

THE PURPLE MARTIN IN OKLAHOMA



Adah Ellis, Artwork Copyright PMCA

Description

The purple martin (*Progne subis*) is the largest North American member of the swallow family (**Hirundinidae**). Other Oklahoma members include: cliff, tree, bank, rough-winged and barn swallows. Purple martins nest in colonies and often locate near human habitation. First-year males and all females are bluish gray with light gray throats and breasts. First-year males will have one or more dark feathers on the throat, chin, breast, flanks, belly or undertail coverts.

Body Length: 7-1/2 inches to 8-1/2 inches.

Nesting: Colonial nester; both sexes help in the construction of nests made of mud, grasses, leaves, twigs, straw and pine needles.

Eggs: White, usually 4-5.

Incubation: Female incubates eggs and the male insulates eggs while the female is away; hatching occurs after 15-16 days.

Fledging: About 28 days after hatching.

Food: Insects caught in the air-wasps, grasshoppers, butterflies, dragonflies, etc. Purple martins do not eat a significant number of bees or mosquitoes as widely believed. Most mosquito species are not active during the day when martins are feeding. Crushed eggshells may be offered as a dietary supplement, providing calcium and grit.

Migration: Martins are Neotropical migrants -birds that nest in Oklahoma in the summer and spend

their winters in Central and South America. Adults arrive in Oklahoma mid-February through May with previous year's young arriving four to six weeks later. Martins usually abandon their nests a few days after the young fledge and begin gathering at communal nesting sites prior to migration in late August or early September.

Site Location

Three key factors should be considered when attempting to attract purple martins. These are house loca-

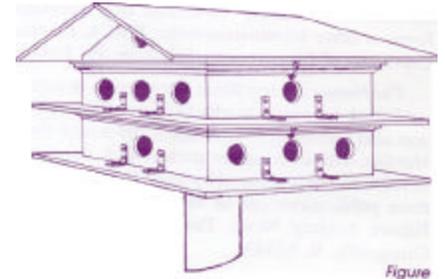


Figure 1

tion, design and nest management.

The house should be placed within 100 feet of human activity (house, barn or garden) and must be at least 40 feet from buildings, trees and other obstructions. Martins need a place to perch that provides the best view of open space where insects may be flying. Open areas near water are especially attractive to martins. House height may range from 8-30 feet, but 12-14 feet is recommended.

It sometimes takes several years to attract martins to a new site. If the house is not used in the spring, leave it up until after fall migration. Young birds may discover it as they head south. Then lower and/or plug boxes after fall migration to prevent usage by sparrows and starlings. If nestboxes must be changed, do it over a two year period. Do not eliminate the old nestboxes until some of the martins have accepted the new one.

House Designs

Early European naturalists noted that American Indians attracted purple martins to their villages by hanging gourds. This early housing technique is still used today.

Gourds may last up to 30 years if properly maintained. They should be soaked for 15 minutes in copper sulfate solution (one pound copper sulfate dissolved in five gallons of water). After they are dried, paint them with white oil-based paint to minimize heat. The entrance hole should be 2-1/4 inches in diameter, and three to six quarter-inch drainage holes should be drilled into the bottom.

Nestboxes (Figure 1) should be constructed of a lightweight material. For this reason, aluminum structures are considered by many to be ideal as they are lightweight and reflective. Although martins don't seem to mind the bright interior, you'll probably have to fit the compartments with a special hole shape to keep starlings out. Each compartment should be at least 6x6x6

inches in size and have 2-1/4 inch entry holes. Additionally, aluminum apartments are very durable and will remain attractive for years without

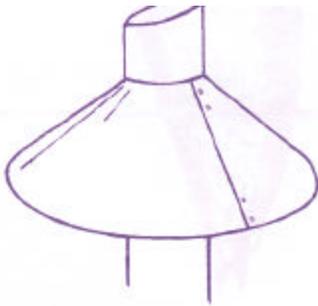


Figure 2

extensive maintenance.

Houses made from PVC pipe material and masonite also are available. PVC structures are inexpensive to construct and very durable but can be difficult to clean. Wood houses should be 1/2-inch to 3/4-inch thick to insulate against heat and cold.

Nest Box Management

Several boxes may be set up in the same yard. When "fully" occupied, a house will have a percentage of compartments vacant. The occupancy rate can be increased by using porch dividers between "apartments."

Martin houses should maintain a relatively cool temperature. Since martins prefer to nest in locations where they are exposed to direct sunlight (open areas), painting houses white to reflect heat and providing proper ventilation will help prevent excessive heat build-up.

Ventilation is essential. When deciding on a martin house design, select a structure with abundant ventilation. Some designs have ventilation shafts through the structures center while others are ventilated by small holes drilled in the compartments.

Guard rails around the porches on the houses will help protect fledglings. Young birds come out from time to time and rails may protect them from falling off the porch.

Mounting Posts can be made of wood or steel. Wood houses should

be mounted on a winch-operated system that cranks up and down because most houses weigh too much for a telescoping pole. If telescoping poles are used for mounting lightweight structures, mark the poles to maintain the compass orientation of the nestbox.

Predator guards (Figure 2) should be used to protect martins from predators. A section of 4-inch PVC pipe placed around the base of the mounting pole may deter snakes. Another type of predator guard is a cone of smooth metal plastic that umbrellas downward away from the pole. These "baffles" are commercially available.

Figure 2

Predator guards should be at least 40 inches wide to protect martins from predators.

Problems

When possible the nests should be checked weekly to note any problems with parasites or losses from predators and to remove sparrow and starling nests. Keeping records will help in managing the colony and in recognizing problems.

The most serious problem for purple martins in many areas is nest competition. Aggressive European starlings and English house sparrows have caused large declines in the populations of many native cavity-nesting birds. Starlings and English sparrows are not protected by law and can be controlled by traps, shooting and regular removal of their nests.

By frequently monitoring and cleaning out nests, house sparrows and starlings may be discouraged. This requires easy access to the house. The house should be easy to raise and lower vertically so that the martins' nests are not disturbed. Therefore, a lightweight house is important. Sparrow traps can be purchased that fit into compartments of some aluminum houses or on the mounting post.

Predators are less of a threat to purple martins, but to individual colonies they can be devastating. Snakes, owls, hawks, raccoons, opossums, cats and squirrels can pose a threat to martins. A single visit of a predator to the nestbox may cause immediate abandonment by

the martins.

Parasites such as mites may pose a problem, especially for young birds that may jump or fall from houses trying to escape the parasites or become sickly and underweight. Placing sulphur, Sevin, or pyrethrum in each apartment prior to the martins' arrival may help reduce parasite problems. Sprinkle 1/2 teaspoon under sub floors no more than twice a season. Do not apply directly to eggs or young. A safer alternative to the environment is to remove infested nest material and replace it with clean, dry straw or cedar shavings. Old nesting material should be removed at the end of the nesting season.

Inclement weather sometimes causes the loss of purple martins. Two main weather problems affect the martins: early spring cold snaps sometimes kill off early arrivals, and cold rains and winds of late spring and early summer may prevent the adults from obtaining sufficient insects to feed their newly hatched young.

Additional Sources

The Purple Martin Conservation Association is an international non-profit conservation organization formed to help purple martin populations through scientific research, conservation activities and landlord education. PMCA maintains a colony registry and publishes a quarterly magazine, *Purple Martin Update*, for members. To receive free registration forms or other information write, PMCA, Edinboro University of Pennsylvania, Edinboro, PA 16444.

The Nature Society News is a monthly newspaper published for purple martin fanciers. The organization also publishes J. L. Wade's *Attracting Purple Martins*. This information-packed book, first printed in 1985, can be purchased by mail. Further details on these publications can be obtained by writing The Nature Society News, Purple Martin Junction, Griggsville, IL 62340.

Nongame Contributions Aid Bird Species

Oklahoma taxpayers can help conserve the 800-plus nongame species in this state, more than half of which are birds, by sharing their state tax refund. Since the Nongame Wildlife Act was adopted in 1981, taxpayers entitled to a refund have been able to check the appropriate line on their state income tax form to donate any portion of their refund to the Nongame Wildlife Program. Donations to the Program are deducted from the refund check and are tax deductible on next year's federal form if you itemize.

Oklahomans concerned about the future of nongame wildlife, including endangered species, also can support the Nongame Wildlife Program with an annual donation by mail. Your donations will be used to manage these species for future generations to enjoy.

A major concern of the program is the apparent decline in the populations of Neotropical migrant bird species such as Hell's vireo, yellow-billed cuckoo and Eastern kingbird. The program hopes to raise the public's awareness of the decline of these and other species.

To contribute to nongame wildlife, remember on your state tax form, or mail a check to the Nongame Wildlife Program, 1801 N. Lincoln, Oklahoma City, OK 73105.