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FLORIDA'S HAWKS AND OWLS

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Hawks and owls are sometimes referred to as "birds of prey" because most species belonging to these groups kill their food (prey). They also are called "raptors" which refers to their ability to seize prey. Because their ecological niche is high in the food web, raptors serve as symbols of strength and freedom in historical folklore.

Most birds of prey raise only one brood per year. Barn Owls usually produce more than one brood and Kestrels and Burrowing Owls occasionally raise two broods in one year. Hawks and owls share a few physical characteristics such as large talons (the nails) and strong decurved bills. Sexes usually are similarly colored (exceptions include Northern Harrier, American Kestrel, and Merlin) but females tend to be larger than the males. Juveniles of most species have different plumages than adults which often makes identification difficult. For example, Bald Eagles are mostly brown until they obtain their white head and tail feathers in their third year. Both hawks and owls regurgitate pellets of undigestible body parts of prey such as bones, hair, and feathers. However, this is where the similarities end.

HAWKS

The term "hawks" in the general sense refers to all day-time (diurnal) birds of prey in the taxonomic order Falconiformes. This includes 23 different species from 3 different families that can be found in Florida.

VULTURES – Cathartidae

Vultures are the ultimate scavengers. They tear off bite-sized pieces of carrion with their strong hooked beaks. Because they do not grasp prey with their talons, their feet are relatively weak. Both species roost in groups in woodlands but usually feed in more open habitats. They nest on the ground, in hollow trees or in buildings.

Turkey Vulture (Cathartes aura): the larger of the 2 vultures (27 inches long), black body, adults have a red featherless head; common statewide.

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Black Vulture (Coragyps atratus): 25 inches long, shorter tail, white wing patches, and flaps its wings more often, black body, adults have a gray, featherless head; common statewide.

KITES, EAGLES, ACCIPITER AND BUTEO HAWKS, HARRIERS, AND OSPREY – Accipitridae

Kites

Kites are graceful, soaring raptors that eat flying insects on the wing and small vertebrates. The Snail Kite is an exception and eats only apple snails (Pomacea spp.).

White-tailed Kite (Elanus leucurus): 16 inches long, black shoulders, white underparts and mostly white tail; wet prairies and marshes; uncommon statewide, but mainly in southern 1/3.

American Swallow-tailed Kite (Elanoides forficatus): 23 inches long, deeply forked tail with black and white pattern; open woodlands; uncommon statewide.

Mississippi Kite (Ictinia mississippiensis): 14 inches long, dark gray back, light gray head; open woodlands; uncommon in north and occasional in south.

Snail Kite (Rostrhamus sociabilis): 17 inches long, dark body with white at the base of the tail; wet prairies and marshes; nomadic during the winter and may move up to north Florida, occasional nester in south.

Eagles

Bald Eagle (Haliaeetus leucocephalus): 34 inches long, adults have white head and tail and dark brown body; commonly nests in tall pine trees in upland habitats and feeds on fish and carrion in and around water bodies; uncommon statewide.

Golden Eagle (Aquila chrysaetos): 35 inches long, golden head and neck feathers; occasionally seen in Florida during the winter around marshes.

Accipiter Hawks

Accipiters may be readily identified by relatively short rounded wings, a relatively long tail, and rapid wing beats which helps them to catch small birds in woodlands.

Sharp-shinned Hawk (Accipiter striatus): 12 inches long, gray or brown on back, streaked underneath, square tail; fairly common winter visitor in woodlands statewide.

Cooper's Hawk (Accipiter cooperii): 17 inches long, gray or brown on back, streaked underneath, large rounded tail; uncommon nester in woodlands in northern two-thirds of the state.

Northern Goshawk (Accipiter gentilis): 21 inches long, gray (darker on back); no verified records, but may occasionally occur in north Florida during winter.

Buteo Hawks

Buteos are the most commonly seen hawks in Florida, but they are difficult to accurately identify because several species have dark and light color morphs. Generally, Buteos are larger than the Accipiters. They also have broad, rounded wings and a broad fan-shaped tail which is used like a rudder when soaring. They are found in all habitats and eat everything from rabbits and squirrels to lizards and snakes.

Red-shouldered Hawk (Buteo lineatus): 19 inches long, reddish shoulders, tail has black and white bands; feeds on small vertebrates and invertebrates; common nester statewide.

Short-tailed Hawk (Buteo brachyurus): 16 inches long, dark color morph - black above and below with banded tail and wings, light color morph - black above and white below with banded tail and wings; feeds on small birds; uncommon nester in central and south on edges of woodlands.

Red-tailed Hawk (Buteo jamaicensis): 22 inches long, brown above, whitish below with dark belly band on most birds, adults' tail is reddish above; feeds mostly on rodents and rabbits in open areas; common statewide and nests in a variety of open woodlands.

Broad-winged Hawk (Buteo platyterus): 16 inches long, brown above, streaked - below, wide black and white bands on tail, light underwings with dark border; feeds on small vertebrates and invertebrates; common nester in north.

Swainson's Hawk (Buteo swainsoni): 20 inches long, dark color morph - dark brown with lighter or rufous coloring on leading edge of underwings, light color morph - dark brown head and back, brown or rufous breast with white throat patch, white belly and leading edge of underwings; both color morphs have light, unmarked undertail feathers; occasional winter visitor statewide.

Rough-legged Hawks (Buteo lagopus): 20 inches long, dark color morph - black or brown with lighter underwings and tail, light color morph - dark brown back with lighter head, underparts are lighter and heavily marked, dark trailing edge on wings and banded tail; occasional winter visitor statewide.

Northern Harrier

(Circus cyaneus): 20 inches long, gray (male) or brown (female) upperparts and streaked underneath with white rump; courses low over marshes and open prairies searching for small vertebrates; common winter visitor statewide.

Osprey

(Pandion haliaetus): 24 inches long, dark brown above, light head with dark eye stripe, light underparts with streaking and barring; specially adapted feet which enable them to hold on to slippery fish; common nester statewide in live or dead trees close to water.

FALCONS – Falconidae

Falcons are characterized by long pointed wings and long tails. They are extremely fast fliers.

Audubon's Crested Caracara (Caracara plancus audubonii): 23 inches long, more similar to vultures in appearance and eating behavior; dark overall with white on the throat and neck, barring on tail and wings, long legs; feeds on reptiles, birds, mammals and carrion; typically nests in cabbage palms in central and south range lands.

American Kestrel (Falco sparverius): 10 inches long, rufous (males) or creamy and streaked (females) breast, rufous back (dark brown bands - females), blue-gray upperwings (males only), lighter colored underwings with streaking and barring, vertical black streaks in front of and behind eyes (mustache); typically seen perched on roadside utility lines; feeds on small vertebrates and insects; common winter visitor statewide; southeastern subspecies (paulus) is an uncommon nester statewide in cavities in open woodlands.

Merlin (Falco columbarius): 12 inches long, blue-gray (males) or brown (females) above, white underparts streaked with brown, thick black bands on tail, no mustache; feeds mainly on birds; common fall migrant and rare winter visitor statewide along the coasts and inland open habitats.

Peregrine Falcon (Falco peregrinus): 18 inches long, slate-gray above, white underparts with barring, wide vertical black marking in front of and below eye (mustache), feeds on shore birds and ducks; common fall migrant and uncommon winter resident statewide along coasts and inland lakes and marshes.

OWLS

Owls are the night-time (nocturnal) birds of prey in the taxonomic order Strigiformes which consists of two families, Tytonidae and Strigidae. These raptors are characterized by a large rounded head with large forward-facing eyes set in their sockets so these birds have to move their entire head to gaze from side to side, feathered facial disks focus sound more directly toward their ears, and soft feathers which allows silent flight. Because it is difficult to see owls at night, they can be more easily recognized by their distinct voices (calls).

BARN OWLS – Tytonidae

Barn Owl (Tyto alba): 14 inches long, heart-shaped (monkey) face, cinnamon-brown above, buff below, long legs, and "scream-like" call; feeds on small mammals in open areas; uncommon nester statewide in barns, abandoned buildings, and tree cavities.

TYPICAL OWLS – Strigidae

Eastern Screech-owl (Otus asio): 8 inches long, feathered ear tufts, gray, red, or brown body streaked with brown and white, quavering whistle-like call; feeds mostly on insects; common cavity-nester statewide in woodlands.

Great Horned Owl (Bubo virginianus): 20 inches long, large feathered ear tufts, dark back and horizontally barred underparts, yellow eyes, 4 to 6 fairly rapid low hoots followed by 2 slower hoots; feeds on variety prey including ducks, geese, skunks, and other raptors; uncommon, year-round resident statewide, typically nests in abandoned raptor or crow nest.

Burrowing Owl (Scolecio cucularia): 8 inches long, light brown overall with white barring and spotting, 2-note "coo-c-o-o" call; feeds primarily on insects and lizards; nests in underground burrows in open, well-drained habitats, scattered populations throughout the state; species of special concern.

Barred Owl (Strix varia): 17 inches long, brown back, rounded brown head without ear tufts, lighter below with vertical barring on belly, dark eyes, call sounds like "who cooks for you, who cooks for you alllll;" feeds primarily on rodents; usually nests in cavities in a variety of woodlands, uncommon statewide.

Long-eared Owl (Asio otus): 13 inches long, feathered ear tufts are closer together than those of the Great Horned Owl, dark back and vertically barred underparts; very rare winter visitor in a variety of habitats.

Short-eared Owl (Asio flammeus): 13 inches long, no ear tufts, light brown overall with dark streaking; resembles the Northern Harrier Hawk as it flies close to the ground in open areas; occasional winter visitor.

Northern Saw-whet Owl (Aegolius acadicus): 7 inches long, reddish-brown back, light facial disk, streaked underparts, no ear tufts; feeds on insects; occasional winter visitor in northern woodlands.

IMPORTANCE TO HUMANS

Because hawks and owls are at the top of many food webs that exist in a variety of Florida's habitats, they are exposed to many chemicals and diseases. For example, mercury may be absorbed by a plant and passed on to a plant-eating rodent and then to a hawk that consumes the rodent. Because of this role or niche that they occupy, raptors are excellent "indicators" of environmental quality. Also, their diets of small mammals, other birds, and insects, play essential roles in "natural" pest management.

Humans have been using raptors to secure game for thousands of years. This sport of falconry is a form of hunting enjoyed by many Floridians. Falconers with trained raptors have also helped to prevent bird-airplane collisions by clearing airport runways of other birds.

RAPTORS IN DANGER OF EXTINCTION: CAUSES & RECOVERY STRATEGIES

There are 6 Florida raptors that are legally listed as species in danger of extinction either by the state or federal government (Table 1). Although they have not gone through the political legal listing process, several other species are biologically in just as much danger of extinction as those that are officially listed.

Human-caused alterations of natural habitats are the major causes of endangerment of raptors in Florida. More specific human impacts include alteration of natural hydrology in south Florida which has resulted in declines of the apple snail (major food item for the Snail Kite); conversion of native range and prairie habitats into citrus and improved pastures has decreased the amount of suitable habitat for the Caracara; removal of snags (dead trees) has reduced the availability of nesting structures for Kestrels; and free-ranging domestic cats take their toll on burrowing owls that nest close to residential areas.

Recovery of these and other raptors to population levels and trends that no longer indicate that they are in danger of extinction ideally should focus on conservation of large contiguous ecosystems of suitable quality through the state's land use planning processes. The practice of merely protecting active nest trees does not provide any assurance that offspring from these nests will have enough suitable habitat areas to contribute to population growth for the species.

More specific strategies that may assist in the recovery of some species include better control of chemicals that may adversely affect the health of raptors and snag management or nest box projects that increase the number of suitable nesting structures for Kestrels. Recovery efforts devoted to raptors will also benefit many other species living in the same ecosystems.

Table 1. Raptors legally listed as species in danger of extinction in Florida.

SPECIES	FGFWFC ¹	USFWS ²
Snail Kite	E ³	E
Bald Eagle	T ⁴	E
Osprey	SSC* ⁵	
Audubon's Crested Caracara	T	T
Southeastern American Kestrel	T	
Burrowing Owl	SSC ⁶	

¹ Florida Game and Fresh Water Fish Commission (list published in Section 39-27.03-05, Florida Administrative Code).

² United State Fish and Wildlife Service (list published in List of Endangered and Threatened Wildlife and Plants, 50 Code of Federal Regulations 17.11-12).

³ Endangered

⁴ Threatened

⁵ Species of Special Concern in Monroe County only

⁶ Species of Special Concern

NUISANCE AND DAMAGE PROBLEMS

On a large scale, the number of nuisance problems caused by raptors is minimal compared to those caused by armadillos, squirrels, and other species. However, an individual situation such as owls killing poultry can be quite severe to the person experiencing the damage. The most common problems involving raptors in Florida are: bird-airplane collisions, poultry depredation, depredation at aquaculture facilities, property destruction and calf depredation by vultures, and song bird predation at backyard bird feeders.

If you want to stop hawks from killing song birds at a feeder, stop feeding for a couple of days until the predator goes elsewhere to find prey. A bird feeder placed within 15 feet of some sort of escape cover will enhance song bird survival. Although the act of predation at a feeder may disturb some people, it also provides a unique opportunity to observe and study natural phenomena such as how feeding behavior may make some song birds more susceptible to avian predators.

Nesting behaviors of certain hawks and owls also can cause problems by interfering with proposed development or other land uses and activities. Legal protection (see "LEGAL ASPECTS") of these species prohibits nest destruction or removal without separate permits issued by the Florida Game and Fresh Water Fish Commission (620 S. Meridian Street, Tallahassee, FL 32399-1600) and the U.S. Fish and Wildlife Service (Division of Law Enforcement, P. O. Box 4339, Richard B. Russell Federal Building, Atlanta, GA 30302).

Because all hawks and owls are protected by federal laws, any type of prevention or control methods involving depredations and property damage should be implemented in coordination with the USDA-Animal Damage Control specialist (904/377-5556).

LEGAL ASPECTS

All hawks and owls are federally protected under the amended Migratory Bird Treaty Act of 1972 (16 USC, 703-711). These laws strictly prohibit the capture, killing, or possession of hawks or owls without a special permit from the U.S. Fish and Wildlife Service. No permits are required to scare depredating birds except for endangered and threatened species.

Falconry, like other forms of sport hunting is regulated by both the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service. No person shall possess any raptor for falconry purposes without a joint state-federal permit (Florida Administrative Code 39-9.005).

WHAT YOU CAN DO TO HELP RAPTORS

- join a conservation organization actively involved in conserving Florida's habitats.
- contact your elected officials to let them know of your interest and concern about Florida's raptors and their habitats.
- show your support for programs that encourage conservation of habitats that will benefit raptors.
- learn as much as you can about raptors by reading articles and books and watching videos.
- build and place a bird box for Kestrels or Screech-owls in a suitable area.

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SCRUB JAY

Common Name: Florida scrub jay

Scientific Name: (*Aphelocoma coerulescens coerulescens*)

Appearance: size - 11 inches long (about the size of a blue jay)
color - mostly blue-gray above and light gray below with a bluish breast band, dark eye-ear patch, white eyebrows and forehead

Range: - central peninsular Florida

Habitat: - restricted to one habitat type, low-growing oak scrub that occurs on well-drained sandy ridges

Diet: - insects, small animals such as anole lizards and tree frogs, berries and seeds; a good acorn supply is crucial to their existence

Reproduction: - nesting season is March through June
- clutch size is 3 or 4 eggs
- only females incubate the eggs and brood the young in the nest
- rarely raise 2 broods/season
- young remain in their nesting territory for at least one year and help their parents raise more young

Behavior: - live in extended family groups that include the breeding pair, nonbreeding offspring helpers, and the youngest members of the family
- one bird usually acts as a sentinel and searches for predators while others forage
- groups of jays will mob and harass predators
- scrub jays are usually not afraid of people and act like pet parakeets

Threats: - habitat elimination
- habitat fragmentation into scrub patches too small to support jays
- habitat degradation (e.g. suppression of fire and human uses such as dirt bikes)
- direct human-related mortality (e.g. house cat predation, highway mortality, and shooting)

Continued...

- feeding junk food such as peanuts to jays is not good for their health; and hand-feeding by people will also interfere with studies that are trying to determine how well certain habitats can provide food requirements for this species

Solutions:

- preservation of large continuous tracts of oak scrub habitat (ideal size is 750-acres no more than 5 miles from other tracts)
- limit off-road trails and roads in jay habitat
- prescribed burning programs to maintain suitable vegetation structure and composition

Legal Aspects:

- officially designated as a threatened subspecies by the Florida Game and Fresh Water Fish Commission in 1975 and the U.S. Fish and Wildlife Service in 1987