Peregrine Falcon

North Carolina Wildlife Profiles

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Peregrine Falcon

(Falco peregrinus)

As a member of the falcon family, the peregrine has tapered wings that make it a fast and agile flyer. Peregrines can reach speeds of up to 200 miles per hour in a dive or "stoop." Its acute eyesight and amazing flying abilities make it highly adapted to hunting other birds, such as blue jays, pigeons, and waterfowl. It typically strikes its prey in flight.

Description

The peregrine falcon is a crow-sized raptor with distinctive plumage. The head is covered with black feathers that extend down along the side of the head, creating a hooded appearance. The wings and back are a slate gray color. The throat, chest and belly are white with horizontal bars of black or dark brown. The central part of the breast lacks the barring. Juvenile birds visibly differ from the adults. Their feet or talons are a dull blue, as opposed to a bright yellow in adult birds, and they have slightly different plumage. Juveniles have brown wings and back, with heavy streaking on the chest and underparts. Female peregrine falcons are slightly larger than males.

History and Status

Because of their territoriality, nest-site requirements and dependence on other birds as prey, peregrine falcons need large areas in which to live and reproduce. Therefore, they do not occur in large numbers anywhere in their range. Historically, peregrine falcons bred in North Carolina until 1957, but they disappeared from the state and from much of their range because of the use of organochlorine pesticides such as DDT. This chemical accumulated in the food chain of falcons and other birds, resulting in thin eggshells that cracked when the parents attempted to brood their eggs. Peregrine falcon population numbers fell so low that they were extirpated from much of their range, requiring the reintroduction of captive rearing birds in the Eastern United States. The peregrine falcon was designated as an endangered species in 1973, immediately following the passage of the Endangered Species Act but was removed from the federal list of threatened and endangered species in 1999 due to recovery of their populations. However, in North Carolina, the peregrine falcon is state-listed as an endangered species and identified as Species of Greatest Conservation Need in the N.C. Wildlife Action Plan.

Habitats & Habits

Peregrine falcons nest in tall mountain cliffs with an unobstructed view of the surrounding area. These cliffs must have ledges or small caves that provide a nest site that is inaccessible to predators and sheltered from wind, rain and excessive temperatures. Normally these cliffs are situated along ridges, bluffs or in gorges with a body of water nearby. Peregrine falcons also will nest on ledges on tall buildings in cities. Peregrine falcons do not actually build a nest. They make a depression or "scrape" in loose gravel, soil, pieces of bark or leaf matter.

During mating season, the young male falcons attempt to attract a mate by displaying a series of acrobatics and somersaults in the air. Once the female has chosen her mate, they will remain a pair for life. Peregrine falcons usually return to the same cliff or area and produce an average of three or four eggs every year.

Peregrine falcons are fast and agile flyers, hunting other birds in midair.

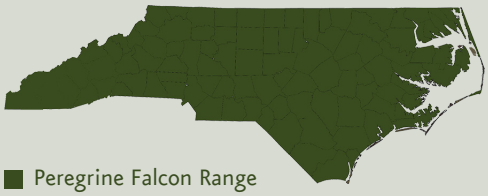
Adult peregrine falcon (Photo: Teddy Llovet, Flickr)

Chris Kelly, a Wildlife Commission biologist, conducts a survey of peregrine falcons in the mountains. (Photo by: Reese Mitchell)

Range and Distribution

Peregrine falcons are found nearly worldwide. In North Carolina, peregrine falcons are found across the state with most nesting pairs in the mountains and along the coast. In the mountains of the state, the peregrine falcon is a permanent resident, found year-round. Along the coast and in the Piedmont, the raptor is seen mainly during the fall and winter during migration.

Range Map



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NCWRC & Human Interactions

The N.C. Wildlife Resources Commission took aggressive steps in peregrine falcon management in 1984 and began a peregrine falcon hacking program to reintroduce captive-raised peregrines into the wild in hopes of re-establishing a falcon population in our state. NCWRC continued the hacking program until 1991 after 80 juvenile peregrines had been released into the wild. The first territorial peregrine falcon pair was observed in 1986 to be joined by eight more over the next five years. The peregrine population in North Carolina seemed to be well on its way by 1991. But the number of territorial pairs began decreasing over the next four years until only four territorial pairs were left. The Commission released 12 more birds in 1996 and 1997 in order to bolster the existing population and to increase the population in the Southern Appalachian Mountains. Since 1997, the peregrine population has continued to increase. Today, biologists find between 10 and 13 nest sites occupied by a breeding pair. They continue to monitor nesting sites with the help of volunteers. Monitored sites include those with previous nesting activity, those with suitable habitat and those with reported peregrine sightings.

Biologists report three metrics of the population's health to the U.S. Fish and Wildlife Service annually. These metrics are: territory occupancy, which is the number of territories occupied by a breeding pair; nest success, which is whether the final outcome of the nesting attempt was a success or failure; and productivity, which is the number of young per pair. NCWRC recently completed analysis of peregrine falcon monitoring data for the post-delisting monitoring period of 2003-2015. North Carolina's peregrine population shows acceptable levels of territory occupancy and productivity but unacceptably low nest success rates. Most years, only five successful nesting pairs produce all of the young for the year, masking problems at the other sites experiencing chronic nest failure. Biologists can now focus on measures to determine causes of and boost nest success.

Peregrine falcons nest only once in a year. And if the nesting attempt fails or the birds are forced to abandon the nest, the pair may not nest again until the following year. Since peregrines are very territorial, each cliff site will support only one nesting pair. If that pair is disturbed and abandons the nest, the cliff is essentially unused habitat until the following year. The impact of nest disturbance is often the result of the adult leaving the nest for longer periods of time than it would in the absence of disturbance. When the adults are spending time away from the nest to investigate a climber, hiker, or drone they are not tending the eggs or young. Eggs can desiccate, chill, or overheat. Nestlings can chill or overheat or not be fed adequately while the adult is responding to the disturbance. A badly startled adult could crush an egg when it flushes from the nest ledge. Older nestlings could bolt from the nest before they are capable of flying.

To reduce nesting disturbances, the Commission works with cliff site landowners and rock climbers to limit disturbance during the breeding season. Landowners, such as the U.S. Forest Service, close specific rock climbing routes near peregrine nesting areas. Some climbing area closures are posted on the websites of rock climbing organizations to help increase awareness of such closures. Commission biologists have coordinated with public landowners to reroute hiking trails near nesting sites in order to prevent human disturbance.

References

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Scott, Shirley L., ed. *Field Guide to the Birds of North America* (Washington, D.C.: The National Geographic Society, 1987).
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Credits

Written by Phil Spivey, Allen Boynton. Updated by Chris Kelly, NCWRC 2018

Wild Facts

Classification

Class: Aves
Order: Falconiformes

Average Size

Body: 13 to 23 inches
Wingspan: 36 to 44 inches
Weight: 2.2 pounds

Food

Mostly small-to medium-sized birds, although they will take prey, such as fish and rodents, from other raptors if the opportunity arises.

Breeding/Young

Peregrine falcons prefer to nest on tall cliffs and buildings. The female lays three or four eggs, usually in early March to early April in NC. The eggs are brown or dark tan flecked with small blotches of dark brown. Both parents incubate the eggs for 33 to 35 days.

The female normally feeds the young while the male does most of the hunting. The chicks are fed four to eight times per day and are protected by both parents. Young peregrine falcons fly when they are between 35 and 42 days old.

Life Expectancy

Around 90 percent die within the first year. Adult survivorship is about 60 percent. Some peregrine falcons live to 20 years.

Peregrine falcon and chicks on nest (Photo: Pverdonk, Flickr)