American Woodcock

Scientific Name: Scolopax minor

The American woodcock is one of New York's most unusual upland birds. Approximately the size of a mourning dove, the woodcock has a bill that looks too long for its body, and ears that are placed forward on the face, between the eyes and the bill. To help guard against predation from above, its eyes are set high on the back of the head. The woodcock's odd appearance has inspired many local names like timberdoodle, bog sucker, mud bat, mud snipe, and Labrador twister.

Woodcock are a popular game bird in New York and are pursued by many hunters. The hunting season for them is relatively short and runs from early October into November. Hunting woodcock is not for the faint of heart. The habitat of these secretive birds is usually very thick and difficult to walk through. As such, woodcock hunters often go out with a well-trained dog, which makes it easier to find the birds.

Physiology & Behavior

The woodcock's long bill has a flexible tip specially adapted for probing into moist soil in search of earthworms. It can eat its weight in worms each day. Its large eyes have nearly 360-degree vision - a distinct advantage when foraging in the soil. An adult American woodcock weighs 8-12 ounces, is 10-12 inches in length (including bill), and has a wingspan of 17-19 inches.

The woodcock's mottled brown to black body enables this bird to blend in with the forest floor. As such, they are difficult to spot and will often startle you if you walk by them. When flushed from the ground, these birds flutter up through the thick canopy, level off over the top and then fly away. Wind moving through their wings makes a whistling sound as they go. Although they sometimes fly considerable distances, they usually only fly short distances of 10 to 20 yards. Woodcock are capable of flight speeds of 30 mph.

The brain of an American woodcock is unique among birds. The cerebellum, which controls muscle coordination and body balance, is located below the rest of the brain and above the spinal column. For most birds, the cerebellum occupies the rear of the skull. One theory

suggests that as the woodcock evolved, its eyes moved back in the skull, its bill lengthened and the nostrils approached the base of the bill, allowing for better ground-probing abilities. As a result, the brain was rearranged, and the modern bird, in essence, has an upside-down brain.

Migratory birds, woodcock spend each spring and fall traveling between their breeding grounds in northern North America and their wintering grounds in the southern United States. They fly only at night, typically migrating at low altitudes of 50-100 feet. They may fly alone or in loose flocks called flights. If you are walking near moist thickets during these migration times, you might see signs of the woodcock: silver-dollar-shaped white splashes on the ground-the droppings or 'chalk' of these birds. Woodcock are most active at dawn and dusk, usually searching for a meal. Their long bill is specially adapted for probing into moist fertile soil for their preferred food of earthworms. A single bird can eat its weight in worms each day. Woodcock also eat other invertebrates, and have been known to eat ants from ant hills during times of drought.

Breeding Ecology

Each spring, male woodcock perform an unusual courtship ritual in an attempt to attract mates. At dusk, a male will sit on the ground in an opening or small field and repeatedly utter a low, nasal, almost insect-like 'peent.' He then takes off low and spirals upward on whistling wings to heights of 100-200 feet before spiraling back down and landing near where he took off. He makes a chirping sound during this downward spiral. Males repeat this act again and again until well after dark.

Nesting occurs from mid-March into June. Females lay their eggs-one per day-in shallow depressions on the ground among dead leaves. Most nests have four eggs, and incubation takes approximately 21 days. The chicks are precocial and can move around and follow the hen soon after hatching. Chicks grow very rapidly on a diet of earthworms and insects. By the time they are four weeks old, it is difficult to distinguish the chicks from adults. Male woodcock are not involved in nesting or brood rearing.

Habitat Ecology

The woodcock requires a diverse mix of habitats to thrive, including riparian shrublands and forests (land along riverbanks), as well as upland shrublands, early successional forests and forest thickets. Within these areas, second growth hardwoods provide important nesting habitat, while areas with thick cover and moist fertile soil with abundant worms are used as

feeding grounds. In addition, the woodcock uses new clear-cuts, large fields or pastures for night roosting, and males need small openings in the forest to sing over.

Conservation and Management

Woodcock populations have been declining in the eastern United States for several decades. Annual spring surveys of their breeding grounds show that woodcock numbers in the eastern flyway and in New York have been falling by about 2 percent since the 1960s-a loss of over 55 percent in the last 40 years. As a result, national and international bird conservation organizations consider the American woodcock a species of continental concern, and protecting the woodcock is a high priority in its habitat ranges.

The woodcock's decline is attributed to loss of upland and wetland habitat due to development, succession, and forest maturation. In addition, the reduction in forestry practices, especially in riparian areas which are critical for breeding and migrating woodcock, also contributes to the loss in woodcock numbers. Woodcock depend on trees and shrubs that require full sunlight and open canopies. This only comes from disturbance to forests, which has been dramatically reduced by fire suppression and the reluctance to fell trees. This reluctance is based on the misconception that cutting trees is bad for birds and wildlife. While cutting trees can negatively impact some wildlife species, proper forest management actually increases the abundance and diversity of some birds and forest wildlife in an area.

Woodcock are not alone in this struggle. There are many other species that rely on the early successional shrub and forest habitats. In fact, most of New York's shrubland and early successional forest bird species are experiencing widespread declines. Ironically, the bird and wildlife species of mature forests, often touted as threatened, are actually doing well overall; it is the early successional species that need more help and habitat.

Fortunately, woodcock populations, as well as other early-successional-forest species, can often be readily restored through proper harvest management of forested lands. Cutting small 5-10 acre patches or strips through the forest in rotation creates a mosaic of different age forests with diverse structures. These areas provide everything the woodcock needs to survive and prosper-good cover, abundant food, and openings for singing males.

Bald Eagle Fact Sheet

Bald Eagle
Haliaeetus leucocephalus

New York Status: **Threatened**

Federal Status: Not Listed

Adult bald eagle

Description

The bald eagle was adopted as the symbol of the United States because of its independence and strength. One of the largest birds of prey (raptors) found in North America, bald eagles stand about 30 inches (76 cm) high, sport a wingspan of 72-84 inches (1.8-2.1 m), and weigh between 8 and 14 pounds (3.6-6.4 kg).

This majestic bird is easily identified in adult plumage by its unmistakable brown body set off by a white head and tail and bright yellow bill (male and female eagles look identical, except that the female is usually about one third larger and heavier than the male, as is typical in birds of prey). Sexual maturity and the characteristic white head and tail are achieved at five years of age. The word *bald* in the eagle's name comes from a word in Old English that means white headed.

Immature bald eagles lack the white head and tail. They are mostly chocolate brown with varying amounts of white over the body, tail, and underwings. Juvenile bald eagles are often mistaken for immature golden eagles, which are much rarer in New York.

Despite their fierce image, bald eagles are actually quite timid and opportunistic. Since their primary prey is fish, bald eagles are sometimes called *sea eagles*, though they will take some mammals, waterfowl, seabirds and carrion, especially during winter.

Life History

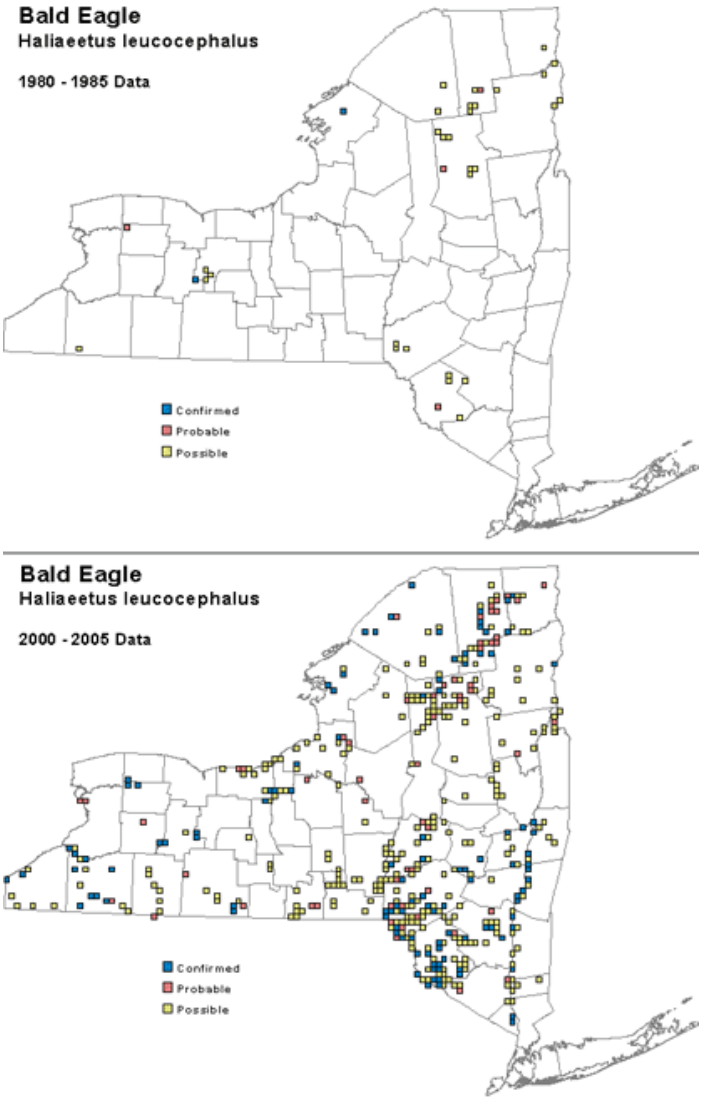
The bald eagle is a long-lived bird, with a life span in the wild of more than 30 years. Bald eagles mate for life, returning to nest in the general area (within 250 miles) from which they fledged. Once a pair selects a nesting territory, they use it for the rest of their lives.

Bald eagles' aerial courtship is an amazing display of avian abilities. The pair soars high in the sky, begins a dive, and interlocks talons while descending in a series of somersaults. Bald eagles produce only one or two offspring per year, rarely three. In New York, the young fledge by mid to late summer at about 12 weeks of age. By 20 weeks they are largely independent.

A bald eagle nest is a large structure, usually located high in a tall, live white pine tree near water. The nest is reused and added to (decorated) each year, often becoming eight or more feet deep, six feet across, and weighing hundreds of pounds.

Bald Eagle Distribution and Habitat

Bald eagles are wholly North American, and currently are found in every state except Hawaii, as well as throughout Canada. Eagles prefer undisturbed areas near large lakes and reservoirs, marshes and swamps, or stretches along rivers where they can find open water and their primary food, fish.



Distribution of Bald Eagle in New York from 1st and 2nd
NYS Breeding Bird Atlas Records

Historically, bald eagles nested in forests along the shorelines of oceans, lakes or rivers throughout most of North America, often moving south in winter to areas where water remained open. Prior to the 1900s, they used as many as 80 nest sites in New York, primarily in the northern and western parts of the state.

Wintering grounds are from southern Canada south, along major river systems, in intermountain regions, and in the Great Plains. Many hydroelectric plants, including some in New York, provide suitable wintering habitat for bald eagles.

Status

Bald eagles always have been seen as competitors with humans for important wild food sources and as threats to farm animals - at one time, bounties were even offered for killing them.

In the last century, reproductive impairment from pesticides (especially DDT) and heavy metals caused virtual extirpation of the few remaining bald eagles in New York and many other areas. Persistent and toxic compounds in fish from contaminated waters built up to high levels in the eagles' bodies, interfering with the deposition of calcium in their eggshells and making many of the eggs infertile. Since the 1972 ban on DDT, eagles and other birds of prey are once again producing young. However, there has been no reduction in the human activity most damaging to eagle populations - destruction of habitat by logging and development along watercourses. Even recently, extensive human activity within preferred eagle habitats has disturbed important nest areas, resulting in reproductive failure and nest abandonment.

Bald Eagle Restoration, Research and Management

The New York State Bald Eagle Restoration Project began in 1976 in an attempt to reestablish a breeding population through *hacking* (hand rearing to independence). Over a 13 year period, 198 nestling bald eagles were collected (most from Alaska), transported and released in New York.

Eaglets in the hacking cage

The hacking project ended in 1989, when it accomplished its goal of establishing ten breeding pairs. The bald eagle program's focus has now shifted to finding and protecting nesting pairs in New York, and monitoring their productivity.

Bald eagles continue to do well; in 2010 New York had 173 breeding pairs which fledged 244 young. Each year, New York's bald eagles fledge about 10 percent more young eagles than the year before.

Hopes are high that bald eagles will continue to expand in New York and elsewhere, repopulating areas from which they have disappeared. In the meantime, our challenge is to secure sufficient suitable eagle habitat and to limit human disturbance within these habitats, allowing the species to continue to live and expand in New York.

Bicknell's Thrush Fact Sheet

©*Jeff Nadler Photography*

Bicknell's Thrush
Catharus bicknelli

New York Status: Special Concern
Federal Status: Not Listed

Description

Previously thought to be a sub-species of the gray-cheeked thrush (*Catharus minimus*), the Bicknell's thrush was recognized as a distinct species in 1995. It is a small to medium sized thrush, measuring 6 to 7 ½ inches (15 - 19 cm) with olive to brown upper parts and gray or white under parts with a heavily spotted breast. Sexes are similar. When compared with the gray-cheeked thrush, the Bicknell's is smaller in size with more yellow on lower mandible and contrasting chestnut color on tail and wings. It prefers dense under story and thick tangles of brush or thicket.

Life History

The Bicknell's thrush is an elusive neotropical migrant that breeds in the high elevation forests of northeastern North America and winters in the Caribbean. Males arrive on the breeding grounds before females. Both sexes mate with multiple partners and each nest contains eggs fathered by different males. Males are not territorial but will compete for mating rights with females. Nest construction by the female occurs in a dense stand of young spruce or fir. The nest is a cup of twigs and mosses placed at the base of a group of branches against the trunk of a small tree. The clutch of 3 to 4 eggs is incubated by the female for 9 to 14 days. Young hatch almost bare but reach adult weight by the time they leave the nest 9 to 13 days post hatching. Both parents share in feeding the young. Diet consists of insects and other invertebrates found close to ground level. Forages by hopping along the forest floor and making short flights among the low branches of trees.

Distribution and Habitat

Bicknell's Thrush Range

The Bicknell's thrush is an eastern nearctic species with a very geographically limited breeding range that extends from the northern Gulf of the St. Lawrence and Nova Scotia, south through the mountains of New England and New York. It is a habitat specialist restricted to montane forests of balsam fir. In New York, the Bicknell's thrush breeds at high elevations in the Adirondack and Catskill mountains which represent the southern-most boundary of its breeding range. Because of its preference for stands of dense fir on ridgelines, the Bicknell's thrush is often associated with recently disturbed areas characterized by standing dead conifers and dense regrowth of balsam fir.

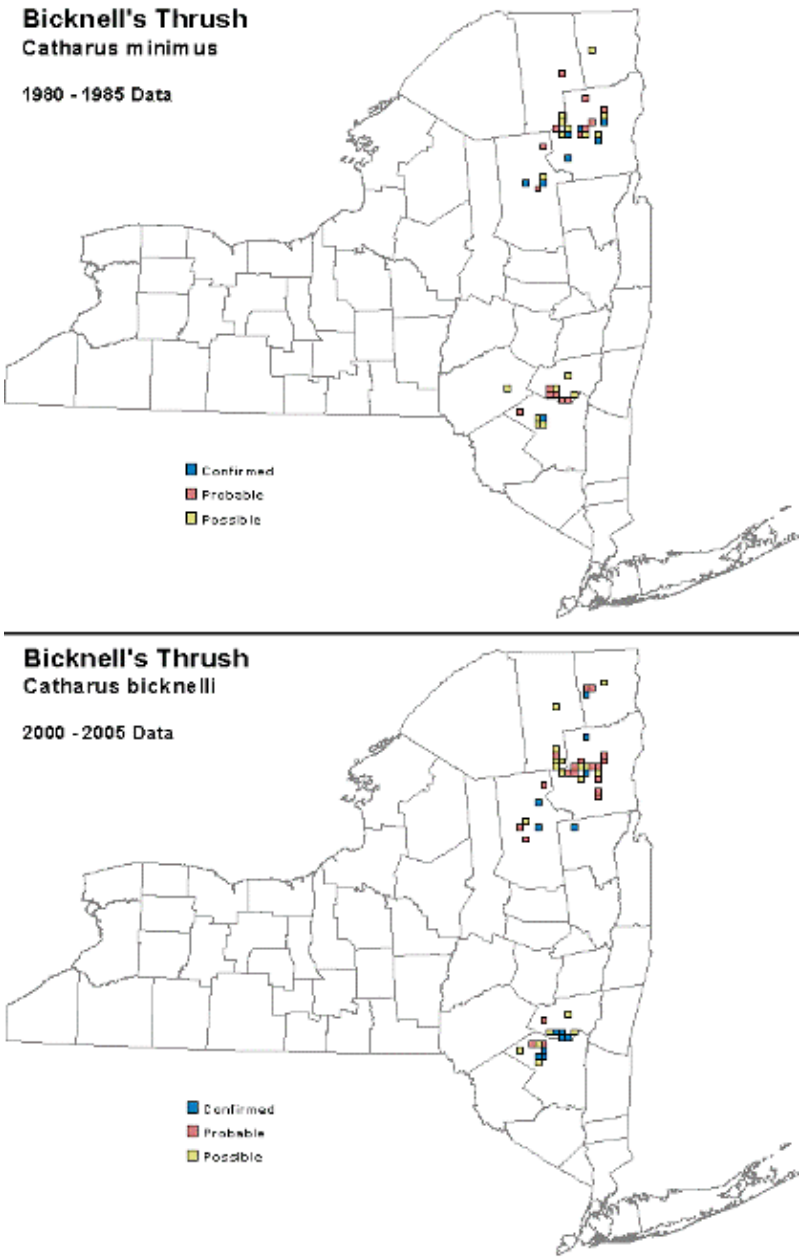
Status

First discovered by Eugene Bicknell on Slide Mountain in the Catskills in 1881, this thrush is endemic to northeastern North America. The Bicknell's thrush is of high conservation priority because of its small population, limited breeding and wintering ranges, and vulnerability to deforestation in its winter habitat. Population data are difficult to gather because of the species' limited range and elusive breeding habits. Total population is thought to be less than 50,000 individuals. The significant geographic and habitat limitations of this species breeding range many make it vulnerable to the effects of climate change.

Distribution of Bicknell's Thrush in New York from
1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

Further research is needed to determine population characteristics as well as the distribution and extent of Bicknell's thrush breeding habitat in northeastern mountain forests. Little is known of Bicknell's thrush breeding and wintering ecology. Mercury pollution and acid deposition have contributed to the degradation of high elevation forests in the northeast since the 1960s and 1970s. Designation of the Catskills and Adirondack High Peaks Important Bird Areas by the Audubon Society offers some habitat protection.



Black Rail Fact Sheet

Black Rail
Laterallus jamaicensis

State Status: **Endangered**
Federal Status: Not Listed

© David Seibel Photography

Description

The smallest of North America's rail species at six inches in length; it is stocky, short-billed, short-tailed, and round-winged. It is mostly dark gray or black on the head, bill, and chest with white-speckled dark wings, back and lower abdomen. The throat of the female is pale gray or white and the throat of the male is pale to medium gray. The nape and upper back is chestnut-brown and the eyes are scarlet red. The breeding season call is a three-noted "kickee-doo" or "kic-kic-ker." Immature black rails are similar in appearance to the adults but with less distinct spotting and streaking on the body. The eyes are amber to hazel until they turn red at three months old.

Life History

The extent of migration in this species is poorly understood. Individuals have been recorded in winter as far north as New Jersey; however, it is likely that most east coast populations migrate south. Spring migration occurs from mid-March to May. Peak nesting occurs from June to mid-July. The nest is concealed in grasses and is woven together with live and dead vegetation. It has a deep cup shape with a canopy over top, and an entrance ramp leading up the side. A clutch of 6 to 10 buffy white eggs with brown spots is incubated for 16 to 20 days. Both sexes share incubation and brood rearing duties suggesting a monogamous relationship, but it is unknown whether the pair bond lasts longer than one breeding season. Chicks are hatched one at a time and are semiprecocial at birth. The degree of parental care and chick survival is unknown. Fall migration occurs in September to mid-October.

Distribution and Habitat

Black Rail Range

Black rails breed locally in California, Kansas, and along the Atlantic coast from southern New England to the Gulf coast states. They winter from the southern Atlantic coast, south to Central America. Historically, the breeding range may have extended as far north as Massachusetts but today the core breeding range is from New

Jersey south along the coast to Florida. In the late 1930s, breeding locations in New York were limited to just a few sites on Long Island's south shore (Oak Beach marsh, Long Beach and Lido Beach). However, from the 1940s to 1968 no breeding activity was recorded at these sites or anywhere else in the state. In 1968, black rails were once again confirmed breeding at Oak Beach marsh with the discovery of two nesting pair. During the 2nd New York State Breeding Bird Atlas (2000-2005) a single bird was heard calling from the marsh.

Black rails nest on the higher ground portions of coastal salt and brackish marshes dominated by rushes, grasses, and sedges. They have also been documented less frequently in wet meadows and freshwater emergent marshes. The single remaining breeding location in New York is dominated by saltmeadow cordgrass and spikegrass interspersed with shallow pools of water.

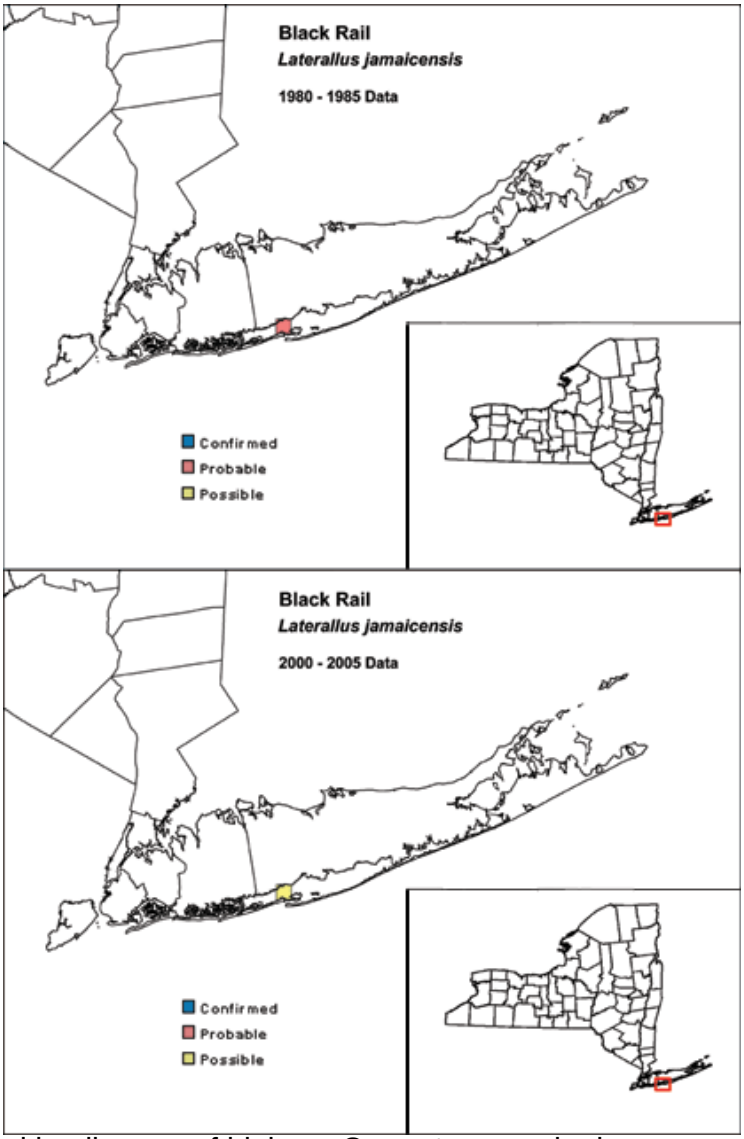
Status

The black rail population has been declining in the eastern United States for over a century and some reports suggest that the population may have decreased by as much as 75% in just the last 10 - 20 years. It has likely been extirpated from the northern extent of its range in Connecticut and Massachusetts and the number of nesting locations and individuals within its core range has decreased to very low numbers.

Population declines are likely attributable to increasing development in coastal areas that has resulted in habitat loss and degradation of breeding areas. Black rails build nests in the high ground areas of coastal marshes because they are less prone to flooding than lower-lying areas; however, those characteristics also make it ideal for residential and commercial development. In addition, many remaining salt marshes are in close proximity to development and are subject to many factors that reduce habitat quality, including:

- ditching to drain water in an effort to control mosquito populations. This management practice also reduces the abundance and diversity of other invertebrates, which are the black rail's food base.
- predators, such as raccoons, cats, and rats, occur at higher densities near human development than in wild areas. Due to their high-marsh habitat, black rails may be more prone to mammalian nest predation than more interior-marsh nesting species.

- soil is often contaminated with PCBs, heavy metals and pesticides. Birds that feed on prey from contaminated soil may have lower reproductive success and higher mortality than birds in less polluted wetlands.
- invasive species, such as *Phragmites*, often crowd out native vegetation and form dense monoculture stands. The diversity of wildlife is drastically reduced at sites once taken over by *Phragmites*. It is unlikely that black rails can utilize marshes dominated by Phragmites and these stands represent a further loss of black rail habitat.



Distribution of Black Tern in New York from 1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

The future of the black rail is uncertain. Despite very low population numbers, the black rail is not protected by federal listing as threatened or endangered. It is also unprotected in many of the states within its southern range; however, it is listed as endangered in most of the Mid-Atlantic states. The biggest threat may be yet to come if sea levels rise as a result of climate change. Climate change model predictions suggest that the low-lying habitat of this species will likely be among the first areas inundated.

Little is known about black rails, due to its secretive nature and rareness. Additional research on this species is needed in all areas of biology. Current research along the east coast is focusing on assessing the black rail population and developing a conservation action plan aimed at increasing the population throughout its range.

Black Tern Fact Sheet

© *Philip Jeffrey Photography*

Black Tern
Chlidonias niger

New York Status: **Endangered**

Federal Status: Not listed

Description

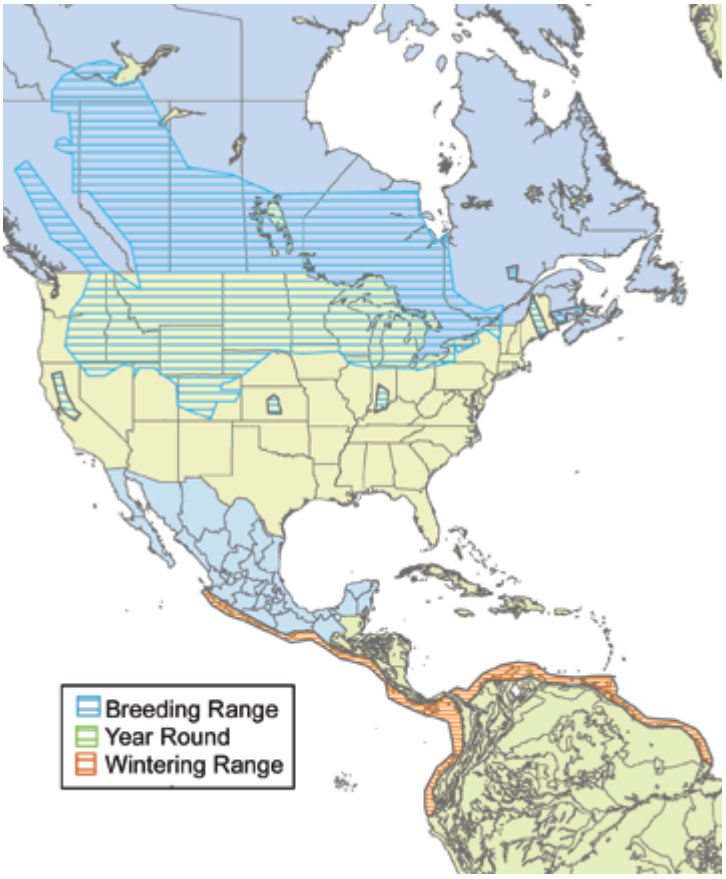
The black tern is a small member of the Laridae family at approximately 10 inches in length and 50-60 g in weight. It is identifiable in the breeding season by its jet black feathers on the head and body, the back fading to gray on the rump. The bill is nearly as long as the head and is bluish with a trace of dark red at the gape; the feet are also dark red. The upper wings and tail are uniformly gray, aside from white lesser wing coverts which form a small white shoulder when the bird is at rest. During the winter, black feathers fade to gray on the back and turn white on the underparts. Juvenile black terns are similar to the adult in winter plumage, but have barred wing coverts and are generally scalloped brown overall. The call of this bird is a shrill, metallic "krik."

Life History

In early May, black terns return to New York from the wintering range and begin their courtship displays at communal feeding and resting areas. Mating pairs are established by mid to late May when they disperse to nesting areas in typically large (≥ 20 ha) "hemi-marshes" (50/50 ratio of open water to emergent vegetation). Nest-site selection and building is rapid; in approximately four days, black terns build shallow, cup-like nests upon floating substrates of matted, dead marsh vegetation, old muskrat houses, cattail rootstalks, emergent vegetation mats of algae, or fallen logs. The single brood consists of 2-4 eggs; both parents attend the nest and continually add nesting materials during the incubation period of 21 days. The chicks are able to swim, walk and run within two days of hatching and they fledge in 21-24 days.

Distribution and Habitat

Black Tern Range

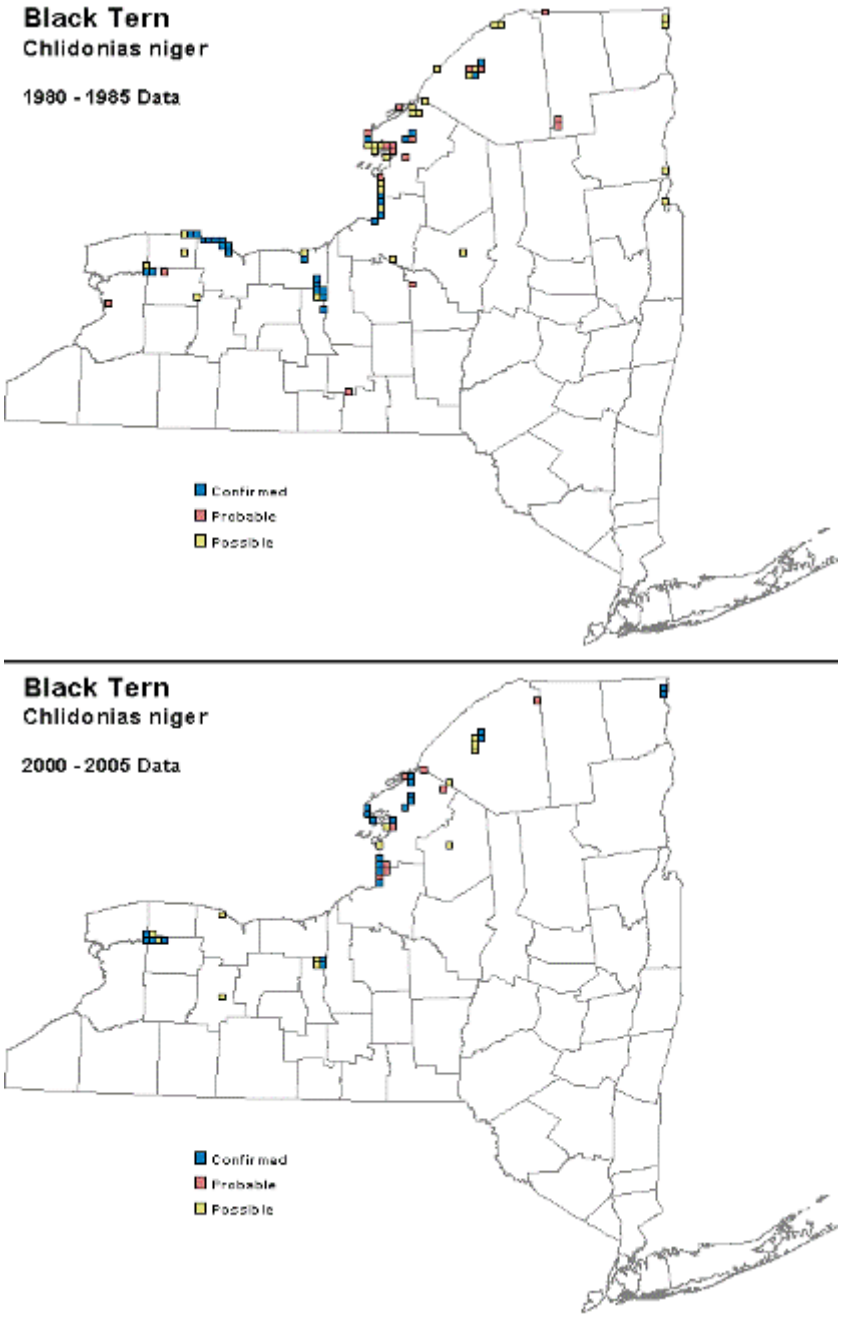


The black tern is a semi-colonial waterbird that nests on inland marsh complexes, ponds, mouths of rivers and shores of large lakes. In North America, the breeding range extends from central British Columbia, east across the prairie provinces to central Ontario and southern Quebec, south to central California, Utah, Wyoming, Kansas, Iowa, Illinois, Indiana, Ohio, northern New York, and northern New England. The black tern winters in marine and coastal areas of Central America and northern South America.

In New York, black tern breeding colonies once occurred at 56 sites along the southern and eastern shores of Lake Ontario from Niagara Falls to Watertown, in marshes along the St. Lawrence River and inland marshes of western, central and northwestern New York. Today, approximately 200 nesting pairs occur at less than 20 of the historic breeding sites.

Status

Beginning in the 1960s, the black tern population declined across its range. In the 1960s, a series of dams in the St. Lawrence River were erected to generate hydropower, stabilize Lake Ontario water levels for commercial shipping, and protect shoreline real estate from flooding. These dams limited the annual fluctuation of water levels that promoted the hemi-marsh conditions favored by nesting black terns, and resulted in a loss of breeding habitat. Regular monitoring revealed that the number of colonial nesting sites in New York State decreased between 1989 and 2004 by 57%. This is primarily attributed to habitat degradation. The 2000-2005 NYS Breeding Bird Atlas data showed 40% fewer black tern-occupied blocks than the 1980-1985 Breeding Bird Atlas. Black tern nesting habitat may be further compromised by agricultural run-off, pollution, invasive species, reduced invertebrate prey biomass, residential and commercial development, and recreational watercraft disturbance.



Distribution of Black Tern in New York from
1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

Black tern surveys are conducted every three to four years by New York State Department of Environmental Conservation staff and volunteers at historical and current nesting sites. These surveys are a critical component to monitoring the status of this declining species, and are necessary to identify factors that will improve conservation efforts and restoration of nesting sites. Currently, invasive species control and water level manipulations are the most effective strategies of black tern habitat management; however, both can be costly and time and labor intensive. In New York, the impact of agricultural run-off and pesticide contamination has been suggested as a compounding factor to habitat loss. Additional research focused on habitat quality, water quality, and prey populations is needed to determine the impact of habitat degradation on black tern diet and nutrition, which may be limiting successful breeding.

Cerulean Warbler Fact Sheet

©Jeff Nadler Photography

Cerulean Warbler
Dendroica cerulea

New York Status: **Special Concern**

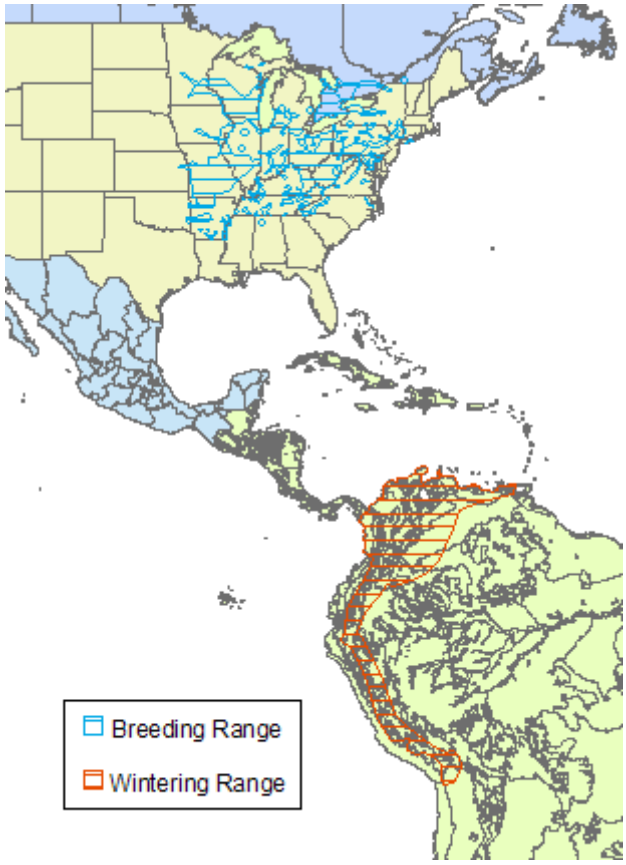
Federal Status: Not Listed

Description

A small wood warbler of about 4 inches (11.5 cm) in length, with long pointed wings, short tail, and long under tail coverts. Males have blue upper parts and white below with black streaking on back and upper tail coverts. Females are bluish-green to olive-green above with white under parts and a white or yellowish eyebrow stripe. Both sexes have 2 white wing bars and white tail spots. Juveniles are similar to female with brownish/gray upper parts, white under parts and a pale crown stripe. The cerulean warbler is often found high in the canopy of mature forests.

Life History

The cerulean warbler is an early migrant and arrives on breeding grounds up to 2 weeks before other wood warbler migrants. Males arrive one week before females and pairs form as soon as females arrive. Age of first breeding is one year. Both sexes participate in nest site selection but construction is carried out by the female who may take up to a week to construct the nest. The nest is a shallow cup consisting of grasses, weeds and mosses, bound on the outside by spider web silk and decorated with white lichens. The nest is usually located in mid-story canopy and is concealed above. Clutch size is 2 to 5 eggs. Incubation is done entirely by the female and lasts 9 to 12 days. Both parents feed the young which fledge after 10 to 12 days. Diet consists primarily of insects gleaned from the upper canopy. Fall migration occurs early and most cerulean warblers return to wintering grounds by August.



Cerulean Warbler Range

Distribution and Habitat

Breeding range extends from the southeastern and south central United States north to southeastern New York and Ontario and west to the Mississippi Valley. It prefers large forest tracts of tall, deciduous, broad-leafed tree species. Territories often occur in the closed canopy of old growth forests near stream bottoms, lakes or rivers. Two principal breeding areas for the cerulean warbler remain in New York: the Finger Lakes highlands and the lowland plain south of Lake Ontario.

Status

The cerulean warbler was designated a species of continental importance for the United States and Canada by the Partners in Flight program. In the late 19th century it was one of the most abundant breeding warblers in the Ohio and Mississippi River valleys. By the mid 1900s, however, it had largely disappeared from most of its former range as a result of habitat loss due to forest fragmentation. In New York it is mostly rare, but locally common in areas where suitable habitat still exists.

Management and Research Needs

The biggest threat to cerulean warbler populations is the fragmentation and loss of mature deciduous forest. Further study is needed to determine the degree of fragmentation tolerated by cerulean populations. Research is also needed to define the minimum forest tract size needed to support breeding populations of cerulean warblers.

Common Loon Fact Sheet

Common Loon
Gavia immer

New York Status: **Special Concern**
Federal Status: Not Listed

Drawing by Jean Gawalt

Description

Referred to as the "spirit of northern waters," the Common Loon is recognized as a symbol of unspoiled wilderness. In breeding plumage, this water bird is black-headed with a heavy, black, dagger-like bill, dark red eyes, a black collar, a white necklace, prominent white checks on the back, and white underparts. In non-breeding plumage, the body is essentially grayish above and whitish below with varying amounts of white showing on the side of the head. Dark traces of the collar are often visible. In the winter, the bill is lighter and of a grayish hue. Juveniles are similar to adults in winter plumage, but have more prominent barring across the back. A distinctive feature of the loon is its eerie, yodel-like call that can be heard on northern lakes where nesting occurs and on wintering areas in late winter and early spring.

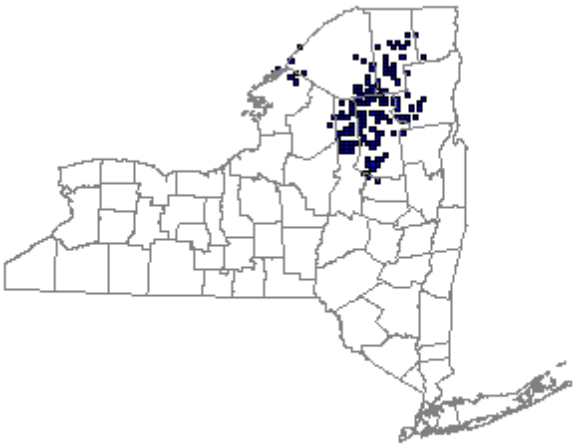
Life History

Returning to the same breeding grounds year after year, Common Loons are believed to mate for life. Upon their return, the pair renews their bond with short displays, including synchronized swimming, head posturing and diving. The nest is built within a few feet of the water's edge by both the male and female. A clutch of two eggs is laid sometime between mid-May and June. The young hatch after an incubation period of 26-31 days and begin to swim almost at once. Within 24 hours, they are moved by the parents to a nursery area

away from the nest. In 2-3 weeks, the young are able to make short dives and catch small fish. Fledging occurs in 11-13 weeks. Juveniles may spend several years in oceanic wintering areas before returning inland to breed. The loon's diet consists almost entirely of fish.

Distribution and Habitat

Common Loons breed across most of Alaska and Canada, south to Washington, Montana, Minnesota, Wisconsin, Michigan, New York and New England. In New York, Common Loons breed on the lakes of the Adirondack Mountains and in the St. Lawrence River region. Loons winter along the coast and on open lakes nearby.



Confirmed Breeding Blocks
Atlas of Breeding Birds in New York State, 1985

While Common Loons are symbolic of quiet, secluded places, they also inhabit somewhat developed lakes. Larger lakes of 25 acres or more are generally preferred. The lake must be large enough to allow a clear takeoff over surrounding trees. The presence of both shallow and deep water is also important. Shallow water is used for foraging, nurseries and shelter, while deep water is necessary for adult diving and social interaction.

Status

Although historic information on Common Loons is incomplete, it is known that they were once much more abundant. It is likely that populations declined in the 1800's with European exploration and settlement. Common Loons prefer the quiet atmosphere of uninhabited lakes, but growing human populations create disturbances on these lakes as they are developed. Disturbances caused by paddling, camping, fishing, and boating on lakes can lower the loon's reproductive success. Anthropogenic impacts on loons and other wildlife arise from a variety of sources. Accidental ingestion of lead fishing tackle by loons leads to lead toxicity and death. Catastrophic events, such as oil spills and botulism outbreaks, have potential to significantly affect loon populations during migration or on their wintering grounds. In the Adirondacks, acidification of lakes and mercury contamination of water

bodies is a problem. Acid rain lowers the biological productivity of lakes and reduces the amount of forage fish available to loons. Toxicity from mercury pollution of water bodies can lead to decreased reproductive success of loons as well.

Management and Research Needs.

Despite these difficulties, Common Loon populations in New York seem to be stable or increasing. Continuation of current management programs is necessary to maintain a healthy population. Public education is very important in reducing the risk of lead toxicity due to ingestion of lead fishing tackle and in decreasing disturbance caused by recreational activities such as boating. Such activities should be prohibited near nest sites and nursery areas during the breeding season. Signs providing information on the natural history of the Common Loon and the effects of human impacts on loons can be posted at boat ramps, beaches, campgrounds and other public access points to inform the public of the loons' needs. Monitoring programs, such as those conducted by the Adirondack Cooperative Loon Program and the Audubon Society of New York, Inc. have been established to evaluate the long-term reproductive success and changes in the breeding population of Adirondack loons, and help ensure that the haunting call of the Common Loon continues to echo off the Adirondack hillsides for years to come.

Common Nighthawk Fact Sheet

© Judd Patterson Photography

Common Nighthawk
Chordeiles minor

New York Status: Special Concern

Federal Status: Not Listed

Description

The common nighthawk, as its name implies, is neither a hawk nor is it strictly nocturnal. A mottled gray, brown and black bird with large black eyes; it is distinguished from other members of the nightjar family primarily by its call which is a single, nasal peent. Measuring 8 to 10 inches (20 to 25 cm), the common nighthawk is cryptically colored with a long, forked tail; long, pointed wings; and broad white wing bars that are visible during flight. It

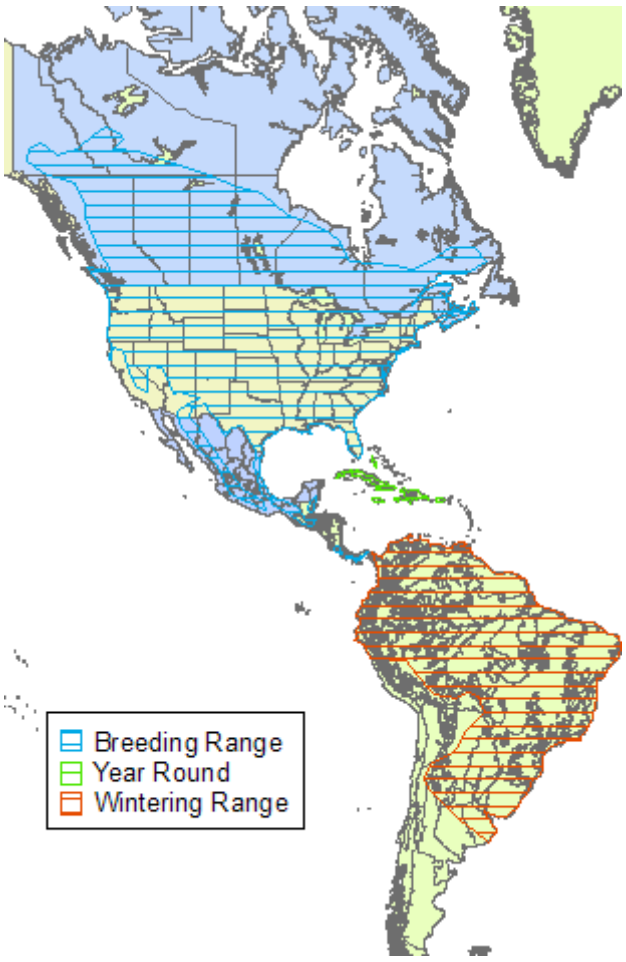
has a short, slightly decurved bill and a large, gaping mouth. Sexes are similar but the female has smaller white wing patches and lacks the white tail stripe characteristic of the male.

Life History

A neotropical migrant, the common nighthawk has one of the longest migration routes of any North American bird. Commonly migrating in large flocks, it is a late arrival to breeding grounds in the spring, and makes an early departure in the fall. Females usually begin to arrive at their breeding grounds in small groups around late May and early June a few days before males. Two eggs are laid directly on the ground and no nest is constructed. Incubation is performed entirely by the female who will leave the eggs or young unattended during the early morning and evening to feed. Young hatch after 18-20 days and are semi-precocial with sparse patches of fluffy down. Both parents feed the young at dawn and dusk by regurgitating insects. Diet consists entirely of flying insects that are caught during flight.

Distribution and Habitat

Common Nighthawk Range

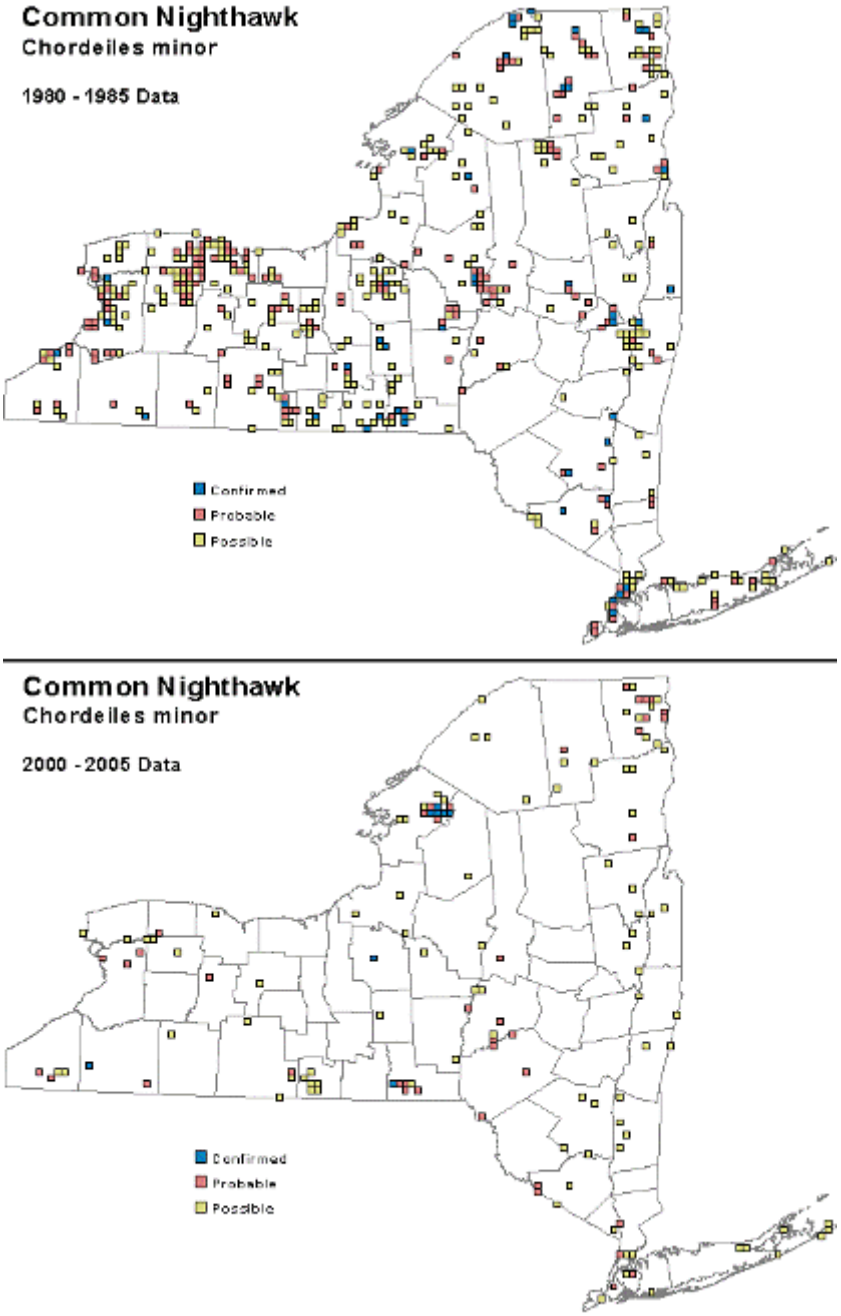


The common nighthawk will nest on bare substrate such as sand, dirt, gravel, or bare rock. In urban areas they will commonly nest on the roofs of buildings. In New York, this species is a widespread but local breeder that utilizes a variety of open habitats that include coastal dunes and beaches, forest clearings, and gravel roof tops. Wintering habitat is not well documented but does include open areas similar to those used during the breeding season.

Status

It is suspected that this species is experiencing declines throughout many parts of its breeding range including New York. However, it is important to note that many survey methods,

including those used for the New York State Breeding Bird Atlases, are not conducive to the detection of this species. Local increases have been reported in some states (North Dakota, Utah and Vermont).



Distribution of Common Nighthawk in New York from 1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

Research is needed to evaluate the causes of decline for this species. Factors potentially contributing to this decline include habitat loss, pesticide use, and the switch from gravel roofs to rubbers roofs in many urban areas. Management practices such as placing gravel pads in the corners of non-gravel roofs and burning and clear cutting patches have had some success in attracting breeding common nighthawks. The wintering range and migration routes of this species are poorly understood and require further study.

Common Tern Fact Sheet

Common Tern
Sterna hirundo

New York Status: **Threatened**

Federal Status: Not Listed

Description

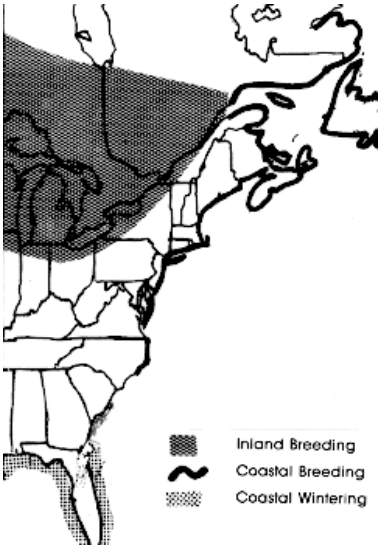
The common tern is the most widespread and abundant tern in New York. This species has a light grey back, white underparts, a white, deeply forked tail, and a glossy black cap and nape. Its pointed wingtips are noticeably darker than those of the roseate tern with which it associates. The tail is also shorter and has darker outer edges. In breeding plumage, the bill is blood red with a black tip. The immature and winter adult lack enough of the black crown to appear as though balding, and the bill is uniformly dark. The call is a harsh, rolling "kee-urr," with a downward inflection. The average common tern is 13-16 inches (33-40 cm) in length, has a wingspan of about 31 inches (71 cm) and weighs about 4.2 ounces (120 gm).

Life History

From late April to mid-May, common terns return to their northern breeding colonies. These colonies may contain several hundred to several thousand birds, including roseate, least and gull-billed terns, and black skimmers on Long Island. The nest is a simple scrape built above the high tide line in sand, gravel, shells or windrowed seaweed. It is usually lined with vegetation. A clutch of 2-4 (usually 3) eggs is laid during late May through July. Both sexes share incubation duties for 21-27 days. The young fledge about 28 days after hatching. One brood per season is typical, but re-nesting is common when the first nest is destroyed. By mid-October, the terns depart for wintering grounds, sometimes flying as fast as 40 mph.

The common tern secures its prey in a fashion similar to other terns, striking the water in shallow dives or skimming the surface. It feeds on small fish up to 3-4 inches in length. Occasionally, shrimp or aquatic insects are taken. One banded individual was found to be 25 years old upon recapture.

Distribution and Habitat



Common terns inhabit sand and shell beaches, grassy uplands and rocky inland shores in North and South America, Eurasia, and northern Africa. This species breeds in North America along the Atlantic Coast from the northern Maritime Provinces of Canada to South Carolina, and occasionally in the Gulf of Mexico or on large inland lakes. Wintering grounds are from its southernmost breeding areas on the Atlantic Coast to northern Ecuador and Brazil. In New York, common terns nest predominantly on Long Island, but they are also known to breed on small natural and artificial islands (power cribs, piers, navigation sites, etc.) in Lake Erie, Lake Ontario, the St. Lawrence and Niagara rivers, and Oneida Lake in central New York.

Status

In the early 1900's, common terns were almost extirpated by plume hunters. Protective legislation in 1918 allowed this species to make a comeback in the 1920's and 1930's. Today, competition with ring-billed gulls for nest sites in upstate New York and disturbance on Long Island breeding beaches are the reasons for decline. Many colonies are being forced to breed in salt marsh habitats as a result of the increased human use of beaches and competition with herring and great black-backed gulls. Flooding and predation are problems as well.

Management and Research Needs

Researchers from private and public conservation organizations and concerned volunteers census tern breeding areas on Long Island annually. Extermination of rats has been undertaken in some areas where they were a problem in the past. In upstate New York, some nesting success has occurred as a result of the construction of gull exclosures on the terns' nesting islands.

Eskimo Curlew Fact Sheet

Eskimo Curlew

Numenius borealis

New York Status: **Endangered**

Federal Status: **Endangered**

Description

Once called a "doughbird" for the thick layer of fat developed for migration, the eskimo curlew is a long-legged wading bird resembling a whimbrel. Measuring 12-14 inches (30-36 cm) in length and weighing 1 pound (.45 kg), adults are mottled brown on the back, with a white throat and yellowish-buff undersides. A buff-white eyebrow divides the dark crown from the eyeline and the bill is thin, curving downward over its 2 inch length. Cinnamon colored wing linings are visible in flight and the stilt-like legs are dark green to blackish-gray. In the spring, it feeds robin-like on berries and insects, especially ants, grasshoppers and their eggs. Snails are added to the menu in the winter. The voice is a melodious, whistling "tee-tee-tee."

Life History

Eskimo curlews return from the wintering grounds in early May to June. Their well camouflaged nest is a hollow in the ground lined with leaves or straw. The clutch consists of 3-4 eggs which are usually brownish-green to blue. The periods for incubation and fledging are unknown.

Distribution and Habitat

Eskimo curlews breed in the northern Mackenzie (Northwest Canada), on wetlands north of the tree line, in open tundra and on tidal marshes. Preferred breeding habitats are fields, pastures, and the drier parts of salt and brackish marshes, as well as coastal beaches and vegetated dunes. During migration, populations move south and east to gather on the coasts of Labrador and Newfoundland before flying offshore in route to South American wintering grounds.

Status

Eskimo curlews are extremely rare. Breeding grounds occur in areas well beyond normal human encroachment and many biologists believe eskimo curlews are close to extinction. By the early part of this century, this species was already considered rare. Predation and

disease were the primary causes of the decline, although excessive hunting on migration routes and in South America during the late 1800's also had an impact.

Management and Research Needs

Information on this species is incomplete. Protection of remaining populations is paramount, but recovery strategies for this species have not been devised since they breed and winter in such remote areas. Shorebird specialists with the American Ornithologists' Union have recommended immediate protection and management of known stopover sites along migration routes in the west. The U. S. Fish and Wildlife Service is in the process of forming a recovery team to aid in the conservation of this rare species.

Golden Eagle Fact Sheet

Golden Eagle

Aquila chrysaetos

New York Status: **Endangered**

Federal Status: Not Listed

Description

This majestic "upland" eagle is aptly named for its golden- brown plumage, with head and nape feathers a slightly lighter, gold color. Measuring 27-33 inches (70-84 cm) in length, the golden eagle has a wingspan of 78 inches (2 m) and weighs 7-14 pounds (3.2-6.4 kg). Adults wield a bill which is a bit smaller and darker than that of our only other eagle, the bald eagle. The immature golden in flight can be distinguished from the immature bald eagle by the presence of distinct white patches on the underside of the wing and by a broad white tail with dark band. The most notable field mark at any age distinguishing these two eagles, should you be in a position to see it, is the presence of feathers on the legs of golden eagles all the way down to the toes while the bald eagle has a considerable amount of exposed leg showing. Favored prey items include rodents, rabbits, birds and reptiles, as well as carrion.

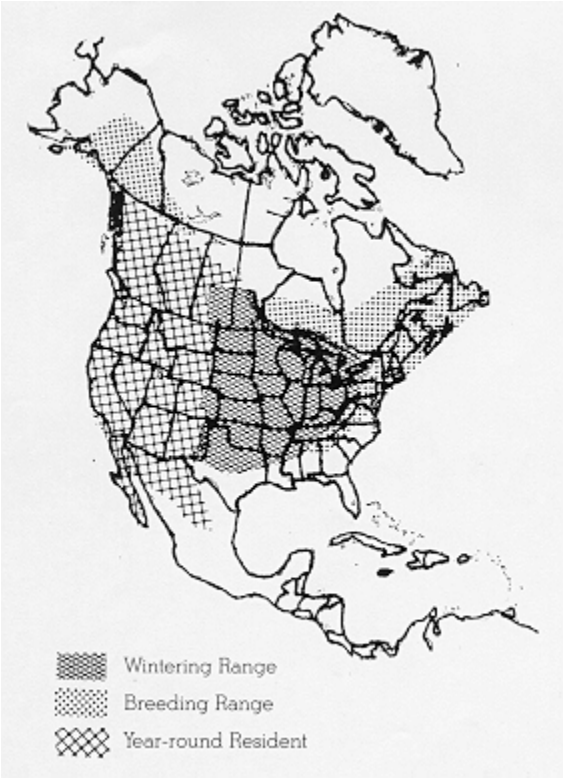
Life History

The golden eagle is long-lived, with a life span in the wild believed to be 30 years or more. It is also believed a pair mates for life and defends a selected territory against other golden

eagles. Both the male and female participate in nest building, occasionally in a tree but more often on a cliff ledge, commonly with the protection of an overhanging tree or rock. The nest is made of large sticks and often contains aromatic leaves which may serve to deter insects. Since the same nest may be used and added to (decorated) year after year, they sometimes get quite large.

The single clutch consists of 1-2 (rarely 3) eggs which hatch after an incubation period of 35-45 days. Eaglets fledge in 65-75 days. The male provides some help with incubation, but is the major food provider during incubation and chick rearing. Young reach sexual maturity and obtain adult coloration at about 5 years of age.

Distribution and Habitat



The golden eagle is distributed worldwide throughout the Northern Hemisphere. Golden eagles are typically associated with the plains of the western United States, and are fairly common in our western states, Alaska and western Canada. Never abundant in the eastern U. S., this species is now virtually extirpated as a breeding bird east of the Mississippi River. Golden eagles once nested at no more than a dozen or so sites in the Adirondacks of New York, in Maine and in New Hampshire. They are believed to still nest in some numbers in eastern Canada, as evidenced by hundreds of golden eagles appearing during the fall and spring migrations in the eastern U. S. Preferred habitats include generally open areas: tundra, grasslands and deserts. The golden eagle feeds primarily on live mammals such as ground squirrels and marmots, found in their preferred upland habitats. In winter they will feed on carrion and waterfowl in the east, often associated with wintering bald eagles.

Status

Golden eagles have been protected in the United States since 1963. During the 1950's, an estimated 20,000 eagles were destroyed by ranchers, particularly sheep farmers who perceived them to be a threat. In the northeastern states, remnant populations declined drastically. Although sightings occur every year in New York, most are during migration and

no active nests are currently known. A nest was built in the winter of 1992-93 by a wintering pair in southeastern New York, but has never been used as the pair departs every spring to return the next fall. The reasons for the decline of this species in the east are not clear. Various factors seem to be involved, including shooting, accidental trapping, human disturbance at nest sites, loss of essential open hunting habitat due to succession and fire control, and possibly pesticide contamination (especially by DDT).

Management and Research Needs

DEC continues to monitor historic eyries in hope that they may be used again, and have been investigating the golden eagle's decline and the factors that may be involved in its breeding scarcity in New York.

Hacking, a technique used successfully in New York to restore the bald eagle, has been considered for goldens, but has not been pursued due to the uncertainty of why golden eagles disappeared from New York and whether these conditions still remain. Hacking of goldens is being conducted in a few southeastern states during the 1990's and at least one pair has nested in there in recent years.

Golden-winged Warbler Fact Sheet

Golden-winged Warbler
Vermivora chrysoptera

New York Status: Special Concern
Federal Status: Not Listed

Description

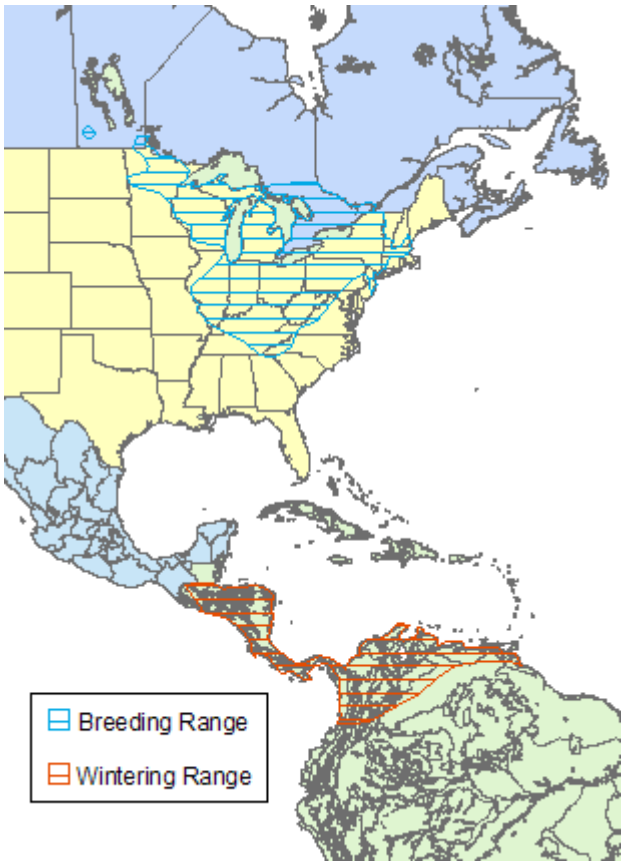
©Jeff Nadler Photography

This neotropical migrant is a small (11-13 cm) songbird of eastern shrub lands. The golden-winged song is a high and buzzy "zee zee zee zee." Adult males are gray above and white below with bright yellow fore crown and wing coverts. Black eye mask and throat patch suggestive of the black-capped chickadee (*Poecile atricapilla*). Females similar to males with smaller yellow wing patch and no black eye mask or throat patch. Juvenile are similar to adult.

Life History

Males arrive on breeding territory 2 to 7 days before females. Pairs form as soon as females arrive and nest building begins almost immediately after bond formation. Nest construction and incubation is done entirely by female. The nest is often an open cup of grasses with leaves forming the base and is typically located on the ground in a shrubby or forested edge. Females will desert nests during the construction phase if disturbed, but will tolerate a high level of disturbance while incubating. Nesting occurs between mid May and late June with incubation beginning when the second to last egg is laid. Clutch size is 3 to 6 eggs. Re-nesting is known to occur after the loss of a clutch. After 10 to 11 days, the completely altricial young will hatch. Both parents share in feeding the young which remain in the nest for 8 to 9 days. Diet consists mainly of insects and spiders gleaned from the peripheral branches of tree tops.

Distribution and Habitat

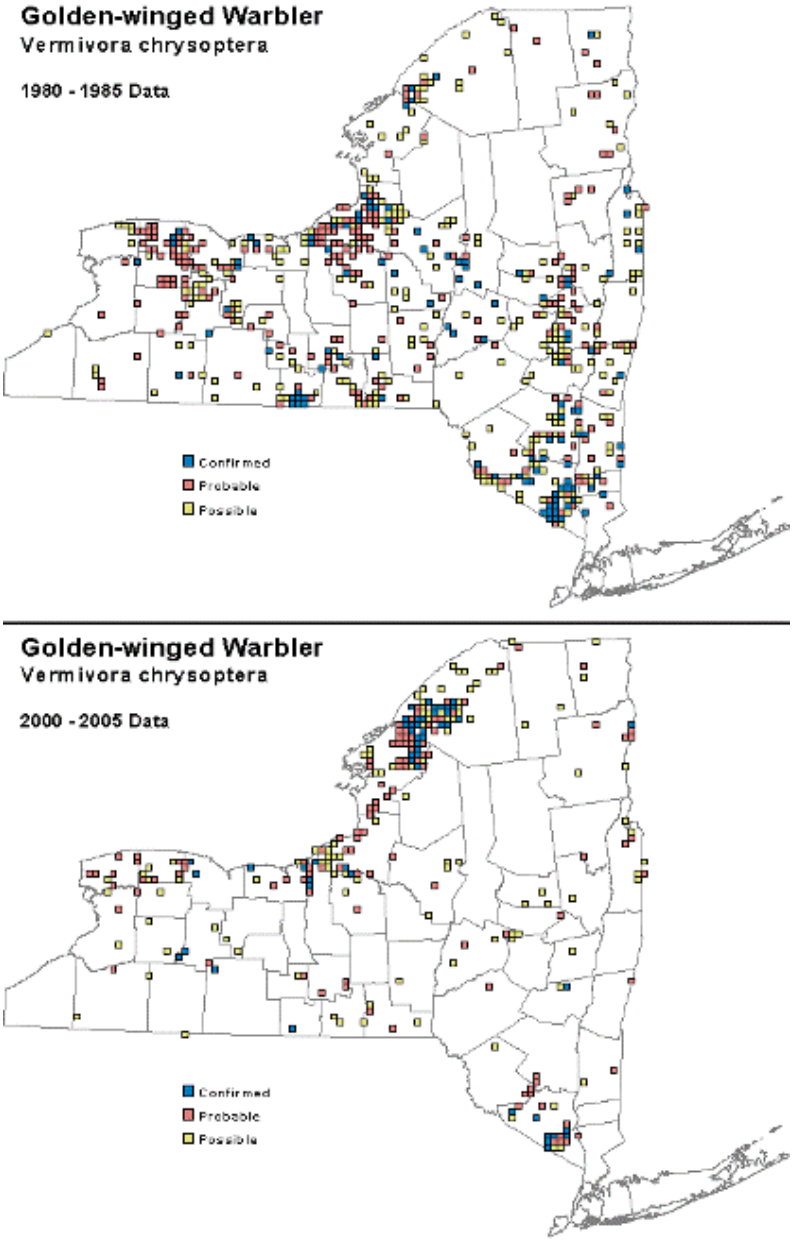


Golden-winged Warbler Range

The golden-winged warbler breeds throughout the north central and northeastern United States into Ontario, Canada. Although its range is expanding westward, it is disappearing from much of its former range in the northeastern states. This pattern coincides with the loss of early successional habitat in the northeast as well as the expansion of the blue-winged warbler (*Vermivora pinus*) into the golden-winged warbler's range. The golden-winged warbler is a habitat specialist and prefers to nest in early successional fields with a combination of shrubby and open areas within the territory. In New York this type of habitat is found in abandoned farmlands in the early stages of succession and in scrub/shrub wetlands.

Status

This species is becoming increasingly localized and uncommon throughout the state. Threats to golden-winged warbler populations in New York State include habitat loss; competition and hybridization with blue-winged warblers; and nest parasitism by brown-headed cowbirds (*Molothrus ater*). Breeding Bird Atlas results for 2000 to 2005 showed a significant population decline across the state with the only remaining stronghold in the St. Lawrence Valley of northwestern New York.



Distribution of Golden-winged Warbler in New York from
1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

There is a need for further research into habitat use by golden-winged and blue-winged warblers. Blue-winged warblers tend to be habitat generalists while golden-winged warblers are habitat specialists that may be competing with blue-winged warblers for optimal breeding territories. Maintenance of early successional fields is needed to preserve golden-winged warbler nesting habitat. The degree of hybridization with blue-winged warblers as well as nest parasitism by brown-headed cowbirds also require further study.

Grasshopper Sparrow Fact Sheet

©Jeff Nadler Photography

Grasshopper Sparrow
Ammodramus savannarum

New York Status: Special Concern

Federal Status: Not Listed

Description

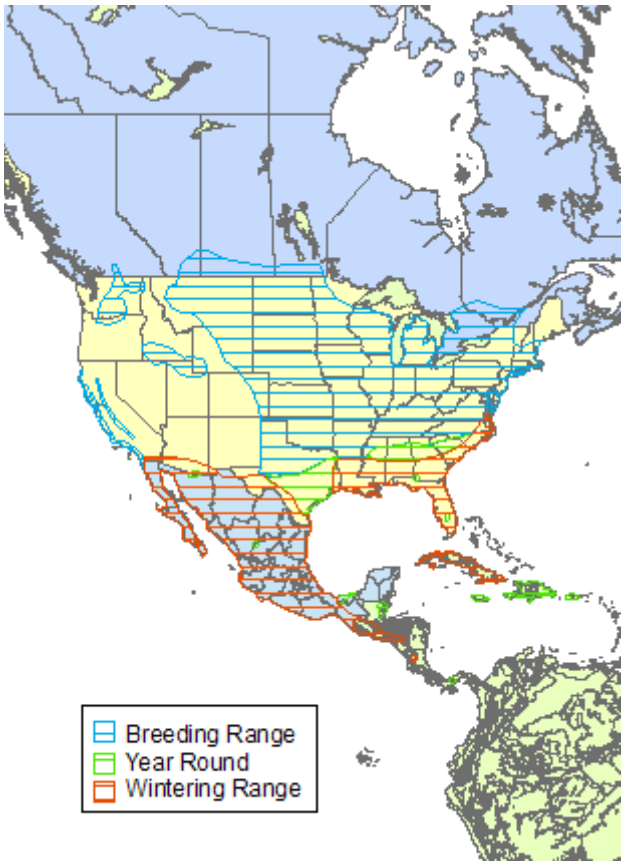
The grasshopper sparrow gets its name not so much from its diet but from its song which is one or two chips followed by a buzzy insect-like trill. This secretive grassland sparrow is more often heard than seen and remains hidden in dense grass cover. It perches on vegetative stalk or shrub while singing. It is a small, stocky sparrow (10 - 14 cm) with a flat head, relatively large bill, and white eye ring. Sexes are similar with gray to brown coloring above, buff colored sides and breast, and a short tail. The dark crown has a pale to white stripe down the center. It is the only grassland sparrow that lacks wing bars and streaking on its breast or sides although the juvenile shows these markings. This species forages for insects while walking or running along the ground.

Life History

A late spring migrant, the grasshopper sparrow returns to breeding grounds in the northeastern states in mid to late May. Because it is a nocturnal migrant, it is rarely seen during migration. Males arrive on breeding grounds 3 to 5 days before females. Once females arrive, pair bonds form and nest construction by the female begins immediately. The nest is built on the ground at the base of a clump of vegetation and consists of a deep cup of stems and grasses with over-hanging vegetation creating a dome with a side entrance. Pairs will raise 2 to 3 broods per year and will construct a new nest each time. Incubation is carried out by the female while the male defends the nest from predators and the territory from intruders. Parents will not fly directly to or from the nest but walk along the ground when leaving or arriving. Clutch size is 3 to 6 eggs for the first brood with subsequent broods having fewer eggs. Nestlings hatch after 10 to 12 days and are cared for by both parents as well as non-parent females. Young leave the nest after 9 to 10 days but are unable to fly. They run or walk along the ground in dense cover to avoid

disturbance. Young of the first brood will leave their natal territories once adults begin feeding nestlings of the second brood.

Distribution and Habitat

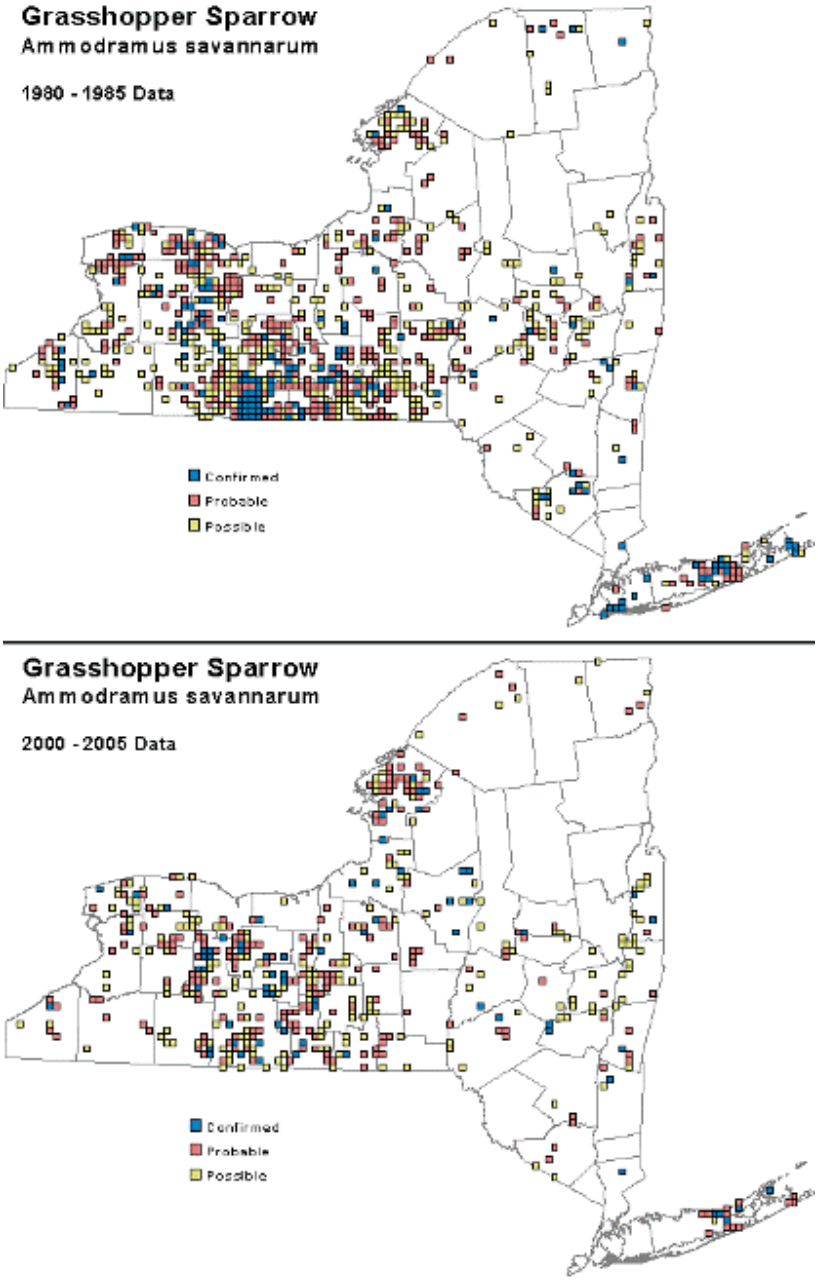


Grasshopper Sparrow Range

A common local breeder throughout much of the United States and southern Canada. Breeding range extends from southern Maine and New England south to northern Georgia, west to Texas and north to Montana, Idaho, and eastern Washington. The grasshopper sparrow depends on dense grasses for foraging and nesting cover. In New York it remains locally common where grassland habitat is available. Upland meadows, pastures, hayfields, and croplands are primary habitats for the grasshopper sparrow.

Status

In the eastern United States, the historic distribution of the grasshopper sparrow was restricted to natural grasslands resulting from fires or flooding. The growth of agriculture in the late 19th and early 20th centuries created more breeding habitat and facilitated the spread of the grasshopper sparrow's range in the northeast. By the mid 1900s, however, loss of lands used for agriculture paired with the growth of development began to take its toll on grasshopper sparrow populations. In New York populations have declined considerably with the loss of grassland and agricultural habitat due to suburban land development and natural plant succession.



Distribution of Grasshopper Sparrow in New York from 1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

Threats to the grasshopper sparrow population in New York include loss of nests due to mowing of fields during the nesting season, the use of pesticides by farmers, and the loss of grassland habitat resulting from development or plant succession. Management practices for preserving and restoring grasshopper sparrow habitat include prescribed burning, mowing and grazing of grasslands and agricultural areas. Management practices at airports have been successful where mowing is postponed until the end of the breeding season. Further research is needed on the winter ecology, distribution, and habitat use of migratory populations.

Henslow's Sparrow Fact Sheet

Henslow's Sparrow
Ammodramus henslowii

New York Status: Threatened

Federal Status: Not Listed

Description

Two distinctive characters help in identification of this sparrow: the flat-headed profile and the olive-colored head. The wings are rust-colored and the buffy breast and sides are streaked with black. Juveniles have the characteristic rust-colored wings and olive head of an adult, but its underparts are not streaked. The call is a weak, cricket-like, metallic "tslit" or "tsi-like." The ventriloquial quality of the voice and the secretive nature of the Henslow's Sparrow make this bird an easy one to overlook and difficult to observe.

Life History

During the courtship period, the male hops up and down with nesting material in his bill and sings to the female. He then leads her on foot to several potential nesting sites which he indicates by rapidly fluttering his wings. The female approves of one and builds a nest there over the next 5-6 days. She incubates 3-5 eggs for a period of 9-11 days. The young fledge in about 9-10 days. Henslow's sparrows have two broods each year. Nesting occurs in loose colonies which may be the result of clumped food resources. The species is believed to be monogamous.

Distribution and Habitat

Henslow's Sparrow Range

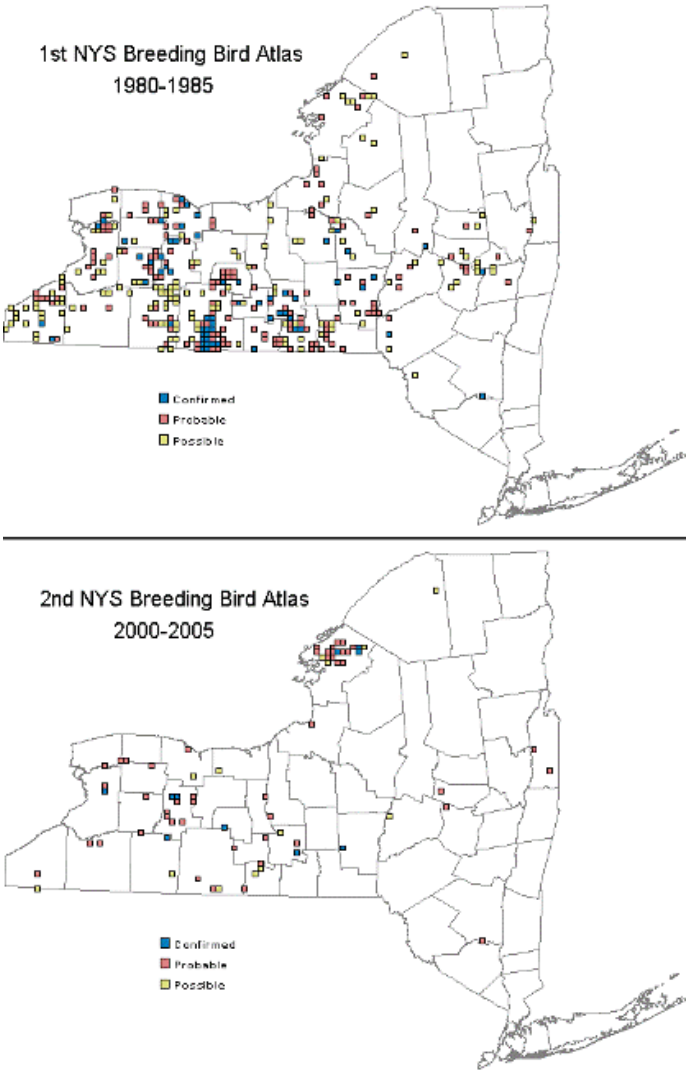
Henslow's sparrows breed from South Dakota, Minnesota, Wisconsin, Michigan, Ontario and Massachusetts south to Kansas, Missouri, Illinois, Kentucky, West Virginia, Virginia, and North Carolina and locally in Texas. In New York, populations are very localized and found primarily in the central and western parts of the state, especially the Appalachian Plateau

and Great Lakes Plain. In eastern New York, it may also be found in the Mohawk Valley.

Generally, its habitat consists of fallow, weedy, often moist fields and meadows. Breeding occurs in a variety of habitats with tall, dense grass and herbaceous vegetation, including upland weedy hayfields, pastures without shrubs, wet meadows, drier areas of salt marshes, grassy fields, and sedge covered hillsides with recently planted pine seedlings. Though not associated with grazed areas, they will use lightly grazed pastures.

Status

In the early 1900s, Henslow's sparrows were uncommon and rare in all parts of New York State. Populations increased from 1920 to 1940, with several new colonies appearing throughout the state, including Long Island, central and western New York, and corridors along the Hudson, Delaware and Susquehanna rivers. Populations began to decline in the 1950s. Breeding Bird Survey data through 1989 have shown a steady, statistically significant declining trend in New York State and throughout the Northeast. The Henslow's Sparrow has been on the American Birds' Blue List (Special Concern) since 1974. It was listed in New York State as a Species of Special Concern in the early 1980s and was re-classified as Threatened in 1999. Populations continue to decline.



Distribution of Henslow's Sparrow in New York from 1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

The major threat to Henslow's sparrows is loss of breeding habitat as agricultural grasslands are developed or abandoned to subsequently revert to forests. This species deserves special attention, not only because the primary breeding habitat is a transitory, early successional stage, but because comparatively fewer fields are allowed to lie idle today for a sufficient number of years. Management of habitat through burning has both positive and negative effects. While it is beneficial in stimulating herbaceous growth, it also reduces the amount of ground litter which Henslow's sparrows seem to prefer. Henslow's sparrows utilize lightly grazed pastureland. A declining dairy industry in New York State will reduce the need for pasturage. More frequent mowing will be required to replace grazing and, if economically infeasible, pastures will be allowed to revert back to forests. The effects of this trend need to be addressed.

Horned Lark Fact Sheet

© David Seibel Photography

Horned Lark
Eremophila alpestris

New York Status: Special Concern
Federal Status: Not Listed

Description

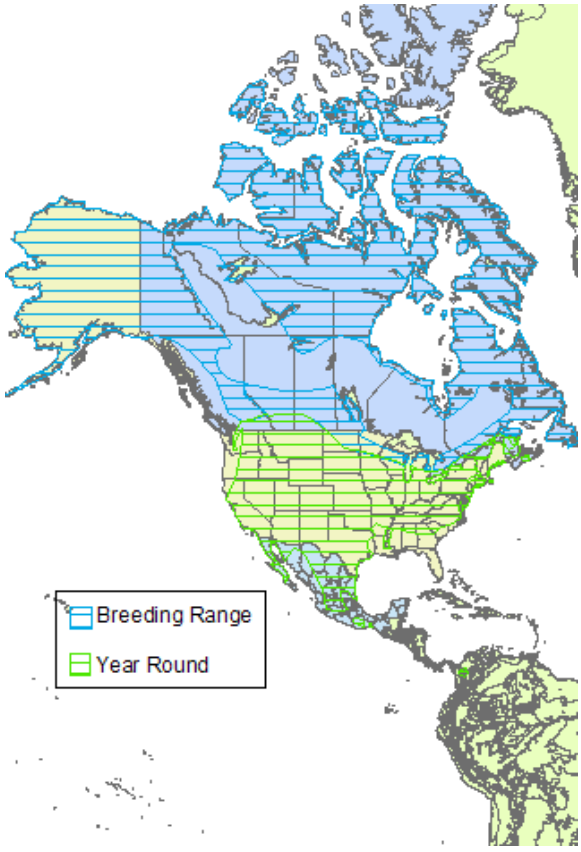
The horned lark is a small (16 - 20 cm) songbird named for its horn like feather tufts which are most often visible on male. They are easily distinguished by their dominant black lores, cheek patches, and breast patch. These contrast strikingly with the white to yellow eyebrow stripe, ear patches, and chin. Males are slightly larger and darker than females with color variations throughout North America relating to habitat moisture. The back, rump, nape, and dorsal side of the tail feathers are a brownish gray with the breast and belly light brown to white. Juveniles are distinguished from adults by dusky facial features, lighter overall coloration, a buff yellow bill, and flesh colored legs and feet.

Life History

The horned lark is the earliest nesting, native bird species in New York State with nesting reported as early as late February. Nests are constructed on the ground with the site selected by the female. The nest is typically in a small depression and is made of grasses, roots, and hair. It is often lined by small by pebbles on its outer rim. Incubation is done entirely by the female and begins after the last egg is laid. Young typically hatch on the same day and are covered in a buff colored down which offers some protection from the elements and helps camouflage them from predators. Two or more clutches a season are common for much of this species range. Both the male and female feed nestlings and fledging occurs at 8 to 10 days. They primarily feed on invertebrates and seeds.

Distribution and Habitat

Horned Lark Range

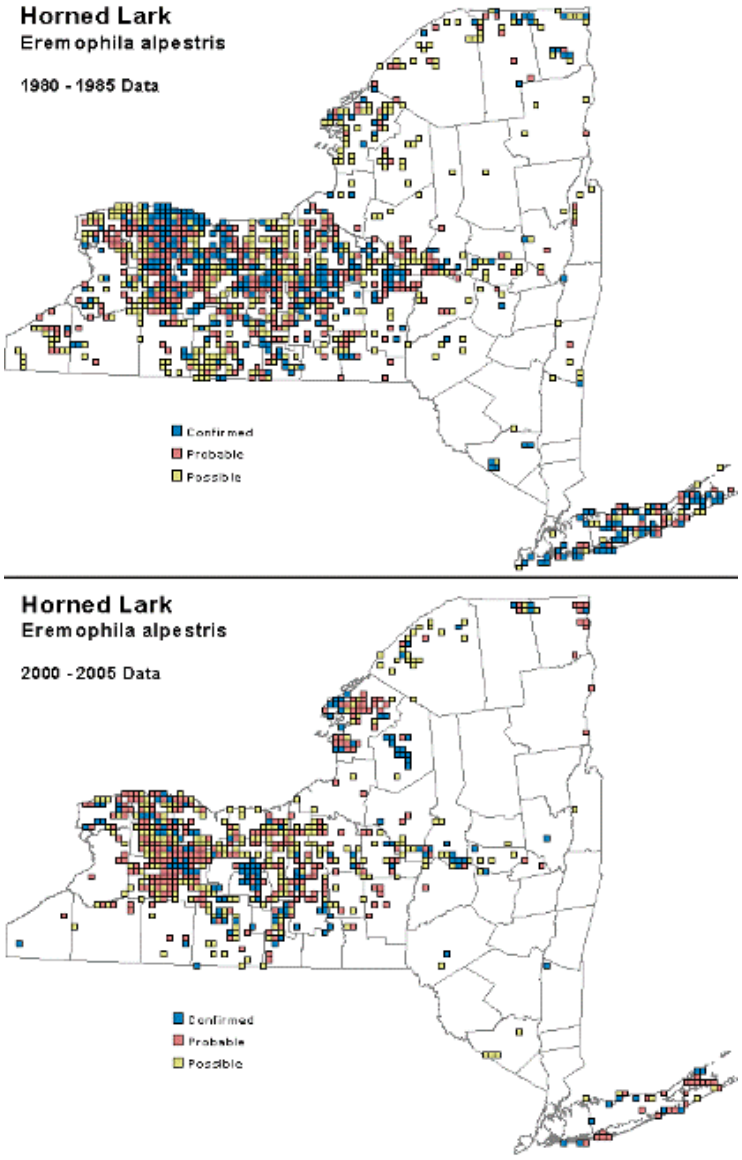


The breeding range for this species is vast extending north to south from the arctic islands to central Mexico. This species is found year round throughout much of its range with northern populations migrating to central or southern parts of the breeding range during the winter months. It was likely uncommon in the northeast before the settlement and clear cutting that took place in the 19th century. Occupies areas with short grasses and/or barren ground. Tolerates disturbance and agricultural practices well. Commonly nests in row crops, hayfields, short grass prairie, and deserts.

Status

In New York, the horned lark occupies low land areas across the state including the Great Lakes Plains, Appalachian Plateau, and the Costal Lowlands. The second atlas results yielded a 37 percent decline in detection for this species. While it continues to occupy the same areas, its distribution within these areas has become patchy with the most notable loses in the Appalachian Plateau and Costal Lowlands. This species is experiencing declines throughout much of its range and is listed as a Threatened species in Connecticut.

Distribution of Horned Lark in New York from 1st and 2nd NYS Breeding Bird Atlas Records



Management and Research Needs

The horned lark would benefit from grassland management efforts. Research assessing this species response to habitat restoration at disturbed locations (ie reclaimed mines) may also be beneficial. Research on geographic variations of the species is also needed.

Least Tern Fact Sheet

Least Tern
Sternula antillarum

New York Status: **Threatened**

Federal Status: **Endangered** (interior U. S. only, not on coast)

Description

The least tern is the smallest American tern, weighing about 1 ounce (28 gm) and measuring about 9 inches (23 cm) in length. It is identified in spring and summer by a white forehead contrasting with a black crown and nape. Its body is slate grey above and white below, with the pointed wings and forked tail characteristic of most terns. The bill and feet are yellow. Wingbeats are uniquely rapid and the black leading edge of the outer wing is conspicuous in flight. Immature least terns have upper parts which are mottled white and dark brown. The call is either a sharp, penetrating "kip-kip-kip" or a shrill "zreep."

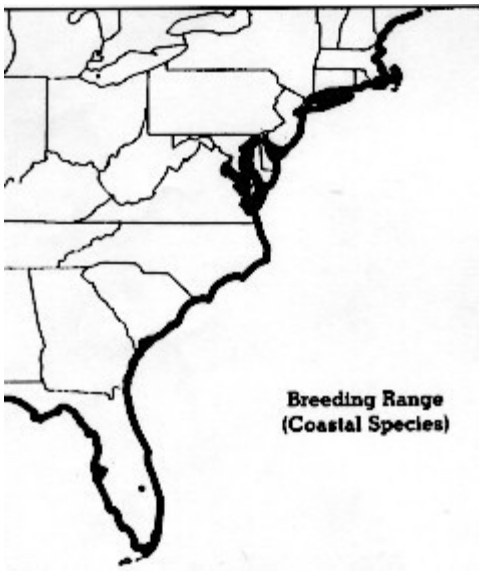
Life History

By late April to mid-May, the least tern is on its northernmost breeding grounds, usually arriving before common terns and black skimmers. The least tern breeds in colonies of up to 200 birds. Nests are scraped in sand, shell or gravel, and may be sparingly lined with small shells or other debris. Eggs are commonly laid in clutches of 2 from late May through June, and are incubated by both sexes for 21 days. The young fledge in 19-20 days. The least tern is very defensive in the colony, and adults scream and dive at intruders. Piping plovers, another endangered beach-nesting bird, are commonly found nesting in association with least terns. By late August and early September, least terns leave their northern breeding grounds to head for wintering areas.

Least terns feed mostly on small fish caught by skimming the surface of the water or by making dives from the air. Banding studies have shown individuals living up to 21 years.

Distribution and Habitat

The least tern has a nearly worldwide distribution. In the Western Hemisphere, it breeds on the Pacific Coast from central California to Peru, inland along the Colorado, Red, Rio Grande, Missouri and Mississippi river systems, on the Atlantic Coast from Maine to Argentina, and along the Great Lakes in Michigan, Minnesota, Wisconsin and Ohio. Migrants mainly occur on Long Island's outer coast and rarely on the lower Hudson River. This species winters from the Gulf Coast and Central America south to Peru and Brazil.



The least tern breeds on broad, level expanses of open sandy or gravelly beach, dredge spoil and other open shoreline areas, and more rarely, inland on broad river valley sandbars. In an unusual case, 20 pairs nested on the roof of a city auditorium in Pensacola, Florida in 1957, and have continued to do so annually.

Status

The U. S. Fish and Wildlife Service lists the least tern population found in the interior U. S. as endangered. Around the turn of the century, the least tern was in danger of extirpation in the northeastern U. S. because of hunting for the millinery trade. Protective legislation in 1918 allowed the species to recover in the 1920's and 1930's. In recent years, however, human pressures have been causing a decline in populations of this species. Surveys from 1985-1995 found an average of approximately 3,000 breeding pairs at between 50 and 66 colonies along New York's Long Island coast. Development of coastal areas destroys breeding habitat and recreational activities can disrupt reproduction. Increases in populations of more aggressive gulls has led to competition for nesting sites. Some colonies are severely limited by predation from rats, great horned owls, black-crowned night herons, dogs and cats.

Management and Research Needs

Researchers from private and public conservation organizations and concerned volunteers annually census breeding colonies on Long Island. With the cooperation of landowners, nesting areas are fenced off and signs are posted in an attempt to protect colonies from disturbance. Tern stewards monitor colonies and provide information to the public about this and other beach-nesting species. Extermination of rats has been undertaken in several areas.

Loggerhead Shrike Fact Sheet

Loggerhead Shrike

Lanius ludovicianus

New York Status: **Endangered**

Federal Status: Not Listed

Description

The loggerhead shrike is 8 to 10 inches long with a wing spread of 12.5 to 13 inches. Its coloration is similar to a mockingbird with gray above and white below. The shrike is distinguished by a characteristic black facial mask that meets over the base of the bill, a heavy hooked bill, black wings with white wing patches, and a slim black tail with white outer tail feathers. The other North American shrike species, the Northern shrike, is slightly larger, has a longer bill and the mask does not meet over the base of the bill. When perching, the shrike holds its tail nearly horizontal, whereas most other birds hold their tails pointing downward. The loggerhead perches alone, usually in tree tops or on telephone wires in open country. Its flight pattern is low and undulating with very fast wing beats.

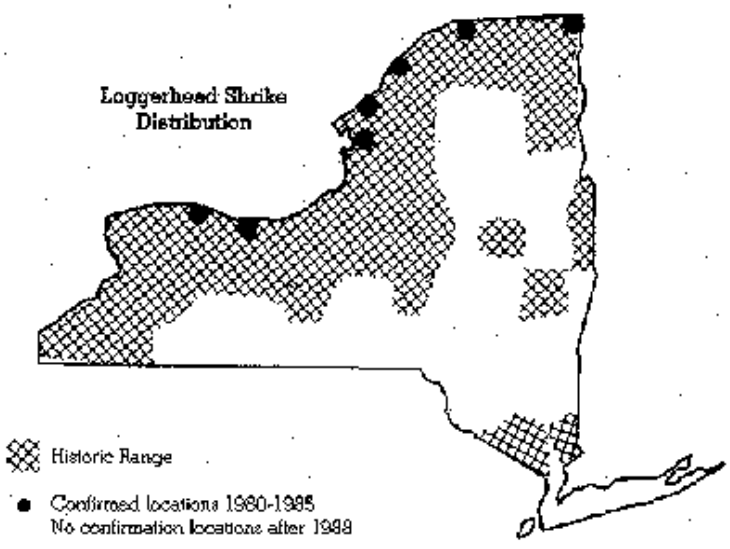
Life History

The loggerhead shrike is known for its unique behavior of impaling its prey on thorns, barbed wire fences, and similar projections, hence its preference for nesting near areas containing such objects. Though the reason for this behavior is not totally understood, it is supposed that it serves as a means of storing food, and also to assist in tearing apart the prey since the loggerhead does not possess very strong claws. Maligned because it occasionally feeds on small birds, the shrike feeds mainly on beetles, grasshoppers and small rodents. The loggerhead has extraordinary eyesight and can focus on a grasshopper in a field 50 to 70 yards away.

The loggerhead begins nesting in late April or early May. The well-made nest is constructed of thick twigs woven together and lined with fibers and padded with feathers, hair or cotton. The shrike lays four to six eggs and may raise two broods in the southern portion of its range.

Distribution and Habitat

The loggerhead shrike ranges throughout most of North America from southern Canada to southern Mexico. This species former range was from Maine through New England, south to Virginia, Pennsylvania and West



Virginia. It winters from Virginia to Florida. With an uneven and local distribution, the loggerhead was never considered to be a common breeding bird in the northeast.

Historically,however, it was reported as being a fairly common breeder in western and central New York. Its breeding habitat consists of agricultural areas that contain hedgerows, hayfields, pastures and scattered trees and shrubs, especially hawthorn.

Status

The loggerhead population level is extremely low, and no nests have been located in New York in recent years. The reasons for the loggerhead's steady decline are not clear at this point. One hypothesis suggests that the abandonment of many farms and orchards, overgrown from neglect, has created unfavorable nesting habitat. Roadkills and pesticide contamination may also be factors. Further research is necessary before a conclusion can be reached as to the loggerhead's plight.

Management and Research Needs

Management efforts for the loggerhead shrike in New York have included a status survey and the establishment of a system for reporting sightings of this rare species. Research on habitat requirements in New York and Virginia suggest that this shrike prefers areas with extensive, active pastureland. Continued research on productivity, habitat loss and other aspects of the species' ecology should provide a better understanding of the species' decline and suggest possible measures for reversing this trend.

Mute Swan

Scientific name: Cygnus olor

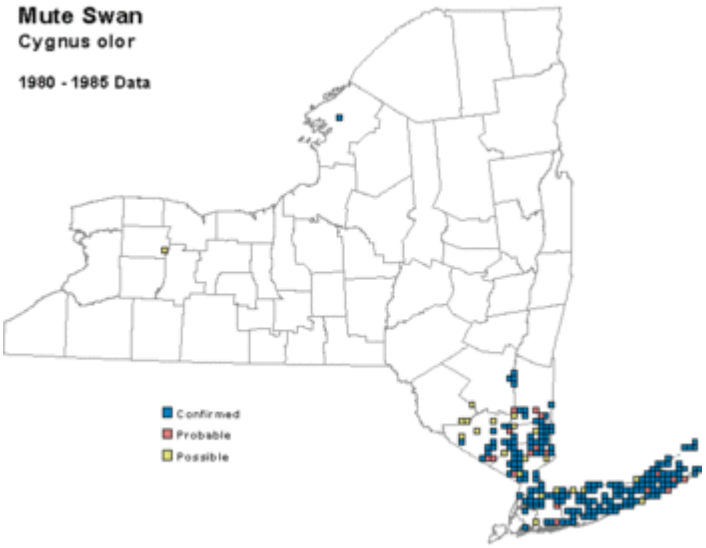
History in New York

Mute swan swimming

Mute swans are a non-native, invasive species first brought to this country from Europe in the late 1800s for their aesthetic value. Initially introduced in New York's lower Hudson Valley and Long Island, mute swans were kept by breeders as domestics on the ponds of private estates. The release of domestic swans into the wild on Long Island and the lower Hudson Valley has led to well established populations in those

areas. The largest known releases occurred from 1910-1912 and consisted of about 500 birds.

By 1993, New York's mute swan population had increased to about 2,000. Currently, the population is believed to have increased further to about 3,000. The largest numbers of swans still occur on Long Island and in the lower Hudson Valley, but a rapidly increasing population has taken hold in the Lake Ontario region (see the map of mute swan breeding locations in New York).



Mute Swan Breeding Locations - NYS Breeding Bird Atlas Project

Life History

Mute swans are the largest birds in New York, with an average adult weight of 20-25 pounds and a wing span of nearly 7 feet. Both sexes have a black face patch with a fleshy knob on the forehead that overlays an orange bill. These facial characteristics distinguish mute swans from other swan species in New York State. Males ("cobs") tend to have slightly larger knobs and body sizes than females ("pens"). Despite these differences, it is very difficult to tell the sexes apart. Mute swans, as indicated by their name, are not very vocal. They will, however, grunt, snort, or hiss to communicate, especially if threatened.

The diet of mute swans consists of submerged aquatic vegetation (SAV) found in water as deep as 4 feet. They eat a variety of plant species and consume about 4-8 pounds of vegetation daily, sometimes uprooting plants completely. Often, adult swans will uproot more plants than they actually consume. Submerged aquatic vegetation plays an important role in aquatic ecosystems by providing both food and cover to a variety of vertebrate and invertebrate species. In turn, many species (e.g., fish) rely on animals that live in SAV beds

for food. Thus, loss of SAV caused by large flocks of feeding swans could have a detrimental impact on aquatic ecosystems.

Mute swans become sexually mature when they are two years old, but often will not begin breeding until they are three, four, or even five years old. Some individuals may pair and sometimes even build a nest when they are 1 year old, but will not breed.

The nesting period for mute swans begins in late March to April. Nests are large (4-5 feet across) with shallow depressions in the center. Nest sites will vary based on available habitat, but are typically in secluded areas on shore or in shallow water. In marshes, nests are often floating, constructed of cattail stems. Other nest materials include twigs, leaves, and stems of wetland plants, such as cattail and phragmites. Occasionally, nests will contain litter, such as paper, plastic wrappers, and fishing line.

Mute swans lay an average of 6 eggs but can produce as many as 11 in one clutch. The off-white to pale green eggs are laid at a rate of one per day, and hatch 35 days after the last egg is laid. The average hatch date for swans in New York is around June 1. Renesting may occur if the initial nest fails. Mute swan offspring ("cygnets") are either gray or white upon hatching. Their color at hatch is a genetic trait and not related to sex. Gray cygnets gradually turn a brownish color by their first winter, before gaining their white adult plumage. White cygnets remain white. Mute swan families typically stay close to their nesting area and separate from other broods and non-breeding swans for the first couple of months after hatching. Cygnets can fly at about 4-5 months of age and are considered "juveniles" at that time. On average, only 3 cygnets per breeding pair survive to juvenile age. Causes of death include disease, hypothermia, and predators. The most common predator of mute swan cygnets in New York is the snapping turtle.

During the nesting and brood rearing-periods mute swans are very territorial. Both males and females are aggressive toward people and other waterfowl within their nesting area. Sometimes their behavior is so aggressive that they will drive other waterfowl out of areas where the swans are nesting. Reports of swan attacks on people, especially small children and users of personal watercraft, are common. Because of this, waters occupied by breeding swans are often unusable to people during the nesting and brood-rearing periods. Aggression among swans also occurs, especially when an adult male with a nest or brood encounters another male. In these instances both males raise their wings and fluff their

feathers, known as "busking" (also part of the mating ritual), and begin twirling in place; a ritual that appears more like a dance than a fight.

Current and Future Research

Concerns about the impact of mute swans on people, wildlife, and ecosystems have prompted the New York State Department of Environmental Conservation (NYSDEC) to initiate research on this species. In May 2004, researchers began collecting nesting and productivity data across New York State. These data provide information on nesting distribution, clutch sizes (eggs per nest), hatching rates, cygnet survival, and proportions of breeding birds within the populations.

Ground, boat, and aerial surveys are also being done across the state to monitor current population numbers, seasonal distribution and movement patterns, and habitat use. These data, along with productivity estimates, help to determine and predict population trends.

As part of this research, some swans have been tagged with identification markers, including aluminum leg bands, plastic neck collars, and even satellite-tracked radio-transmitters. Past research on swans and other waterfowl indicate that these methods of marking swans have little to no impact on the well-being of marked individuals.

Future research plans include:

1. continuing studies of productivity, survival, and movements.
2. determining the impact of mute swan feeding on submerged aquatic vegetation.
3. documenting mute swan aggression toward people and other waterfowl.
4. determining the extent to which feeding by people contributes to mute swan population growth and survival.

Reporting Collared Mute Swans

Please provide the following information when reporting a collared mute swan. Include your name, address, phone number, e-mail; date and time of sighting; location of the sighting (including county, town, name of water body, and nearest road intersection); collar identification code; and an estimate of the total number of mute swans observed in that location. Your help in reporting mute swan sightings is an important part of the data collection process and is greatly appreciated.

Reporting Problems Related to Mute Swans

If you have concerns regarding mute swans impacting vegetation, wildlife, or human activities on your property, please contact the DEC wildlife office in your region. They can provide information or assistance to alleviate the problem. ***Remember, mute swans are protected by the New York State Environmental Conservation Law. Therefore, swans, as well as their nests and eggs, may not be handled or harmed without authorization from DEC.***

Northern Harrier Fact Sheet

Northern Harrier
Circus cyaneus

New York Status: **Threatened**

Federal Status: Not Listed

Description

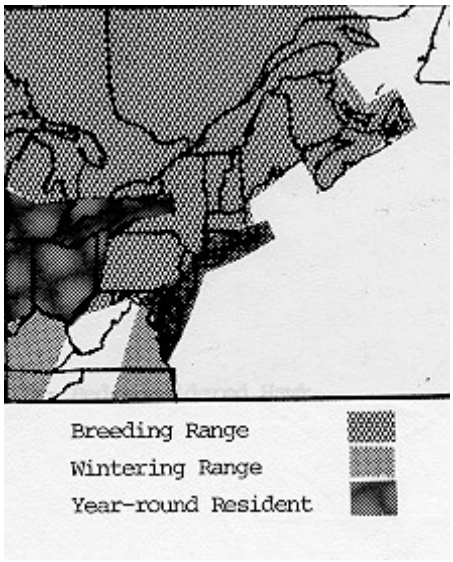
The northern harrier, formerly known as the marsh hawk, hunts primarily on the wing and may cover up to 100 miles per day. Its prey, consisting of mostly rodents and small birds, is detected using extremely keen hearing. This 16-24 inch (41- 61 cm), slender-bodied hawk has a long tail and wings, long yellow legs, distinct facial disks and a conspicuous white rump patch. In flight, the wings are held in a shallow "V." The adult male is pale gray on the head, back and wings. The gray tail is banded with 6-8 gray-brown bars. There is cinnamon-brown spotting on the legs and flanks, and the wing linings and undertail are white. The eyes of an adult male are yellow. Female plumage is browner overall with dark streaks on the breast. The female is born with brown eyes which turn yellow at about three years of age. Juveniles resemble adult females, but have gray eyes. When startled, this species makes a rapid, nasal chattering "ke-ke-ke-ke-ke."

Life History

This raptor is considered one of the most agile and acrobatic in North America. During the breeding season, the male performs an elaborate courtship flight consisting of a series of U-shaped maneuvers. The nest is a flimsy structure built of sticks and grass on the ground. It

can be found in dense vegetation or situated in a slightly elevated position. The clutch averages 5 eggs. Incubation lasts 30-32 days and begins before the last egg is laid, so the young vary in size. The young fledge in 30- 41 days, then remain near the nest, dependent on their parents for 3-4 weeks. Clutches are larger and reproductive success is higher during years when vole populations are high.

Distribution and Habitat



Northern harriers breed in North America from northern Alaska and Canada south to northern Baja California, Mexico and the southern U. S., except in the southeast. Wintering occurs from southern Canada to northern South America. Communal flocks roost on the ground in agricultural fields, abandoned fields and salt marshes.

Breeding occurs in marshes, grasslands, meadows and cultivated fields. It appears that coastal areas are preferred, but inland areas are used when coastal habitats are limited.

Status

Historic populations of northern harriers were considered abundant and widespread. However, declines have been observed in recent decades. In 1972, this species was placed on the American Birds' Blue List and has remained there since. Declines were primarily due to a loss of breeding habitat and the effects of pesticides. Reforestation, filling in of wetlands, changes in land use, and urban and industrial development in coastal areas all contributed to habitat losses.

Management and Research Needs

Protection of suitable habitat is the most vital need of northern harriers. Population size and reproductive success of this species are dependent upon prey populations. It has been well documented that northern harrier populations and populations of their prey follow similar patterns of fluctuation. It is important that any management allow for healthy prey populations and provide habitats that are suitable for them as well.

Osprey Fact Sheet

Osprey

Pandion haliaetus

New York Status: **Special Concern**

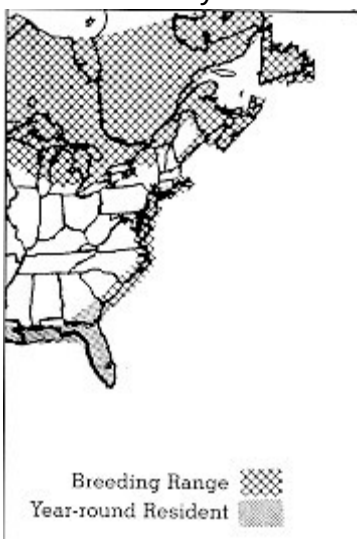
Federal Status: Not Listed

Description

The osprey is a large bird of prey measuring 22-25 inches (56-64 cm) with a wingspan of 4-6 feet (1.2-1.8 m). The sexes are nearly alike in plumage, but the female is slightly larger than the male. Adult plumage is dark brown above and white below. The white head has a dark crown with a characteristic dark brown streak on each side. Juvenile plumage resembles that of the adult, with buff to white tips on the feathers of the back and upper wing. In flight, the osprey's long, narrow wings appear to have a crook at the wrist where dark patches are also apparent.

Life History

Ospreys feed primarily on live fish, which they catch by using their long, hooked talons. An osprey sometimes plunges deep enough to momentarily submerge its entire body. The female lays one to four, but usually three, eggs in the spring in a large nest of sticks constructed at the top of a dead tree. Nesting platforms and other man-made structures are also commonly used. They also occasionally nest on the ground. The nest is often used year after year and can become quite large (up to 10 feet high!) as more material is added prior to each nesting season. The young fledge at about eight weeks of age, then remain in the area of the nest for about two months.



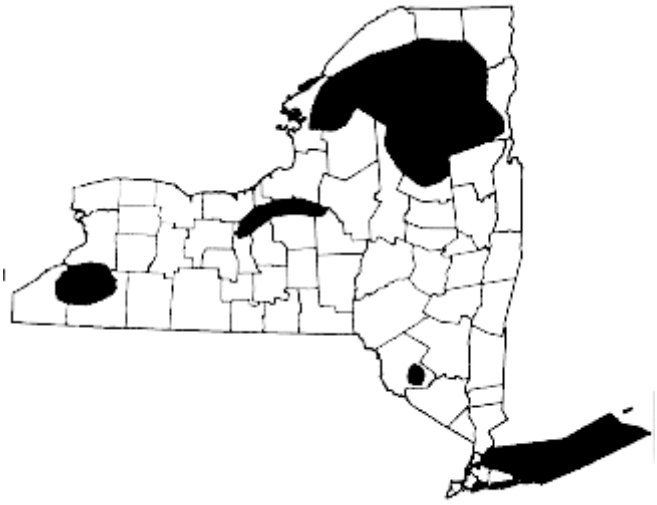
Distribution and Habitat

Ospreys breed on every continent except Antarctica. Only one of the five subspecies, Pandion haliaetus, occurs in North America. Here, its breeding range extends from

northwestern Alaska across Canada south to Baja California in the west and to the Gulf States in the east.

In New York, there are two main breeding populations, one on Long Island and the other in the Adirondack Mountains. Within its range, the osprey prefers to make its home along the coastline, and on lakes and rivers.

Status



Osprey Breeding Range in New York State

The decline of this species was caused by DDT-induced eggshell thinning, which reduced the reproductive output of breeding pairs. In turn, the breeding population declined from an estimated 1,000 active nests in the 1940's between New York City and Boston, to an estimated 150 nests in 1969. Since the ban of the insecticide DDT in New York in 1971, and in the rest of the country in 1972, the population has slowly been making a comeback. In 1995, there were 230 breeding pairs on Long Island alone. In 1983, the osprey was down graded to "Threatened" from its 1976 listing as "Endangered", and in 1999 it was down graded from "Threatened" to "Special Concern."

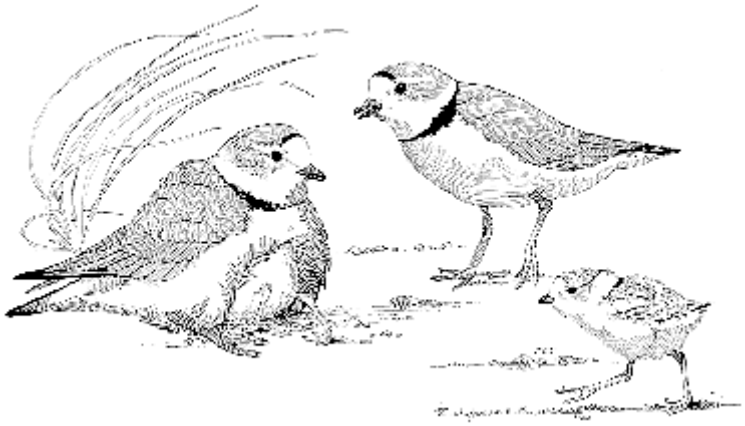
Management and Research Needs

The osprey is probably the longest studied and monitored raptor in New York. The New York State Department of Environmental Conservation (NYSDEC) monitors the status and productivity of the majority of New York's population. Each year, both ground and aerial surveys are conducted by NYSDEC to document osprey nests in the state.

From 1980-1987, the NYSDEC released 36 young ospreys taken from nests on Long Island in an attempt to establish a third or "satellite" population in southwestern New York. During the seven years of the project, 30 young ospreys were released into the wild. This has lead to successful nests in the area, including nine nesting pairs in 1998. There are also close to a dozen breeding pairs in central New York and one in Southeastern New York in Sullivan County.

Piping Plover Fact Sheet

Piping Plover
Charadrius melodus



New York Status: **Endangered**

Federal Status: **Threatened**

Description

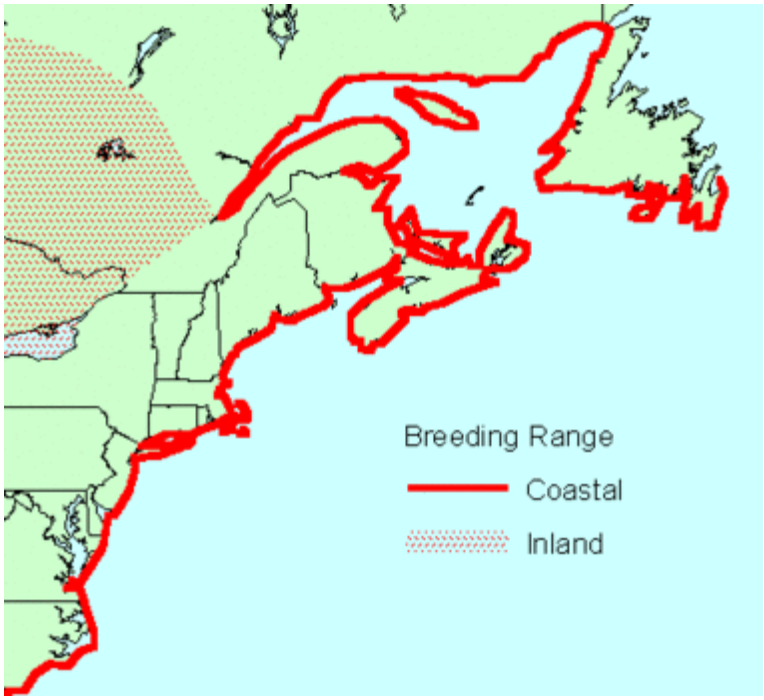
This pale shorebird with orange legs is the color of dry beach sand. It weighs 1.5 to 2.25 ounces (43-64 gm) and is 5.5 inches (14 cm) long. In spring and summer, it sports a single black neck band and a narrow black band across its forehead. In flight, the rump is white. The bill is yellowish with a black tip. The sexes appear similar in both size and plumage. The call is a melodious, organ-like, two to four note whistle. Piping plovers are seen singly or in small flocks.

Life History

The piping plover is the first of the shorebirds to arrive on the breeding grounds, starting from early to mid-March. Nests, which are shallow scrapes, are made during courtship and are sometimes lined with pebbles and/or shells. They are usually placed well above the high tide mark on open, generally grassless sand beaches or dredged spoil areas. During May and June, 1 egg is laid every other day until the average clutch of 4 eggs is complete. If the first nesting attempt is unsuccessful, a second or third clutch may be laid, often containing only 3 eggs. The piping plover often nests with a colony of least terns. Incubation by both sexes begins with the laying of the fourth egg and takes 25-31 days. The young are precocial and leave the nest shortly after hatching and fledge in about 28-35 days. By early September, all but a few stragglers have departed for their wintering areas.

Diet consists principally of marine worms, insect larvae, beetles, crustaceans, mollusks and other small marine animals and their eggs. Food is obtained by foraging on beaches, dunes and in tidal wrack. Data on the breeding behavior of piping plovers shows that some adults return to the same nesting area annually and may retain the same mate as well. One recaptured individual on Long Island was 14 years of age.

Distribution and Habitat



Piping plovers breed on dry sandy beaches or in areas that have been filled with dredged sand, often near dunes in areas with little or no beach grass. They occur along the Atlantic Coast from southwestern Newfoundland and southeastern Quebec south to North Carolina, and on inland beaches from eastern Alberta and Nebraska to Lake Ontario. Three populations currently exist: one along the east coast, another on the upper Great Lakes, and a third on the major river systems and wetlands of the northern Great Plains.

Within New York, this species breeds on Long Island's sandy beaches, from Queens to the Hamptons, in the eastern bays and in the harbors of northern Suffolk County. A single pair was also recorded in 1984 at Sandy Pond, Lake Ontario in Oswego County.

Piping plovers spend winters along the coast from Texas to North Carolina, and infrequently as far south as the Bahamas and Greater Antilles.

Status

This species was driven to near extinction around the turn of the century by extensive hunting for meat and sport. Protection since 1918 by the Migratory Bird Treaty Act allowed piping plovers to make a recovery by the mid-1920's. The population peaked in the 1940's, but declined once again due to development and recreation following World War II. Continued human pressures such as coastal development, recreational activities, and disturbance by off-road vehicles have reduced the available suitable breeding habitat for these birds. No population increases were recorded from the 1970's to the 1980's. However, recent surveys have estimated the Atlantic Coast population slightly higher at approximately 800 breeding pairs, about 200 of which nest in New York.

The piping plover is also listed as endangered in Maine, New Hampshire, New Jersey, Maryland, Indiana, Michigan, Minnesota, Wisconsin, Iowa, Ohio and Pennsylvania. It is threatened in the remainder of its range.

Management and Research Needs.

Survey groups from the New York State Department of Environmental Conservation, the Nature Conservancy, the Audubon Society and a network of concerned volunteers annually census the breeding colonies on Long Island. With the cooperation of private and public landowners, fencing and signs prohibiting entry have been erected to protect existing colonies from disturbance. Tern/plover stewards actively patrol and monitor nesting sites to increase nesting success and alert the public to the vulnerability of these species to human disturbance.

Red-headed Woodpecker Fact Sheet

Photo by USGS

Red-headed Woodpecker
Melanerpes erythrocephalus

New York Status: Special Concern

Federal Status: Not Listed

Description

Unique and unmistakable among the woodpeckers, the red-headed woodpecker has a bright red hood covering its head, neck, throat, and upper breast. It measures 7 to 10 inches (19 - 25 cm) in length with a long, chisel-like bill. Sexes are similar with white under parts contrasting the back, tail, and wings which are black with a blue or greenish sheen. Distinctive white secondaries are visible in flight and at rest. Juvenile has a brown neck and head in place of the red hood, and brown streaking on the rest of the body. It is one of only a few species of woodpeckers known to cache food in the winter, and the only one to cover its food stores with bark.

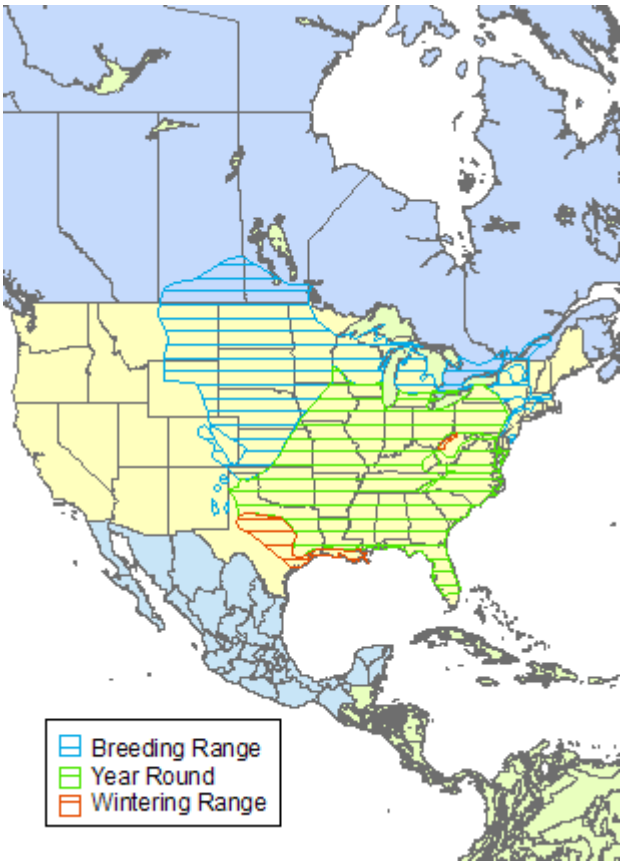
Life History

The red-headed woodpecker is both sedentary and migratory within its breeding range. It nests in the cavities of dead trees up to 80 feet above the ground. The male selects the

cavity site and both sexes share in building the nest and incubating the eggs. Clutch size is 4 to 8 eggs and parents will raise 1 or 2 broods per season. Incubation lasts 12 to 14 days and nestlings hatch completely naked and helpless. Young fledge at 27 to 30 days and will remain near the nest site until they are driven away by parents raising a second brood. The red-headed woodpecker is the most omnivorous of all North American woodpeckers and has a diverse diet of seeds, nuts, fruit, insects and animals such as nestlings and mice.

Distribution and Habitat

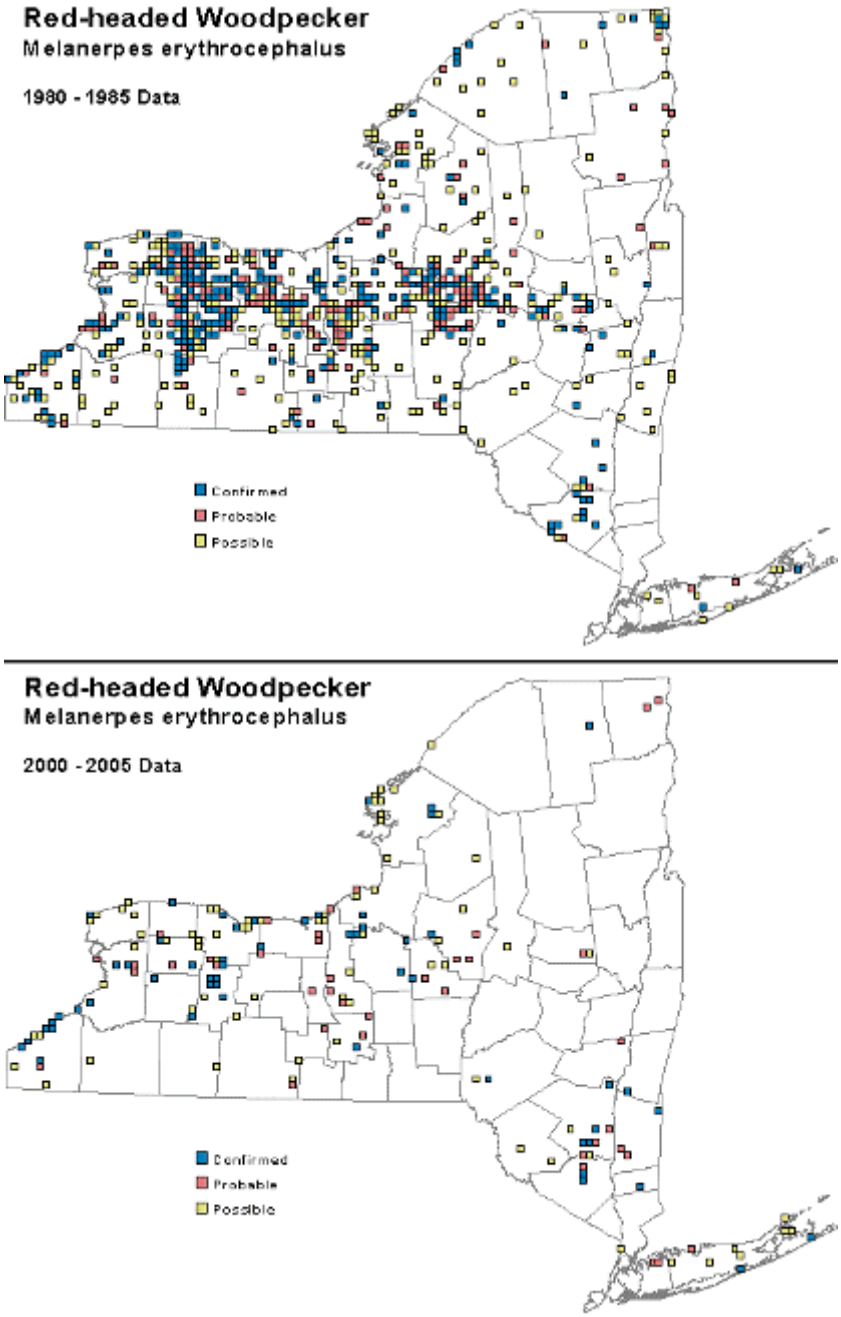
Red-headed Woodpecker Range



This species range extends from southern Canada to the Gulf coast through the eastern and central United States east of the Rocky Mountains and west of the New England states. Winters in the southern parts of its breeding range. Its breeding habitat is characterized by the presence of dead trees for nest sites, snags for roosting, and open ground for foraging. Prefers river bottoms, wooded swamps, and open grasslands with scattered trees.

Status

Historically the bright plumage of the red-headed woodpecker made it a popular target for hunters. Today it is a locally common breeder in the lowland areas of New York State. It was formerly more abundant but has suffered population declines throughout much of its breeding range. Breeding Bird Atlas results for New York illustrate this trend with red-headed woodpeckers being detected in significantly fewer blocks during the second atlas than in the first.



Distribution of Red-headed Woodpecker in New York from 1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

Population declines of the red-headed woodpecker are thought to be due primarily to competition with European starlings (*Sturnus vulgaris*) for nesting cavities, and collision with vehicles while foraging for insects along roadsides. Agricultural pesticide use can also inhibit red-headed populations. Habitat loss resulting from forest regeneration, fire suppression, and agricultural development is also a concern.

Red-shouldered Hawk Fact Sheet

Red-shouldered Hawk
Buteo lineatus

New York Status: **Special Concern**

Federal Status: Not Listed

Description

The red-shouldered hawk is a slim, narrow-winged, long-tailed buteo. It obtains prey by still-hunting from perches and scanning the ground below. The 17- 24 inch (43-61 cm) adult is blackish-brown above with extensive black and white checkering, especially apparent on the wings. Rufous streaking and edging is apparent all over the body, but is most evident on the shoulders. The tail is blackish with three or four narrow white bands. The breast, belly and wing linings are rufous with black streaks. Immatures are brownish above with little or no rufous coloring. Their undersides are cream-colored, heavily streaked, and blotched with dark brown. The tail is brownish-gray with narrow, light bands. From courtship to the start of incubation red-shouldered hawks scream a loud "kee-yar;" during the remainder of the year they are predominantly silent.

Life History

During the courtship display, one to four birds may soar together. They flap, swoop and descend while calling before diving to the original perch. They may rise in wide spirals 1,500 to 2,000 feet above the nest. The male and female build a nest together. It is usually placed in the crotch of the main trunk of a tree, 20-60 feet high. It is made of sticks and twigs, lined with strips of inner bark, fine twigs, dry leaves, evergreen sprigs, feathers and down. The clutch averages three eggs. Incubation lasts for 33 days and the young fledge in 39-45 days. First breeding usually occurs at two years of age.

Distribution and Habitat

Red-shouldered hawks breed east of the Great Plains from southern Canada to the Gulf Coast, west along the Gulf to central Mexico. An isolated population breeds in California. Wintering occurs south of Canada, though sparsely so in the northern states. In New York, nesting populations were found in the Appalachian Plateau, Catskill Peaks, the Delaware, Mongaup and Rensselaer hills, the Tug Hill Plateau, and Lake Champlain Valley.

Confirmed Breeding Blocks
Atlas of Breeding Birds in New York State*

This raptor breeds in moist woodlands, riverine forests, the borders of swamps, open pine woods and similar habitats. Nesting almost always occurs near water, such as a swamp, river or pond.

Status

This hawk was once the most common large hawk of central and western New York. However, in recent years New York populations have declined. Biologists have found it difficult to determine if the change in historic data represents a shift in the breeding range or an actual population decline. The primary problem facing this species is loss of habitat. Since European settlement in the 17th century and especially since the 19th century, the favored closed canopy forests have been cut for logging, agriculture, and urban and suburban development.

Disturbances from humans in the form of off-road vehicles, hunters, horseback riders and suburbanites in general have pushed red-shouldered hawks into the deepest, wildest areas left. Although some members of this species seem to be unaffected by humans, most are secretive and avoid inhabited areas. In 1999, the red-shouldered hawk was down graded from "Threatened" to "Special Concern."

Management and Research Needs.

In many regions of New York, farms are being abandoned and their fields are reverting to forests. In the early 1900's, about 75 percent of the state was cleared or open for farming. Today, more than 61 percent is forested. While this creates more potential habitat for red-shouldered hawks, not all of this land may be suitable. The Allegheny National Forest Land and Resource Management Plan contains guidelines for protecting nests, including

reducing disturbances near nest sites, minimizing habitat change, and closing roads to public use during the breeding season.

Roseate Tern Fact Sheet

Roseate Tern

Sterna dougallii

New York Status: **Endangered**

Federal Status: **Endangered**

Description

The roseate tern is a graceful bird, 14 to 17 inches (36-43 cm) long, with a wingspan of about 30 inches (76 cm). It resembles the common tern. Its back and upper wings are a light pearly-grey, while its underparts are white. The tip of the white tail extends well beyond its wing tips when the bird is at rest. In the summer it has a black cap, nape and bill. Juveniles have prominent dark "V" s on the feathers of the back. The flight of this bird is distinctive, with rapid, shallow wingbeats of equal emphasis on the upstroke and downstroke. Its call is a rasping "z-aa-p" or a soft, two-syllabled "chivy." Roseate terns feed primarily on American sand lance, a small marine fish.

Life History

Roseate terns arrive on the breeding grounds in late April or early May and begin nesting one month later. In New York, roseate terns are always found nesting with common terms. The nest may be only a depression in sand, shell or gravel, and may be lined with bits of grass and other debris. It is usually placed in dense grass clumps, or even under boulders or rip-rap. Both adults incubate the eggs for about 23 days, and the young fledge in 22- 29 days. One brood per season is typical, although two broods are sometimes produced. Migration begins in late summer. One banded individual from Great Gull Island, New York was 9 years old when recovered.

Distribution and Habitat

A marine coastal species, the roseate tern breeds. along the coasts of the Atlantic, Pacific and Indian oceans on salt marsh islands and beaches with sparse vegetation. In eastern North America, it breeds. from the Canadian Maritime Provinces south to Long Island, although formerly the breeding range extended to Virginia.

In New York, this species breeds only at a few Long Island colonies. The largest colony, more than 1,000 pairs, is located at Great Gull Island off eastern Long Island.

Status

During the 1870's and 1880's, the roseate tern was in serious danger of extirpation from its range in the northeastern U. S. due to hunting for the millinery trade. Protection since 1918 under the Migratory Bird Treaty Act allowed this tern to recover in the 1920's and 1930's.

Threats to roseate tern populations include vegetational changes on the breeding areas, competition with gulls for suitable nesting areas, and predation. The increased presence of humans has contributed to higher predation rates. Predators such as raccoons find tern nests when they are attracted to the garbage left behind by careless beach users.

The roseate tern population is estimated to have fallen by 75% since the 1930's. Recent survey data indicates that 87% of the birds in New York nest in only one colony at Great Gull Island.

Management and Research Needs.

Status and distribution of roseate tern populations is monitored annually by the New York State Department of Environmental Conservation in cooperation with the American Museum of Natural History, The Nature Conservancy and other researchers. A critical research need is to better understand the species' wintering habits and survival. One of the highest priorities in the Recovery Plan prepared by the U. S. Fish and Wildlife Service is to extend the species range by restoring some of the historic breeding areas. A recent success in New York was the nesting of roseate terns and 60 pairs of common terns on Gardiners Point Island in 1995. This site supported no terns when habitat management began in 1990.

Seaside Sparrow Fact Sheet

©Philip Jeffrey Photography

Seaside Sparrow
Ammodramus maritimus

New York Status: Special Concern

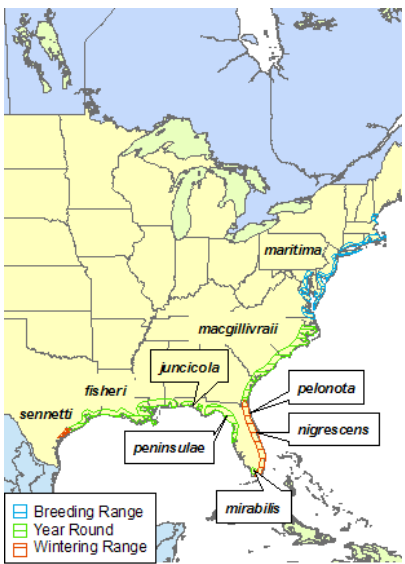
Federal Status: NY Subspecies (*A. m. maritima*) - Not Listed, Cape Sable Seaside Sparrow (*A. m. mirabilis*) - Endangered

Description

Appropriately named, the seaside sparrow is a salt marsh specialist with 9 recognized subspecies throughout its range along the Eastern and Gulf coasts of North America. One subspecies, the dusky seaside sparrow (*A. m. nigrescens*), became extinct in 1987 when the last remaining individual in captivity died. The seaside sparrow is distinguished from other sparrows by its overall gray coloring, large size and long, conical bill. Sexes are alike with distinct yellow markings above the eye, on the supercilium, and on the edge of wing at wrist. Adult measures 5 to 6 inches (13 - 15 cm) with a short, spiky tail. Similar to the sharp-tailed sparrow (*Ammodramus caudacutus*) but the seaside sparrow is larger and grayer. The juvenile is similar to adult with less streaking and brown upper parts.

Life History

Males arrive on breeding marshes approximately one week before females beginning in late March. Pair bonds form immediately after the arrival of the females. Males actively defend their territories and engage in combat with other males who invade their territory. Nesting may continue until mid-July and renesting is common after failed nest attempts. The female alone builds the nest and incubates the clutch of 2 to 5 eggs. The nest is an open cup of grasses often constructed in tall vegetation in the wettest part of the marsh. Pairs are monogamous and territorial throughout the breeding season but will feed well outside of the defended territory.



Young leave the nest after 9 to 11 days and usually form loose flocks with other fledglings and juveniles near feeding areas.

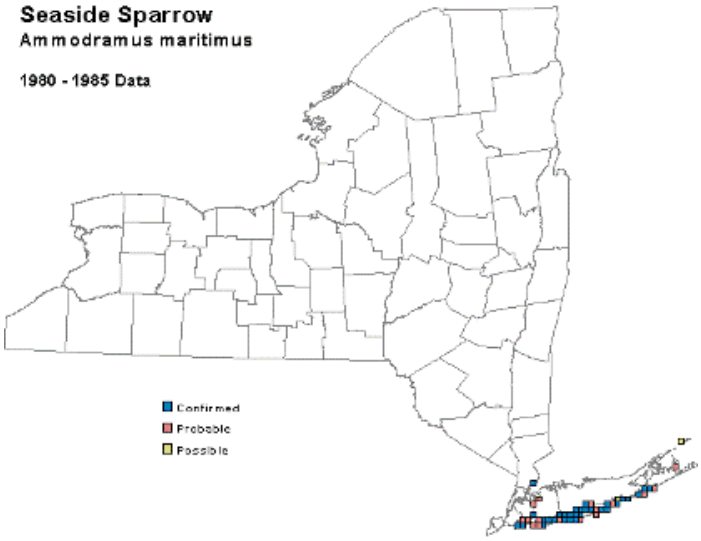
Distribution and Habitat

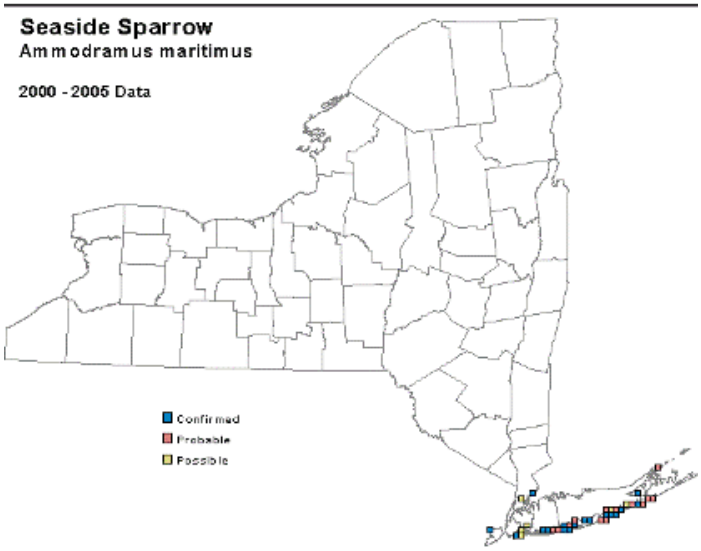
Seaside Sparrow Range

The seaside sparrow has a very limited breeding range that extends along the Atlantic Coast from New England to northern Florida. Breeding populations within this range are discontinuous and localized. In New York, the seaside sparrow is a rare and local breeder restricted mainly to the maritime area. The largest tract of suitable habitat is found on the barrier islands that line the south shore of Long Island. Year round populations are found along the Gulf Coast of Florida west to Texas, and along the Atlantic Coast from Florida north to the Carolinas. Populations in the northeast are migratory. Habitat requirements for the seaside sparrow include elevated vegetation for nesting and open areas for foraging of insects.

Status

Habitat alteration is the most likely reason for the decreased abundance of the seaside sparrow in Long Island over the last half century. Alterations and fragmentation of habitat is widespread throughout this species range. Changes in Breeding Bird Atlas data over 20 years illustrate that the breeding population is becoming less widespread. It is listed as a Watch List species by the National Audubon Society.





Sedge Wren Fact Sheet

Sedge Wren
Cistothorus platensis

New York Status: Threatened

Federal Status: Not Listed

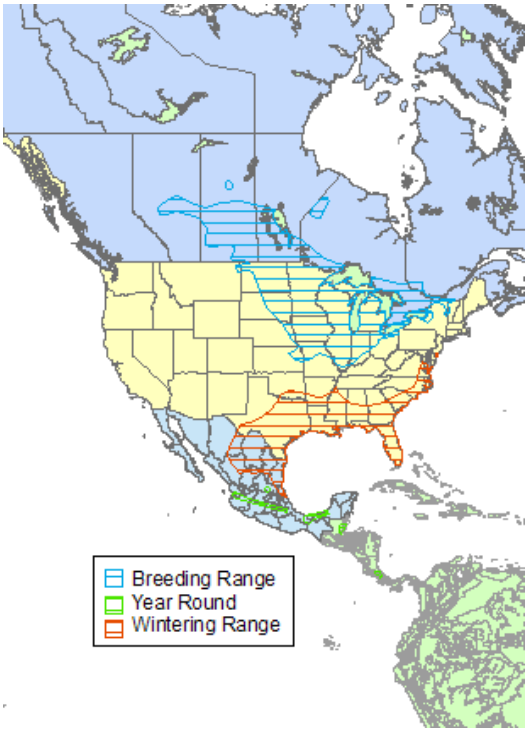
Description

Photo by National Park Service

Formerly known as the short-billed marsh wren, the sedge wren is a rare and local breeder found in wet fields and marshes. It is a small wren measuring 4 to 5 inches (10 - 12 cm) with brown upperparts, buff to white underparts and pale streaks on the back and crown. Sexes are similar and the juvenile is similar to adult except darker above. Tail is short with black barring and held upright. Distinguished from other wrens by lack of white eye stripe and its song which is a distinctive trill preceded by 2 or 3 chips.

Life History

Males arrive on breeding grounds before the females and establish territories that are used for courtship, nesting and foraging. Males will construct multiple nests within their territory and the female will choose one for nesting and line it with grasses, feathers and fur. The nest consists of a ball of woven grasses at a height of 10 to 90 cm above the ground and within close proximity to muddy ground or shallow water. Both males and females will destroy the nests of conspecifics and other species nearby by piercing the eggs with their sharp bills. The female will lay a clutch of 2 to 8 eggs which she alone will incubate for 13 to 16 days. Young hatch completely naked and blind and are cared for mostly by the female although the male may participate in



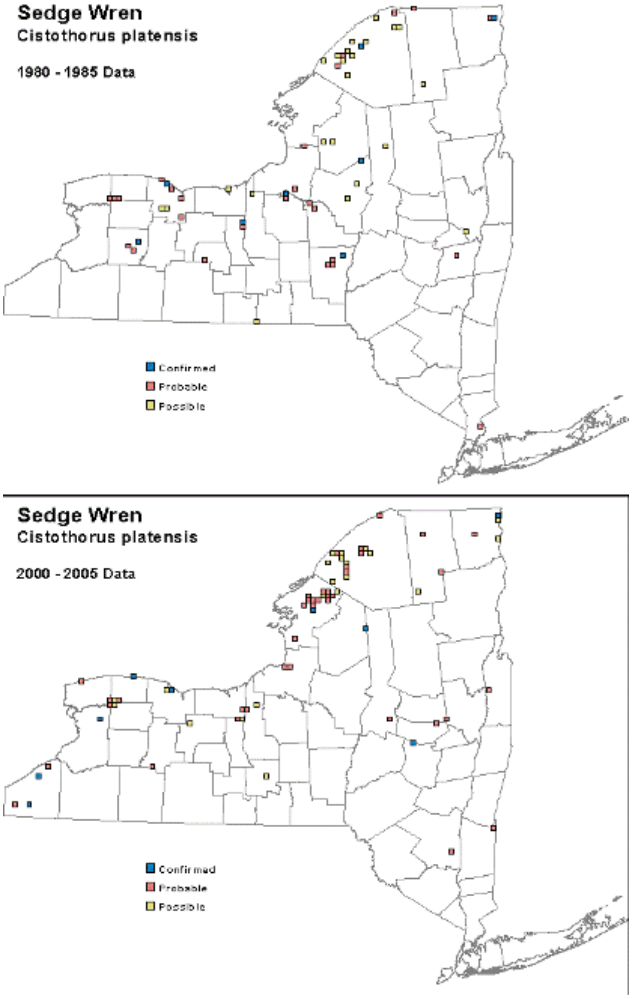
some of the feeding. After 12 to 14 days the young will leave the nest but remain in the nesting area until fall migration.

Distribution and Habitat

As its name implies, the sedge wren breeds in wet meadows or hayfields dominated by sedges and grasses. A short distance migrant, the sedge wren winters in the southeastern United States and breeds in the north central U. S. and central Canada. The wintering range extends from coastal Virginia south to Florida and west to southern Oklahoma, Texas and eastern Mexico. The breeding range covers southern Canada and the north central United States west to eastern Montana, and east to New York. The sedge wren exhibits low site fidelity to nesting sites due to their sensitivity to changes in water level and vegetation.

Status

Previously listed as a species of special concern, the sedge wren is now considered a threatened species in New York State. It is a very rare and local breeder and has experienced population declines throughout its breeding range. New York records are mostly from the St. Lawrence Valley and the Lake Ontario Plain. In the northeast the sedge wren is a species of management concern.



Distribution of Sedge Wren in New York
from 1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

The biggest threat to sedge wren populations is the loss of breeding habitat due to the draining of wetlands. Further research is needed on the extent of movement by sedge wrens during the breeding season.

Short-eared Owl Fact Sheet

Short-eared Owl
Asio flammeus

New York Status: **Endangered**
Federal Status: Not Listed

Description

Short-eared owls are medium size owls with small ear tufts that appear as two ridges along the top of the head. They have round, beige facial disks similar to those of barn owls. The underparts are white/buffy (male) or tawny/rust (female), and streaked with brown, while the back is brown and mottled with white. When perched the wings extend beyond the tail and in flight the undersides of the wings show dark markings on the wrists and primary tips. The short-eared owl's flight is frequently described as "moth or bat-like" because it flies low over grasslands or marshes, moving back and forth with unhurried, irregular wingbeats.

Short-eared owls are the most diurnal of all the northeastern owls. They are most often observed in the late afternoon and at dawn or dusk. These birds eat primarily small mammals, but they occasionally take small birds and the young sometimes eat insects. When hunting short-ears dive from perches or fly low over the ground and pounce on prey from above, sometimes hovering briefly before they drop.

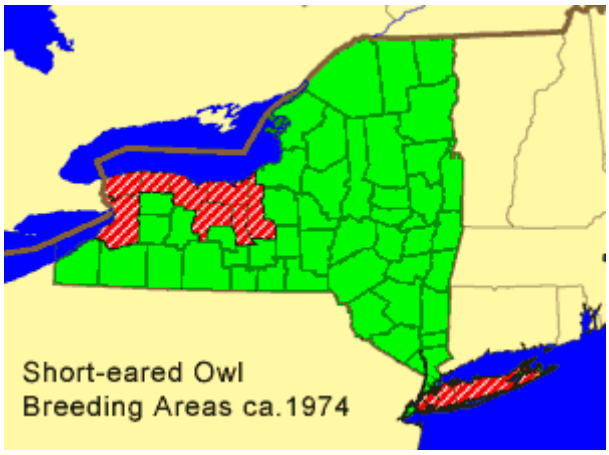
Life History

Short-eared owls opportunistically inhabit areas where small mammals, especially meadow voles (*Microtus pennsylvanicus*), are abundant. Their breeding sites, the number of wintering birds, the number of nesting pairs, and the number of eggs or young may change from year to year based on the food supply. Breeding begins in March when both sexes begin defending territories and courting

with elaborate flight displays that include wing-clapping, exaggerated wing-beats, and skirmishing. Nests are placed on the ground where the female creates a cup and lines it with grasses and down. Four to nine eggs are typical, but clutches as large as fourteen have been reported in years of peak small mammal abundance. Incubation, which is done by the female alone, lasts about a month. The eggs hatch asynchronously and fledging occurs about a month later.

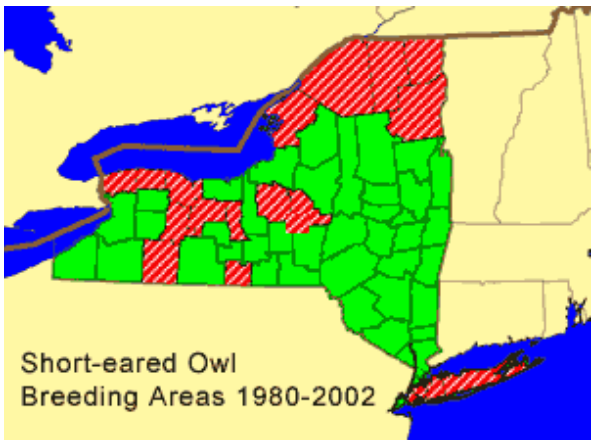
In winter short-eared owls gather in open habitats that support large numbers of voles. When food is abundant they may form large communal roosts of up to 200 birds in sheltered sites ranging from conifers to stump piles to abandoned quarries. Deep snow and ice may reduce the availability of prey locally and cause the owls to abandon wintering areas occupied earlier in the season. However, where food remains plentiful into the spring and summer, wintering areas may become breeding sites.

Distribution and Habitat



Short-eared owls are widely distributed breeding in marshes, grasslands, and tundra throughout North America and Eurasia, and on every continent except Australia. They are also found on islands such as Iceland, the Hawaiian Islands, the Greater Antilles, and the Galapagos. They are birds of open county. Within their extensive global range they occur wherever small mammals are abundant, favoring habitats such as prairies, coastal grasslands, heathlands, shrub-steppe, and tundra.

Although there are scattered breeding records in the east as far south as Virginia, New York is at the southern edge of this owl's breeding range. Northern populations are believed to be highly migratory, and there is a marked increase in the number of birds in New York in the fall and spring. Short-eared owls are more common as winter residents than as breeders. They winter in significant numbers in the Finger Lakes and the Lake Ontario lake plain, especially in Jefferson County, at a few scattered sites in the Hudson Valley, and on the south shore of Long Island. As breeders they are very rare, being limited to the St. Lawrence and Lake



Champlain Valleys, the Great Lakes plains and the marshes of Long Island's south shore.

Status

Early in the twentieth century Eaton called the short-eared owl "one of our commonest owls" outnumbering all other owls in lowlands and marshy areas. By 1974 it was already considered a local breeder, declining in numbers. A comparison of historical and modern breeding records show that this species may have been lost as a breeder from eastern Suffolk County and the upper Hudson Valley. However, in the last 20 years new breeding sites have been documented in the St. Lawrence and Champlain valleys and east of Lake Ontario.

In the Northeast region five of the thirteen states list short-eared owls as endangered while two others include them on their state lists at lower levels of conservation concern. Historically these owls bred in at least eight states in the Northeast but today they nest only in Massachusetts, New York, Vermont, and Pennsylvania. Most biologists believe reforestation and the loss of open habitats are largely responsible for this decline.

Management and Research Needs

Short-eared owls have probably never been common as breeders in New York but our knowledge of their status and distribution may be incomplete because they occur in some parts of the state that are sparsely populated, breed early in the season, and hunt late in the day. Targeted surveys in appropriate habitats near wintering areas might shed new light on this bird's status and distribution as a breeding species in New York.

The conservation of short-eared owls in New York depends on protecting relatively large, open sites that support small rodents. Except for a few large marshes, most of the nest sites recorded in recent years have been found on farms, typically in active hayfields or pastures where the nests and young birds are sometimes mowed or plowed. Once abandoned, agricultural sites rapidly become unsuitable for owls because they succeed to woodlands or are replaced by development. In order to protect short-eared owls it will be necessary to identify suitable nesting sites that can be managed for small rodents and owls. Such management will likely have the added benefit of protecting other imperiled grassland birds with similar habitat requirements.

Spruce Grouse Fact Sheet

Spruce Grouse
Falcipennis canadensis

New York Status: **Endangered**

Federal Status: Not Listed

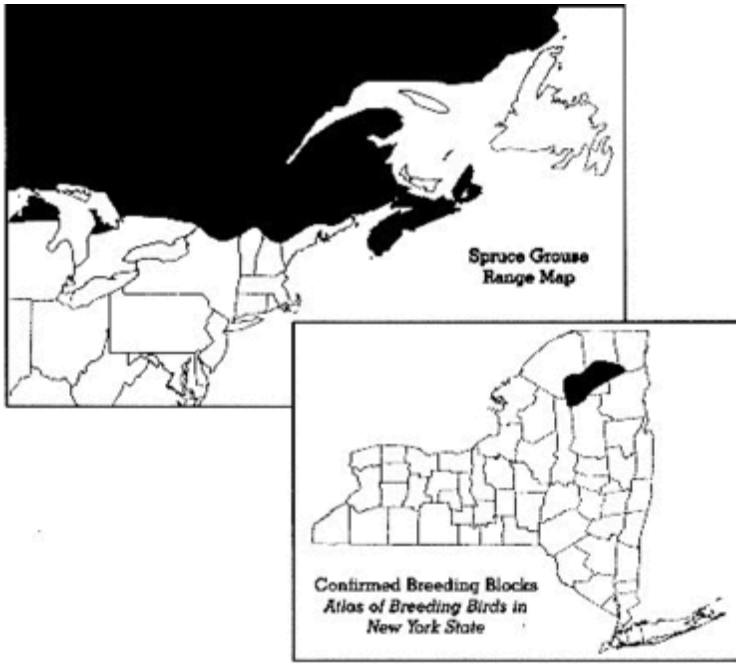
Description

Spruce grouse are a smaller, darker cousin of the ruffed grouse (*Bonasa umbellus*). Nicknamed "fool hen" for its lack of fear of humans, spruce grouse allow humans to approach within a few feet before flying. They apparently depend on their protective coloration to conceal them. Measuring 15-17 inches (38-43 cm) in length, the male is black on the upper breast and throat, has a brown or blackish tail tipped with chestnut, white-tipped undertail coverts, a finely barred gray and black rump, and a crimson comb above each eye. The female is brown overall with black barring. She also has the chestnut terminal tailband. Feathering on both sexes extends to the base of the toes. This species feed mostly on needles and buds of spruce, jack pine, fir and larch, as well as berries, seed, mushrooms, leaves and some insects. In the winter months, however, the diet shifts to the foliage of coniferous trees only. This shift is accompanied by an increase in the size of the gastrointestinal tract to digest the foliage.

Life History

Males of this species are polygynous (mate with several females). Females defend their own nesting territories from other females and take on all of the parental duties. The male displays away from the nesting areas to females moving through his territory. His display consists of strutting, tail-spreading and periodic short flights with exaggerated wing beats. The females build a nest of twigs, grasses and leaves in a shallow depression beneath low hanging branches or beside a fallen tree. A clutch of four to seven eggs is incubated for 17-24 days. The young are precocial and fledge in only 10 days.

Distribution and Habitat



Spruce grouse range across northern North America in the area generally congruent with the coniferous boreal forests. The limit of trees at the edge of the tundra is the northern edge of the range. The southern edge of the range occurs where coniferous forests dip into the northern United States, in New England, New York, the northern Midwest and the Northwest. In New York, the population is concentrated where Franklin and St. Lawrence counties meet in the Adirondack Foothills.

Within this range, spruce grouse prefer early to mid-successional stage coniferous forests of primarily spruce and fir, especially with an understory of blueberries and other ericaceous plants, with scattered openings of a few hundred square feet. Low, wetland areas are preferred as well.

Status

In the late 1800', this species was quite common in Herkimer, Hamilton and Franklin counties. Today, populations remaining in the Adirondack Mountains are fragmented and sparse. The reduction and fragmentation of spruce-fir forests in the Adirondacks (45 to 50 percent) due to historical logging and the maturation of remnant stands is probably most responsible for decline of this species. Accidental shooting of female spruce grouse by hunters also poses a threat to survival of small and disjunct populations. The ease with which this bird can be killed most likely had an impact on the population size. Development and settlement in previously unpopulated areas and flooding of large wetland areas to create lakes and reservoirs also played important roles, as did habitat loss due to selective logging of softwoods and interspecific competition with the ruffed grouse.

Researchers at the State University of New York - College of Environmental Science and Forestry at Syracuse, who have been monitoring spruce grouse populations since the mid 1970', estimate the state breeding population at 175-315 individuals. The precarious nature

of populations within the Adirondacks has led to the formation in 1992 of the Spruce Grouse Recovery Team by the New York State Department of Environmental Conservation. The goal of this team is to ensure the long term survival of viable populations of spruce grouse and their associated boreal forest community in New York.

Management and Research Needs

The Spruce Grouse Recovery Team has identified various management and research actions needed in order to protect, maintain and enhance spruce grouse populations and their habitat. Some examples include: (1) protection of currently occupied sites, (2) education of the general public and hunters to the status, recognition and concern for spruce grouse, (3) development of management plans to enhance and increase spruce grouse habitat and (4) consider experimental releases of spruce grouse into suitable but unoccupied habitats.

Upland Sandpiper Fact Sheet

©Philip Jeffrey Photography

Upland Sandpiper
Bartramia longicauda

New York Status: Threatened

Federal Status: Not Listed

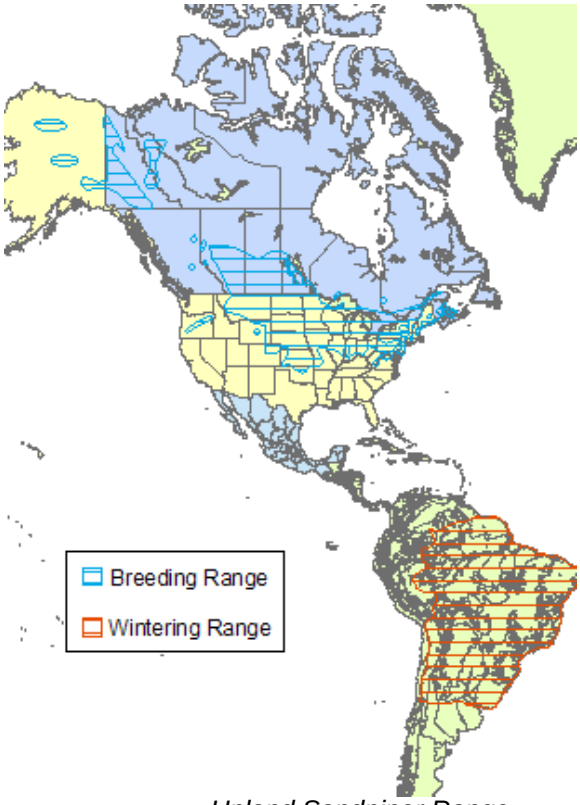
Description

Referred to as the shorebird of the prairies, the upland sandpiper spends little time near water and is an obligate grassland species. The adult measures 28 - 32 cm (11 - 13 inches) with a long, thin neck and small head with large, dark eyes and white eye ring. It is a medium-sized sandpiper with long, yellow legs and a short, thin bill. Adults buff above with dark brown barring. Sexes similar. In flight the dark outer wings contrast with light under wing coverts. Commonly perches on fence posts with wings raised after alighting. Tail is proportionally long and extends past wingtips while perched. Juvenile is similar to adult with

a pale head. The call of the upland sandpiper is unique and commonly referred to as a wolf whistle.

Life History

The upland sandpiper returns to its breeding grounds in early spring, arriving in New York by late April. Pairs arrive together or form immediately after arrival and remain in loose colonies for nesting. Nest preparation begins approximately 2 weeks after arrival. Age at first breeding is one year and pairs rear only one brood per season. Pairs construct nests on the ground, using clumps of grass or other vegetation for cover. A clutch of 4 eggs is laid and incubated by both parents for 21 - 29 days. Chicks are precocial and leave the nest within 24 hours of hatching. Age at fledging is 30 days. Pair remains together for one week after hatching and then the female leaves. Chicks are able to procure their own food within a few days of hatching. Diet consists almost entirely of flying insects but will also feed on other small invertebrates. Glean insects from ground while walking. It is an early fall migrant and leaves New York for wintering grounds by mid September.



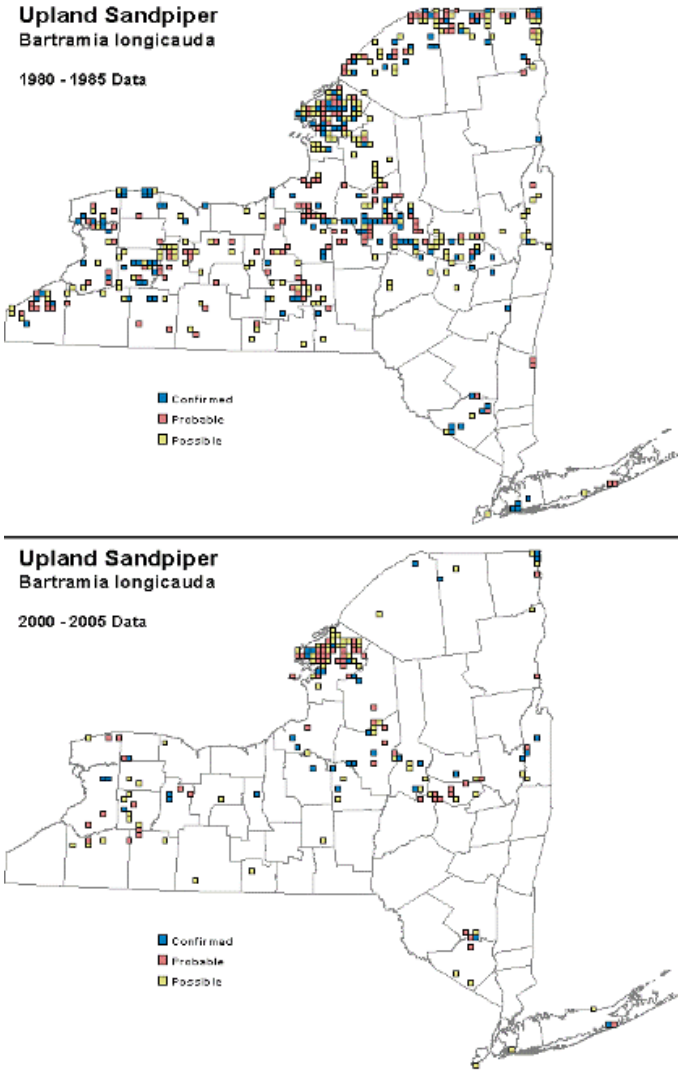
Upland Sandpiper Range

Distribution and Habitat

Breeding range extends from southern Canada south through the central plains states from the Rocky Mountains east to the Appalachian Mountains. In the northeastern United States populations are declining due to loss of grassland habitat. Historically the upland sandpiper was reported as a locally common breeder in parts of New York. Today the state population is restricted to remaining grassland habitats of the St. Lawrence Valley in Jefferson County, and the Mohawk Valley. Remains an uncommon breeder throughout the state in agricultural areas and grasslands surrounding airports. Breeding pairs have been reported at John F. Kennedy International Airport since 1969.

Status

During the late 19th century, the upland sandpiper population suffered pressure from market hunters after the extinction of the passenger pigeon (*Ectopistes migratorius*). Across the northeast population declines have coincided with the loss of grassland habitat since the mid 1900s. Once a locally common breeder in the mid Hudson and Mohawk valleys and agricultural areas of New York, the upland sandpiper is now considered to be an uncommon breeder and migrant in most parts of the state.



Distribution of Upland Sandpiper in New York from 1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

Population declines across the northeast are the result of habitat loss. Grassland area across the state has decreased over the last 30 years as a result of development, vegetative succession, and a reduction in pasture and hayfields. Management efforts for the upland sandpiper and other grassland birds in New York have focused primarily on the preservation of open grasslands. Maintaining large, contiguous tracts of grasslands and preventing the encroachment of woody vegetation are important to preserving upland sandpiper habitat. Mowing, plowing, and burning of fields should be avoided during the nesting season. Further research needed on the use of airports by nesting pairs.

Vesper Sparrow Fact Sheet

© *David Seibel Photography*

Vesper Sparrow
Pooecetes gramineus

New York Status: Special Concern

Federal Status: Not Listed

Description

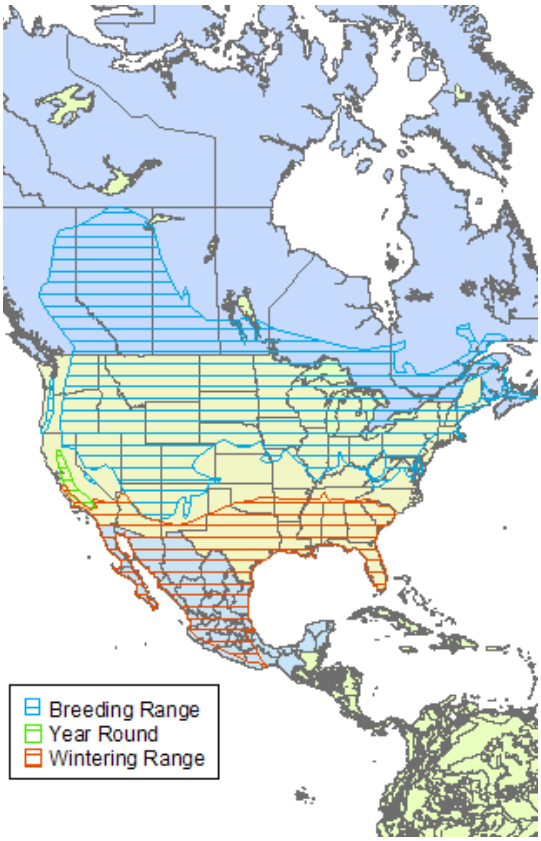
The vesper sparrow is a large to medium sized (15 cm) grassland sparrow that is named for its tendency to sing just before dusk. It is grayish brown above and whitish below with dark blackish brown streaking. One of its most distinguishing features is a pale wedge shaped area extending from the malar to the rear of the ear-coverts. It also has a narrow white eye-ring, rufous lesser wing-converts, and longer tail then similar sparrows. Sexes are alike and plumage is similar throughout the year. Juveniles are similar to adults but their plumage contains little to no rufous coloration. It can distinguish from the song sparrow by larger size, shorter tail, and paler coloration. Also has a larger, stocker build then the savannah sparrow and has a grayish-brown crown lacking a median stripe.

Life History

The vesper sparrow is an early spring migrant with males arriving in New York in late March and females arriving within a week of the males. The nest is built by the female alone. Nests are constructed on the ground often under or at the base of vegetation. It is woven out of grasses and lined with fine grasses, feathers, and hair. Pairs commonly raise 2 broods per season. Clutches contain 3 to 5 eggs and the female incubates for approximately 13 days, although males may occasionally incubate. Young hatch completely naked and both the male and female feed young. The male often takes over feeding completely when the female starts the second brood. Fledging occurs at approximately 9 to 10 days old with the young depending on their parents for 20 to 30 days after fledging.

Distribution and Habitat

Vesper Sparrow Range



This species breeding range extends north to south from Alberta, Canada to central Arizona and east to west from Nova Scotia to Oregon. Its wintering range extends north to south from central California to central Mexico and east to west from Florida to California. The vesper sparrow was likely uncommon in Eastern North America prior to European settlement. Populations peaked in the late 19th and early 20th century as a result of forest clearing. They have experienced significant declines as forest regeneration and farmland abandonment progress in the northeast. This species is unique in that it requires patches of bare ground within its breeding territory, making severely disturbed habitats such as reclaimed mines, overgrazed pasture, and row crops potentially suitable. It prefers shorter grassland areas and often occupies native prairies, pastures, haylands and semidesert forests.

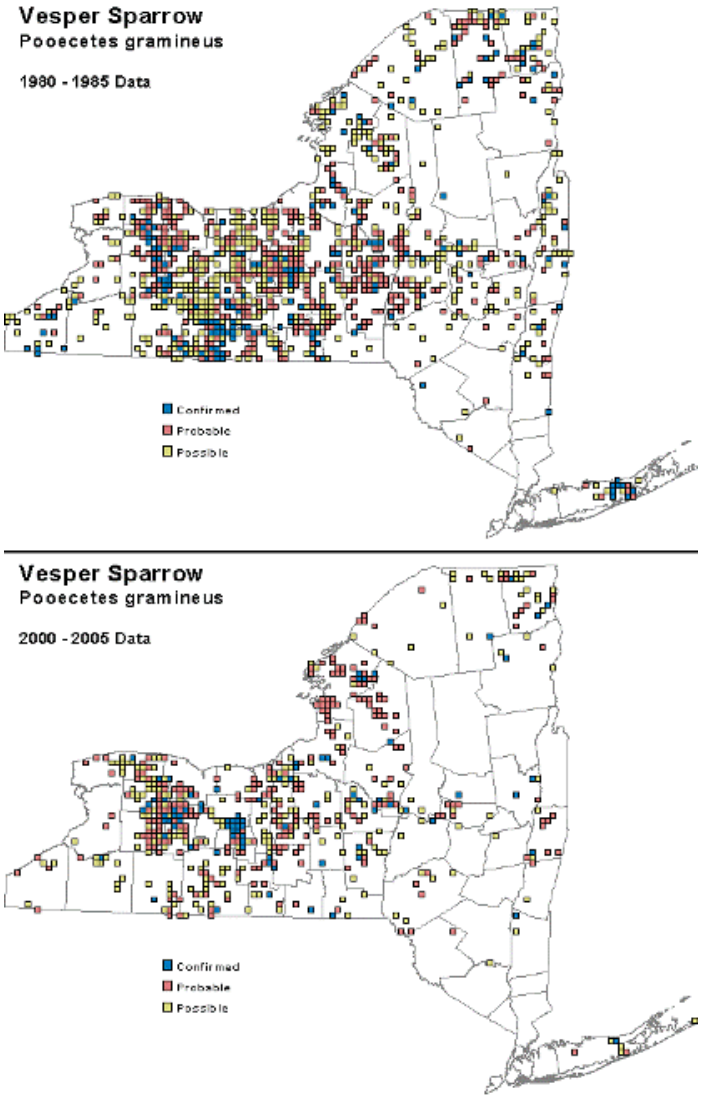
Status

In New York it is most commonly found in the Erie-Ontario Plain and the Central Appalachians. The second New York State Breeding Bird Atlas yielded a 49 percent decline in detection from the first atlas. This species is not currently identified as a species of specific conservation need by Partners in Flight, but is listed as Threatened or Endangered in several eastern states including Massachusetts, Connecticut, and New Jersey. It continues to decline throughout much of its range.

Distribution of Vesper Sparrow in New York from
1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

Research is needed to evaluate management practices that could increase habitat. These include prescribed burns, livestock grazing, and mine reclamation. Evaluations of the effectiveness grazing regimens and reclaimed mines have yielded conflicting results.



Whip-poor-will Fact Sheet

©Philip Jeffrey Photography

Whip-poor-will
Caprimulgus vociferous

New York Status: Special Concern

Federal Status: Not Listed

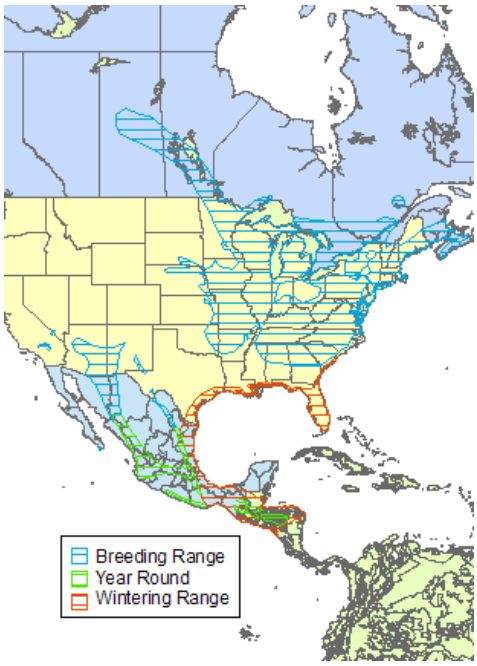
Description

The whip-poor-will, named for its distinctive call, is more commonly heard than seen. A crepuscular bird, it is most active at dawn and dusk. During the day it roosts on the low limbs of trees where it is well-camouflaged. Unlike most birds, the whip-poor-will roosts with its body parallel to the branch. A medium sized nightjar, the whip-poor-will measures 8 to 10 inches (22 - 26 cm) in length with a very short bill and long, rounded tail and wings. Cryptic coloring makes this ground-nesting bird very difficult to detect. Upper parts are mottled gray, black, and brown; while the under parts are pale with gray and black spotting. The black throat is bordered by a white necklace in males and a buff colored necklace in females. Males also have white tips on the outer tail feathers. Large eyes are used for locating prey at night. Whip-poor-wills feed exclusively on night-flying insects such as moths, beetles, and mosquitoes.

Life History

Males establish and maintain territories at the beginning of the breeding season. A clutch of 2 eggs is laid directly on leaf litter on the ground. Incubation is shared by both parents and lasts 19 to 21 days. Parents do not actively defend the nest or their territory but will remain on the nest until a disturbance comes within 1 meter. Chicks are downy and precocial at the time of hatching and nestlings fledge at 15 to 20 days. Females will occasionally leave when chicks are 7 to 9 days old to start a second brood nearby. Breeding is synchronized with the lunar cycle so that young hatch before a full moon. This maximizes foraging time for parents when the feeding demands imposed by the newly hatched young are highest.

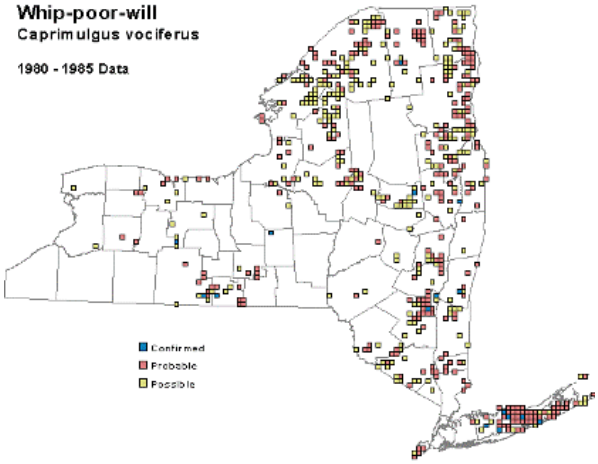
Distribution and Habitat

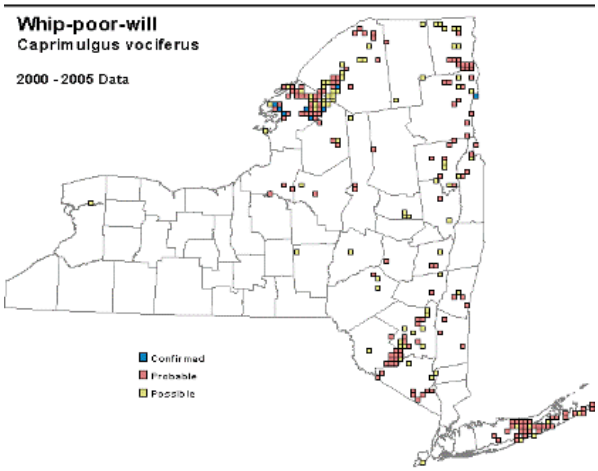


The breeding range extends from central Canada east to the Atlantic coast and south to Oklahoma and Georgia. Winter range includes the southeastern United States and Central America. Breeds in dry, deciduous or mixed forests with sparse underbrush near open areas needed for foraging. Seems to prefer pitch pine/scrub oak barrens on Long Island and oak-hickory forests in upstate New York.

Status

Although rarely seen, the whip-poor-will is a locally common breeder in parts of New York that are not heavily forested, especially in Long Island and the St. Lawrence Valley. Absent in the higher elevation areas of the Adirondacks, Catskills, and Tug Hill Plateau. New York State Breeding Bird Atlas results for the state indicate a decline in detections over the last 20 years although it is important to note that survey methods used for the atlas are not conducive to detection of the whip-poor-will. The species has disappearance from many parts of New York which it has previously inhabited.





Management and Research Needs

Like many nocturnal species, the whip-poor-will is not usually detected during Breeding Bird Surveys which are normally conducted during day light hours. Therefore whip-poor-will surveys could give a better indication of the population status. Habitat loss resulting from forest succession is thought to be a major factor resulting in the decline of whip-poor-will numbers in New York. Further study is needed on the habitat characteristics of whip-poor-will habitat.

Yellow-breasted Chat Fact Sheet

©Philip Jeffrey Photography

Yellow-breasted Chat
Icteria virens

New York Status: Special Concern

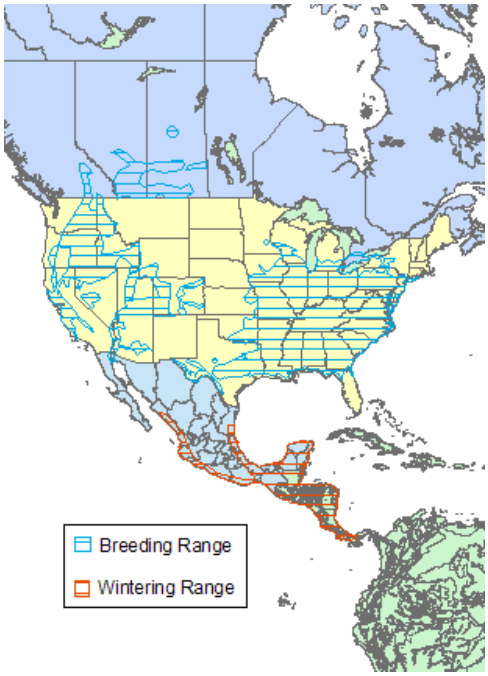
Federal Status: Not Listed

Description

It has been debated whether or not the yellow-breasted chat is even a warbler because of its uncharacteristic size, bill shape, and long tail. The largest of the wood warblers, it measures 7 inches (18 cm) in length with a heavy black bill that is slightly curved. The song is a low pitched collection of cackles, whistles, and gurgles that has been likened to a wren or a thrasher. Adults have olive upper parts, white under parts, and a bright yellow throat and breast. Sexes are similar with white eye spectacles and lores that are black in males and gray in females.

Life History

Males arrive on breeding territories before females. In New York this occurs during the first week of May. Females begin nest-building shortly after pairing with males. Pairs are monogamous and territorial but tend to nest in loose colonies. The nest is an open cup of woven grasses, leaves, and bark placed near ground level in dense shrubs or thicket. The female incubates a clutch of 3 to 6 eggs for 11 to 12 days. Young hatch completely naked and altricial and fledge after just 8 to 9 days. Diet consists mostly of insects but also includes fruits. Insects are gleaned from the ground or in areas of dense shrubs. The yellow-breasted chat has a unique habit of holding its food with its foot.



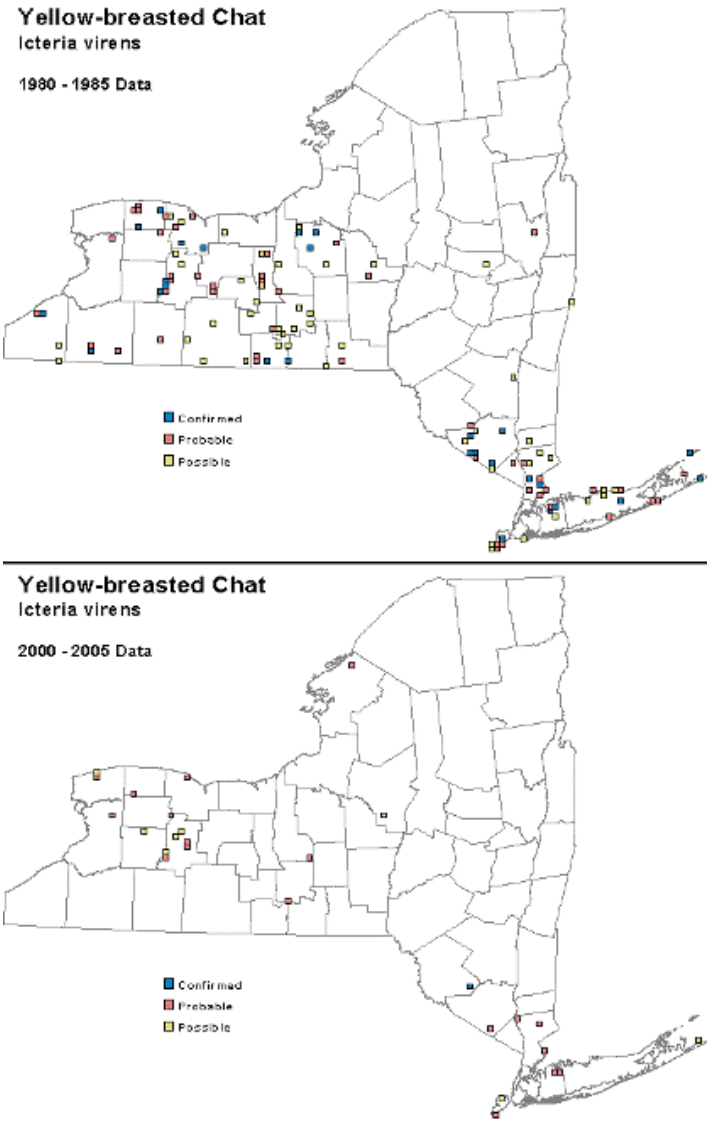
Yellow-breasted Chat Range

Distribution and Habitat

The yellow-breasted chat has a wide breeding range across the eastern United States and southern Canada from Iowa to the lowland areas of New York, south to Florida and Texas. It also occurs in scattered regions of the Midwest and west of the Rocky Mountains. Preferred habitat contains dense thickets and brush in the understory of deciduous and coniferous edges.

Status

The yellow-breasted chat is generally a southern species that entered New York along the river systems of the Hudson Valley and Appalachian Plateau. It is an uncommon and local breeder that was detected in only 26 survey blocks during the 2000 - 2005 New York State Breeding Bird Atlas. Range-wide populations appear to be stable, but it has experienced fluctuations in peripheral and local populations. While populations in the eastern part of its range are declining, they are increasing in the west.



Distribution of Yellow-breasted Chat in New York from 1st and 2nd NYS Breeding Bird Atlas Records

Management and Research Needs

The yellow-breasted chat commonly exploits secondary growth and early successional habitats. The loss of such habitats has proven to be detrimental to peripheral populations. Management that limits succession would increase breeding habitat. Further research is needed on the relationship between breeding habitat availability and population density. The effects of brood parasitism by brown-headed cowbirds (*Molothrus ater*) on the reproductive success of yellow-breasted chats also requires further study.

Canada Goose

Scientific name: Branta canadensis

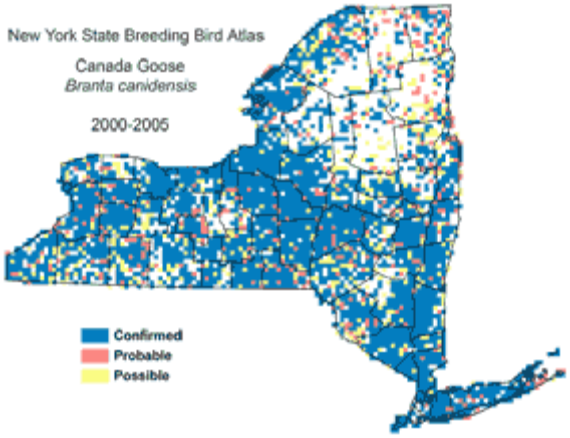
Canada geese are one of the most familiar wildlife species in New York State. These birds are important for the recreational opportunities they provide and because of problems they can cause. Balancing these two views of Canada geese is a tremendous challenge for wildlife managers, property owners, and communities across the state.

Few people realize that there are distinct populations of Canada geese in New York. Managers often refer to geese that breed in northern Canada and winter in the U.S. as "migratory". These are the honking harbingers of the changing seasons, as waves of high flying geese pass over during spring and fall migration. Geese that breed in southern Canada and the U.S. are referred to as "residents" because they spend most of their lives in one area. Banding studies have shown that resident Canada geese are not simply migrant geese that stopped migrating.

Migratory populations of Canada geese have existed for as long as we know, while the resident population is a recent phenomenon. In the early 1900s, only a handful of Canada geese nested in the wild in New York State. These geese were descendants of captive birds released by private individuals in the Lower Hudson Valley and on Long Island. Local flocks grew rapidly and spread to other areas. During the 1950s and 1960s, game farm geese were released by the State Conservation Department on wildlife management areas in upstate New York (north and west of Albany) to establish local flocks in huntable areas.

Today, New York's resident Canada goose population numbers close to 200,000 birds, with nesting documented all across the state. Combined with populations nesting in other eastern states, there are more than one million year-round resident geese in the Atlantic Flyway. Every fall, these are joined by similar numbers of migratory geese from northern Canada. Resident populations have grown steadily because of milder and more favorable conditions for nesting and survival, while migratory populations have experienced some dramatic ups and downs caused by harsh weather on the breeding grounds and greater exposure to harvest by hunters.

Biology of "Resident" Canada Geese



Resident geese are long-lived, especially in urban-suburban areas. Some will live more than 20 years. Most resident geese begin breeding when they are 2-3 years old and they nest every year for the rest of their lives. They mate for life, but if one member of a pair dies, the remaining goose will mate again. Geese lay an average of 5-6 eggs per nest, about half of which will hatch and become free-flying birds in the fall. A female goose may produce more than 50 young over her lifetime.

The annual life cycle for resident geese begins in late winter when adult pairs return to nesting areas in late February or March, as soon as waters open up. Egg-laying (1-2 weeks) and incubation (about 4 weeks) generally extend through April, with the peak of hatching in late April or early May, depending on location in the state. Geese will aggressively defend their nests, and may attack if approached. Non-breeding geese often remain nearby in feeding flocks during the nesting season. After hatching, goose families may move considerable distances from nesting areas to brood-rearing areas, appearing suddenly "out of nowhere" at ponds bordered by lawns.

After nesting, geese undergo an annual "molt", a 4-5 week flightless period when they shed and re-grow their outer wing feathers. Molting occurs between mid-June and late July, and the birds resume flight by August. During the molt, geese congregate at ponds or lakes that provide a safe place to rest, feed, and escape danger. Severe conflicts with people often occur at this time of year because the geese concentrate on lawns next to water and cannot leave during that period. Before the molt, some geese without young travel hundreds of miles to favored molting areas. These "molt migrations" account for the disappearance or arrival of some local goose flocks in early June.

After the molt and through the fall, geese gradually increase the distance of their feeding flights and are more likely to be found away from water. Large resident flocks, sometimes joined by migrant geese in October, may feed on athletic fields and other large lawns during the day, and return to larger lakes and ponds to roost at night. This continues until ice or snow eliminates feeding areas and forces birds to other open water areas nearby or to the south, where they remain until milder weather returns and nesting areas open up.

Legal Status

All Canada geese, including resident flocks, are protected by Federal and State laws and regulations. In New York, management responsibility for Canada geese is shared by the U.S. Fish and Wildlife Service (USFWS), U.S. Department of Agriculture (USDA), and the New York State Department of Environmental Conservation (DEC). It is illegal to hunt, kill, sell, purchase, or possess migratory birds or their parts (feathers, nests, eggs, etc.) except as permitted by regulations adopted by USFWS and DEC.

Double-crested Cormorant

Cormorant Management in New York

Cormorants in a tree.

Cormorant populations have increased markedly across New York in recent years, likely a result of a cleaner environment and fewer pesticides causing reproductive problems. Large nesting colonies are a sight to behold, but high densities of nesting cormorants are not without problems. In Lake Champlain, destruction of vegetation on nesting islands in Vermont by cormorants threatens populations of common terns, a threatened species. On Oneida Lake, cormorant occupation of islands also threatens survival of the common tern. In addition, thousands of cormorants stopping over during the fall migration have raised concerns about their effect on ecologically and economically important fisheries. And in the eastern basin of Lake Ontario, cormorants have been found to be a significant predator of smallmouth bass, which is a native, economically important species.

The Department's mission includes a responsibility to manage fish and wildlife resources for the benefit of current and future generations. It is not an easy job, and often requires balancing of competing interests to find the course of action that will do the most good with the least harm. The profession of wildlife management has grown in sophistication in considering the human side of the equation, and we also pay attention to social and economic issues and consider people's values and desires in developing our management plans. We are currently involved in a series of cormorant studies and management activities with our counterparts in other states, universities, the federal government, and Canada.

Sound science is at the base of our investigations, and requires that we keep an open mind, document our observations, and learn from experience.

Eastern Bluebird

Did You Know?

Eastern bluebird - Sialia sialis
Photo: Jeff Nadler

- The Eastern bluebird can see an insect 100 feet away.
- In the fall,roosting flocks of up to 50 birds huddle together at night to stay warm.
- Bluebirds are one of the first birds to return north in the spring.
- The Eastern Bluebird was named our state bird in 1970.

Size:

Bluebirds are about 7" long

Coloration:

The male is bright blue with white undersides and a rust-colored breast. The female is grayish blue, but otherwise similar to the male

Where to watch:

Bluebirds nest in cavities in standing dead trees and in nesting boxes.
Nesting boxes are set on posts five to six feet off the ground and come in pairs (one for the bluebirds, the other for the competition). Bluebirds eat insects, seeds and berries, so look for them in fields, meadows and orchards.

What to listen for:

A musical "chur-wi" or "tru-ly"

When to watch:

Bluebirds may be present year-round. Most migrate to southern states in the fall, but they will winter in New York State if they can find enough food.

Great Blue Heron

Great blue heron Ardea herodias
Photo: Sue Shafer

Did You Know?

- The webbing between their front two toes prevents the great blue heron from sinking into the mud while wading.
- Large colonies or *rookeries* may have hundreds of individual nests, each reaching three or four feet across.
- Both parents take turns incubating their eggs and feeding their chicks.
- The largest heron chick gets the most food and sometimes pushes its weaker siblings out of the nest.

What to watch for:

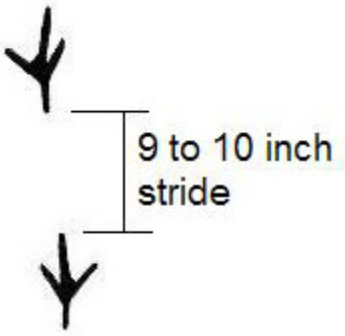
Size:

Adults stand 3 to 4 ½ feet tall, with a 5 ½ to 6 ½ foot wingspan; and weigh 4 ½ to 5 ½ pounds; females are smaller than males.

Appearance:

Bluish-gray with black and white streaks on the front; long, slender legs; yellow bill; long neck folded into S-shape when in flight; black plume of feathers on head

Tracks:



Great blue heron tracks

Look in the mud for 6- to 7-inch imprints with four toes(three facing forward and one pointing backwards) each with a claw mark at; webbing may be apparent.

Nest:

Many large nests scattered high up in the canopies of trees, generally near water.

Where to watch:

They forage for fish and other prey in swamps, salt marshes, lakes and slow moving rivers and streams, and along beaches, fields, or meadows throughout New York State. Rookeries are on islands or in wooded freshwater swamps across the state, except the coastal lowlands of Long Island.

Stay at least 1,000 feet away from active rookeries in order to prevent individual birds and colonies from abandoning their nests, and to assure that they return to their nest site each year. Human disturbance is the biggest cause of nesting failures.

When to watch:

Most active during dusk and dawn; abundant throughout the breeding season (mid-April to late June) and the summer. Most migrate for the winter, although some will remain where there is open (unfrozen) water for foraging, such as along the lower Hudson River and the coast of Long Island.

Great Horned Owl

Did You Know?

Great horned owl - Bubo virginianus
Photo: Susan L. Shafer

- Great horned owls are fierce predators with an appetite for skunks (an unusual yet regular part of their diet), birds (hawks and waterfowl), and mammals (commonly mouse to rabbit size).
- They use their sharp eyesight, acute hearing, and specially edged feathers for nearly silent flight to hunt and capture prey stealthily at night.
- They are permanent residents year-round in the U.S. and do not migrate like many other bird species.
- Adult great horned owls lack predators, though they are sometimes harassed while at roosts or nests by crows calling loudly from branch to branch.

What to watch for:

Size:

18-25" in length; 4-5' wingspan; about 3 lbs.

Appearance:

Very large with conspicuous ear tufts on the head; overall body color is mottled with reddish brown to gray or black and lighter streaked undersides; large yellow eyes with a reddish brown face bordered by black; white throat.

Nest:

In hollow cavities or broken parts (stumps) of trees and abandoned nests of squirrels, hawks, herons and crows. Also found on rocky ledges, caves, barns, and on artificial platforms.

Other signs to look or listen for:

- Gray cylindrical pellets, which are clusters of indigestible regurgitated parts of prey such as bones feathers and fur.
- Whitewash or liquid droppings.
- Three to six noted hoots that are loud, consistent, and perceptible. Calling can begin in late summer and continue throughout winter of the nesting season. In the summer, the young fledglings cry loudly for food, which is often mistaken for the cry from a bobcat or fox.

Where to watch:

Great horned owls are quite common statewide and are found in a wide variety of habitats including open and secondary growth forests and agricultural and open fields. They also can be found around cliffs and suburban or urban areas.

When to watch:

They are usually most active at night but also may hunt during the day. They can be seen perched in their nests starting as early as January or February.

Peregrine Falcon

Photo credit Mike Feller

Peregrine falcons are listed as an endangered species in New York State. They were eliminated as a nesting species in the state by the early 1960's, due mainly to pesticide (DDE) residues in their bird prey. The release of young captive bred birds from 1974-1988 helped lead to their return as a nesting species. Peregrines first returned to nest on two bridges in New York City in 1983. Two years later, in 1985, they were again nesting in the Adirondacks.

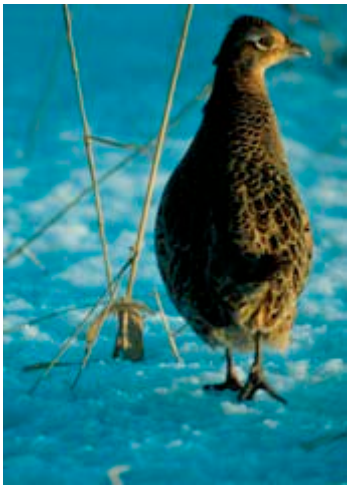
The population has grown steadily since that time. By 2003 there were close to 50 pairs present statewide. New York City now has probably the largest urban population of peregrine falcons anywhere, and peregrines nest on every Hudson River bridge south of Albany. Peregrines currently nest on buildings or bridges in Albany, Syracuse, Rochester, Binghamton and Buffalo, with about twenty pairs present in the Adirondacks on cliffs.

Photo credit Dave Gardner

Many of these sites need annual management to protect the birds during the nesting season. For example, necessary bridge maintenance work must be conducted in a manner that does not prevent the falcons from nesting successfully. Falcons do not build stick nests like most hawks and the eggs can roll off bridge girders or get broken on window ledges. Wooden nest boxes filled with gravel are placed at many of the sites to increase productivity. These boxes need periodic replacement. Some Adirondack cliff climbing routes have to be closed for several months in the summer when they are too close to an active peregrine nest, both for the sake of the birds' nesting success and the safety of the climbers who may be dived on by the aggressive adults.

Due to all these human impacts, peregrine falcons will have to be protected for many years to come if we are to continue to enjoy their presence in New York.

Ring-necked Pheasant



Pheasants Arrive in New York

Pheasants are a popular game bird that have blessed New York's landscape since first successfully introduced in 1892 on Gardiner's Island. A later release in 1903 on the Wadsworth estate, near Geneseo, truly established this Asian immigrant and helped popularize pheasant hunting in New York. Populations peaked in the late 1960's and early 1970's, the "heyday" of the ringneck. Today, wild pheasants are difficult to find. Most wild pheasants are found in the Lake Plains of western New York.

Current Status

The pheasant population in New York has declined nearly 90% since 1970. Most biologists believe it is because of a lack of fallow grasslands for nesting and brood-rearing. Pheasant populations across the United States are driven by federal agricultural programs that set-aside large expanses of undisturbed grasslands. For a number of reasons, these programs have not been as widely available or implemented in New York. Conversely, the Conservation Reserve Program has set-aside millions of grassland acres in the mid-western states. The result there has been some excellent pheasant hunting opportunity since the program's inception in 1985.

In 2010, DEC adopted a "Management Plan for Ring-necked Pheasants in New York State." This was an update of the original ten-year pheasant management plan that guided pheasant management activities from 1999-2009. To develop the updated plan, DEC staff reviewed the current pheasant plan and programs, looked at how other states manage pheasants, talked to sportsmen and other stakeholders, and prepared a succinct action plan for guiding management and use of pheasants in New York. The plan consists of four goals, 16 objectives, and 33 actions to be implemented through 2020, and assumes the current level of staff and fiscal resources for pheasant propagation and management will continue.

Wild Pheasant Management

Goal: *Increase wild pheasant populations in suitable range through sound habitat improvement practices and regulations, within fiscal and land use constraints.*

Pheasants are found on fertile agricultural lands normally associated with grain farming. According to the Census of Agriculture, the amount of land in farming in New York has

declined from 68 percent in 1920 to 24 percent in 1992. Therefore, the quantity of land that can harbor wild pheasants has been greatly reduced. Less farmland and the lack of fallow grasslands have negatively impacted pheasant populations. In comparison, the return to a forested landscape has increased species such as white-tailed deer, black bear, and turkeys. The best area for pheasant management remains a band of 13 counties in the Lake Plains of western New York. Whereas most of the fertile farm land of the Mohawk and Hudson River valleys have reverted to forest, this area is actively farmed and offers the most potential for self-sustaining pheasant populations. What activities are implemented to manage wild pheasant populations?

DEC's Bureau of Wildlife:

- Delineates pheasant range and hunting regulations to protect hens in the best habitat and to implement habitat improvements where needed.
- Works with private organizations and governmental agencies to promote habitat improvements that benefit pheasants.
- Provides input to federal agricultural policies and programs that may affect pheasants.
- Provides $10,000 annually to private landowners to establish warm season and cool season grasses to improve nesting and winter cover.
- Monitors pheasant populations, harvest, and the number of pheasant hunters by means of the Farmer Pheasant Inventory and the annual Small Game Survey.

Propagated Pheasants

Goal: *To provide artificially propagated pheasants in areas of the state where there are limited opportunities to enjoy wild pheasants within fiscal and land use constraints.*

The first of seven New York State game farms was established in 1909 in Sherburne. Today, the Department operates one pheasant propagation facility, the Richard E. Reynolds Game Farm located near Ithaca, New York. Hatching and distributing pheasants since 1927, the Ithaca farm provides pheasants for two current programs. The Day-old Pheasant Chick Program is a cooperative effort between the

Department, landowners, sportsmen, and 4-H youth. The Adult Pheasant Release Program is run by Department staff with some pheasant stocking assistance provided by sportsmen.

Day-old Pheasant Chick Program - Cooperators receiving day-old pheasant chicks provide all the facilities and equipment necessary to raise and release pheasants. The birds are brooded until six weeks old and then moved to an outdoor rearing pen where they continue to grow and develop their brilliant adult plumage before being released. Approximately 60,000 day-old pheasant chicks are distributed to approved applicants annually.

Adult Pheasant Release Program - The Game Farm raises 25,000 adult pheasants annually for distribution Statewide. The fully grown pheasants are released on land open to public hunting just prior to and during the fall pheasant hunting season. Birds released at this time provide the highest harvest rates.

The primary purpose of the pheasant propagation program is to provide pheasant hunting opportunity, not to restore wild pheasant populations. The Department releases thousands of pheasants annually. Very few survive until spring to reproduce. Therefore, hunters are encouraged to harvest released pheasants. Both programs require that the birds are released on land open to public hunting.

Ruffed Grouse

Scientific name: Bonasa umbellus

Round, plump birds a little larger than pigeons, ruffed grouse are a favorite of birders and hunters alike. Also known as "partridge", they are year-round residents of New York State. Though these birds go unseen by many, the familiar drumming performed by males, especially in spring, lets people know they are there.

A forest species, ruffed grouse prefer young forest habitats and are generally found in areas with active forestry, in recently abandoned agricultural areas that have reverted to early successional forest, or in areas affected by fire. Grouse can often be seen along the sides

of gravel roads near these young forest thickets where they pick up grit (small stones) to aid them in digestion.

One of the state's most popular native game birds, ruffed grouse have been a favorite target for generations of New York bird hunters. Despite declines in their numbers, ruffed grouse are still common, particularly in younger forests, and provide excellent hunting opportunities. Grouse attract thousands of hunters with their shotguns and bird dogs who spend many days walking old woods roads eagerly anticipating the exciting flush of a grouse bursting from cover. Grouse are challenging quarry, rapidly flying and dodging through trees and thick cover. Those hunters lucky enough to bag one are rewarded with a sumptuous gourmet meal.

Quick Facts:
Ruffed Grouse...
...Spend most of their time on the ground.
...Seldom fly more than a couple hundred yards, but can hover and make complete turns in the air when flying through thick brush.
...Do not migrate; spend their entire lives within a few acres.
...In fall, grow fleshy bristles (called pectinations) along the sides of their toes which act like snowshoes to help the birds travel over snow. Pectinations are shed in spring.
...Males make drumming sounds with their wings to attract females and warn off other males.

Physiology & Behavior

Ruffed grouse come in two basic color phases. Gray phase birds tend to occur in colder northern areas, while brown phase birds occur in warmer southern areas. Some birds, however, exhibit a combination of both colors. Grouse feathers are mottled with white and black which helps them blend into the forest floor and hide from predators. Grouse have broad, flat, fan-shaped tails with a dark band near the tip. Though similar in appearance, male grouse are slightly larger than females (hens) and have long shiny black neck feathers. Males will puff up these feathers and fan out their tails to attract females or warn off other males.

Grouse are well-suited for snowy climates. In the fall, they grow a series of comb-like rows of fleshy bristles (called pectinations) along the sides of their toes. These bristles act like

snowshoes, helping the birds to travel over deep soft snow. The pectinations are shed in spring.

Ruffed grouse spend most of their time on the ground and will often run and hide to avoid detection. When closely threatened, they explode from their hiding place in a powerful burst of flight. Many a person has been startled by this loud unexpected flurry of wings. Though good fliers, grouse seldom fly more than a couple hundred yards before either landing in a tree or on the ground to run into a thicket to hide. Interestingly, sometimes when they land in a tree, they will back up, stretch out their necks, and flatten out against the tree trunk, apparently trying to camouflage themselves from predators.

During winter, grouse will burrow or dive into soft, powdery snow when available. This not only helps keep them warm, but also hides them from predators. In times of extreme cold, temperatures beneath the snow can be as much as 25 degrees warmer than the air.

Breeding Ecology

Each spring, male grouse ruffle their neck feathers, fan their tails and drum in an attempt to lure hens to their territory. Male grouse are aggressively territorial throughout their adult lives, defending a 5-20 acre patch of forest. Males claim their territory by standing on a log, rock, or mound and beating their wings against the air. Called drumming, it sounds like a distant lawn mower engine slowly starting up and then increasing to a rapid beat. Drumming is most frequently heard during the spring mating season, but it can occur throughout the year.

Generally solitary birds, ruffed grouse do not develop pair bonds, and one male may breed with several hens. Following mating, hens construct nests and lay 8 to 14 cream-colored eggs. If the nest is destroyed, hens will often attempt to renest. Nests are shallow depressions in the leaf litter, often at the base of a tree, stump or bush, and normally located in second growth hardwoods. Eggs are incubated by the hens and hatch in 24-26 days. Chicks are precocial (highly independent from birth), and leave the nest soon after they hatch to follow the hen and start feeding. Hens stay with their broods until they are grown. During autumn, juvenile birds can disperse from natal habitats up to two miles or more.

Food Habits

Young grouse chicks eat insects and small invertebrates, gradually switching over to adult diets. Adult grouse eat a wide variety of fruits, seeds, leaves, buds and insects. During

winter when snow covers the ground, grouse rely on eating the buds and catkins of trees and shrubs such as aspen, cherry, birch, ironwood and apple.

Conservation and Management

Short-lived, most ruffed grouse rarely live a full year, though a few will make it to three years. Mortality from the time the chicks hatch (early June) until they are fully grown (around mid-August) is often more than 50 percent. Most grouse succumb to predation, providing meals for a number of predators, including hawks, owls, fox and coyotes. Some grouse die of disease or exposure to severe weather. Good habitat that provides adequate cover and food resources greatly increases the survival of ruffed grouse.

Ruffed grouse depend on early successional tree and shrub species which occur in forested areas that have been recently disturbed, such as by fire or active forestry. This disturbance opens the canopy, allowing full sunlight to reach the ground and promote vigorous new growth.

In New York State, the reluctance to cut forests, and suppression of fires has greatly reduced the amount of early successional forest habitat available to ruffed grouse, as well as a host of other bird and wildlife species. In fact, 67% of the bird species that rely on this habitat are in serious long-term decline. While ruffed grouse are still a common bird in most forested areas of the state, their populations have declined more than 80% since the 1960s.

Part of the reluctance to cut trees is based on the misconception that cutting trees is bad for birds and other wildlife. In fact, properly planned forest harvest can increase abundance and diversity of birds and most other wildlife in a forest. For grouse, this typically involves cutting small 5-10 acre patches or strips through the forest, creating a mosaic of different age forest stands with diverse structure. This provides the food and cover needed for grouse to prosper.

As long as New Yorkers maintain their forest lands as suitable habitat, we will always have the pleasure of hearing the drumming of ruffed grouse in spring, of seeing a hen and her chicks scurry across a back country road, or of being unnerved by the sudden explosive burst of a grouse taking flight.

Wild Turkey

The Eastern wild turkey (Meleagris gallopavo) is a large and truly magnificent bird. Adult males, also called "toms" or "gobblers", have red, blue, and white skin on the head during the spring breeding display. They have a long beard of hair-like feathers on their chests and spurs on their legs that can be from 0.5 inches to 1.5 inches in length. Their call is a gobble. The tom has a dark black-brown body. Mature males are about 2.5 feet tall and weigh up to 25 lbs. The average weight is 18 to 20 lbs.

The females (hens) are smaller than toms and weigh 9 to 12 lbs. Hens have a rusty-brown body and a blue-gray head. Less than 10 percent of the female population have a beard, and less than 1 percent have spurs. The hen makes a yelp or clucking noise.

History

The wild turkey is native to North America. Turkeys were widespread when the Europeans arrived and may have predated the earliest human inhabitants. At the time of European colonization, wild turkeys occupied all of what is currently New York State south of the Adirondacks.

Turkey habitat was lost when forests were cut for timber and turned into small farms. The early settlers and farmers also killed wild turkeys for food all year round, since there were no regulated hunting seasons at that time. The last of the original wild turkeys disappeared from New York in the mid-1840's. By 1850, about 63 percent of the land in New York was being farmed. This trend continued until the late 1800s when about 75 percent of New York State was cleared land.

In the early 1900s farming began to decline. Old farm fields, beginning with those on the infertile hilltops, gradually reverted to brush land and then grew into woodland. By the late 1940s, much of the southern tier of New York was again capable of supporting turkeys. Around 1948, wild turkeys from a small remnant population in northern Pennsylvania crossed the border into western New York. These were the first birds in the state after an absence of 100 years.

Restoration

The return of these first wild turkeys sparked an interest in restoring them to all of New York. In 1952, a pheasant game farm in Chenango County was converted to raise turkeys; over the next 8 years 3,100 game farm turkeys were released throughout the state. These stockings failed because the game farm birds were not wild enough to avoid predation. Survival of released birds was low, as was natural reproduction. As a result, the populations failed to expand.

In southwestern New York, the wild turkeys from Pennsylvania had established healthy breeding populations and were expanding rapidly. In 1959, a program was begun by the State Conservation Department to live trap wild turkeys in areas where they were becoming abundant for release elsewhere in New York.

Most of the trapping was done in the winter when natural foods are not abundant. A flock of turkeys was lured with piles of corn or other grain. When most of the birds were concentrated on the food pile, the turkeys were captured by shooting a large net over them. Wildlife biologists and technicians put the birds into crates, loaded the crates onto trucks, and drove the birds to new territories that did not have wild turkeys. A typical release consisted of eight to ten females and four to five males. These birds would form the nucleus of a new flock and generally were all that was necessary to establish a population.

Since the first turkeys were trapped in Allegany State Park in 1959, approximately 1,400 birds have been moved within New York. These 1,400 birds have successfully reestablished wild populations statewide. Today, numbers have increased dramatically to an estimated 250,000 to 300,000 birds. In addition, New York has sent almost 700 wild turkeys to the states of Vermont, Massachusetts, New Hampshire, New Jersey, Connecticut, Rhode Island, Delaware, and the Province of Ontario, helping to reestablish populations throughout the Northeast.

Biology

The turkey breeding season begins in early April and continues through early June. During this time, the toms perform courtship displays -- strutting, fluffing their feathers, dragging their wings and gobbling -- all in an effort to attract willing hens. A single tom will mate with many hens.

After mating, the hen goes off by herself to nest. Her loosely formed nest is usually in a wooded area, but can be in brush or an open field. Over a period of two weeks, the hen lays

10 to 12 cream-colored eggs which hatch after 28 days of incubation, usually late May or early June. The hen moves her brood into areas of grassy or herbaceous plants where the young, called poults, can feed on the abundant supply of insects. The poults can fly when they are about two to three weeks old; from then on they will roost in trees at night.

During midsummer, two or more broods will often merge together to form a flock. These flocks range over a wide area and move around frequently in search of food. In late summer and early fall, the flocks begin to spend more and more time in the woodlands feeding on fruits, seeds, nuts, and acorns.

During the winter, turkeys reduce their range, diminish their daily activities and often form large flocks. They frequently spend time in valley farm fields feeding on waste grain and manure spread by the farmers. Spring seeps, which are usually free of ice and snow, are also favorite feeding areas. Turkeys have been known to spend a week or more on a roost when a severe winter storm strikes. Studies have shown that healthy wild turkeys can live up to two weeks without food.

Foods

In the spring and summer, adult wild turkeys feed on a wide variety of plants and insects, such as tubers, dragonflies, snails, roots, flowers, fruits and grasshoppers. In the fall, turkeys feed on beechnuts, acorns, grapes, corn and oats. During the winter months, they depend on anything left from the fall, such as green plants, nuts, seeds and fruits; in agricultural areas they depend heavily on waste grain, manure and silage. They are able to scratch through 4 to 6 inches of snow to find food. Turkeys can move long distances to find food, but will stay in a small area if food is locally abundant. Feeding turkeys during harsh winter months is generally not recommended nor needed.

Mortality and Predation

The young poults are preyed upon heavily by mink, weasels, domestic dogs, coyotes, raccoons, skunks and black snakes. Their only defense against predators is the ability to scatter and hide in a frozen state until the mother gives the all-clear signal. The hen will also fake injury (a broken wing) to lead predators away from the young. Sixty to seventy percent of the poults die during the first four weeks after hatching. Adult birds can be preyed upon by foxes, bobcats, coyotes and great-horned owls. Many hens are taken by predators while nesting. More than 6 to 8 inches of soft snow, for over a 5 to 6 week period, can also cause mortality due to starvation.

Hunting

Wild turkeys are now legally protected as a game species in New York. There are highly regulated spring and fall turkey hunting seasons in the state. The spring season, which takes place during the month of May, is designed to have little or no impact on the population. Only "bearded" birds are legal, which almost totally restricts the take to males. Since this season occurs after most of the hens have been bred, the females continue to nest and produce a new generation of wild turkeys.

The fall season is restricted to certain areas of the state. Both hens and toms may be taken during this season. The season length varies throughout the state, depending on population levels. It starts as early as October 1 and ends as late as mid-November. The fall season bag limit also varies in different areas of the state. The number of turkeys harvested in New York State increased substantially through the early part of this decade, and has now started to level off.

Did You Know?

. . .that turkeys can fly 40 to 55 m.p.h.

. . .that turkeys can swim.

. . .that turkeys can run 12 m.p.h.

. . .turkey restoration in New York was paid for through hunting license sales and special taxes collected on sales of firearms, ammunition, and archery equipment.