URBAN WILDLIFE PROGRAM

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DEPARTMENT OF WILDLIFE AND RANGE SCIENCES

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SS-WIS-16

HELPING OUR SMALLEST FALCON: THE SOUTHEASTERN AMERICAN KESTREL

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DESCRIPTION

The southeastern American kestrel (Falco sparverius paulus), formerly called the sparrow hawk, is the smallest member of the falcon family in the United States. It is about the size of the blue jay. The southeastern kestrel is slightly smaller than other kestrels that migrate into Florida during the winter months. The male has a reddish-brown back and tail and slate blue wings. His underside is buff with small black spots on the lower abdomen and flanks. The female is reddish-brown with brown streaks on the chest, and black bands on the tail. Both sexes have 2 black "whiskers" on each side of the face. Young birds are similar in appearance to adults. Kestrels also can be recognized by their hovering flight as they search for prey.

DISTRIBUTION

The American kestrel occurs from northern Canada and Alaska to the most southern tip of South America. The Southeastern kestrel is restricted to South Carolina, Alabama, Georgia, and Florida. It is found throughout Florida except for the extreme southern tip of the peninsula. This subspecies does not migrate and remains in the Southeast year-round.

Photo by John Smallwood

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HABITAT

Kestrels typically nest in cavities excavated by woodpeckers in snags (dead trees). They most frequently use decayed longleaf pine trees greater than 9 inches (22.5 centimeters) in diameter and 20 feet (6.7 meters) tall.

Mature, open pine woodlands provide kestrels with snags for nesting sites and abundant insects and lizards which are fed to the young. Adjacent pastures and fields also are used for feeding.

Also of importance to nesting kestrels in north-central Florida are upland agricultural areas formerly covered by hardwood hammocks or longleaf pine flatwoods. In particular, areas with remnant open longleaf pine forests or isolated longleaf pines standing in fields and pastures are good nesting sites. However, dead trees for nesting sites may be scarce in these areas. Also vegetation differences and the use of pesticides that reduce food resources may render agricultural lands less suitable than natural areas.

In south-central Florida, kestrels nest in longleaf pine sandhills and pine flatwoods. However, much of this area has been converted to citrus production and kestrel populations are much smaller than in north-central Florida. Some slash pine flatwoods in this region have nesting kestrels. Recently, kestrels have been found nesting in structures such as ornamental palms, buildings, utility poles, and purple martin houses in Hillsborough, Polk, and Highlands counties.

REPRODUCTION

Three to 5 eggs are deposited on the bottom (floor) of the cavity between March and June. Kestrels use very little if any nesting material. The female does most of the incubation, which lasts about 30 days. The young leave the nest (fledge) 30 days after hatching. A pair will raise 1 brood of young per year; however, if the first nesting attempt fails, they may lay another clutch of eggs.

CAUSES OF DECLINING POPULATIONS

The once common kestrel or "killy hawk" (named after its high-pitched alarm call of "killy-killy-killy") is now uncommon in Florida. Their numbers may have decreased over 80% in the last 50 years. The main reason for this decline is loss of habitat.

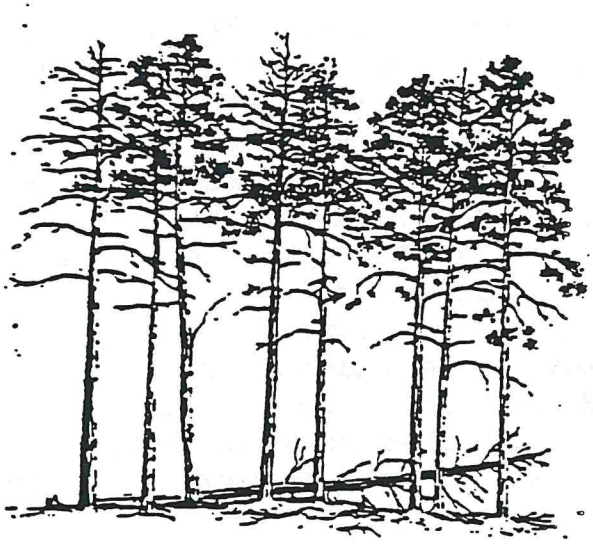
The Southeastern kestrel prefers open pine woodlands. This habitat once was common in much of north- and south-central Florida. Since the turn of the century, however, millions of acres have been altered into row crops, citrus groves, residential development, and timber production. With the rapid growth of Florida's human population, habitat loss is increasing. Without effective programs to preserve and manage feeding and nesting areas, local extinctions could become more widespread.

SOLUTIONS

Whether you own 2 acres or several hundred acres, you can help protect kestrels in one or more of the following ways.

Maintaining natural habitat

Short understory vegetation allows kestrels to see and catch their prey. Invading shrubs and trees are repressed naturally in longleaf pine sandhills by periodic fires. In areas where allowed and where safe, prescribed burning during the summer every 3-4 years will kill back invading shrubs and oaks. Fire permits from the Florida Division of Forestry are required before such a fire can be started. Mechanical methods, such as mowing, also may be used to maintain the open understory required by kestrels for feeding.



Snag management

Snags and scattered live trees (especially pine trees) should be left in and near pastures and fields. These will provide current and future nesting sites and hunting perches for kestrels. Large numbers of snags (about 2 per acre or 5 per hectare) are necessary to support woodpecker populations that excavate the cavities kestrels use for nesting. The best way to provide snags for kestrels is to maintain enough live trees so that normal tree mortality will produce an adequate number of snags. Snags are a temporary resource, which must be continually replaced by reproduction, growth, and death of trees. Some snags only last a few years, while others remain standing much longer.

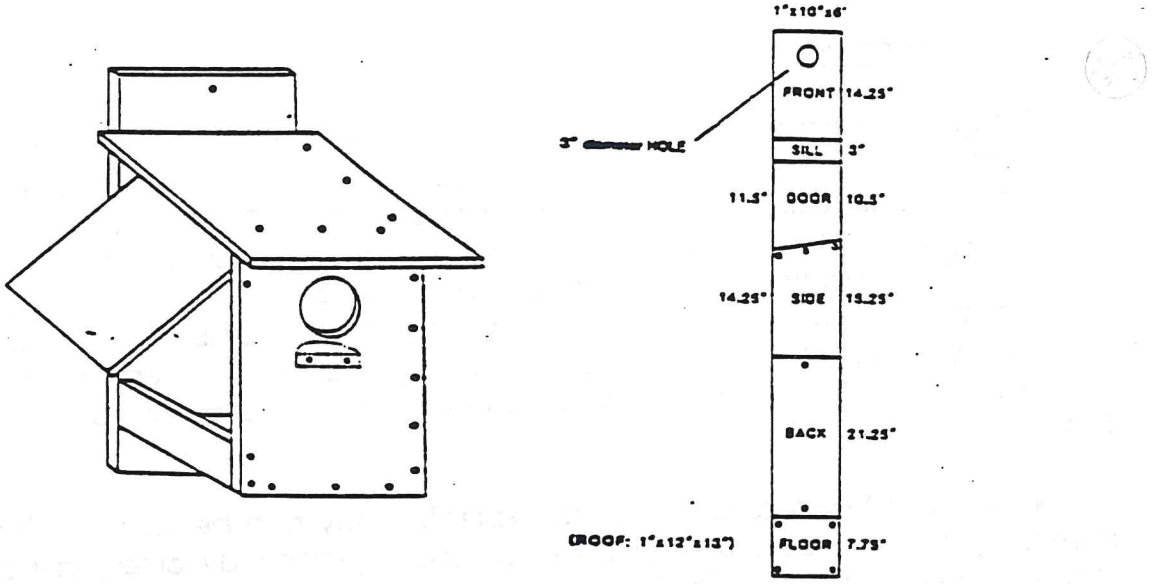
When too few natural snags are available, they can be created. This is done by selecting about 2 trees/acre or 5 trees/hectare (especially pines) that are at least 10 inches (25.4 centimeters) in diameter. The most effective way to kill a pine tree is to cut off the top with a chain saw at a height of about 30 feet (10 meters). Other methods such as injection with herbicides and girdling are less successful. The remaining stump soon will die and within a year or 2 will be suitable for woodpeckers to drill nest holes.

Nest boxes

If adequate nesting sites are not available in an otherwise good, open feeding area, nest boxes may be a temporary solution. Nest boxes need to be maintained, however, and over the long-run are likely more time-consuming than managing for snags.

Suitable locations for nest boxes are near stands of longleaf pine, in fields and pastures, and in open woodlands. Areas of known previous breeding are excellent sites for nest boxes. If permission is granted by the Department of Transportation or the appropriate utility company, highway roadsides and powerline rights-of-way also are excellent sites for kestrel nest boxes. These habitats should have abundant lizard or insect populations. Areas where pesticide use may be high should be avoided.

Nest boxes should be placed 13 to 16 feet (4 to 5 meters) above the ground, high enough to keep out predators but low enough so they can be reached for cleaning and repairing. They should be cleaned between nesting seasons. Two inches of wood shavings or straw (not sawdust) should be placed in the bottom of the box each year. The opening should face south or east to allow warming in the morning but not overheating in the afternoon. This also will protect it from adverse weather which typically arrives from the north. In prime habitats, nest boxes should be spaced at about 1/3-mile (0.5 kilometer) intervals. To reduce use of nest boxes by starlings, place them at least 1/3-mile (0.5 kilometer) from farm buildings. Dimensions and a construction plan for kestrel nest boxes are shown in the figure below. Boxes can be attached to trees with 2 nails. Branches should not obstruct the flight path to the box opening. Boxes on wooden poles can be protected from climbing predators such as raccoons and snakes by wrapping a 3-feet (1 meter) wide strip of sheet metal around the pole.



LEGAL ASPECTS

It is illegal to possess, transport, molest, harass or sell kestrels or parts such as feathers, or nests, or eggs except as authorized by specific permit from the Florida Game and Fresh Water Fish Commission and U.S. Fish and Wildlife Service. Permits also are required to move trees or utility poles containing nests.

NATIVE LIZARDS OF SOUTH FLORIDA

Common Names: anoles, fence lizards, skinks, glass lizards, racerunners and geckos

Other Names: numerous, depending on species

Scientific Names: 11 species and subspecies representing five scientific families are found in South Florida

Appearance:
- Family Iguanidae
  - Anoles: Can change color from green to brown; males have pinkish throat fan. Snout is long and pointed. Length is 5-8 inches (13-20 centimeters).
  - Fence lizards: Pointed scales on backs; pale or grayish brown with dark band on each side. Length is 3-5 inches (7.5-20 centimeters).
- Family Scincidae
  - Skinks: Smooth, shiny lizards with tiny limbs and cylindrical bodies. Tails break off easily. Length is 5-8 inches (13-20 centimeters). Brown bodies; stripes may be light or dark or yellowish. Tails may be brown, pink-red, bluish or reddish.
- Family Anguidae
  - Glass lizards: Often mistaken for snakes because they are legless, these lizards differ from snakes in having visible ear openings, eyelids and small scales on their bellies. Length is 25-43 inches (64-109 centimeters). Bodies light brown to black; undersides may be bright yellow, yellow-tan or pink. Some have dark stripes; others, squarish emerald spots.
- Family Teiidae
  - Racerunners: Long, rough tails; wedge-shaped heads. Thousands of tiny scales on backs. Hind legs much larger than front legs. Brown with yellow stripes. Length is 9.5 inches (24 centimeters).
- Family Gekkonidae
  - Geckos: Stout lizards with large, catlike eyes. Heads and bodies brown with keeled scales, causing rough appearance. Females have two yellow stripes behind head. Length is 2 inches (5 centimeters).

Range: - statewide

Habitat: - various, depending on species. See fact sheet for further information.

Continued...

Diet: - insects, spiders, other small invertebrates

Reproduction: - some species lay single eggs; others lay clutches of up to 17 eggs
- female skinks guard eggs until they hatch

Behavior: - anoles can change colors
- male anoles display throat fans, do "push-ups" and head bobbing during courtship or while defending territory
- many species have tails that break off easily and continue moving to distract predators
- some species are excellent climbers; others are mostly terrestrial
- frequently seen basking in sun
- some lizards burrow in the soil
- most lizards are diurnal; geckos have large eyes for hunting at night

Problems: - may be found on porches or get into homes

Solutions: - exclusion; seal any openings in house

Legal Aspects: - the Florida Keys mole skink, Eumeces egregius egregius, is considered a species of special concern by the state

Printed Material in Appendix: yes