







Species Modeling Report

King Rail

Rallus elegans

Taxa: Avian Order: Gruiformes

Family: Rallidae

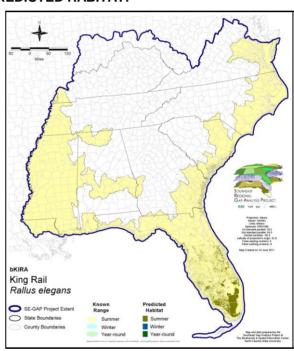
SE-GAP Spp Code: **bKIRA** ITIS Species Code: 176207

NatureServe Element Code: ABNME05020

KNOWN RANGE:

King Rail Rallus elegans

PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE Range bKIRA.pdf

Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_bKIRA.pdf GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=bKIRA

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/bKIRA_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: AL (GB), CT (E), CT (E), IA (E), IA (E), IL (LE), IN (SE), IN (SE), KY (E), MA (T), MI (E), MN (END), MN (END), MN (END), MO (E), NC (W1,W3), NJ (U/U), NY (T), NY (T), OH (E), PA (PE), RI (Concern), TN (D), WI (SC/M), WI (SC/M), ON (END), QC (Non suivie)

NS Global Rank: G4

NS State Rank: AL (S3B,S4N), AR (S1B,S3N), CO (SNA), CT (S1B), CT (S1B), DC (S2N), DE (S2), FL (SNR), GA (S4S5), IA (S1N), IA (S1N), IL (S2), IN (S1B), IN (S1B), KS (S2B,S2N), KY (S1B), LA (S4), MA (S1B,S1N), MD (S3S4B,S2N), ME (S1?N), MI (S1), MN (S1B), MN (S1B), MN (S1B), MO (S1), MS (S3B,S3N), NC (S3B,S3N), ND (SNA), NE (S1), NH (SHB), NJ (S3B,S4N), NM (SNA), NY (S1B), NY (S1B), OH (S1), OK (S1B), PA (S1B), RI (S1B,S1N), SC (SNR), SD (S1S2B), SD (S1S2B), TN (S2), TX (S3B), VA (S2B,S3N), WI (S1B), WI (S1B), WV (S1B), MB (SNA), NB (SNA), NF (SNA), NS (SNA), ON (S2B), PE (SNA), QC (SNA)

bKIRA Page 1 of 4

SUMMARY OF PREDICTED HABITAT BY MANAGMENT AND GAP PROTECTION STATUS:

	l	JS FWS	S US Forest Service		Tenn. Valley Author.		US DOD/ACOE	
	ha	%	ha	%	ha	%	ha	%
Status 1	54,007.7	2	116.3	< 1	0.0	0	0.0	0
Status 2	26,018.6	1	468.9	< 1	0.0	0	0.4	< 1
Status 3	599.0	< 1	4,302.6	< 1	0.0	0	36,296.4	1
Status 4	1.4	< 1	0.0	0	0.0	0	5.6	< 1
Total	80,626.6	3	4,887.8	< 1	0.0	0	36,302.3	1
1	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	203,297.2	8	750.2	< 1	6,240.0	< 1
Status 2	0.0	0	20,542.6	< 1	25,003.8	< 1	20.5	< 1
Status 3	0.0	0	161,604.6	6	0.0	0	81.0	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	385,444.4	15	25,754.0	< 1	6,341.5	< 1
1	Native Am.	Reserv.	State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1.6	< 1	0.0	0	0.0	0
Status 2	0.0	0	80.2	< 1	410,075.6	16	0.0	0
Status 3	0.0	0	202,836.3	8	3,972.4	< 1	48,537.1	2
Status 4	0.0	0	0.0	0	619.4	< 1	0.0	0
Total	0.0	0	202,918.1	8	414,667.4	16	48,537.1	2
1	State Coastal F	Reserve	ST Nat.Area/Pi	reserve	Other State	e Lands	Private Cons. E	asemt.
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	394.0	< 1	0.0	0	0.0	0
Status 2	21,790.9	< 1	17,124.8	< 1	0.0	0	725.5	< 1
Status 3	0.0	0	8,394.7	< 1	1,397.2	< 1	24,001.0	< 1
Status 4	0.0	0	0.0	0	5.1	< 1	0.0	0
Total	21,790.9	< 1	25,913.5	< 1	1,402.3	< 1	24,726.5	< 1
	Private Land - No Res.		Water				Overall Total	
	ha	%	ha	%			ha	%
Status 1	0.0	6	0.0	0			264,807.2	10
Status 2	0.8	< 1	0.0	0			521,852.5	20
Status 3	94.2	< 1	< 0.1	< 1			492,116.7	19
Status 4	1,287,890.5	50	21,642.9	< 1			1,310,782.9	51
Total	1,287,985.7	50	21,643.0	< 1			2,589,559.2	100

GAP Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity) are allowed to proceed without interference or are mimicked through management.

GAP Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive use or management practices that degrade the quality of existing natural communities.

GAP Status 3: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type or localized intense type. It also confers protection to federally listed endangered and threatened species throughout the area.

GAP Status 4: Lack of irrevocable easement or mandate to prevent conversion of natural habitat types to anthropogenic habitat types. Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.

bKIRA Page 2 of 4

PREDICTED HABITAT MODEL(S):

Summer Model:

Habitat Description: The king rail breeds in fresh or brackish tidal marshes, fresh non-tidal marshes, and successional stages of shrubby marsh-swamps with emergent vegetation (Meanley 1992). It does not occur in salt marshes, where Clapper Rails occur, except occasionally during migration (Taylor 1998). Habitat requirements are very similar to that of the muskrat (Meanley 1992). Are reported to use upland-wetland marsh edges, ricefields or similar flooded farmlands, shrub and brackish swamps (AOU 1983, Sibley and Monroe 1990, Meanley 1969), or wet meadows. (Hamel 1992). Also uses flooded willows, ditches, and cattails (Layne et al. 1977).

> The nest is built in water up to 18 inches deep (Reid et al. 1994), or on the ground 6-18 inches above the water, in a clump of vegetation, or hidden by overhanging vegetation (Harrison 1975). The nest is an elevated platform, often with a canopy and ramp, attached to plants growing in shallow water (0-25 cm) or placed in a tussock or other waterside vegetation (Harrison 1978, Meanley 1969).

Quoted directly from existing state habitat notes - K. Cook, 15Feb05

Hydrography Mask:

Utilizes open water features with buffer of 250m from selected water features.

Utilizes wet vegetation features with buffers of 250m from and unlimited into selected vegetation features.

Functional Group	Map Unit Name				
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Central Salt and Brackish Tidal Marsh				
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Embayed Region Tidal Salt and Brackish Marsh				
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Indian River Lagoon Tidal Marsh				
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Sea-Level Fen				
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Tidal Salt Marsh				
Brackish Tidal Marsh & Wetland	Florida Big Bend Salt-Brackish Tidal Marsh				
Brackish Tidal Marsh & Wetland	Mississippi Sound Salt and Brackish Tidal Marsh				
Brackish Tidal Marsh & Wetland	South Florida Everglades Sawgrass Marsh				
Coastal Dune & Freshwater Wetland	Atlantic and Gulf Coastal Plain Interdunal Wetland				
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Central Fresh-Oligohaline Tidal Marsh				
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Embayed Region Tidal Freshwater Marsh				
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Fresh and Oligohaline Tidal Marsh				
Freshwater Tidal Marsh & Wetland	Florida Big Bend Fresh-Oligohaline Tidal Marsh				
Wetlands	Atlantic Coastal Plain Depression Pondshore				
Wetlands	Atlantic Coastal Plain Sandhill Seep				
Wetlands	Atlantic Coastal Plain Southern Wet Pine Savanna and Flatwoods				
Wetlands	Central Florida Herbaceous Seep				
Wetlands	East Gulf Coastal Plain Southern Depression Pondshore				
Wetlands	East Gulf Coastal Plain Treeless Savanna and Wet Prairie				
Wetlands	Floridian Highlands Freshwater Marsh				
Wetlands	South Florida Dwarf Cypress Savanna				
Wetlands	South Florida Freshwater Slough and Gator Hole				
Wetlands	South Florida Pine Flatwoods				
Wetlands	South Florida Wet Marl Prairie				
Wetlands	Southern Coastal Plain Herbaceous Seepage Bog				

CITATIONS:

American Ornithologists' Union (AOU), Committee on Classification and Nomenclature. 1983. Check-list of North American Birds. Sixth Edition. American Ornithologists' Union, Allen Press, Inc., Lawrence, Kansas.

Avise, J.C., and R.M. Zink. 1988. Molecular genetic divergence between avian sibling species:king and clapper rails, long-billed and shortbilled dowitchers, boat-tailed and great-tailed grackles, and tufted and black-crested titmice. Auk 105:516-528.

Bent, A. C. 1926. Life histories of North American marsh birds. U.S. National Museum Bulletin No. 135. [reprint. 1963. Dover Publications, Inc., New York, New York].

Brewer, R., G.A. McPeek, and R.J. Adams, Jr. 1991. The Atlas of Breeding Birds of Michigan. Michigan State University Press, East Lansing, Michigan. xvii + 594 pp.

bKIRA Page 3 of 4 Eddleman, W. R., F. L. Knopf, B. Meanley, F. A. Reid, and R. Zembal. 1988. Conservation of North American rallids. Wilson Bulletin 100:458-475.

Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1992. Birds in jeopardy: the imperiled and extinct birds of the United States and Canada, including Hawaii and Puerto Rico. Stanford University Press, Stanford, California. 259 pp.

Evers, D. C. 1992. A guide to Michigan's endangered wildlife. Univ. Michigan Press, Ann Arbor. viii + 103 pp.

Fussell, J. III and M. Lyons. 1990. Birds of the Outer Banks [pamphlet]. Eastern National Parks and Monument Association Coastal Wildlife Refuge Society.

Fussell, J.O. III. 1994. A birder's guide to coastal North Carolina. Chapel Hill and London: The University of North Carolina Press

Hamel, P. B. 1992. The land manager's guide to the birds of the south. The Nature Conservancy, Chapel Hill, North Carolina. 367 pp + several appendices.

Harrison, C. 1978. A field guide to the nests, eggs and nestlings of North American birds. Collins, Cleveland, Ohio

Harrison, H.H. 1975. A field guide to bird's nests in the U.S. east of the Mississippi River. Houghton Mifflin Company, Boston, Massachusetts. 257 p.

Harrison, H.H. 1979. A field guide to western birds' nests. Houghton Mifflin Company, Boston. 279 nn.

Layne, J.N.; Stallcup, J.A.; Woolfenden, G.E.; McCauley, M.N.; Worley, D.J. 1977. Fish and Wildlife Inventory of the Seven-County Region Included in the Central Florida Phosphate Industry Area-Wide Environmental Impact Study. Volumes I and II. Also avai

Meanley, B. 1969. Natural history of the king rail. NorthAm. Fauna 67:1-108

Meanley, B. 1992. King rail. In Poole A, Stettenheim P, Gill F, eds. The birds of North America. No.

Pearson, T.G. 1959. Birds of North Carolina. Raleigh, NC: Bynum Printing Company.

Potter, E. F., J. F. Parnell, and R. P. Teulings. 1980. Birds of the Carolinas. Univ. North Carolina Press, Chapel Hill. 408 pp.

Reid, F.A., B. Meanley and L.H. Fredrickson. 1994. King Rail. In Tacha TC, Braun CE, eds. Management of migratory shore and upland game birds in North America. Washington, D.C.: International Association of Fish and Wildlife Agencies.

Ripley, S.D. 1977. Rails of the world. M.F. Feheley Publishers, Ltd., Toronto. 406 pp.

Sibley, C.G., and B.L. Monroe. 1990. Distribution and taxonomy of birds of the world. Yale University Press, New Haven, Connecticut. xxiv + 1111 pp.

Taylor, B. 1998. Rails. A guide to the rails, crakes, gallinules, and coots of the world. New Haven and London: Yale University Press. 600p.

Terres, J.K. 1980. The Audubon Society encyclopedia of North American birds. Alfred A. Knopf, New York.

Zimmerman, J.L. 1977. Virginia Rail (Rallus limicola). Pp 46-56 in Sanderson GC, ed. Management of migratory shore and upland game birds in North America. Washington, D.C.: International Association of Fish and Wildlife Agencies.

For more information::

SE-GAP Analysis Project / BaSIC 127 David Clark Labs Dept. of Biology, NCSU Raleigh, NC 27695-7617 (919) 513-2853 www.basic.ncsu.edu/segap Compiled: 15 September 2011

This data was compiled and/or developed by the Southeast GAP Analysis Project at The Biodiversity and Spatial Information Center, North Carolina State University