

Swallow-tailed Kite

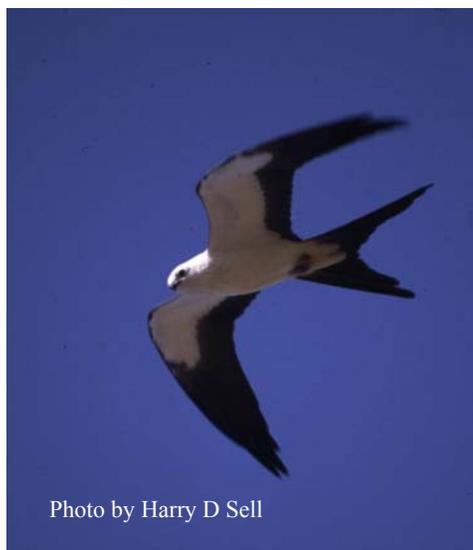
Elanoides forficatus

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DESCRIPTION

Taxonomy and Basic Description

The swallow-tailed kite, first named by Linnaeus in 1758, underwent a common name change in 1999 from American swallow-tailed kite back to simply swallow-tailed kite, the original name. This bird is unmistakable with its narrow, 1.2 m (4 feet) wingspan and long; 25.4 cm (10 inch) forked outer tail feathers. The dorsal coloration is black while the head and underparts are white. Average weight for adults is a little over 454 g (1 pound), with females being slightly heavier than males. This bird spends much of the day in flight catching insects and other foods, including anoles, treefrogs, small snakes and nestling birds. It eats, drinks and bathes on the wing.



Status

Currently, the kite occupies a remnant breeding range of seven, possibly eight, southern states that historically included at least 21 states as far north as Minnesota (Cely 1979). It is state-listed by South Carolina Department of Natural Resources (SCDNR) as an endangered species and a high priority species of concern by Partners in Flight (PIF).

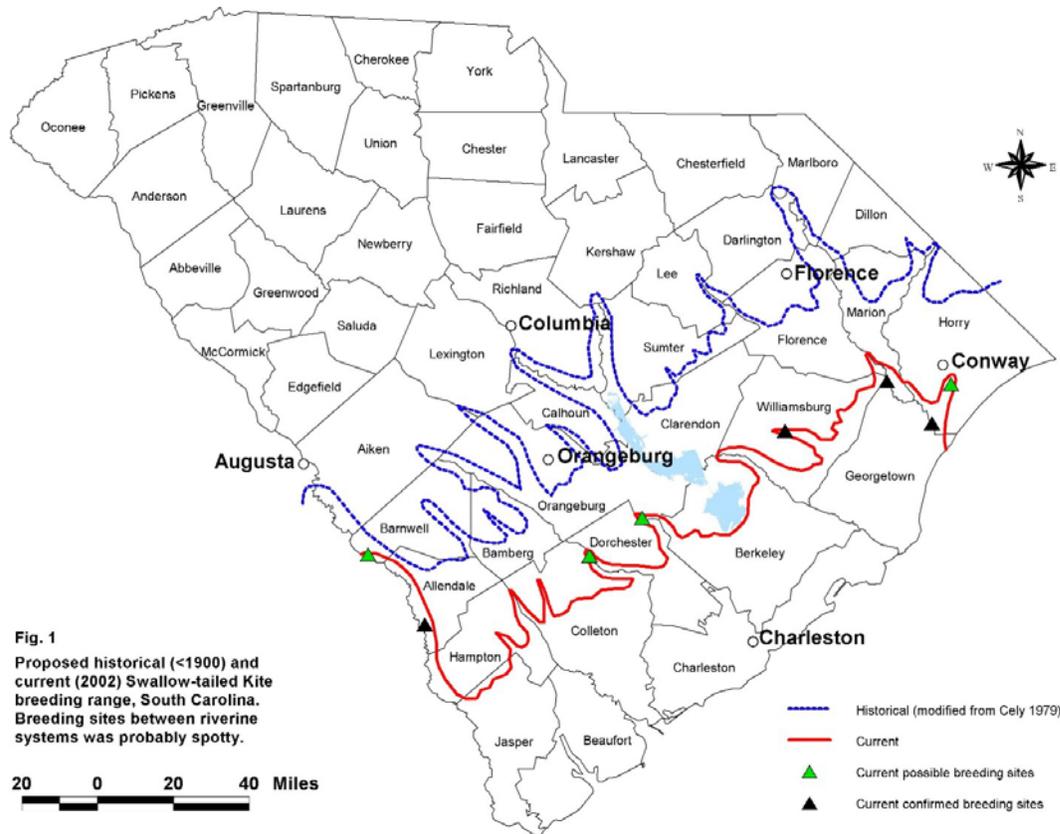
POPULATION DISTRIBUTION AND SIZE

The swallow-tailed kite is found in floodplain forests and other large tracts of forested wetlands/mixed pine habitats of the outer coastal plain (OCP) from South Carolina to east Texas. At least one unsuccessful nesting attempt was documented in 2002 in Arkansas's White River bottoms, approximately 321.8 km (200 miles) north of the nearest nesting population (Bednarz, personal communication). There was a possible range extension into coastal North Carolina at the Cape Fear River in 2003. The estimated population for the entire U.S. is 800 to 1,150 pairs (Cely and Sorrow 1990); about 60 to 65 percent of these birds reside in Florida (Meyer 1995). The estimated number of breeding pairs in South Carolina is 120 to 170; these are primarily found in large floodplain forests and swamps of the OCP, with significant populations occurring on the lower Great Pee Dee, Santee, Edisto and Savannah Rivers and in the Francis Marion National Forest (FMNF).

The disappearance of the swallow-tailed kite from three-fourths of its U.S. breeding range between 1880 and 1910 was one of the most dramatic range contractions of any



bird before the post-WW II peregrine falcon crash. Since about 1940, populations have apparently stabilized with some evidence of a modest range expansion into former habitat, such as eastern Texas and parts of coastal South Carolina. Due to limited samples, no reliable trend data from the Breeding Bird Survey (BBS) is available.



HABITAT AND NATURAL COMMUNITY REQUIREMENTS

The kite is closely associated with large tracts of forested wetlands of the OCP, such as those found at the FMNF and along the lower Savannah, Edisto, Santee and Great Pee Dee Rivers. It shows a strong preference for nesting in dominant or codominant loblolly pines (*Pinus taeda*) growing within or on the edges of wetland forests. However, kites will regularly use bald cypress (*Taxodium distichum*) when pines are unavailable. Kites have also been recorded nesting in water tupelo (*Nyssa aquatica*), sweetgum (*Liquidamber styraciflua*) and willow oak (*Quercus phellos*).

The average dimensions of loblolly pine nest trees at the FMNF were 32 m (104 feet) tall and 49 cm (19 inches) diameter breast height (dbh). Pines were located within pine stands averaging 13.5 m²/ha (60 square feet) basal area/acre and were 61 years of age (Cely and Sorrow 1990). Dimensions for cypress nest trees were similar to the pines; these trees had an average height of 29 m (96 feet), with a diameter above the swell of 50.5 cm (20 inches) and a basal area of 13.5 m²/ha (60 square feet). Cypress ages were not determined but all were at least second, if not third, growth and probably no more than 75 years of age (Cely, unpublished data). Nest trees were only slightly larger than surrounding trees. The average distance to a waterway for kite

nests in South Carolina was 135 m (455 feet), but this distance ranged from 25 to 544 m (82 to 1,795 feet) (Cely and Day, unpublished data). As Spanish moss (*Tillandsia usenoides*) is a key component of nest construction, this epiphyte may be a necessary ecological requirement.

Based on telemetry research, swallow-tailed kites have a large home range that encompasses thousands of acres (Cely and Sorrow 1990). Foraging birds use a variety of stand types and ages and will often commute long distances, up to 24 km (15 miles), from the nest site, to feed on various insects. These include beetles, dragonflies and grasshoppers associated with upland fields, pastures and freshwater marshes. Other swallow-tailed kites are attracted to “hot spots” of insect abundance; feeding aggregations sometimes consist of more than 50 birds.

CHALLENGES

Although there appears to be suitable, but unoccupied habitat in South Carolina, primary challenges to the swallow-tailed kite are wetland loss and drainage. The kite’s social behavior, resulting in a clumped distribution of “nest neighborhoods,” may limit its ability to disperse to unused habitat. Most nest sites occur on private lands; although the species is apparently compatible with some forest management practices, as evidenced by its current use of industrial forest lands, extensive clear-cutting and short rotations are likely problematic for this species.

Specific threats along its migration routes and wintering grounds in southern Brazil are unknown at this time, but significant land use changes could negatively impact the species.

Because the species feeds relatively low on the food chain, there is a concern about a suspected vulnerability to persistent pesticides and reproductive failures such as found with peregrine falcons, bald eagles and osprey. However, there is no evidence to date to indicate such vulnerability. Shooting mortality could have played a role in the extirpation of local populations in the late 1800’s and early 1900’s (Cely 1979; Meyer 1995).

CONSERVATION ACCOMPLISHMENTS

Considerable research efforts have been directed towards the species during the past 15 to 20 years, notably in Florida, but also in South Carolina, Georgia and Louisiana. In South Carolina, initial efforts focused on using radio telemetry to locate nests, determine productivity, describe nesting habitat and quantify home range and habitat use. Within the past eight years, telemetry research has been coordinated with other states and investigators to focus on annual survival, natal site fidelity, migration routes and wintering locations.

In some instances, nest site information has increased land acquisition incentives and protection efforts, such as at the Waccamaw National Wildlife Refuge and the lower Santee/FMNF. Because of the species’ large home range, it could serve as an umbrella species for the conservation of other area-sensitive wetland wildlife including neotropical migrants, barred owls, red-shouldered hawks, pileated woodpeckers, river otter and black bear.

CONSERVATION RECOMMENDATIONS

- Incorporate swallow-tailed kite nest locations into land management and protection efforts.
- Encourage the use of Streamside Management Zones (SMZs) to protect swallow-tailed kite nests that are close to a river or stream.
- Increase the estimated number of protected swallow-tailed kite nests and nest sites through increases in public ownership, easements, Memoranda of Understanding and fee simple purchase.
- Whenever possible, work with land managers and foresters and provide guidelines, based on current habitat descriptions, to protect swallow-tailed kite nest sites during timber harvest operations.
- Begin studies of demographics, nesting habitat, effects of disturbance and habitat alteration in order to develop more specific swallow-tailed kite management guidelines.
- Collaborate with other states in monitoring and researching current swallow-tailed kite populations and their demographics
- Assist with development of a feasible swallow-tailed kite monitoring method that would detect a population decrease in the state over a 10 to 15 year period.
- Work with the general public, NGOs, volunteers, other state and federal agencies, timber companies and private landowners to share results, generate support and increase partnerships for the protection of swallow-tailed kites.

MEASURES OF SUCCESS

A recovery goal has been established at approximately 100 birds per river drainage in the species' range. South Carolina's portion of this goal is approximately 400 nesting pairs statewide. The areas most likely to contain swallow-tailed kites are the Pee Dee and Savannah Rivers, Francis Marion National Forest, the ACE Basin and associated floodplains.

LITERATURE CITED

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