

## Northern Goshawk (*Accipiter gentilis*)

Pennsylvania Candidate Rare Species

State Rank S2S3B, S3N (impaired/vulnerable breeding, vulnerable nonbreeding), Global Rank: G5 (secure)

### **Identification:**

The Northern Goshawk is a large forest raptor, occupying boreal and temperate forests throughout the entire Northern Hemisphere. It is the largest member of the genus *Accipiter* that occurs in North America. Males generally weigh between 1.4 and 2.4 pounds, average 22 inches in length, and have a wingspan ranging from 38.5 to 41 inches. Females are slightly larger, weighing, on average, between 1.9 and 3 pounds, and having a wingspan of 41 to 45 inches and an average length of 24 inches.

All accipiters, including Northern Goshawks, have a distinctive white grouping of feathers that form a band above the eye. In goshawks this band is thick and more pronounced than in the other members of the genus. The eye color of adult goshawks is red to reddish-brown, in juveniles eye color is bright yellow.

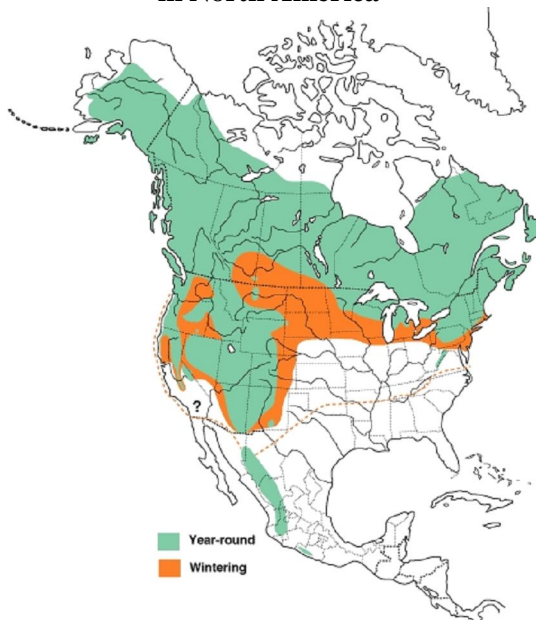
The colorings of adult male and female Northern Goshawks range from slate blue-gray to black. Their backs, the feathers at the leading edge of the wings, and heads are usually dark, and their undersides are white with fine, gray, horizontal barring. Their tails are light gray with three or four dark bands. The coloring of a juvenile goshawk is quite different than that of an adult. Their backs, the feathers at the leading edge of the wings, and heads are brown, and their undersides are white with vertical brown streaking.



Photo: Tim Kimmel

Adult Northern Goshawk

### **Range of the Northern Goshawk in North America**



### **Habitat/Behavior:**

In the eastern U.S., the Northern Goshawk nests in hardwood-hemlock (*Tsuga canadensis*) forests, where black birch (*Betula lenta*) and American beech (*Fagus grandifolia*) are preferred nest trees. They prefer mature forests consisting of a combination of old, tall trees with intermediate canopy coverage and small open areas within the forest for foraging. Each pair of goshawks build and maintain between three and nine nests within their home range, but use and defend only one (or less) per year. Northern Goshawks are highly territorial and a mating pair will advertise their nesting territory by performing an elaborate aerial display before and during nest construction and/or repair. If their nesting area is encroached upon, they will defend it fiercely. Goshawks breed once yearly, usually between early April and mid-June. The female lays between 2 to 4 eggs that hatch in 28 to 38 days. The young may begin to fly when they are 35 to 46 days old. Juvenile fledglings may continue to be fed by their parents until they are about 70 days old.

The goshawk is a top predator and opportunistic hunter that preys on ground and tree squirrels, rabbits and hares, large passerines, woodpeckers, game birds, corvids, and occasionally reptiles and insects. Prey may be taken on the ground, in vegetation, or in the air.

## Status:

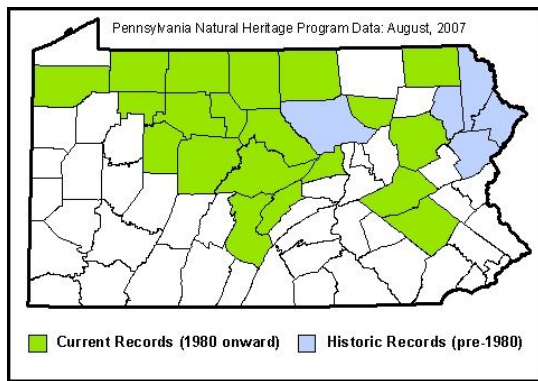
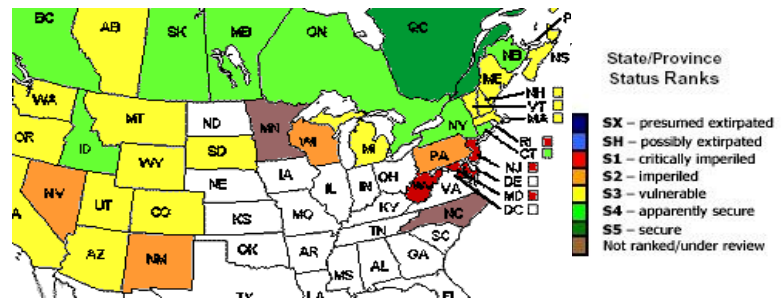
In Pennsylvania, the Northern Goshawk is near the southern extent of its range in eastern North America. Population trends are difficult to determine due to the paucity of historic quantitative data and because of biases inherent in the various survey methods used to track bird populations. Nesting range in the eastern U.S. is currently expanding as second-growth forests mature.

## Conservation Considerations:

Timber harvesting is the principal threat to breeding populations of northern goshawk. In addition to the relatively long-term impacts of removing nest trees and degrading habitat by reducing stand density and canopy cover, logging activities conducted near nests during the incubation and nestling periods can result in nest failure due to abandonment. Following canopy reduction by logging, goshawks are often replaced by other raptors including the Red-tailed Hawk (*Buteo jamaicensis*).

## North American State/Province Conservation Status

Map by NatureServe (2007)



Because the goshawk is both a top predator and an ecological engineer, its decline contributes to the unraveling of forest ecosystems, stressing other forest dependent species. Northern goshawks play an important role in the forest food web as voracious predators of squirrels, jays, flickers, rabbits, snowshoe hares, and songbirds. As builders of numerous, large nests, goshawks provide essential nesting opportunities for many species which can not build their own nests. Empty goshawk nests may be utilized by the Great Gray Owl (*Strix nebulosa*), Cooper's Hawk (*Accipiter cooperii*), Red-tailed Hawk, Great Horned Owl (*Bubo virginianus*), Short-eared Owl (*Asio flammeus*), squirrels, and many other species. Within a decade of goshawks being driven from a forest, their nests collapse from lack of maintenance and a precious wildlife habitat is lost.

## References:

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