Early- to Mid-Succession Birds Guild

Bewick's Wren *Thryomanes bewickii*
Blue Grosbeak *Guiraca caerulea*
Blue-winged Warbler *Vermivora pinus*
Brown Thrasher *Toxostoma rufum*
Chestnut-sided Warbler *Dendroica pensylvanic*
Dickcissel *Spiza americana*
Eastern Kingbird *Tyrannus tyrannus*
Eastern Towhee *Pipilo erythrophthalmus*
Golden-winged Warbler *Vermivora chrysoptera*
Gray Kingbird *Tyrannus dominicensis*
Indigo Bunting *Passerina cyanea*
Orchard Oriole *Icterus spurius*
Prairie Warbler *Dendroica discolor*
White-eyed Vireo *Vireo griseus*
Yellow-billed Cuckoo *Coccyzus americanus*
Yellow-breasted Chat *Icteria virens*

NOTE: The Yellow-billed Cuckoo is also discussed in the Deciduous Forest Interior Birds Guild.

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DESCRIPTION

Taxonomy and Basic Description

All bird species in this guild belong to the taxonomic order Passeriformes (perching birds) and they are grouped in 9 different families. The Blue-winged, Chestnut-sided, Golden-winged, and Prairie Warblers are in the family Parulidae (the wood warblers). The Eastern and Gray Kingbirds are in the flycatcher family, Tyrannidae. The Blue Grosbeak, Dickcissel, and Indigo Bunting are in the family Cardinalidae. The Bewick's Wren is in the wren family, Troglodytidae. The orchard oriole belongs to the family Icteridae. The Brown Thrasher is in the family Mimidae, the Yellow-billed Cuckoo belongs to the family Cuculidae, the Eastern Towhee is in the family Emberizidae, and the White-eyed Vireo is in the family Vireonidae. All are small birds and can be distinguished by song, appearance, and habitat preference.


Blue-winged Warbler
Photo by Kyle Aldinger

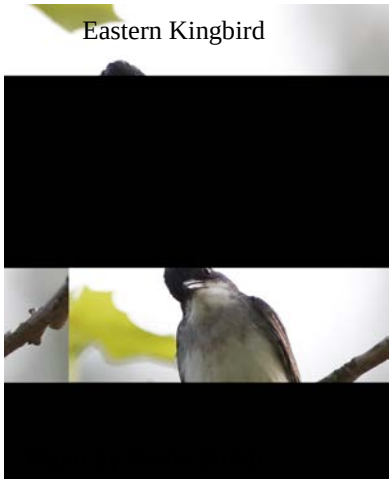
The Blue-winged Warbler averages 12.1 cm (4.75 in.) in length and 8.5 g (0.3 oz.) in weight. The Blue-winged Warbler is a small bird most easily recognized by its thin black eye-line and blue-gray wings. This warbler has bright yellow face, throat, and belly and with an olive back. The female Blue-

winged Warbler is duller in color with an eye line that is grayer in appearance. Juveniles look similar to the adults, but have a duller overall appearance (Sibley 2003).

The Chestnut-sided Warbler averages 12.7 cm (5 in.) in length and 9.6 g (0.34 oz.) in weight (Sibley 2003). The Chestnut-sided Warbler appears as its name suggests; both males and females have a chestnut colored streak down the sides of their bodies. Adult birds have a yellow crown, white check patches and belly, and a lemonish-green back with black stripes. Males are colored more brightly than females. Juveniles are colored much differently, but can be identified as Chestnut-sided Warblers by their white belly, lemonish-green back, and two pale yellow wing-bars (Peterson and Peterson 2002).

The Golden-winged Warbler is a small, striking songbird averaging 12.1 cm (4.75 in.) in length and 8.8 g (0.31 oz.) in weight. Adult males have a yellow crown, a black mask, and a black throat. This bird has a white belly, gray back, and a yellow wing patch. Adult females and juveniles appear similar to the males but have a duller overall appearance and a greenish-yellow crown (Sibley 2003).

The Prairie Warbler is a small songbird averaging 12.1 cm (4.75 in.) in length and 7.7 g (0.27 oz.) in weight (Sibley 2003). Male and female Prairie Warblers also look very much alike. This bird has yellow underparts, black stripes on the sides of the body, a brownish-green back, and two black face marks. Males can be distinguished from females by darker coloration and the presence of chestnut colored streaks on the back. This species can also be identified by its propensity to bob its tail. Juvenile birds appear quite differently, but also bob their tails (Peterson and Peterson 2002).



The Eastern Kingbird is the smallest kingbird, averaging 21.6 cm (8.5 in.) in length and 40 g (1.4 oz.) in weight. The adult Eastern Kingbird has a black head, dark gray upperparts and white underparts. They have a black tail with a white tip. The juvenile bird appears similar to the adult (Sibley 2003).

The Gray Kingbird is a large, conspicuous and aggressive flycatcher. It averages 22.9 cm (9 in.) in length and 44 g (1.5 oz.) in weight (Sibley 2003). It is a rare visitor to South

Carolina's coast during the breeding season (May through September), where it nests in pines and palmettos in open areas near salt water (Smith 2002, Florida FWC 2003). It features gray upperparts with white lowerparts, a dark mask through the eye, and a thick black bill. The species also features orange-red crown feathers, although these may only be visible in hand (Smith 2002). The Gray Kingbird may best be distinguished from the closely related Eastern Kingbird, a more abundant species in South Carolina, by its much paler upperparts, forked tail, and heavier body, measuring 9 in. in length (Evans 1990, Smith 2002). The robust black bill may also distinguish the species and is used to feed on large flying insects, often taken in midair, in addition to occasional berries and fruit (Sprunt 1942).

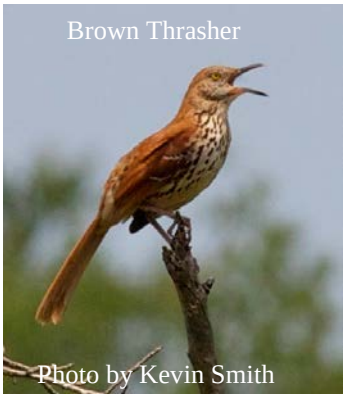
The Blue Grosbeak averages 17.1 cm (6.75 in.) in length and 28 g (0.98 oz.) in weight. The adult male has a large black bill and is dark blue in color with black wings and rufous wing-bars. The adult female has the same large black bill but is a pale gray-brown overall with buffy brown median coverts. The juvenile bird has a solid warm rufous-brown coloring overall. They begin to acquire variable amounts of blue on the head and rump during their first summer (Sibley 2003).

Dickcissel photo by USFWS

The Dickcissel is a stocky bird averaging 15.9 cm (6.25 in.) in length and 15 g (0.53 oz.) in weight. The adult male has gray head, long yellow supercilium, a brown back with black streaks, and a light gray belly. They are most easily recognized by their yellow breast with a black V on it. The female is similar to the male but they lack the black V on their breast and have a duller face and head pattern. The juvenile is similar to the female, but is duller in color with fine streaks on the chest (Sibley 2003).

The Indigo Bunting is a small, stocky bird averaging 14 cm (5.5 in.) in length and 14.5 g (0.42 oz.) in weight. The adult male bunting is bright blue with a darker head and wings edged in black. The adult female is light brown in color with a white throat and light streaking on the chest. The juvenile male bird is buff brown with patches of blue on the face, chest, wings and rump (Sibley 2003).

The Bewick's Wren is a slender bird averaging 13.3 cm (5.25 in.) in length and 10 g (0.35 oz) in weight (Sibley 2003). Like most wrens, male and female Bewick's Wrens look alike and cannot be distinguished from one another. Wrens are small, active birds with decurved bills and cocked tails. The Bewick's Wren is a brown bird with a white eye stripe and black barring on the tail feathers (Peterson and Peterson 2002).



The Brown Thrasher is a larger songbird averaging 29.2 cm (11.4 in.) in length and 69 g (2.4 oz.) in weight. The adult Brown Thrasher has rufous colored upperparts, a heavily streaked white breast, a long tail, and a bright yellow eye. The juvenile Brown Thrasher is similar in appearance to the adult (Sibley 2003).

The Eastern Towhee is a medium-sized songbird averaging 26.7 cm (10.5 in.) in length and 40 g (1.4 oz.) in weight. The adult male is black on top with rufous sides, a white belly, and a white patch at the base of the primaries. The adult female is similar to the male except instead of being black on top, she is a chocolate brown. The juvenile has a brown head and back with black wings and a black tail. The rufous on the sides does not become obvious until a later age (Sibley 2003).

The Orchard Oriole is the smallest oriole, averaging 18.4 cm (7.25 in.) in length and 19 g (0.67 oz.) in weight. The adult male is brick red in color with a black head, back, tail, and wings with white wing-bars. The adult female is olive green above, yellow below, and has well-defined white wing-bars. The juvenile male appears similar to the female but has a black bib (Sibley 2003).

The White-eyed vireo is a small, stocky songbird averaging 12.7 cm (5 in.) in length and 11.5 g (0.4 oz.) in weight. The adult bird has a tell-tale white eye encircled in yellow spectacles. They have an olive-green head and back with yellow flanks and a whitish throat and belly. The juvenile bird is similar to the adult but has a gray head with white spectacles encircling a brown eye (Sibley 2003).

The Yellow-billed Cuckoo averages 30.5 cm (12 in.) in length and 65 g (2.3 oz.) in weight. The adults are brown on top and white below; the tail is long with black feathers ending in white tips. The bill for which they are named is mostly yellow. The juvenile is similar in appearance to the adult but briefly lacks the yellow on its bill and has a less distinct tail pattern (Sibley 2003). The Yellow-billed Cuckoo is also discussed in the Deciduous Forest Interior Bird Guild.

Yellow-breasted Chat photo by Jim Conrad, public domain

Yellow-breasted Chats are the largest warblers in North America, averaging 17-19 cm (6.5-7.5 in.) in length (Audubon.org 2013) and weighing 23-31 g (0.8-1.1 oz.) (Eckerle and Thompson 2001). Both sexes are olive green above and white beneath with a yellow breast. The bill is black as is the face mask which is bordered above and below by white. This species sings a very disjointed song consisting of a few repeated phrases, whistles, and croaks. It may sometimes be heard singing at night (Audubon.org 2013).

Status

Disturbance-dependent birds, including the species in this report, are experiencing precipitous population declines (Askins 2000 and 2001; Hunter et al. 2001). Golden-winged and Blue-winged Warblers are currently facing declines from habitat loss, hybridization, and competition. These warblers nest in disturbed sites such as abandoned farmland, aspen clearcuts, and burned forest stands that are currently in decline in the face of urban sprawl, reforestation, and lower numbers of abandoned farmlands (Confer et al. 2011).

Golden-winged Warblers frequently become extirpated in areas with Blue-winged Warblers. Blue-winged Warblers are expanding their range northward and out-compete Golden-Winged Warblers for resources such as territories, nesting material, and food. Blue-winged Warblers also hybridize with golden-winged warblers, producing viable offspring. This causes a genetic decline for Golden-winged Warblers (Confer et al. 2011). While the Golden-winged Warbler is not currently ranked in South Carolina, it is ranked as at the federal level as a Species of Concern (NatureServe 2013).

The Prairie Warbler is ranked as secure globally (G5) and apparently secure (S4) in South Carolina. The Chestnut-sided Warbler is ranked as secure (G5) globally and is not ranked in South Carolina. Prairie and chestnut-sided warblers have been steadily declining. The main cause of the decline is a range-wide loss of early-successional breeding habitat. Cowbird parasitism is also negatively impacting these warblers (NatureServe 2013).

The Gray Kingbird appears to be well-adapted to living in developed habitats, as it is a common visitor to farms and suburbs, which provide foraging opportunities on agricultural pests and insects (Smith 2002; Wetmore 1916). However, concern has been raised over the impacts of pesticide use, both through ingestion of affected insects and the potential impacts of consistent application over nesting areas (Campbell 1988). Currently, the species is listed as Least Concern on the IUCN Red List as the population is believed to be stable and covers a large range (IUCN 2011). NatureServe lists the global status as secure (G5), while the state status is vulnerable (S3) (NatureServe 2013).

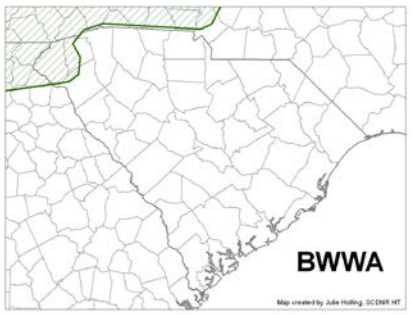
The Dickcissel is currently considered secure globally (G5) and is not ranked in South Carolina. The Dickcissel experienced severe declines from the mid 1960s to late 1970s resulting in high levels of concern, but recently these declines have leveled off (NatureServe2013). The main

cause of decline in Dickcissels comes from habitat alteration. There is large loss of available nesting habitat as native grasslands undergo large-scale conversion to row crops. Dickcissels also nest in hay fields, which results in extremely low nesting success since the nests are destroyed during harvesting (Frawley and Best 1991).

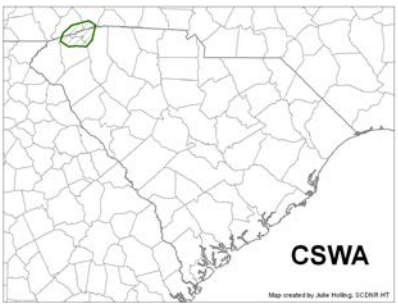
The Bewick's Wren is ranked as secure globally (G5) but it is extremely rare in South Carolina. The threats to Eastern populations are not clearly understood. It is thought that interspecific competition with invasive species such as European Startlings (*Sturnus vulgaris),* House Sparrows (*Passer domesticus*), and native birds such as House Wrens (*Troglodytes aedon*), Carolina Wrens (*Thryothorus ludovicianus),* and Song Sparrows (*Melospiza melodia*) may be contributing to declines. Changes in habitat, harsh weather, and predators may also be negatively impacting populations (Ehrlich et al. 1992; Kennedy and White 1996).

Many of the birds in this guild are still common throughout the State and country and are currently ranked secure globally (G5) and not ranked in the State of South Carolina. This includes the Eastern Kingbird, Blue Grosbeak, Indigo Bunting, Brown Thrasher, and Eastern Towhee. The Orchard Oriole is also globally secure (G5) and is ranked as secure (S5) in South Carolina. Also ranked globally secure (G5) is the White-eyed Vireo, and the Yellow-billed Cuckoo, ranked apparently secure (S4) in SC. The Yellow-breasted Chat is considered relatively stable range-wide (G5) and in South Carolina (S4) although the Northeast has been experiencing declines (Audubon.org 2013). The biggest threats leading to declines in these species are habitat loss to human development or succession of grassland or shrubby habitats (NatureServe 2013).

POPULATION SIZE AND DISTRIBUTION

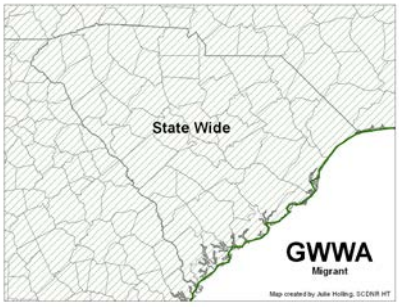


The Blue-winged Warbler is a breeding bird that occurs in the extreme southern edge of Canada, the Northeastern United States, extending as far south as South Carolina, and as far west as Eastern Nebraska (NatureServe 2013). The Blue-winged Warbler probably occurs in low densities as a breeding bird in South Carolina's Appalachian Mountains. It is only migratory along the coast (C. Watson, pers. comm.). The Blue-winged Warbler overwinters in Central America and the Caribbean (NatureServe 2013). This warbler is currently experiencing a northward expansion in its range. Despite this expansion, the overall population trend of Blue-winged Warblers is believed to be declining (BirdLife 2012). According to Breeding Bird Survey (BBS) monitoring trends (1966-2010), Blue-winged Warblers are declining at a rate of 0.5% in the Eastern region. Population trends for the Southern region cannot be accurately calculated since populations are so small (Sauer et al. 2012).

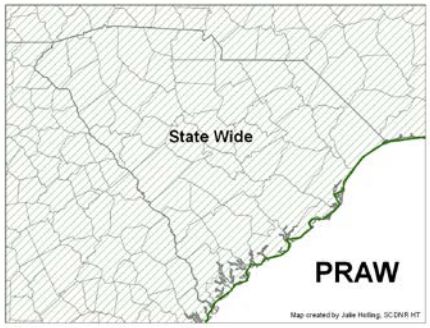


The Chestnut-sided Warbler is a northern breeding bird found in Southern Canada, the Northeastern United States, and south through the Appalachian Mountains

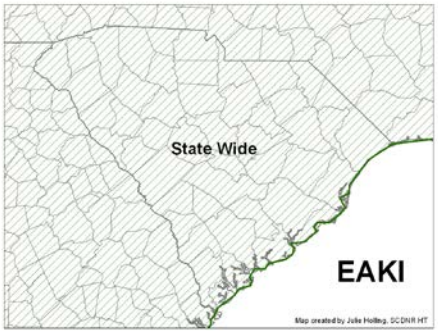
(Richardson and Brauning 1995). South Carolina is at the southern-most end of this bird's breeding range, and its distribution in the State is restricted to the Appalachian Mountains. The Chestnut-sided Warbler winters in Central America. This warbler has been experiencing long-term (1966 through 2010) population declines of 1.4% per year in the Eastern region (Sauer et al. 2012).



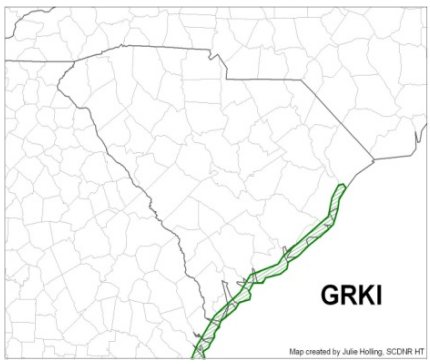
The Golden-winged Warbler is a northern breeding bird found in Southern Canada, the Northeastern United States, and extending south into the Appalachians. South Carolina composes the southern-most extent of the range where these birds occur in small numbers in the extreme northwestern part of the State. The Golden-winged Warbler overwinters in Central America and northern South America (NatureServe 2013). According to BBS trend data (1966-2010), Golden-winged Warblers are declining at a rate of 2.6% per year in the Eastern BBS region. Population trends for the Southern region cannot be accurately calculated since populations are so small (Sauer et al. 2012).



The Prairie Warbler has been experiencing long-term (1966 through 2010) population declines of 0.8% in South Carolina with the steepest declines (6.3%) occurring from 1966 through 1979 (Sauer et al. 2012). Recently (1980 through 2010), population trends have stabilized; however, populations are still below objectives.



Eastern Kingbirds have a large breeding range extending from Southwestern and North-central British Columbia and Southern Mackenzie to New Brunswick and extending southward to Northeastern California, the Gulf Coast, and Florida (NatureServe 2013). They commonly breed throughout South Carolina (Cely 2004). Eastern Kingbirds overwinter in Western Amazonia, extending as far south as Central Argentina (NatureServe 2013). According to BBS monitoring data (1966-2010), Eastern Kingbirds are declining at a rate of 1.4% in South Carolina (Sauer et al. 2012).



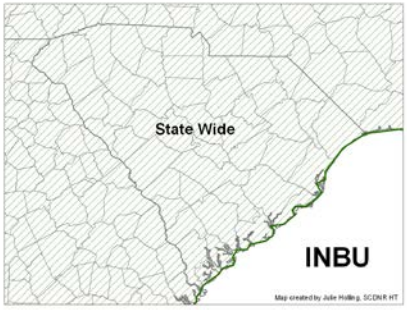
The primary breeding range of the Gray Kingbird includes southern Florida and the Florida Keys through the Greater Antilles islands of Hispaniola, Cuba and Puerto Rico, extending in lower numbers through the Caribbean Basin. South Carolina and North Carolina constitute the northern limit of its breeding range where it is a rare summer resident (Sprunt and Chamberlain 1970). There is evidence

of historic breeding activity in SC; however the most recent breeding record is from Debidue Beach in 1993, with an additional sighting of an adult pair during the breeding season in 1984 on Fripp Island (Sprunt 1942; Cely 2003). The wintering distribution is concentrated further south in the Caribbean basin including Hispaniola and Puerto Rico, as well the coastal countries of Central and South America along the Caribbean. Although birds largely depart breeding areas of the Continental US, they may rarely be seen in the southernmost regions of Florida in winter (Smith et al. 2002).

The Blue Grosbeak is a widespread breeder, nesting from Central California, Southern North Dakota, and Southern Pennsylvania, extending all the way south to Northern Baja California, Costa Rica, and central Florida (NatureServe 2013). They are common and widespread breeders in South Carolina (Cely 2004). The Blue Grosbeak overwinters in Central America and the Caribbean (NatureServe 2013). The Blue Grosbeak is currently experiencing an increase in its population in South Carolina at a rate of 0.4% per year as evidenced by BBS trend data from 1966 through 2010 (Sauer et al. 2012).

The Dickcissel commonly breeds from Eastern Montana and Southern Saskatchewan to the Eastern Great Lakes region and extending down to Southern Texas and Western South Carolina (NatureServe2013). They are a rare breeder in South Carolina (Cely 2004). Dickcissels overwinter on the western coast of Central America and Northern South America (NatureServe 2013). The Dickcissel has been experiencing long-term (1966 through 2010) population declines of 2.4% per year in the Eastern portion of its range. Values for South Carolina were not calculated since the sample size is too small to make an accurate calculation (Sauer et al. 2012).

The Indigo Bunting is a common breeding bird in the Central and Eastern United States (Sibley 2003). Indigo Buntings breed throughout South Carolina (Cely 2004). Indigo Buntings overwinter in Central America and the Caribbean (NatureServe 2013). According to BBS trend data (1966-2010), Indigo Buntings are declining at a rate of 1.6% in South Carolina (Sauer et al. 2012).



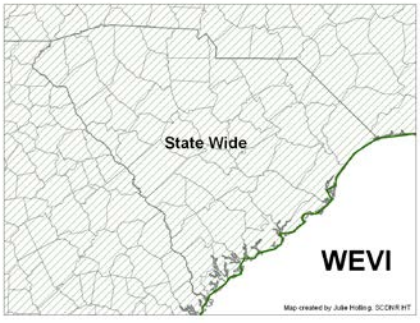
The Bewick's Wren primarily breeds and winters in Central America and Central and Western North America (Kennedy and White 1997). This species has expanded and contracted its range in response to habitat changes in Eastern North American and once could be found in the Western Appalachian Mountains. Today this bird is rare in the Eastern United States and is likely extirpated from South Carolina. The Bewick's Wren has been experiencing long-term population

declines of 12.7% per year in the Eastern region as evidenced by BBS trend data (1966 through 2010) (Sauer et al. 2012).

The Brown Thrasher is a common breeding bird in the Central and Eastern United States and the southern portion of Canada (NatureServe 2013). They are common and widespread breeders in South Carolina (Cely 2004). Brown Thrashers overwinter along the East Coast, Southeastern United States, and into Central Texas (NatureServe2013). The Brown Thrasher is slightly increasing in population size at a rate of 0.1% in South Carolina, but they have been experiencing long-term population declines of 1.1% per year throughout their range as evidenced by BBS trend data (1966 through 2010) (Sauer et al. 2012).

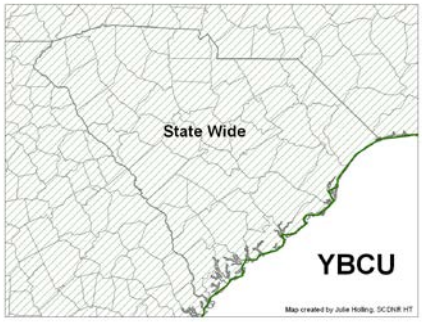
The Eastern Towhee breeds in much of the Eastern half of the United States (NatureServe 2013). They are common and widespread breeders in South Carolina (Cely 2004). Eastern Towhees overwinter in the Southern United States from Central Texas extending east to the Atlantic Coast (NatureServe 2013). The Eastern Towhee is currently experiencing declines in population size in South Carolina at a rate of 1.3% per year as evidenced by BBS trend data from 1966 through 2010 (Sauer et al. 2012).

The Orchard Oriole is a common breeding bird in the Central and Eastern United States, and Central Mexico (NatureServe2013). They commonly breed throughout South Carolina (Cely 2004). Orchard Orioles spend the winter in Central America and the northeastern portion of South America (NatureServe 2013). The Orchard Oriole has been experiencing long-term (1966 through 2010) population declines of 0.8% per year in South Carolina (Sauer et al. 2012).



The White-eyed Vireo is a common breeding bird from Central Iowa across to the Atlantic Coast, going as far north as Southern Massachusetts and Ontario and as far south as the eastern coast of Mexico (NatureServe 2013). They are common and widespread breeders in South Carolina (Cely 2004). White-eyed Vireos overwinter in the Southern United States, eastern Central America, and the Caribbean (NatureServe 2013). White-eyed Vireos are slightly increasing in population size at a rate of 0.1% in South Carolina (Sauer et al. 2012).

The Yellow-billed Cuckoo is a common breeding bird in the eastern half of the United States from Eastern Wyoming extending all the way to the Atlantic Coast and as far south as Central Mexico (NatureServe2013). They are a common breeding bird throughout South Carolina (Cely 2004). Yellow-billed Cuckoos overwinter in southern Central America extending southward all the way into Northern Argentina (NatureServe 2013). According to BBS trend data (1966-2010), Yellow-billed Cuckoos are declining at a rate of 0.6% in South Carolina and declines of 1.6% per year throughout their range (Sauer et al. 2012).



The Yellow-breasted Chat's range extends from southern Canada south to the Gulf Coast states and Texas. It breeds throughout South Carolina and winters in Central America. As with other shrub-scrub species, chats have been declining in eastern North America in areas that are losing that type of habitat. However, the species is increasing in the western portion of its range (NatureServe 2013). The Breeding Bird Survey shows a relatively stable trend in the population for SC. The IUCN considers the species of "least concern."

HABITAT AND NATURAL COMMUNITY REQUIREMENTS

Disturbance-dependent birds have suffered steep population declines throughout the Eastern US (Hunter et al. 2001). Historically fire, floods, windstorms, and herbivores maintained habitat conditions conducive to disturbance-dependent species (Askins 2001). Fire suppression, the loss of large canopy tress such as the American chestnut (*Castanaea dentata*), and the extirpation of beaver (*Castor canadensis*) and mega herbivores such as elk (*Cervus elaphus*) and bison (*Bison bison*) following European settlement, reduced the availability of early-successional habitat throughout the Eastern US (Askins 2000).

Although natural ecological forces that create habitat for each of these birds revolve around disturbance regimes, each bird has its own unique requirements. The Blue-winged Warbler is an early- to mid-successional generalist species. They use a variety of successional habitats like woodland clearings, forest edges, and abandoned pastures. Habitat typically consists of clumped shrubs and saplings (Dunn and Garret 1997).

The Chestnut-sided Warbler is a high elevation specialist most common in the secondary growth of forest clearings, large tree-fall gaps, areas recovering from forest fires, and successional growth following beaver activity (Richardson and Brauning 1995).

The Golden-winged Warbler is an early-successional specialist species. They require shrubby habitat in upland or wetland areas, with sporadic tree cover and an understory of grass and forbs.

Early-successional habitats are short-lived and turn into mature forests, forcing these warblers out of the habitat (Buehler et al. 2006).

The Prairie Warbler's name is a bit of a misnomer because open prairie is not the preferred habitat. This bird requires a shrubby component to habitat. The Prairie Warbler can be found breeding in southern pine forests with a well-developed shrub layer, dunes along the Atlantic Coast, scrub oak, pine barrens, and abandoned pastureland or fields (Nolan et al. 1999).

The Eastern Kingbird prefers open environments with suitable nest sites and perches. It breeds in fields with scattered shrubs. It has been known to breed in a variety of habitats including parks, newly burned forest, beaver ponds, and golf courses (Murphy 1996).

The Gray Kingbird has a low sensitivity to humans and likely benefits in the short-term from coastal development within its breeding range. It has adapted to nesting in human altered landscapes and profits from altered insect communities of agricultural and disturbed habitats (Smith et al. 2002). Breeding and wintering habitats for the species are similar, preferring open coastal habitats near water, in areas of lower vegetation dominated by palmetto and pine, or mangrove when present. Nests are usually built 1.2 to 3.7 m (4 to 12 ft.) off the ground, but little is known about their breeding habits (Florida FWC 2003; Smith 2003).

The Blue Grosbeak frequents habitats with medium-sized trees and low shrub density, including forest edge, fields, power-line cuts, hedgerows, and riparian areas (Lowther and Ingold 2011).

The Dickcissel's primary habitat is tall grasslands, including everything from hayfields and prairie to lightly grazed pastures and roadsides (Temple 2002). They prefer habitat with a high proportion of forbs in which they gain access to perches, nesting cover, nest support, and a high abundance of prey (Patterson and Best 1996).

Indigo Buntings are commonly found in brushy and weedy areas along the forest edge, roadsides, fallow fields, powerline cuts, and riparian areas. Indigo Buntings tend to avoid areas of intensive agriculture and frequent mowing (Payne 2006).

The Bewick's Wren prefers scrub thickets of stunted vegetation interspersed within an open woodland landscape. Remnant populations in the East are often found near buildings or brushy areas on farms in relatively open country (Kennedy and White 1997).

Brown Thrashers use a wide variety of habitats but are most commonly found in mid-successional areas. They frequent thickets, hedgerows, forest edge, and overgrown clearings of deciduous forest. They are often seen foraging on the ground in dense brush (Cavitt and Haas 2000).

Eastern Towhees prefer scrubby habitats consistent with forest edges, overgrown fields, shrubby backyards, and thickets. The common characteristic to their preferred habitats is dense shrub cover and high levels of leaf litter in which to forage.

The Orchard Oriole frequents a diverse group of habitats but tends to prefer riparian zones, floodplains, marshes, and the edge of rivers and lakes. They are commonly found in areas with trees in open shrublands like parks and farms. Orchard Orioles prefer deciduous trees to coniferous trees (Scharf and Kren 2010).

White-eyed Vireos prefer shrubby habitat such as deciduous scrub, overgrown fields, wood margins, riparian thickets, and mangroves. They prefer variable habitat that has extensive undergrowth, shrubs, and saplings, interspersed with taller trees (Hopp et al. 1995).

Yellow-billed Cuckoos prefer open woodland areas with dense scrub and clearings. They are frequently found in riparian areas (Hughes 1999). In the Southeast, Cuckoos are commonly found in hammocks and hardwood forests with streams, thickets, and swamps with fencerows in the vicinity (Stevenson and Anderson 1994).

Yellow-breasted Chats are found in brushy, thorny tangles along streams or on dry hillsides. Being a shy bird, they are more often heard than seen. However, its display flight, which consists of bouncing up into the air and down while singing, does sometimes get the observer's attention. [Audubon.org]

CHALLENGES

Habitat loss and suppression of disturbance regimes are the main challenges to this guild. The loss of the American chestnut resulted in reduced availability of larger tree-fall gaps that create early-successional habitat within a forested landscape. The extirpation of elk and bison, large animals that drive successional processes through herbivory, has also reduced the ecological forces that maintain early-succession habitat. Additionally, fire suppression and a less abundant population of beaver have reduced available habitat for disturbance-dependent birds.

Even-aged timber management reduces the structural complexity of forested landscapes upon which the Prairie and Chestnut-sided Warbler depend. Urban development and the conversion of agricultural land to monoculture plantations has reduced available habitat for the Prairie Warbler and Bewick's Wren. The Gray Kingbird is listed as a species of moderate priority in the South Carolina SWAP, largely because the species has been studied little in the State. The SWAP ranking system considers not simply population trends, but also the amount of knowledge concerning such management questions as the species' distribution, abundance, and limiting factors within SC. Although there is little known on the species, a probable management challenge is the long-term effects of habitat loss due to coastal development, although the Gray Kingbird has been known to adapt to urban and agricultural landscapes (Smith et al 2002).

Other causes of population declines in members of this guild may be attributed to bird strikes at communication towers and wind turbines, brood parasitism by the Brown-headed Cowbird (another disturbance-dependent species), and habitat loss on wintering grounds. Although brood parasitism of Prairie Warbler nests in South Carolina is low (14%), Prairie Warblers are among the 4 most frequently parasitized species in the region (Kilgo and Moorman 2003).

CONSERVATION ACCOMPLISHMENTS

No conservation initiatives have been set specifically for members of this guild. However, in the case of the Gray Kingbird, the South Carolina coast features many regions under ownership by state and federal agencies which protect habitat that could potentially host the species. These include State Heritage Preserves, Wildlife Management Areas, and National Wildlife Refuges. Other large tracts of protected land occur across the State, benefitting other guild members as well as more common species.

Long-term monitoring programs, such as the Breeding Bird Survey (Sauer et al 2004), have provided population trend data that enables biologists and land managers to prioritize management decisions based on the knowledge of population trends.

National initiatives such as the Partners in Flight (PIF) Landbird Conservation Plan (Rich et al. 2004) and the North American Bird Conservation Initiative (NABCI 2005) have provided a method by which interested parties can coordinate conservation activities. These initiatives have provided guidelines for priority species, population and habitat objectives, and recommendations for conservation actions. State and federal agencies have implemented habitat improvement projects based on guidelines outlined in PIF and NABCI.

CONSERVATION RECOMMENDATIONS

- Utilize GIS and land type associations to determine total area and distribution of available habitat. Modeling will enable SCDNR to prioritize land acquisition and habitat improvement projects.
- Partner with other land management agencies and make recommendations about habitat improvement projects that benefit early-succession species.
- Expand the use of Farm Bill and other cost-share programs to implement activities that integrate habitat objectives for early-succession birds.
- Expand participation in the Landowner Incentive Program (LIP) to create or enhance habitat on private lands.
- Promote the use of Best Management Practices that support providing buffer zones and that increase structural diversity (such as providing small clearcuts).
- Partner with appropriate agencies to encourage prescribed burning activities on public and private lands.
- Work with international partners to identify problems on wintering grounds. Where feasible, provide financial incentives to conserve habitat.
- Continue to monitor populations of early-succession birds through participation in the Breeding Bird Survey (BBS).
- Initiate agency supported monitoring programs, such as Partners In Flight (PIF) point counts.
- Expand monitoring programs to areas not adequately sampled.
- Monitor bird response to management activities both pre- and post-treatment.
- Continue to strengthen partnerships with regional and national initiatives such as the Atlantic Coast Joint Venture, Appalachian Mountains Bird Conservation Region (BCR), PIF and NABCI.

- Pursue opportunities for funding for land acquisition or management activities through partnerships with regional agencies and NGOs.
- Develop partnerships with recreational bird watching organizations in the State.
- Research effects of bird strikes on migratory bird populations and partner with the communications industry to work toward solutions in SC.
- A number of conservation objectives have been identified for the entire population of Gray Kingbirds, which can be used to guide future research of the rare visitor in South Carolina. These include population dynamics and migration as well as breeding biology and the effects of coastal development (Smith et al 2002). An immediate objective is to encourage the reporting of all Gray Kingbird observations in order to establish the presence of the species in the State.

MEASURES OF SUCCESS

The first measure of success will be to implement monitoring programs that will allow SCDNR to document population trends and avian response to management in the State. The next goal will be to determine population and habitat objectives for priority species. Finally, implementing the above mentioned recommendations to provide the appropriate quantity of habitat to support target populations will be important. The ultimate measure of success will be to halt population declines and, once determined, to support populations equivalent to those outlined in population objectives.

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