

SWALLOW-TAILED



KITES





Helping the Swallow-tailed Kite Make a Comeback

Natural History, Citizen Science, Management Recommendations

The epitome of beauty and grace, people feel instantly uplifted when a Swallow-tailed Kite appears. Lacking the fierce brow possessed by most birds of prey, this kite's dove-shaped, gleaming white head gives it an angelic appearance. The sweepingly long wings and deeply forked tail coupled with the bird's ability to float effortlessly impart an ethereal quality. Its captivating beauty may be why the Swallow-tailed Kite is an ecotourism magnet: its immense popularity makes it much sought after by birders, naturalists and wildlife photographers. The main ecosystem service Swallow-tailed Kites perform for humans is agricultural pest control. Contributions to biodiversity include its role in dispersing Spanish moss and various lichens, materials it uses to construct and adorn its nest.

Natural History and Status

Status.—The Swallow-tailed Kite once enjoyed a much larger breeding range in the U.S., one which included 16 and possibly 21 states. The U.S. population size decreased dramatically from 1880 to 1940, when the breeding range contracted to less than a quarter of what it once was. This decline may have been caused by extensive logging of virgin forests in the south, wide-scale conversion of prairie and wetlands to agriculture, and persecution (shooting).

The species' current breeding range is restricted to the five Gulf Coastal states, Georgia, and South Carolina. Although the species is not federally threatened or endangered, it is protected by the federal Migratory Bird Treaty Act and state laws. It is against the law to harm or shoot a Swallow-tailed Kite, take one from the wild, or destroy a nest or eggs. The states where kites currently breed all list the species as a Species of Greatest Conservation Need in their State Wildlife Action Plans. The Swallow-tailed Kite is also listed as State Endangered in South Carolina and Mississippi, State Threatened in Texas, and State Protected in Alabama.

Threats.—This kite faces a barrage of threats throughout its global range. This long-distance migrant spends the spring and summer in the southeastern U.S. where it breeds; then it migrates to southern South America for the winter. While kites need help across their range, this brochure is designed to help kites while they are in the U.S. Main threats on the breeding grounds include: shooting, destruction of nests and breeding habitat, human disturbance at nests and communal roosts and habitat degradation.

Habits.—Swallow-tailed Kites are some of the earliest migrants, arriving on the U.S. breeding grounds from mid-February through May. They also depart for the wintering grounds earlier than most birds, with most departing sometime between early July and mid-August. This punctuated timeline when kites are on the breeding grounds means that pairs are not likely to attempt a second nest if their first breeding attempt fails. The timeline is tight because of the great distance kites travel on migration—an annual round-trip of about 10,000 miles!

This aerial predator hunts mostly prey that it either captures in midair or gleans from shrubs and tree canopies. Insects constitute a large part of the diet. Common insect prey include beetles, grasshoppers, katydids, moths, cicadas, dragonflies, termites, winged ants, bees, wasps, wasp larvae and caterpillars. Kites sometimes follow tractors and other machinery that are stirring up insects. Kites also hunt frogs, lizards, snakes, bats, and small nestling and fledgling birds, especially when breeding. While in Central and South America, some kites occasionally eat fruit.

Nesting habitat often consists of forest and a mix of other habitat types as well as sources of fresh water. A pair's breeding home range often includes bottomland hardwood and riverine forests, pine plantations, clear cuts, pastures, and croplands. This mosaic of land use types provides an abundance and diversity of prey close to the nest.

The stand containing the nest tree is usually either mature pine, bottomland hardwood forest or a mixture. The nest tree is often on or near a forest edge at the interface with a slough, pond, river, field, young pine plantation, or clear-cut. The nest tree can be any species, although sweetgum, pines, cypress, and oaks are often used. The crown of the nest tree usually has an opening on at least one side that provides a view and allows sufficient room for the parents, with their 4-foot wingspans, to fly into and out of the nest. Kites place their nests higher up in a tree than most hawks, in the upper 15% of a tall tree. The nest is usually anchored in a fork on the main trunk but can be out on a substantial limb. The nest, a stick platform decorated with Spanish moss and bunch lichens, is approximately 2 feet in diameter and up to 1 foot deep.

Understanding the social lifestyle of these birds is important to their conservation planning. These gregarious birds nest, hunt and roost together. Kites often nest in small groups called "neighborhoods" whereby 2 to 7 pairs nest near one another, sometimes as close as 44 yards apart. Kites often hunt together in groups of 2 to 4 individuals, and insect swarms may attract 20 or more kites. In the evenings, kites often assemble to perch close together in communal night roosts of 2 to 75 or more individuals. In July and August, kites gather in larger, pre-migration roosts. The largest Florida roosts may contain hundreds to thousands of individuals.





Kites like to be around each other, and one way that individuals find one another on the breeding grounds is to return to the same neighborhoods and communal roosts year after year. Therefore, to help maintain social cohesion, we provide recommendations to protect or conserve nest and roost sites.

How you can help the Swallow-tailed Kite

The following are voluntary recommendations and guidelines suggesting ways in which you can help the Swallow-tailed Kite make a comeback in the U.S.

Citizen Science

Report sightings. —Join the exciting realm of citizen science by reporting your Swallow-tailed Kite sightings. Landowners can help solicit sightings by talking to foresters, tractor operators, farmers, hunters, and anyone working on or using their land. Turkey season coincides with the kite's courtship and nest-building times. If out fishing or boating, watch for nesting and roosting activity because most of the nests are located along rivers, streams and oxbow lakes. Anyone haying or burning fields might see small groups to flocks of kites feeding.

While any sighting is of interest, evidence of nesting or roosting, observations of several or more kites, flocks of kites feeding over fields, and locations where kites are seen regularly are of particular interest. If you see a kite carrying nest material or food, note the precise location and direction the bird is flying, as this information is especially helpful for finding neighborhoods and nests.

Study the kite's natural history, threats it faces and recommendations contained herein to become a more effective ambassador for kites. Improve the quality of your data by studying age-related plumage differences and kite breeding behaviors, including vocalizations. Record details about your kite observations and report sightings promptly.

Where to report observations.— Birders should note that eBird does not have the highly specific location data that researchers studying kites need. Therefore, if you suspect nesting, it is extremely helpful if you use one of the following web pages for reporting.



Sightings:

• Texas, Louisiana and Mississippi

If you find a nest, contact Dr. Jennifer Coulson immediately: (504) 717-3544 (cell phone with voice mail and texting) or email: jacoulson@aol.com.

Report other sightings at the Orleans Audubon Society (OAS) site: <http://jjaudubon.net/swallow-tailed-kite-project/report-sightings/>

• Florida

Contact: Avian Research and Conservation Institute (ARCI) site: <http://arcinst.org/report-sightings>

• South Carolina, Alabama, and Georgia

Contact: The Center for Birds of Prey's site: <http://stki.thecenterforbirdsofprey.org/>

Rescues:

If you find an orphaned, injured or diseased kite, note the precise location where you found it, and if it is a young bird or a possible breeding adult, also look for a nest nearby. The public is authorized to transport birds of prey in need of help to licensed rehabilitators. If the bird has been shot, call law enforcement.

• Alabama:

<https://www.outdooralabama.com/wildlife-rehabilitation/current-wildlife-rehabbers>

• Florida:

FWC's Wildlife Alert Hotline: 1-888-404-3922 or visit <https://myfwc.com/conservation/you-protect/wildlife/injured-orphaned/>

• Georgia:

Atlanta Wild Animal Rescue Effort (AWARE) in Lithonia, GA: Use contact form on website: <http://www.awarewildlife.org> or email: HELP@AwareWildlife.org or contact The Chattahoochee Nature Center in Roswell, GA: 770-992-2055 ext. 239 or <http://chattnaturecenter.org/>



• Louisiana:

Dr. Jennifer Coulson: (504) 717-3544. OAS has a network of trained volunteers who may be available to transport a kite in need of help.

• Mississippi:

Nick Winstead of the Mississippi Museum of Natural Science: (601) 576-6000 or email: nick.winstead@mmns.ms.gov

• South Carolina:

Avian Medical Clinic: 843.971.7474 and press option #1 for the Injured Bird Line or email: dispatch@avianconservationcenter.org

• Texas:

<https://tpwd.texas.gov/huntwild/wild/rehab/list/> or call your local game warden, or the Texas Parks and Wildlife Department Wildlife Information Line: 1-800-792-1112

Found a Dead Kite?—If you discover a dead kite, contact Dr. Jennifer Coulson: (504) 717-3544. If it was shot, also call law enforcement.

Which kite did you see?

Mississippi Kites are abundant and are often mistaken for Swallow-tailed Kites because both have long pointed wings and similar flight patterns. The most notable difference between these two kites is the shape of the tail: the Mississippi Kite has a shorter, rectangular shaped tail, while the Swallow-tailed Kite has a very long, deeply forked tail.

Visual differences between Swallow-tailed Kites and Mississippi Kites

	Swallow-tailed Kite	Mississippi Kite
Coloration		
Head	white	light gray to gray
Breast and abdomen	white	gray
Wing surfaces (upper)	black with bluish cast	charcoal black, silver panels
Wing surfaces (under)	white and black	gray and charcoal black
Tail	black with bluish cast	charcoal black
Shape		
Wings	very long, pointed	long, pointed
Tail	very long, strongly forked	rectangular
Measurements		
Head to tail length	20 to 25 inches	12 to 15 inches
Wingspan	47 to 54 inches	29 to 33 inches
Weight	0.9 to 1.4 pounds	0.5 to 0.75 pounds

Swallow-tailed Kite



Mississippi Kite



The White-tailed Kite is also sometimes confused with the Swallow-tailed Kite. Its size and shape resemble the Mississippi Kite. It has a white head, breast, abdomen and tail, a gray back, and its gray wings have black shoulders. The only other bird that may be confused with the Swallow-tailed Kite is the Magnificent Frigatebird, because of its long, pointed wings and deeply forked tail. Frigatebirds are observed mostly offshore.

Guide to Aging Swallow-tailed Kites

Being able to identify the age of a Swallow-tailed Kite is useful information, especially for determining whether there may be breeding activity nearby. One-year-old kites are non-breeders and can be distinguished from adults by a wingspan that is about 10% narrower and a tail that is approximately 15 to 17% shorter.



	Adult	One-year-old	Fledgling
Coloration			
White parts	white	white	buffy wash fades rapidly
Black parts	bluish cast	black	purplish/greenish sheen
Wings (upper)			sometimes white scalloping
Shape			
Wings	very long, pointed	long, pointed	long with rounded tips
Tail	longest, deeply forked	long, forked	shorter, more shallow fork
Measurements			
Wingspan	47 to 54 inches	44 to 51 inches	up to 51 inches
Tail Length	13 to 14.5 inches	11 to 12 inches	up to 12 inches
Molt (Summer)			
Wings	innermost primaries	heavy	none
Tail	limited	noticeable	none



Management Recommendations

Do Not Disturb Nesting or Roosting Kites.

Human disturbance during the breeding season may cause a pair to temporarily or permanently abandon their nesting effort. Such disturbances may even cause injury or death to eggs or young. For example, if parents are flushed from the nest, eggs or young nestlings may die of exposure to the elements or might be depredated. Breeding adults are most sensitive to disturbance during courtship, nest building, and the first week of incubation. Wary or fearful individuals may be easily disturbed throughout the nesting period, until the young are fledged and disperse beyond the neighborhood. Near-fledging-age nestlings can be easily spooked. Disturbances at this time might cause pre-mature fledging, in which case nestlings might be injured in crash-landings or clumsily take low perches, increasing their risk of predation.

Avoid disturbance by maintaining a distance of at least 300 feet from an active nest and moving through the area quickly and quietly. Installing a camera at a nest could cause abandonment. Do not fly a drone, helicopter or airplane directly over or within 800 feet (250 yards, or 0.15 mile) of a nest or operate heavy machinery near a nest.

Avoid logging or burning near an active nest throughout the duration of the nesting cycle, including when the young are recently fledged but are not yet proficient fliers. For nests located along waterways, boat traffic and jet skis coming close to the nest may also cause disturbance.

Kites often respond to a disturbance by circling overhead and continuously alarm-calling (a harsh “kee-kee” vocalization). These behaviors indicate that the kites perceive a serious danger, and if you are the cause of this behavior, leave the area immediately.

Protecting large roost sites from human disturbance is a high priority for the species’ conservation. Roosting kites are sensitive to the same types of disturbance and the same guidelines apply. The large pre-migration roosts in Florida that consist of hundreds to thousands of kites are particularly important to the species. Kites depend on these sites to find one another, follow experienced birds to insect swarms, follow kites to other kite activity centers (nesting, feeding and roosting areas), and possibly also to secure mates and hunting partners.

Enhancing and Restoring Habitat.—Kites nest in and often hunt over forests.

Therefore, replanting bottomland hardwood forest, pine forest, or mixed pine-hardwood forest, especially along streams, rivers and lakes, will ensure future kite habitat. Use native trees and shrubs in habitat restoration projects and provide a diversity of species if possible. When managing existing stands, provide a diversity of species, diameter, and age classes.

Dead trees and the dead limbs of live trees are attractive to kites as places to roost communally and bask in the sun. Pairs also use dead trees as sites for courtship feeding and mating. Retain dead trees along waterways and forest edges for roosting. If snags and dead trees are lacking, they can be created by girdling a few canopy trees. Girdling invasive trees is a good tactic for creating snags, rather than removing them. (Note: Girdling alone will not kill the invasive Chinese tallow.)

The addition of a fresh water feature may attract kites. Swallow-tailed Kites seek out ponds and lakes to hunt dragonflies and also to drink and bathe. A forested patch along the bank might even be selected as a nesting or roosting site.

One way to feed kites indirectly is to provide host plants for the caterpillars they eat.

The Swallow-tailed Kite is known to locals as the “Catalpa” or “Catawba” hawk because it is a predator of the catalpa sphinx caterpillar. Consider planting a southern catalpa tree, the host of the catalpa sphinx caterpillar. This tree reaches heights of 25 to 40 feet and prefers full sun to partial shade. It thrives in moist, well-drained soil, but adapts well to dry or wet soils. The broad, heart-shaped leaves are spring green in color. Clusters of white, trumpet-shaped flowers bloom from May through July.

Beneficial Forestry Practices.—Timber lands can provide nesting, roosting and feeding habitat for Swallow-tailed Kites. Kites generally nest in mature stands and roost in and feed over all types of forest, including pine plantation. Breeding and roosting requirements of the species are compatible with some levels of forestry, especially if stand rotations are long enough to maintain sufficient stands of large canopy trees over time. Area considerations must take into account the social requirements of this species; land managers need to plan to provide sufficient areas of mature forest in any one year that would support nesting neighborhoods.

A potential threat to kites is the possibility that a nest site or an entire nesting neighborhood



might be logged during the breeding season, causing reproductive failure. Do everything possible to avoid harvesting nesting trees and the surrounding forest buffer, and delay timber activity in breeding areas until nesting has been completed. Contact Dr. Jennifer Coulson to find out if any nests are known or suspected to occur on your land. Hire a knowledgeable forester to survey and mark the timber and boundaries prior to harvest, and alert this person to the fact that kites may be nesting on your land. When nests are found within active sales, coordinate logging with timber purchasers to protect the nest site. If a nest is discovered during logging or a nest tree is damaged, contact Dr. Coulson immediately to investigate solutions.

Recommendations are to restrict timber harvesting from March 1 to August 15 within buffers surrounding suspected or known nests. Leave at least a 750-foot radius buffer around nests or neighborhoods from March 1 through May 31 and a minimum 300-foot radius buffer from June 1 through August 15 or until nesting is completed (young are proficient fliers).

Preserving former nest sites also benefits kites because kites will often repeatedly nest in the previous year's



nest tree or in adjacent trees. Monitor nest stands for repeated nesting for 5 years following the last nesting attempt before contemplating any timber harvest within 300 feet of a nest tree.

Within a one-mile radius of active nests, manage the area for future kite habitat by identifying potential nesting and roosting habitat in streamside zones, riparian areas and along transition zones between wet lowlands and drier uplands. Preferred nest trees include emergent to super-emergent trees that are taller than the residual canopy trees.

Within preferred breeding habitat, retain clumps of canopy trees during timber harvesting to provide for current and/or future kite nesting and roosting needs. The best scenario for kites is to retain clumps that are adjacent to unharvested forest. This reduces risks from wind and lightning and may help to conceal nests from aerial nest predators.

Controlled burns: Spring and summer controlled burns of pine forests not being used for nesting can benefit kites. Burns stir up flying insects, providing an excellent food source that may attract kites from many miles away and for several days afterward. Kites seem to be especially attracted to spring burns used to restore/maintain longleaf pine savanna.

Although burns provide feeding opportunities, a potential threat to kites is the possibility that a nest site or an entire neighborhood might be destroyed. Adult kites attending nests have sometimes been killed in wildfires. Recommendations are to avoid burning near a suspected or known nest during the nesting season from March 1 through August 15. Also take precautions when burning known nesting areas outside of the breeding season. Dry winter burns degrade kite nesting habitat by inviting nest predators: exhaustive burns that kill the under- and mid-story attract Great Horned Owls, a dangerous predator of adults and young. When burning suitable breeding habitat where no nests are suspected, consider minimizing the fire intensity, especially within riparian areas and along transition zones between wet lowlands and drier uplands, from March 1 through August 15.

Pine plantation managed for saw timber: Managing commercial pine forests for longer rotations (e.g., saw timber) provides potential nesting habitat for kites while managing for short

rotations (e.g., pulpwood) can provide good feeding habitat.

Management strategies which make commercial pine forest attractive to kites for nesting are to thin the forest at the time of crown closure and to leave the stand in a long enough rotation. Longer rotations not only provide potential breeding habitat, but when kites nest in them, longer rotations are also more likely to preserve nest trees and nest sites for



CONTROLLED BURNS FEED KITES. FIRE STIRS UP FLYING INSECTS, AND KITES KNOW THIS, COMING FROM MANY MILES AROUND.





multiple years, especially when stands last for 35 to 45 years. When these conditions are met, kites will sometimes select one of the taller, emergent trees along the “take” row as the nest tree because it provides the parents enough room to fly in and out of the stand easily.

To manage for nesting habitat, thin the stand as soon as the stand reaches crown closure. For example, if the original spacing was 6’ x 12’ (rows 12’ apart, trees within rows 6’ apart), then thin the stand when the crowns of the trees start to touch one another (approximately 10 to 16 years old). Create a space (take row) by harvesting every third to fifth row, and also thin the suppressed trees within each row so that the “leave” trees are 12’ apart after thinning. Remove any damaged, diseased or stunted trees during thinning. Thinning reduces competition, allowing the remaining trees to grow rapidly. Once old enough, the tallest, most emergent trees, may be selected for nesting.

Commercial pine foresters should try to avoid the use of fire in kite nesting areas. Fire is used to



clear out the understory while suppression of fire maintains a thick understory. A thick understory is desirable for kite nesting habitat because it makes hunting more difficult for Great Horned Owls and may discourage this predator from moving into or hunting in kite nesting areas.

Streamside Management Zones: Kites commonly nest, roost, feed and travel along waterways, so preserving a belt of trees along creeks, streams and rivers is beneficial. If harvesting timber, try to leave a 300-foot wide buffer of trees along both sides of the waterway. When this is not possible, smaller forest buffers may still benefit kites. Streamside management zones also help protect water quality by reducing runoff, stabilizing banks and providing shade.

Beneficial Agricultural Practices.—During the spring and summer, Swallow-tailed Kites are often attracted to burned fields, disking of old crops and haying to feed on the insects which are stirred up. Certain crops, such as soybean, and fallow fields can also be great sources of flying insects.

Do not use neurotoxic insecticides that are known to harm birds, such as imidacloprid (neonicotinoid insecticide) and chlorpyrifos (organophosphate insecticide).

Stop the senseless shooting!

Even though the Swallow-tailed Kite is protected by state and federal laws, and its habits in no way conflict with human interests (it doesn’t eat chickens, cats, dogs, or fish), illegal shooting still occurs.

Many assume because of the kite’s large wingspan that it is a formidable predator, with strength comparable to an eagle’s. When they see a kite flying low that is slowly and deliberately circling over their yard, they mistakenly assume that it is targeting a small dog, homing or racing pigeons, free-ranging chickens or penned rabbits. In reality, the kite is actually searching for much smaller prey such as insects, tree frogs, lizards and small snakes.

Educate your family and friends about the state and federal laws protecting these birds, as well as the fact that the kite’s dietary and hunting habits do not conflict with human interests. If you assist with hunter safety education, be sure to mention that birds of prey are protected by state and federal law and that it is unlawful to shoot them. Invite an educator to give a demonstration using live raptors.

Report illegal shooting.—Report any illegal migratory bird shootings 24 hours a day using the

free services listed below. Informants can request to remain anonymous. Try to provide exact location, names of and descriptions of people, their clothing, descriptions of vehicle or boat and License Plate or Boat Registration Number.

• **Alabama:**

Operation GameWatch: 1-800-272-GAME (4263).

• **Florida:**

FWC's Wildlife Alert Reward Program: 888-404-FWCC (3922). Cell phone users can text *FWC or #FWC, depending on the service provider. Online reporting: <https://myfwc.com/contact/wildlife-alert/>

• **Georgia:**

Ranger Hotline: 1-800-241-4113 (or *DNR for AT&T Mobility Customers)

• **Louisiana:**

Operation Game Thief hotline: 1-800-442-2511 or use LDWF's tip411 program: text tip to 847411 or download the free "LADWF Tips" iPhone and Android app from the Apple App Store or Google Play.

• **Mississippi:**

Call 1-800-BE SMART(237-6278). Online reporting: <https://www.mdwfp.com/apps/report-violation/>

• **South Carolina:**

1-800-922-5431 or using a mobile phone, text tips to keyword SCDNR along with your tip to 847411(tip411), or call South Carolina Department of Natural Resources at 803-734-4002.

• **Texas:**

Operation Game Thief hotline: 1-800-792-4263

Prevent Human-caused Hazards.—When fishing with exposed trotlines and limblines remove lines that are not in use, because kites and other wetland-associated birds may become entangled in them. Kites are particularly vulnerable to entanglement when skimming the surface of waterways to drink and bathe and when flying along waterways while hunting.

Reduce Nest Predation.—Rat snakes and raccoons are predators of eggs and nestlings. Placing a guard of aluminum roof flashing (3 to 4 feet in width) around the trunk of the nest tree may deter climbing predators. Place the guard as high up on the trunk as possible, nail into the trunk using as few short nails as possible, and fill any gaps between the trunk and the flashing with Great Stuff insulating foam. If the nest tree's crown makes contact with or is close to other trees, also flash these adjacent trees. Any saplings that lean into the nest tree should be flashed or cut down. When the nest tree is not isolated enough it may not be practical to protect the nest from climbing predators. Feeding raccoons near active kite nests increases raccoon numbers and might increase the frequency of nest predation. Keep in mind that feeding raccoons often happens unintentionally (e.g., feeding stations for deer or hogs, feeding cats or dogs outside).

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Authored by: **Dr. Jennifer O. Coulson** of OAS and **Gina Kent** of ARCI. Consultants: **Dr. Ken Meyer**, ARCI; **Chris LeRouge**, SLR, USFWS; **Donald Locascio**, LDWF; **Bill Rivers** and **Tom Lydon**, TNCL. Funding for this brochure was provided by: **The Coypu Foundation.**

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Another way you can help Swallow-tailed Kites is to support OAS's and ARCI's ongoing conservation efforts by please making a donation using the websites below:
OAS - <http://jjaudubon.net/donate/>
ARCI - <http://arcinst.org/keep-on-trackin>



