

Florida Ornithological Society

Position Statement on Wildlife Corridor Connectivity

Abstract: In July 2021 the 'Florida Wildlife Corridor Act' was signed into law. We support increased wildlife corridor connectivity to support the birds of Florida during their nesting, foraging, dispersal, and migration stages. We support continued funding of Florida Forever which is informed by the Florida Ecological Greenways Network and the rich scientific history that has gone into prioritizing connected conservation lands. We encourage municipalities and governments of Florida to include land conservation and corridor connectivity in their comprehensive land use plans and land development regulations. We also support funding for the proper long-term stewardship of public conservation lands which includes funding for prescribed fire and invasive plant reduction.

Background: In the mid-1980s, Larry Harris and Reed Noss outlined the importance of ecological connectivity, wildlife corridors, and the protection of functionally connected networks of conservation lands. They detailed the strategic value of protecting specific tracts of land in Florida that would result in large, connected conservation networks. In 1985 Noss proposed the first statewide ecological network. In 1994, Florida Fish and Wildlife Conservation Commission (FWC) scientists (Cox et al. 1994) assessed the security of rare and imperiled species on existing conservation lands in Florida and identified 'Strategic Habitat Conservation Areas', since updated in FWC's 2009 'Wildlife Habitat Conservation Needs in Florida' (Endries et al. 2009). This information with contributions of researchers from the public, private, and non-profit sectors has directed work by the Florida Ecological Greenways Network, Florida Forever, the Rural and Family Lands Protection Act, the Forest Legacy Program, the Florida Fish and Wildlife Conservation Commission's Cooperative Conservation Blueprint, the U.S. Fish and Wildlife Service's Critical Lands and Waters Identification Project (CLIP), and Peninsular Florida Landscape Conservation Cooperative and many other conservation and land use planning efforts across the state (Hector et al. 2015).

The importance of corridors in general to reduce isolation and extinction: Habitat fragmentation poses a widespread threat to biodiversity by disrupting the dispersal of organisms (Levey et al. 2005). Corridors, that are strips of habitat that join patches of similar habitat, provide avenues of dispersal between patches, thereby increasing gene flow and reducing the probability of local extinctions (Beier and Noss 1998). Small, isolated populations have higher extinction rates (e.g. Pimm et al. 1988) and habitat fragmentation often leads to the isolation of small populations (Rosenberg, Noon and Meslow 1997). Ultimately, the processes of population isolation and local extinction reduce biological diversity. Corridors should be included in conservation plans to increase the connectivity of otherwise isolated patches (Meffe and Carroll 1994). To be most beneficial to wildlife, the corridors should be intact native habitat, not simply strips of land of low-quality habitat.

Public lands and private and agricultural lands (cattle ranches, timberlands, groves and farms) in Florida contribute a great deal towards greenspace that wildlife can use as wildlife corridors.

Avian needs for corridors in all parts of life history: Many iconic bird species are **year-round residents** of Florida. This includes, among others, Crested Caracara, Florida Sandhill Crane, Wood Stork, Cape Sable Seaside Sparrow, Burrowing Owl, Florida Scrub-Jay, Florida Grasshopper Sparrow, Southeast American Kestrel, Limpkin, and Everglades Snail Kite. Some non-migratory species like the Florida Scrub-Jay and the Red-cockaded Woodpecker require large, contiguous tracts of well-maintained habitat for the dispersal of young birds, genetic mixing, and to support their life history. For Florida Scrub-Jays, high quality oak-dominated scrub corridors support Jay dispersal between fragmented habitat patches (Root 1998). If Scrub-Jay habitat patches are separated by more than 12 km with no connecting scrub patches or

corridors, populations are isolated and susceptible to extirpation (Woolfenden and Fitzpatrick 1996). Scrub-Jays that must disperse across longer distances are less successful at breeding or passing their genes on to further generations and subject to higher mortality (Coulon et al. 2010).

Wetlands in Florida, particularly the Everglades, are among the most important in North America for vast numbers of wading birds, especially colonially nesting species as herons, egrets, ibis, and Wood Storks. In the post-breeding season once nestlings fledged, many wading birds move from rookery areas to richer foraging areas using habitat corridors.

Many birds are **part-year residents** in Florida, including species that breed in Florida and winter elsewhere, including the Swallow-tailed Kite and Smooth-Billed Ani, or birds that winter in Florida like the American White Pelican and many shorebirds. Birds that spend part of their year in Florida use different habitat types at different times of year, as Swallow-tailed Kites that gather in large numbers at important Staging Areas (Millsap 1987) after dispersed breeding throughout Florida (Breeding Bird Atlas https://myfwc.com/media/19627/bba_astk.pdf). The kites prefer wetlands during their breeding season and are associated with forest habitats in all seasons. Kites need connected forested corridors as they move between breeding and pre-migration staging areas in Florida. Even in their stopover sites in the Yucatan Peninsula, these birds have been shown to avoid disturbed areas and areas without vegetation (Zimmerman 2004).

Important waterfowl habitat is on major rivers such as the St. Johns and Kissimmee, natural lakes such as Lake Okeechobee and many smaller lakes, interior prairie wetlands, and in isolated coastal areas and estuaries. The Indian and Banana rivers provide important winter habitat for 200,000 to 300,000 lesser scaup (Ducks Unlimited, Florida website <https://www.ducks.org/Florida>). The St. Johns River Valley marshes and lakes provide winter and migration habitat for an additional 15,000 ducks on average. Substantial numbers of shorebirds use this region, particularly the Atlantic coast of Florida and the mudflats and beaches of the eastern Gulf Coast of Mexico. It is important to increase Wetland Reserve Program projects, conservation easements and private lands programs to protect these corridors.

Many birds are **migrants** through the state of Florida, either on the northbound and/or southbound passage. Birds need stopover sites that provide habitat for feeding and resting during migration between breeding and wintering grounds. Passerines need fruits and insects during migration. There are large flights of migrating hawks and other raptors that funnel through Florida each fall to their southern wintering grounds (floridakeyshawkwatch.com). Peregrine Falcons are counted in particularly high numbers as they traverse the Florida Keys (Lott 2006). These birds need areas to rest and forage on their passage.

Migrating birds often use river corridors and coastlines to aid in navigation. For instance, the St. John's River is an important corridor for migrating Spotted Sandpipers and the coastlines are important for many migrating shorebird species.

Habitat changes and sea-level rise are potential threats to bird species: On both coasts, cold-sensitive mangroves now occur northward of their former range, displacing salt marshes over the past few decades due, in part, to changes in climate exhibited by winters with few hard frosts (Cavanaugh et al. 2019). Coastal marsh habitats are home to tidal marsh birds like Saltmarsh Sparrow, Black Rail and American Black Duck. These species face a crisis of sea-level rise, urbanization, and other human impacts that degrade the narrow band of coastal habitat that they require, pushing many bird populations into steep decline (The Atlantic Coast Joint Venture <https://acjv.org/>). In Florida Bay, wading birds as spoonbills, egrets, and ibis

are moving northward into the Everglades because islands are submerging and saltwater creeks are moving inland.

Funding and planning for stewardship of wildlife corridors: There is a critical need for considering management needs in the planning process. Practically every habitat type in Florida is fire-dependent at some level, but fire management becomes unfeasible if corridors are thin, forcing land managers to resort to more expensive mechanical methods that inflate management costs 8-to-10 fold.

Exotic plants also pose a management problem for thin corridors. Making sure future corridors are five to ten times wider than the Cross Florida Greenway would help prevent problems with non-native invasive plants that exclude native vegetation, so important for healthy habitats that can support birds and wildlife.

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