing approximately every ten years from abundance to scarcity and



back to abundance. Adult lynx usually survive periods of hare scarcity, but their kittens often do not. As a result, the lynx population follows a similar pattern, with its peaks and valleys lagging one to two years behind those of the hare.

Lynx populations south of the Canadian border were probably never as abundant or dense as the more northern populations. The diet of lynx in these southern areas is more varied—including squirrels, small rodents, grouse, and hares—and the populations are less dense and less productive than their northern counterparts. This low density and productivity makes southern lynx populations especially vulnerable to the ever-increasing human activities that affect the abundance of the lynx's prey base in these regions, or that may cause lynx to avoid areas of otherwise acceptable habitat.

Although lynx were never abundant in the United States, they probably did occur in most northern states and western



mountainous areas as far south as Colorado. Today, while tens of thousands of lynx remain in Canada and Alaska, the U.S. Fish and Wildlife Service (FWS) can confirm the presence of lynx populations below the border only in Maine, Montana, Washington, and Colorado.

The lynx's gradual disappearance from the contiguous U.S. resulted from human activities that have compromised both the lynx and its habitat. In the nineteenth century, trapping put heavy pressure on the species. Now, the cat's survival in the U.S. is primarily jeopardized by habitat destruction and fragmentation. Some timber practices can remove the mature forest that the lynx needs for denning and rearing young. These activities can also disrupt lynx travel patterns, as the cats prefer tree cover. Roads threaten the lynx by fragmenting its habitat, isolating lynx populations, exposing them to predators, and providing competitor species new access to habitat formerly dominated by the lynx. For example, snowmobile traffic creates trails that may allow competitors like coyotes, wolves, and cougars access to lynx winter habitat. Motor vehicles also cause lynx mortality: Recent attempts to reintroduce lynx from Canada into New York's Adirondack Mountains failed, primarily because the cats were hit by cars and trucks.

Listing the Lynx: A Reluctant Decision

In the 1970s and 1980s, the threat to lynx from trapping reached a new height when the price for hides rose to as much as \$600 each. By the early 1990s, the Canada lynx was a clear candidate for Endangered Species Act (ESA) protection. In response to the lynx's plight, more than a dozen environmental groups petitioned FWS in 1991 to list lynx in the lower 48 states. FWS regional offices and field biologists supported the petition, but FWS officials in the Washington, D.C. headquarters turned it down.

Today, most suitable lynx habitat in the West is on public land. This includes national and state forests, where logging and recreational development often occur. With memories of the northern spotted owl controversy still fresh, FWS was reluctant to list the lynx in the lower 48 states, particularly as the species was still considered abundant in Canada and Alaska. Furthermore, the exact factors driving the lynx's decline were unclear, as some methods of timber extraction, which destroy lynx habitat, seem to promote hare populations.

In 1995, the stakes rose yet higher. Portions of the lynx's habitat were slated for logging when Congress enacted a law that demanded 330 "salvage sales" on national forests. Not only did Congress set logging at an unsustainable level for many forests, but it also protected the sales from court appeal by exempting them from the safeguards of environmental laws. The logging industry maintained that this cut was necessary because large numbers of trees had died from disease, fire, and insects, thereby making the forests unhealthy. Forest Service statistics show little change in tree deaths during the past half century, however, and the law was written so loosely that living trees were scheduled for cutting.

Trapped between industry pressure and inconclusive science, FWS declined to list the lynx, despite the fact that three out of four FWS regional offices favored its listing. Environmental groups took the case to court, where, in March 1997, the judge overruled the FWS decision not to list the animal as "arbitrary and capricious." The ESA requires listing decisions to be made within a year after a petition is filed, but the agency did not formally propose to list the lynx as threatened in the contiguous United States until July 1998. In March 2000, FWS finally listed the lynx as threatened in the lower 48. Its listing will provide a critical step in conserving the lynx throughout the southern part of its natural range, since federal protection will spur much-needed research on the species, aid in generating funds for lynx efforts, and form the basis for managing forest uses for lynx survival.