

NEW YORK'S WILDLIFE RESOURCES

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Mourning Dove (*Zenaida macroura*)

Description

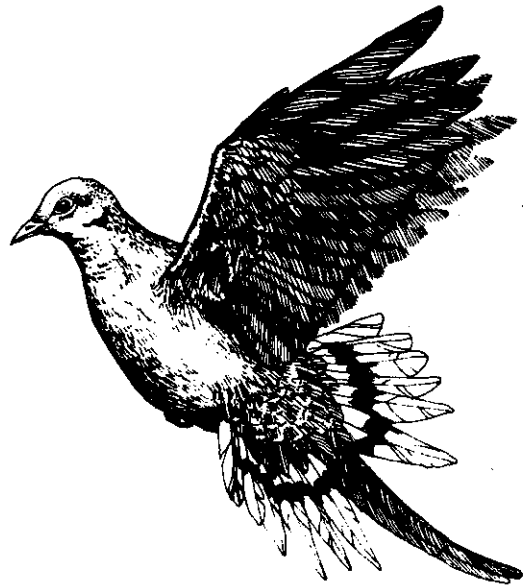
The mourning dove and the rock dove (common pigeon) are the most numerous members of the pigeon family (Family Columbidae) breeding in New York State. The mourning dove looks much like the common pigeon but is more streamlined. The mourning dove has a small head, a robin-shaped body, and a long, tapering, pointed tail. Its back is slate-gray with a bluish cast, while the breast is generally reddish-brown. Most of the head is tan, with a single black spot behind each eye. The neck has a few metallic, purple-hued feathers. Wings are tan to brown, and inner wing feathers have large black spots. The tail, however, has large white spots and a black bar on each feather. This bird's bill is black, and its feet and legs are red.

In general, the coloration of females is slightly duller than males, but the sexes are not easily or immediately distinguished. Males have a light blue crown and nape, but females have an entirely brown head. Males also have rosy breast feathers, compared with the females' usually tan or brown breast feathers. Immature doves are difficult to distinguish from adults;

very young individuals have white- or buff-edged wing coverts, and may have mottled breast, head and neck feathers.

The adult mourning dove is 25-33 cm (10-13 in) long (total), with a 43-48 cm (17-19 in) wing span. The adult weighs 99-142 g (3.5-5.0 oz).

Two other characteristics aid in identifying the mourning dove: its rapid wing beat, often producing a distinct, sharp whistle, and its mournful "coo...coo, coo" call. For some people the mourning dove's call sounds like the soft hoot of an owl. Unlike owls, however, the mourning dove, is a diurnal (active during day) bird.



Distribution and Abundance

The mourning dove's breeding range extends from the southernmost portions of the western Canadian provinces, south throughout all the lower 48 states and into Mexico. Its winter range extends farther south and includes Central America; in winter the mourning dove is absent from Montana, North and South Dakota, Minnesota, and most of Wyoming and Wisconsin. Some New York State doves migrate to southeastern states for the winter, but significant numbers will overwinter throughout New York, excluding the Adirondack region. The mourning dove is rated as the sixth most abundant bird in the United States, with a population of roughly 500 million.

An estimated 10 million doves are distributed throughout New York State, except for the high peaks regions of the Adirondack and Catskill mountains. Flocks of hundreds of birds may be observed, especially in parts of western New York and Long Island. Although now considered common and locally abundant in many areas of the state, this was not always the case. Before 1900, mourning doves were rare throughout most of New York. Several factors may have contributed to the increase of New York's dove population. Deciduous forests were cleared in the 19th century, increasing potential dove habitat. The Migratory Bird Treaty Act of 1918, formalizing agreements

between the U.S., Canada and Mexico, established protection from uncontrolled harvest for many migratory bird species. Another factor is that the mourning dove seems to be slowly expanding its range northward; since New York State is on the northern edge of the range, it has experienced noticeable changes in dove population densities. Finally, an increasing number of winter bird feeders may have caused an increase in the number of doves overwintering in this state.

Several techniques have been used to assess the status of New York and eastern U.S. dove populations. A call-count or "coo"-count survey, started in 1953, is coordinated annually by the U.S. Fish and Wildlife Service. During this nationally-coordinated effort, many survey routes are driven during the last weeks in May. Each route is 20 miles long, with 20 stops where volunteers listen for and count cooing mourning doves. U.S. Fish and Wildlife Service biologists calculate a population index used for estimating year-to-year population trends. An annual report based on these findings is used in making decisions on dove management. This process has detected that numbers of mourning doves breeding in the eastern U.S. have remained stable or increased slightly during the past 10 years. The average number of doves heard calling per route in New York has varied from 14.7 in 1972, to a low of 8.9 in 1979, and to a high of 16.6 in 1982. The 11-year average from 1972-82 is 13.4 doves calling per route. This long-run average is higher than in Pennsylvania (7.5), but lower than Delaware (22.2), Maryland (18.3), and Rhode Island (18.5), all of which allow hunting.

Feeder studies have also documented mourning dove population trends. While the number of feeders has increased in recent years, the numbers of mourning doves observed at them have increased as well. One study has reported that 13 years ago mourning doves frequented only one-sixth of the feeders in central New York State, but now these birds visit as many as two-thirds of all feeders. In the last 5 years, the number of doves observed at feeders has increased by more than 40%.

It is anticipated that the mourning dove population in this state will remain stable in the near future. State populations may fluctuate only slightly with variations in the severity of winter weather and with changes in agricultural practices. These same factors, however, may have great impact on certain local populations in any given year.

Habitat

Mourning doves are most numerous in open, agricultural areas or in fields with small thickets. They are also common along forest edges and in suburban areas having deciduous and coniferous trees. They are less common in open woodlands. Doves are backyard favorites of bird enthusiasts who maintain winter feeders. Motorists may often see the mourning dove perched conspicuously on utility wires along roadsides; its long body with pointed tail is a familiar silhouette.

Life History

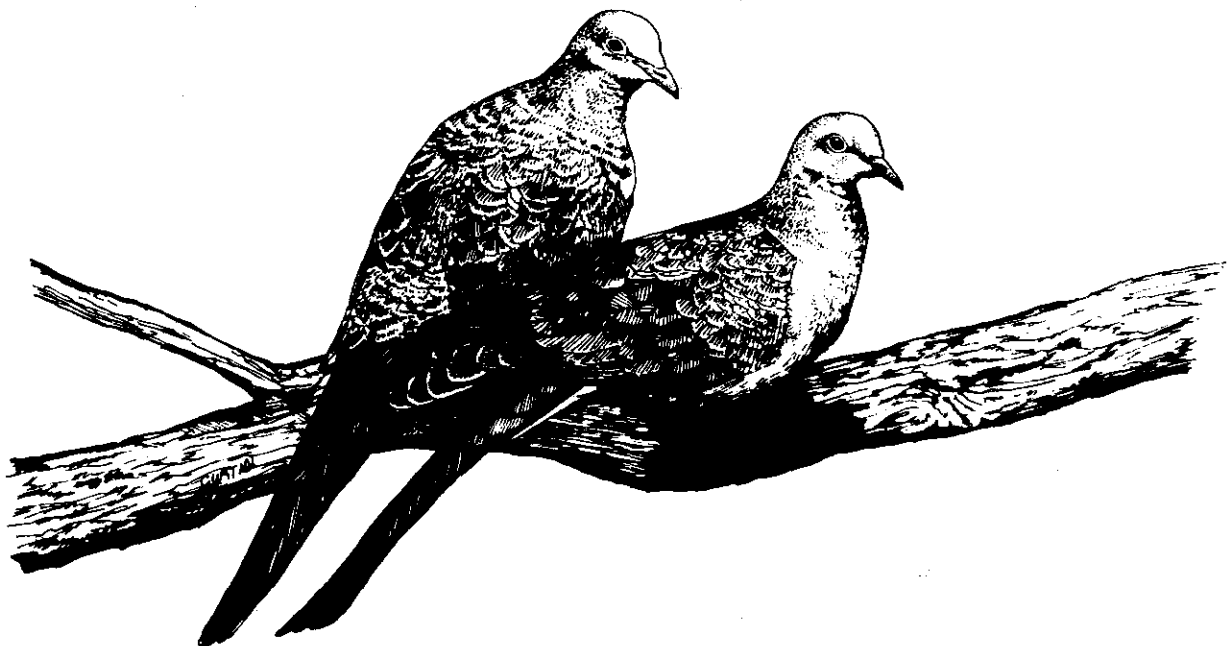
Mourning doves usually pair for life, and the pairs separate from winter flocks very early in the spring. Unpaired males may be very aggressive and territorial throughout the breeding season. The male's courtship display resembles that of the tom turkey. He struts on the ground, with his neck feathers ruffed up, his wings touching the ground, and his tail displayed fanlike behind him. During another portion of the courtship, the male displays his breeding "readiness" in what some call a "nuptial flight". From his perch, the male springs into the air and flies straight up to 30 meters (100 ft) or more with a noisy clapping of his wings over his back. Then, he glides spirally back down with motionless, set wings to continue displaying.

Both the male and female build the nest in a tree, usually on a branch near the main trunk or on a forked branch. Conifers of various species are common nest sites, but doves may also nest in other trees, in shrubs, or on clumps of grass. Less common nest sites include the ground and building ledges. Sometimes the mourning dove builds its nest over abandoned nests of other birds such as bluejays or robins.

The mourning dove nest is fairly distinctive; it is usually no more than a flimsy, frail platform of loosely arranged, coarse twigs. Finer twigs and rootlets line the nest. Sometimes nests are so loosely constructed that the eggs may be visible through the nest bottom. These unstable nests are highly susceptible to destruction by storms or high winds. But a pair will reneest if disturbed; mourning doves normally raise two broods per year (sometimes three) in New York State.

The mourning dove's clutch size is almost always 2 eggs, only rarely will a pair produce 3 or 4 eggs. The eggs are pure white and roughly 28 x 21 mm (1.1 x 0.82 in) in diameter. Depending on location, egg laying begins as early as the second week of March and continues through September in New York State. Both the male and female incubate the eggs; usually the male broods the eggs during the day, while the female broods at night. This "changing of the guard" by the pair can occur fairly regularly, at the same times each day, unless the pair is disturbed. Incubation continues for 13-15 days.

Upon hatching, the squabs (young doves) are helpless and little developed. The squab is covered only by a sparse white down, its yellowish skin clearly visible. Its eyes are closed, and its beak appears swollen. After 3 days, the eyes begin to open and stiff feathers appear. When 6 days old, the squab's eyes are completely open, and it is able to move about in the nest. Both parents feed the young a curdled milklike substance called pigeon milk or crop milk. This fluid is produced by a sloughing of the lining of the adult bird's crop, a modified portion of the esophagus also used by the adult bird for short-term food storage. The pigeon milk is fed to the squab by the regurgitationlike actions of the adult.



The squabs grow quickly. Within 8-10 days, they are fed a diet of mostly seeds. Feeding by adults continues even after the squabs are fledged (leave the nest) at the age of 13-15 days. In New York State, fledging dates (times when fledglings may be observed) are from late April to late October. The total time required to incubate and "raise" the squabs is roughly 29-37 days. As soon as the young are capable of flight the adults begin the breeding cycle again. In this cycle, 3-7 days are used for courtship and nest building, 13-15 for incubation and 13-15 for brooding.

Individuals may begin to flock together in mid-July in preparation for the annual southern migration. Most years, the majority of New York's dove population begins its southward migration in late August or early September. Mourning doves in the more northern parts of their range (of which New York is a part) usually migrate sooner and in greater numbers relative to their more southerly counterparts. Individuals that breed in New York may spend the winter in one of several southeastern states including Florida, Georgia, Louisiana, Mississippi and Alabama. Many individuals, however, may overwinter in New York State, especially if the weather remains mild and food is available. Groups of overwintering birds frequent freshly manured fields, barnyards, and cattle feedlots, but the backyard bird feeder seems to be a favorite site.

The mourning dove is primarily granivorous (seed-eating). Mainly a ground-feeder, 90% (by volume) of its diet in New York consists of wheat, corn, buckwheat, yellow bristlegrass, common ragweed, oats and black mustard seeds. Other seeds eaten include clover, redroot amaranth, charlock, buttercup, wild radish, early wintercress, smooth crabgrass, red campion and evening campion. Other studies in various locales have found that sorghum, millet and/or rice may comprise a significant portion of the diet. Sunflower seeds, and many other weed and grass seeds are also readily eaten. At the bird feeder, the mourning dove appears to prefer oilseed, white proso millet, thistle, wheat, buckwheat, milo, canary seed, hulled oats and cracked corn. Occasionally, this bird eats small amounts of insects or snails.

Mortality rates for mourning doves are very high. Annual population turnover (or annual mortality) rates are as high as 60-85% for juvenile mourning doves and 55-58% for adults. Studies of banded birds have shown that only 3-4% of the dove population in any year is harvested by hunters. For instance, of 10,000 New York State birds banded between 1966-1970, less

than 5% were taken by hunters in the eastern states, an indication that hunting is not a major mortality factor for mourning doves. Predation, accidents, weather, disease, and sometimes starvation, together account for most mourning dove mortality. Generally, about one-half of nesting efforts are unsuccessful due to predation or weather. Both adults and nestlings are subject to predation by hawks and owls. Bluejays, starlings, crows, squirrels, snakes, cats, and even weasels are predators of dove eggs and nestlings. Disease, especially trichomoniasis, can be devastating to local, high populations at certain times. Other dove diseases and parasites include fowl pox, Arizona paracolon, leucocytozoon, haemoproteus infections, tapeworms, roundworms, mites, and bird lice. Females may also die when eggs are retained in the reproductive tract. On the average, these birds are not long-lived; over 60% of these birds die in their first year.

Management

Habitat improvement work is rarely needed specifically for doves because of this species' ability to increase its numbers and its range. Hunting area management is done in some central and southern states. Plantings of grain crops, usually black-seeded sunflowers and Proso millet, are staggered in time to attract both resident and migrant birds. These programs in Illinois, Louisiana and Tennessee have been successful in increasing harvests.

The real management issue in New York involves the question of hunting. Currently, the mourning dove is considered a game bird in 34 of the 48 lower states including many eastern states (Figure 1). In the East, legislation is pending in Ohio and New Jersey to establish open seasons for mourning doves. New York legislators have also introduced "Dove Bills".

The debate over allowing hunting is both a biological and emotional one. Biological evidence shows New York mourning dove populations could sustain a managed harvest. This bird has a high reproductive capacity due to its long breeding season, multiple nesting, re-nesting ability (if a clutch is lost), and great degree of parental care. A study of New York doves between 1966-1970 found that 70% of 10,000 banded doves were juveniles, further suggesting that mourning dove reproduction in this state is high enough to maintain or even increase populations.

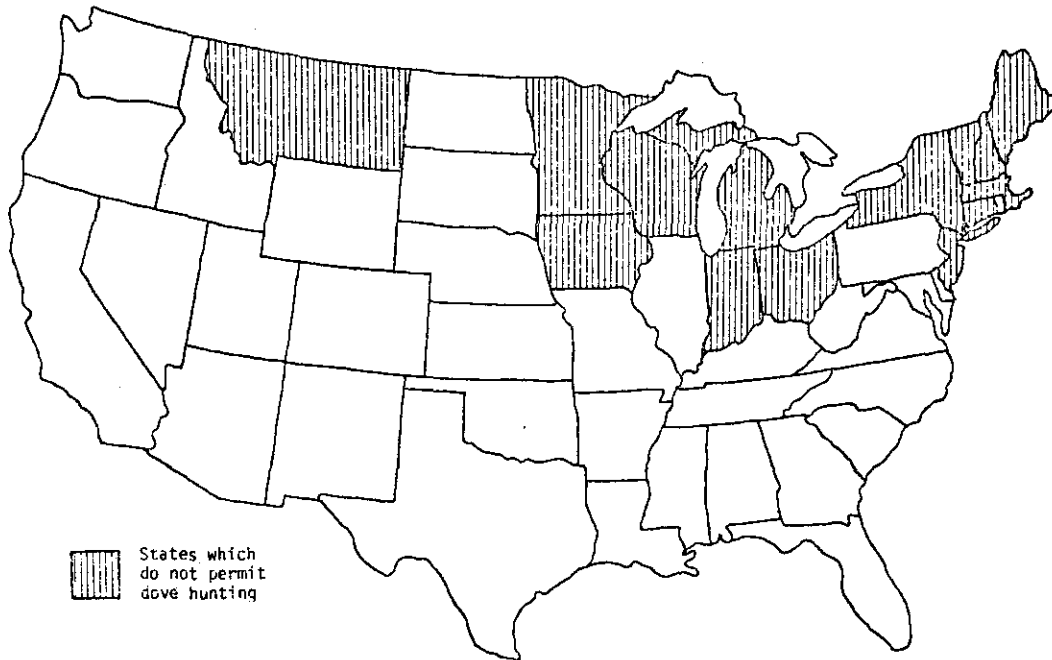


Figure 1. Status of states regarding mourning dove hunting.

On the emotional side of the issue, many people consider the mourning dove a songbird and feel it should not be hunted. This bird, certainly one of the bird-feeders' favorites, has long been regarded in this manner in New York State. In states where dove hunting has been a traditional and popular activity, the nonhunting public more readily accepts dove hunting. Typically, in southern states dove populations have been relatively high for a long time, and dove hunting has long been an acceptable activity. In New York, high dove populations are a recent occurrence, and some people may fear that hunting will drastically reduce dove populations. Although the debate continues, New York's dove population does constitute a renewable resource--one that could produce a regulated harvest, and thereby provide food and recreation, without threatening the stability of the dove population.

Economic and Social Values

The potential for the mourning dove as a recreational asset in New York is high. In spite of the fact that this bird is not hunted in some states, the dove may be the most intensively hunted small game animal in the world. About 3 million dove hunters make 11.4 million trips annually to hunt doves. In the eastern U.S., over 1 million people hunt doves each year, taking

roughly 30.5 million birds per year. Currently, there are over 400,000 small game hunters in New York, many of whom might be attracted to the challenges of dove hunting.

Beyond hunting, the mourning dove has many more values. Over 8.4 million people (53% of New York residents) reported that they participate in planned or unplanned opportunities to observe wildlife around their homes. Most of these individuals regularly feed birds and/or are avid bird watchers. For these people, the increasing abundance of mourning doves at backyard feeders in recent years has provided opportunities to observe doves and to listen to their gentle cooing.

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(Illustrations drawn by Donna Curtin.)