

Wild Things in Your Woodlands

Predators in New York State



Photo: USFWS

From black bears to bobcats, fishers to forest raptors, predators play important roles in our woodlands. Typically large and charismatic, people enjoy the opportunity to observe these animals. However, because of their size and prey requirements predators often require large home ranges and have low population densities. With few individuals spread across large areas, chances to view these creatures are often limited and catching a glimpse of these animals may be a rare, but exciting occurrence. Landowners can take a number of steps to enhance habitat for large predators, which in turn play a valuable role in our forest ecosystems.

Because of their home range and prey requirements, predatory carnivores (and omnivores) can be good indicators of ecosystem health. Conserving and managing forest lands in consideration of their needs – adequate space and habitat – can result in the conservation of a whole range of species and the ecosystems they inhabit. In some situations, predators help enhance the diversity of plants growing in the ecosystem by limiting overgrazing by herbivorous prey. They can also serve as indicators of toxins in the environment. Smaller prey animals accumulate low levels of chemicals in their bodies. When long-lived predators feed on their prey, the toxins from the prey accumulate to higher levels in the tissues of the predator. In the past, certain species of raptors in particular have been detrimentally affected by chemicals in the environment, and have served as “canaries in the coal mine”.

Recently, the role of top predators in controlling “mesopredators” (middle level predators) has received a great deal of attention. Scientists are finding that, when top predators are removed from an environment mesopredators (e.g. feral cats, raccoons, foxes), which tend to be more generalist and opportunistic species with a high reproductive rate relative to larger predators, can quickly increase in abundance and have a strong, negative effect on prey species, such as songbirds. Top predators may reduce mesopredator populations directly by killing them, or indirectly by instilling fear which causes them to reduce or change their times of activity, and can reduce their ability to find adequate food. Fewer feeding opportunities in turn lead to lower rates of reproduction and survival and can suppress population levels.

Some of our most intriguing predators in New York (NY) State include the black bear, coyote, bobcat, fisher, northern goshawk, great-horned owl, long-eared owl, river otter, and even the snapping turtle. Predators typically share a number of characteristics that make them

particularly vulnerable to human influences including the need for large areas of suitable habitat, low population densities, low reproductive rates, and vulnerability to pollution. Not surprisingly, several predator species in NY State are either currently considered “Species of Greatest Conservation Need”, or their populations were substantially reduced or even eliminated from the state at one time. The river otter, for example, disappeared from western NY in the early 1900s as a result of unregulated harvest, habitat destruction, and water pollution, and is considered a Species of Greatest Conservation Need today. Snapping turtles, which feed heavily on aquatic organisms and are known to accumulate chemicals in their bodies, are also listed as Species of Greatest Conservation Need. The northern goshawk is a species of special concern and a Species of Greatest Conservation Need because it is an uncommon year-round resident, and a top predator that depends on forest habitat, and its numbers have been declining over the last several decades. The long-eared owl is another raptor listed as a Species of Greatest Conservation Need and considered vulnerable. This rare and secretive owl is difficult to locate and monitor and, as a result, there is a lot of uncertainty about its population size and trends in the state. While not considered a Species of Greatest Conservation Need, fisher numbers experienced a severe decline in NY during the late 1800s and early 1900s due to over-exploitation and loss of forested habitat. Today, they can be found throughout forested habitat within the northern, eastern and southeastern parts of the state and recently they have begun to return to the southern tier of central and western NY.

The role of predators is an interesting and complex one. Just as interesting and complex, however, are their unique characteristics, their popular allure, and their often extensive habitat requirements. Many of the top predators in NY State may benefit from habitat conservation, management, and enhancement on private forestlands (see Table below). In return, landowners can increase their opportunities for viewing these charismatic species.

Species	Habitat	Home Range Size	Habitat Maintenance and Management
Black bear	Contiguous forests, often mixed with bogs, swamps, agricultural areas	24 -120 square miles	Encourage or plant mast-producing trees and shrubs; retain trees with large cavities; leave tree tops following a timber harvest.
Bobcat	Extensive forests, wooded swamps, rocky outcrops, and occasionally agricultural areas	12-136 square miles	Create young or early-successional habitat areas by cutting; build brush piles; leave tree tops following a timber harvest; leave large logs on forest floor to attract prey, and provide den sites.
Coyote	Overgrown fields, brushy thickets, and woodlands	8-20 square miles	Leave large logs on forest floor for feeding and den sites; build brush piles to attract potential prey.
Fisher	Mature evergreen or mixed evergreen and deciduous forest	6-12 square miles	Maintain or encourage evergreen trees as a component of the forest; retain or create large trees with cavities; leave large logs on forest floor or fell several large trees to create denning sites and thermal cover.
Great-horned	Open and second-growth	3-4	Maintain large live trees with cavities

Owl	woodlands, often mixed with other land uses	square miles	or standing dead trees; favor conifers and oaks for roost sites.
Long-eared owl	Dense evergreen or mixed forest adjacent to openings	0.25 – 8 square miles	Plant or maintain evergreen stands.
Northern Goshawk	Large tracts of mature forest	3-24 square miles	Maintain stands of mature forest with closed canopy within a wider forest mosaic; retain large deciduous trees for nesting; retain large amounts of woody material on the forest floor.
River Otter	In and along streams, rivers, beaver dams and associated riparian habitat	3-10 miles	Maintain undisturbed aquatic systems and adjacent riparian habitats.
Snapping Turtle	Ponds, wetlands, and adjacent upland habitat	0.5 mile or more	Reduce pollutants; maintain aquatic habitats and nearby upland openings for nesting sites.

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