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 (Zenaida macroura) are easily identified 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 together.

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

(a) Cut out 12-inch square pieces of hardware cloth.
(b) Trim the 12-inch square to form a circle.
(c) Cut out piece of pie as shown.
(d) Close pie cut by overlapping edges about 3 inches.
(e) Side view of cone nest ready for nailing in tree.
(f) Select site for nest in moderate shade from 6 to 16 feet above the ground. Nest sites must have limb clearance for easy escape for doves. Use two nails on each side to hold nest in place. Bend edges of nest down slightly after it is nailed to tree or branch.

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**Wildlife Management: Mourning Doves**

By: William F. Harvey
Project Leader
Migratory Bird Program
Maryland Department of Natural Resources

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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
doove nests.

Mourning doves 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, capa-
ble 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 with
in 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, farm-
land, orchards, and lawns. In Maryland and
throughout the eastern U.S., Mourning doves
build nests in trees or shrubs, often on dense
branches or a patch 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 agricul-
tural crops, including corn, wheat, oats, sun-
flowers, 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 plen-
tiful. 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 con-
sume 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 princi-
pal predators.

Doves suffer from a variety of diseases and
parasites; however, the effect of diseases and par-
asites on the population is usually subtle except
during periods of stress. Mourning doves are sus-
cceptible 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
the doves to eat or drink. Outbreaks of this dis-
ease are usually limited to local areas, but wide-
spread 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 weath-
er 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-sum-
mer population or about 50 million birds annu-
ally. Most studies have indicated that hunting
has a negligible effect on mourning dove popula-
tions; however, overharvesting has been suggest-
ed 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 shelters in western and midwestern
states have increased dove nesting sites. In
general, the current trend toward intensive agricul-
ture, with large fields and few hedgerows, is
deterrent 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, Peredox sunflower, and
backsweed. When planting crops for doves, choose a location that is as close as possible to a water
source and nesting and roosting habitat. By com-
bining different crops in the same field or in close
association, dove food 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 pro-
vide seeds until the late-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:** Cowan, J. 1959. "Pre-fab" Wire Mesh Cone Gives Doves
Better Nest Than They Can Build Themselves. Outdoor California, 10:16-11.

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Sanderson, G.C., ed. 1977. Management of Migratory
Shore and Upland Game Birds in North America.

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**Table 1. Life History of Mourning Doves.**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nest sites</td>
<td>Trees and shrubs, occasionally on the ground</td>
</tr>
<tr>
<td>Nest material</td>
<td>Small diameter twigs and sticks, may reuse nests of other birds</td>
</tr>
<tr>
<td>Clutch size</td>
<td>Usually two</td>
</tr>
<tr>
<td>Incubation period</td>
<td>14 to 15 days</td>
</tr>
<tr>
<td>Broods per year</td>
<td>Two to three</td>
</tr>
<tr>
<td>Breeding season</td>
<td>April through September</td>
</tr>
<tr>
<td>Habitat</td>
<td>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)</td>
</tr>
<tr>
<td>Primary food</td>
<td>Feeds almost exclusively on small seeds found on the ground</td>
</tr>
<tr>
<td>Plumage</td>
<td>Slate-gray back, reddish legs and feet, black bill, large white spots on tail, and black spot behind the eye</td>
</tr>
<tr>
<td>Body length</td>
<td>11 to 13 inches</td>
</tr>
<tr>
<td>Body weight</td>
<td>4 ounces</td>
</tr>
</tbody>
</table>
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.

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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.

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Madson, J. 1978. The Mourning Dove. Winchester Press; distinctive bands, 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.

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