

Wildlife Management: Mourning Doves

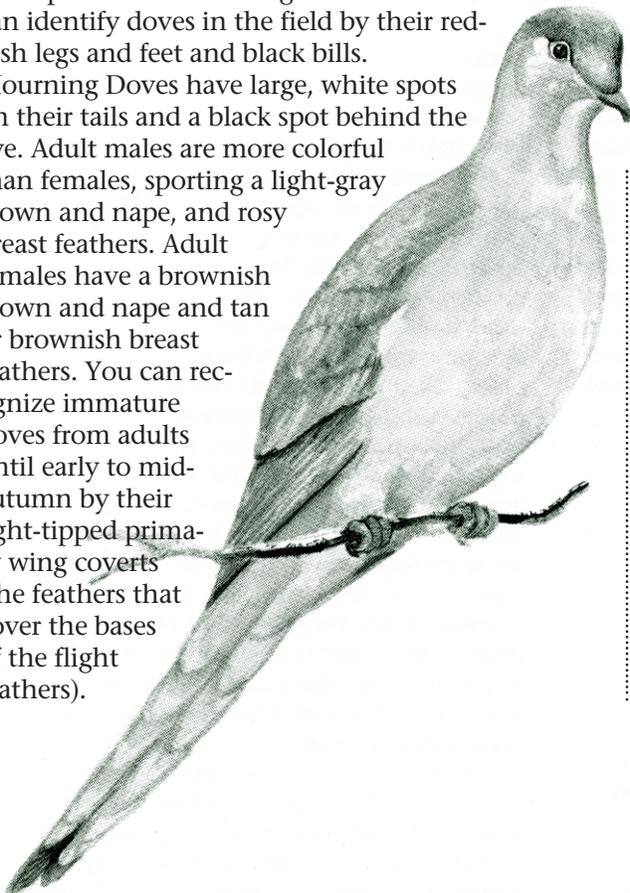
Mourning Doves (*Zenaida macroura*), which belong to the family Columbidae, are closely related to the common pigeon or rock dove.

Mourning Doves are widespread and abundant, and they thrive in a variety of habitats. This fact sheet examines the natural history of Mourning Doves and explains some management techniques that will benefit this species.

Physical Characteristics

Adult doves are about 12 inches long. These streamlined birds are recognized in flight by their slate-gray color, small head, and long, pointed tail. Mourning Doves fly with a rapid wingbeat, which often produces a whistling sound. You also can identify doves in the field by their reddish legs and feet and black bills.

Mourning Doves have large, white spots on their tails and a black spot behind the eye. Adult males are more colorful than females, sporting a light-gray crown and nape, and rosy breast feathers. Adult females have a brownish crown and nape and tan or brownish breast feathers. You can recognize immature doves from adults until early to mid-autumn by their light-tipped primary wing coverts (the feathers that cover the bases of the flight feathers).



As their name implies, the call of the mourning dove is a series of mournful coos that become lower in pitch and volume at the end.

Abundance and Distribution

Mourning Doves breed throughout the United States (except Alaska and Hawaii), the southern portions of the Canadian provinces, the Greater Antilles, and Mexico. In Maryland, doves nest in all counties, but are most abundant from the Western Shore of the Chesapeake Bay to Washington County. Doves nesting at northern latitudes migrate south during August and September to the primary winter range: New Jersey, Nebraska, and California, south to Panama. However, it is not uncommon for some doves to remain in northern regions throughout the winter.

The mourning dove is one of the most widely distributed and abundant birds in North America. Fall populations range from 350 to 600 million birds. In the eastern states, the breeding population has remained stable; however, long-term declines (primarily related to habitat loss) have occurred in the central and western states. Dove numbers are believed to be stable or increasing in Maryland.

Life History of Mourning Doves

Nesting

Mourning Doves nest in Maryland from March to October with peak activity from April to July. Nesting occurs earlier at southern latitudes, and in the Deep South doves nest throughout the year. Mourning dove pairs are believed to remain togeth-

er throughout the nesting season. The doves build their nests with small diameter branches and twigs. In some cases, doves may use nests constructed by other birds, such as robins and grackles. If the doves reuse a nest, they add a fresh layer of nest material. In some areas, reuse of nests constructed by other birds may account for 20 percent of all dove nests.

Mourning dove eggs are elliptical to oval shaped and pure white. Most clutches contain two eggs, although some may contain only a single egg or, rarely, three eggs. The typical two-egg clutch is laid in 24 to 48 hours. The eggs are about an inch long and three-fourths of an inch wide. The second egg in a clutch is usually longer and narrower than the first.

Incubation begins after the second egg is laid and is completed in 14 to 15 days. Females usually incubate from late afternoon until early morning, and males incubate the eggs during the day. About two-thirds of the nests are successful (hatch at least one egg), although this rate varies by year and region. Nests started late in the breeding season tend to be more successful than those started early in the season. Many nests are lost when severe winds blow the flimsy nests from trees.

Newly hatched doves (squabs) are fed "pigeon's milk," a secretion from the parent's crop (a food storage area in the esophagus). After 2 to 3 days, the squab's diet is supplemented with a variety of seeds. Young doves leave the nest 12 to 14 days after hatching and within a week are independent of their parents.

Mourning Doves are extremely productive, capable of producing as many as six broods during the long nesting season in southern states. In northern states, two to three broods are often produced in a single year. Doves complete a nesting cycle in about 30 days, including time for nest building and egg laying. Parents begin a new clutch of eggs within a week of the young leaving the nest. Unsuccessful clutches, for example those lost to predators, are also quickly replaced.

Habitats

Mourning Doves are highly adaptable and are capable of flourishing in cities as well as rural areas. The doves nest in a wide variety of habitats, including the edges of woods, hedgerows, farmland, orchards, and lawns. In Maryland and throughout the eastern U.S., Mourning Doves build nests in trees or shrubs, often on dense branches or the horizontal crotch of a limb. Doves will nest in deciduous or coniferous trees; however, they prefer isolated conifers 10 to 30 feet tall.

Mourning Doves usually do not build ground nests where suitable trees are present, but ground nests are common in the western U.S.

Food

The diet of Mourning Doves is composed almost entirely of seeds. In general, doves eat small seeds, and, therefore, large numbers must be consumed. For example, individual doves have been found with 7,500 seeds of wood sorrel and 6,400 seeds of foxtail grass in their crops.

A variety of agricultural and nonagricultural plants provide seeds for doves. Waste grains of agricultural crops, including corn, wheat, oats, sunflowers, soybeans, and peanuts, are important food items. Mourning Doves often eat seeds of common grasses and weeds, such as foxtail grass, crabgrass, panic grass, chickweed, wood sorrel, pokeweed, wild millet, and smartweeds.

Doves feed mainly on the ground, but their weak legs and feet do not allow them to scratch away vegetation to find food. Therefore, foraging areas must be free of thick vegetation, and seeds must be readily available. For example, harvested agricultural fields provide ideal foraging areas because thick vegetation is removed and waste grain and other seeds are plentiful. Doves are highly mobile, particularly after the nesting season, and adequate sources of food are almost always available.

In addition to food, doves require grit and water. Grit is swallowed and stored in the gizzard to aid in the grinding of seeds. Doves will consume gravel, quartz, cinders, glass, or any small, hard material to serve as grit. Doves fly to a water source several times a day. The life history of the mourning dove is summarized in Table 1.

Mortality Factors

Mourning Doves are not long-lived. Typically only about 30 to 40 percent of young doves and about 50 percent of adults will live into the next year. Doves are prey for a variety of predators, but sharp-shinned and Cooper's hawks are the principal predators.

Doves suffer from a variety of diseases and parasites; however, the effect of diseases and parasites on the population is usually subtle except during periods of stress. Mourning Doves are susceptible to the common disease trichomoniasis, also called canker disease or dove disease. This disease is caused by a protozoan and is identified by yellow necrotic growths in the mouth and throat. The masses grow until it is impossible for

Table 1. Life History of Mourning Doves.

Characteristic	Description
Nest sites	Trees and shrubs, occasionally on the ground
Nest material	Small diameter twigs and sticks, may reuse nests of other birds
Clutch size	Usually two
Incubation period	14 to 15 days
Broods per year	Two to three
Breeding season	April through September
Habitat	Nests in diverse habitats, including edges of woods, farmland, and orchards; feeds in areas where small seeds are readily available (e.g., harvested agricultural fields)
Primary food	Feeds almost exclusively on small seeds found on the ground
Plumage	Slate-gray back, reddish legs and feet, black bill, large white spots on tail, and black spot behind the eye
Body length	11 to 13 inches
Body weight	4 ounces

the doves to eat or drink. Outbreaks of this disease are usually limited to local areas, but widespread mortality can occur.

Severe winter weather that deprives doves of food or water can cause heavy losses. Ice storms, rather than simply cold temperatures, are usually the main cause of mortality attributed to weather because ice covers food and water sources. Doves can survive about 3 to 4 days without food or water.

Hunters kill about 10 percent of the late-summer population or about 50 million birds annually. Most studies have indicated that hunting has a negligible effect on mourning dove populations; however, overharvesting has been suggested as a possible factor in the decline of local dove populations.

Managing Mourning Doves

Dove populations are most affected by large-scale habitat changes. For example, clearing of vast areas of deciduous forest in the 1800s improved habitat for doves. Programs that encourage shelterbelts in western and midwestern states have increased dove nesting sites. In general, the current trend toward intensive agriculture, with large fields and few hedgerows, is detrimental to doves as well as to most other wildlife. Most practices that promote farmland wildlife, however, are favorable for doves.

You can use several management practices to increase the value of land for doves. You can create excellent nesting and roosting sites by planting conifers singly or in small groups. Place wire cones

in trees to provide support for dove nests that may otherwise be destroyed by high winds (Figure 1).

You can provide food for doves by planting crops or managing fields for seed-producing weeds and grasses. Several crops are particularly attractive to doves, including dove proso millet, Japanese millet, brown top millet, Peredovik sunflower, and buckwheat. When planting crops for doves, choose a location that is as close as possible to a water source and nesting and roosting habitat. By combining different crops in the same field or in close association, dove foods can be available for longer periods. For example, if you plant sunflowers in the center of a field and plant buckwheat along the perimeter, the early-maturing buckwheat will provide seeds until the later-ripening sunflower seeds are available. Fields can be left fallow to encourage seed-producing weeds and grasses, such as foxtail grass. Whether crops are planted or natural seed producers are encouraged, mow vegetation to remove dense cover and make seeds available to doves. After seeds are exhausted, disk mowed areas to expose bare soil for grit and dusting areas.

Adapted from:

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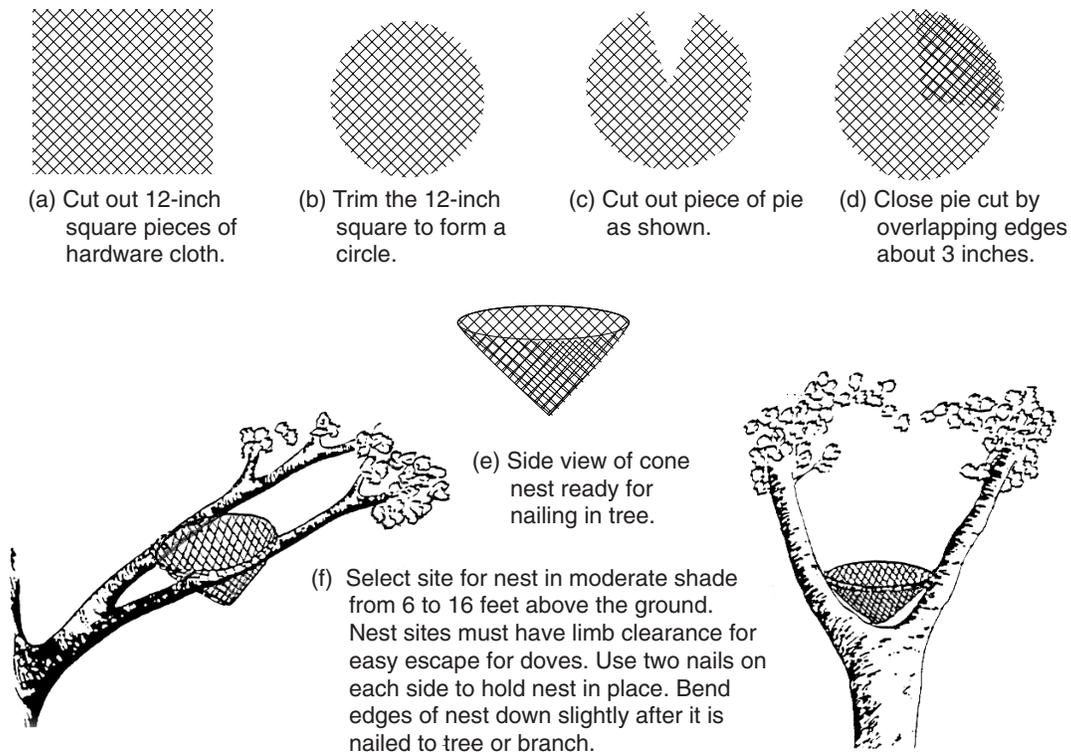


Figure 1. Construction and installation of wire nest cones for mourning doves.

International Association of Fish and Wildlife Agencies; Washington, DC.

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