

## Marsh Birds

**American Bittern** *Botaurus lentiginosus*

**American Coot** *Fulica americana* – breeding populations

**Black Rail** *Laterallus jamaicensis*

**Common (Wilson’s) Snipe** *Gallinago gallinago*

**King Rail** *Rallus elegans*

**Least Bittern** *Ixobrychus exilis*

**Pied-billed Grebe** *Podilymbus podiceps* – breeding populations

**Purple Gallinule** *Porphyryla martinica*

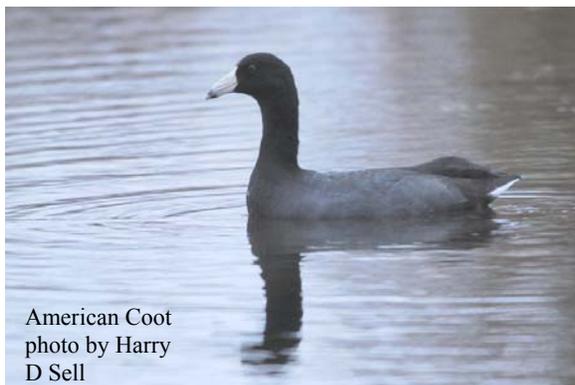
**Yellow Rail** *Coturnicops noveboracensis*

Contributor: John E. Cely

## DESCRIPTION

### Taxonomy and Basic Descriptions

The common snipe was formerly named Wilson’s snipe. The other members of this group have not undergone name changes in recent years.



The members of the marsh bird group vary widely in appearance and size. The rails and bitterns have long, slender beaks and stilt-like legs for wading while the coot and grebe have shorter legs with webbed feet for paddling. Sizes for the species vary from the large American bittern at 58 cm (23 inches) to the small black rail at 11 cm (4.5 inches). The most colorful of the group is the purple gallinule. The male has plumage in shades of green, purple and blue with bright yellow feet and long toes (Sauer et al. 2000).

## Status

None of these species are officially recognized as threatened or endangered, but all are experiencing documented or suspected declines. Partners in Flight (PIF) list all three rails as of continental conservation concern (Rich et al 2004) and the king rail is listed as endangered by the Canadian Wildlife Service (E. Ciuizio, KDFWR, pers. comm.). The black rail is also on the SCDNR “special concern” list. Both bittern species are listed as of regional concern by PIF, while the American bittern is listed as a species of “special concern” by SCDNR. Breeding populations of the pied-billed grebe and the American coot are also of



regional concern according to PIF. The common snipe is a species of continental conservation concern under PIF and the United States Shorebird Conservation Plan (Brown et al 2001).

### POPULATION DISTRIBUTION AND SIZE

The following table was compiled by Chuck Hunter (USFWS) and summarizes the estimated continental population and trend for each species in this group. These are extrapolated estimates from Breeding Bird Survey data.

Species	Estimated Continental Population & Trend	Residency Status in South Carolina
Yellow Rail	10,000 to 25,000 individuals, stable or unknown trend	Winter
Black Rail	5,000 to 50,000 individuals, likely declining but unknown to what extent	Permanent
King Rail	60,000 to 100,000 individuals, steep declines	Permanent
Least Bittern	<150,000 individuals - (?)	Summer
American Bittern	~3 million individuals -	Winter
Pied-billed Grebe	385,000 individuals ?	Permanent but rare breeder
American Coot	6 million individuals +	Permanent but rare breeder
Purple Gallinule	<500,000 (all of Western Hemisphere) -	Summer
Wilson’s Snipe	<3 million individuals, -	Winter

(?) = unknown trend; (+) = increasing; (-) = decreasing

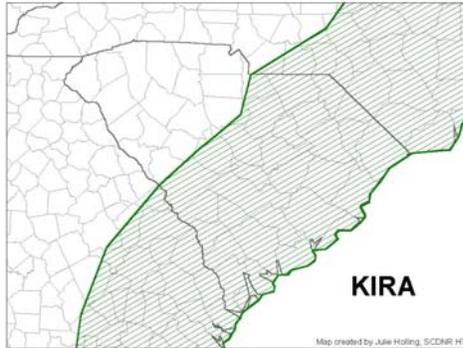
### HABITAT AND NATURAL COMMUNITY REQUIREMENTS

The yellow rail uses freshwater marsh, specifically “damp” marsh, “wet” or low-lying broom sedge fields and pastures, grassy Carolina bays, damp grassy power line right-of-ways and ditch banks. Due to the bird’s small size, it does not use deep-water marshes and impoundments. It is sometimes found in recent clear cuts with scattered puddles of standing water and bunched grasses. Tall or moderate-height grasses seem important for cover.



Some woody trees and shrubs are acceptable features in the habitat, but based on personal observations at a yellow rail site in lower Richland County, South Carolina over an 8 to 9 year period, succession to woody shrubs and trees seemed detrimental. Fire, mowing and other successional retardants are probably needed to maintain suitable habitat conditions. Very little is known about the yellow rail’s distribution and habitat requirements in South Carolina.

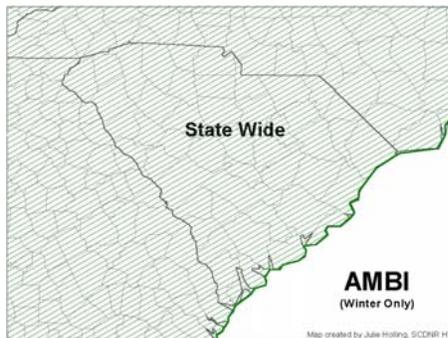
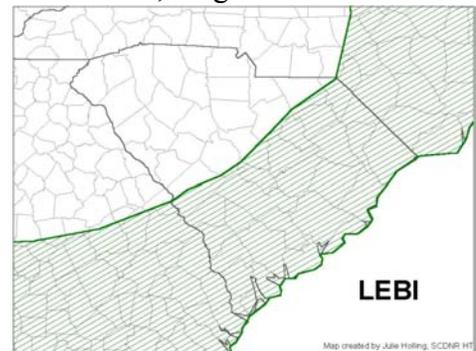
Freshwater and brackish marshes of the coastal zone are the habitats of the black rail. It is often found in black-needle rush marshes (*Juncus roemerianus*) and “high marsh” (infrequently flooded) on the edges of waterfowl impoundments and salt marshes. Like yellow rails, black



rails do not use marsh with significant amounts of standing water. Succession to woody plants is probably detrimental to this species. Where calling birds are located, breeding is presumed to occur, but there is only one confirmed nesting record from 1903. Calling locations are spotty, with Bear Island WMA in Colleton County supporting the most significant population located to date. Much more information is needed about its distribution and habitat requirements in the state.

The king rail is primarily found in the coastal zone, but can be found in the coastal plain and sandhills ecoregions. It was formerly found statewide, but few, if any, piedmont locations are currently known (Cely et al. 1993). Considered a freshwater counterpart to the widely distributed clapper rail of coastal salt marshes, king rails have declined to an alarming extent throughout much of the south.

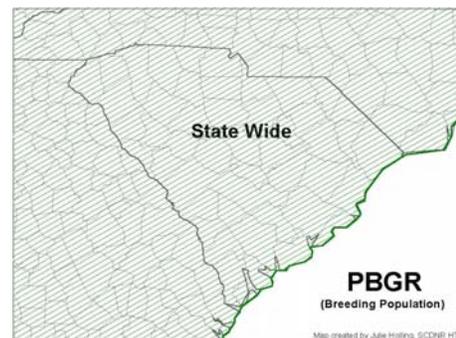
Obvious reasons for declines are not apparent, at least in the southeast, as adequate habitats, like cattail marshes and other freshwater marshes with emergent vegetation, are widely available. In the piedmont, the notable increase in beaver populations in the past 35 years should have created king rail habitat.



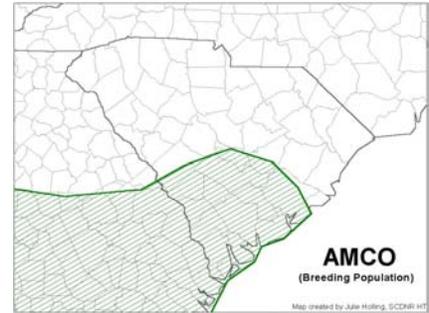
Similar in distribution and habitat use as the king rail, the least bittern differs in that it has never been known historically to occur as a breeder in the piedmont. It is most abundant in the coastal zone. Habitat requirements may be less exacting than the king rail, as the least bittern is more abundant. Freshwater emergent marsh is used, especially if cattail is present. In addition, pond and lake margins with emergent vegetation and waterfowl impoundments are frequented. As with

most members of the Ardeidae family, the least bittern may need deeper water than king rails for nesting security purposes.

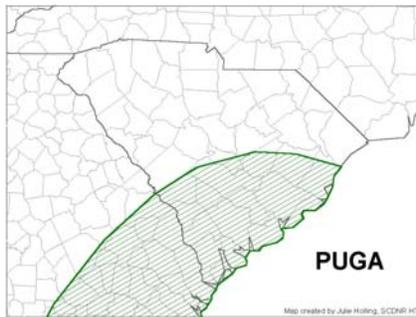
Freshwater tall emergent marsh is used by American bitterns as refuge. Declines may be related to habitat loss on the breeding grounds as more than adequate habitat seems available in South Carolina. The American bittern is distributed statewide but is probably more abundant on the Outer Coastal Plain.



The pied-billed grebe is a fairly common breeder in deep-water impoundments with tall emergent vegetation, in Carolina bays, and other marshes in the coastal zone. In the coastal plain, it is localized, while in the piedmont, it is rare. Key requirements seem to be deeper water for nest protection and escape along with tall emergent vegetation for cover.



There have been less than five documented breeding records for the American coot, from the inner coastal plain and outer coastal plain. This species is abundant as a statewide winter resident, more so in the coastal plain, on ponds, lakes, waterfowl impoundments and other deep-water habitats where submerged aquatic vegetation is available for food. Breeding habitat is poorly known in the state, but apparently similar to that of the pied-billed grebe.



The purple gallinule is closely associated with ponds and impoundments with thick mats of lily pads and other floating emergents. It is found primarily in the coastal zone from the Santee River southward. South Carolina could have the northern-most population on the Atlantic Coast since it is rare, if not extirpated, in North Carolina.

A common to fairly common winter resident only, the common snipe probably is more widespread in the coastal plain. It utilizes wet bare ground, bare agriculture fields with standing water, recently plowed fields, occasionally short grass fields and sod farms for foraging habitat.



## CHALLENGES

Loss of wetland habitat is the most obvious problem, but for some species adequate habitat seems available in South Carolina. Declines may be related to other reasons, as yet undefined, such as pollutants and/or predators. Suppression of natural disturbance regimes causes habitat loss for this group because plant succession reduces the suitability of marsh habitat.

A marsh bird survey conducted by the SCDNR (Cely et al.1993) noted that the majority of recorded marsh birds were associated with coastal waterfowl impoundments and managed wetlands. The future of these species in South Carolina could, therefore, be tied to active waterfowl management programs in the state and any threats to those habitats managed for waterfowl. As most marsh bird management is incidental to waterfowl management, more information is needed on marsh bird management needs. Little is also known about the basic nesting biology of the eight species in this guild that breed in South Carolina.

A critical need is adequate monitoring, both to determine presence and absence and to evaluate population trends; monitoring efforts are especially needed for the three secretive rail species.

## CONSERVATION ACCOMPLISHMENTS

The continued preservation of wetland habitats including freshwater and saltwater marshes is beneficial to these species. Preservation of areas such as the ACE Basin and Bonneau Ferry (recently purchased by the SCDNR and now a Wildlife Management Area) has provided excellent resources for these species. Some of the best habitats for these species include existing waterfowl impoundments along the coast. Additionally, Conway (2004) has initiated standardized monitoring protocols for these species.

## CONSERVATION RECOMMENDATIONS

- Protect and manage wetlands. This includes retarding plant succession through burning, disking, mowing and other measures that restore natural disturbance regimes. This can be accomplished, in part, by increasing the utilization of federal incentive programs that compensate private land owners for wetland restoration activities and practices that reduce erosion and increase water quality.
- Research basic life history and management needs for the species in this guild in South Carolina's wetland habitats.
- Investigate the basic nesting biology of the eight species of this guild that breed in South Carolina.
- Survey appropriate habitat to gather distributional data for these species.
- Establish a monitoring initiative to evaluate population trends for this species.

## MEASURES OF SUCCESS

The first measure of success would be to implement long-term population monitoring studies, which would yield information about distribution, population status and trends for this group. The next step is to increase quantity and quality of habitat by implementing the above mentioned conservation recommendations. The ultimate measure of success is to document stable population trends for declining species and to increase populations for species in which research suggest it is warranted.

## LITERATURE CITED

- Brown, S., C. Hickey, B. Harrington, and R. Gill, eds. 2001. *The U.S. Shorebird Conservation Plan*, 2nd ed. Manomet Center for Conservation Sciences, Manomet, MA.
- Cely, J.E., D.P. Ferral and B.A. Glover. 1993. *Marsh Bird Survey, Final Report*. South Carolina Wildlife and Marine Resources Department. Columbia, South Carolina. 38 pp.
- Conway, C.J. 2004. *Standardized North American Marsh Bird Monitoring Protocols*. USGS, Arizona Cooperative Fish & Wildlife Resources Unit. 26 pp.
- Rich, T. D., C. J. Beardmore, H. Berlanga, P. J. Blancher, M. S. W. Bradstreet, G. S. Butcher, D. W. Demarest, E. H. Dunn, W. C. Hunter, E. E. Iñigo-Elias, J. A. Kennedy, A. M. Martell, A. O. Panjabi, D. N. Pashley, K. V. Rosenberg, C. M. Rustay, J. S. Wendt, T. C. Will.

2004. Partners in Flight North American Landbird Conservation Plan. Cornell Lab of Ornithology. Ithaca, NY. Partners in Flight website.  
[http://www.partnersinflight.org/cont\\_plan/](http://www.partnersinflight.org/cont_plan/) (VERSION: March 2005).

Sauer, J.R., J.E. Hines and J. Fallon. 2005. The North American Breeding Bird Survey, Results and Analysis 1966-2004. Version 2005.2, USGS, Patuxent Wildlife Research Center, Laurel, Maryland.