Black Rail

ASSESSING HABITAT QUALITY FOR PRIORITY WILDLIFE SPECIES IN COLORADO WETLANDS

Black rails *(Laterallus jamaicensis,* Family *Rallidae)* are both the smallest and most secretive rails in North America. They hide within dense marsh vegetation.

Species Description

Identification

Secretive amongst dense vegetation and no larger than a sparrow (about 6 inches long), black rails are difficult to detect in the field. Their gravely *kee-kee-deer* song and their haunting kookaburra-like call are heard more at night than during the day.

Preferred Habitats

Black rails rely most frequently on dense emergent marshes, including beaver ponds.

Diet

From limited knowledge, the diet of black rails appears to consist primarily of invertebrates and some seeds.

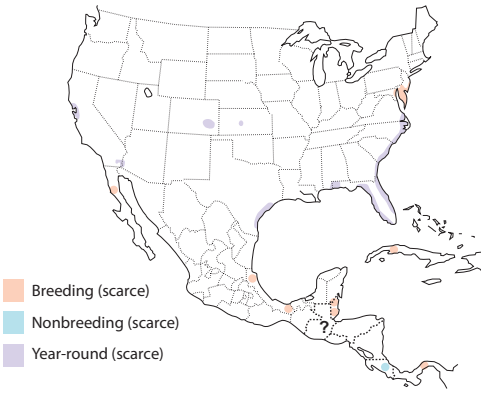
Conservation Status

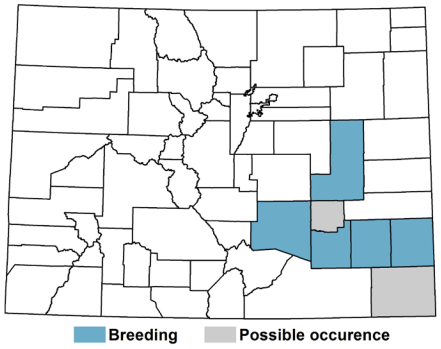
Eastern black rail *(L. j. jamaicensis)* was listed as threatened by the U.S. Fish and Wildlife Service in 2020. Black rails have declined over the last century, due almost entirely to habitat loss and destruction. They are listed as endangered in Arizona, threatened in California, and near threatened by the International Union for Conservation of Nature. Although they are not listed as a Species of Greatest Conservation Need in Colorado (CPW 2015), they are locally important in the Lower Arkansas River Basin and are of concern to the Wetland Wildlife Conservation Program.

Species Distribution

Range

Black rails are widely, but sparsely, distributed through North America, Central America, and the Caribbean. In Colorado, they are known from five counties: Bent, Lincoln, Otero, Prowers, and Pueblo.





North America map used by permission from Birds of the World, published by Cornell Lab of Ornithology. Colorado map based on Andrews and Righter (1992), Leukering (2016), and CFO (2020).

Version Date: November 2020

Preferred Habitat Conditions

Depth of water and water fluctuations	<2.5 inches water with little fluctuation
Dominant vegetation	cattails, rushes, sedges, and grasses; in Colorado, occupied habitats are dominated by cattails
Herbaceous cover height	tall vegetation, presumably for protection
Interspersion	interspersion patterns favoring high vegetation density
Percent of emergent vegetation	dense or thick
Residual cover (litter) depth	mixture of new and residual growth

Management Recommendations

This fact sheet contains easy-to-use guidelines for understanding habitat needs of Colorado Parks and Wildlife priority wetland-dependent wildlife. Biologists with expertise in black rails have suggested numerous practical steps that can be taken to improve habitat quality for this species.

Hydrology

- Reduce fluctuations of water levels through the nesting season to maintain moist soil or shallow water.
- Improve water control devices where needed.
- Impoundments should provide sloping shoreline that provides 25% shallow water averaging 1 inch.

Vegetation

- Maintain emergent vegetation.

Contamination

- Reduce contaminants where needed.

Conservation

- Reduce habitat destruction.
- Manage wetlands on regional scale.

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Liza Rossi (Colorado Parks and Wildlife) contributed to an updated scorecard, based on her field experience. Tony Leukering (formerly with Rocky Mountain Bird Observatory) reviewed an earlier version and provided input on preferred habitat conditions.

Suggested Reading and Citations

Andrews, R., and R. Righter. 1992. *Colorado Birds.* Denver Museum of Natural History, Denver, Colorado.

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Leukering, T. 2016. Black rail. Colorado Breeding Bird Atlas (L. E. Wickersham, Ed.). pp.188-189. Colorado Bird Partnership and Colorado Parks and Wildlife.

Tsao, D. C., J. Y. Takekawa, I. Woo, J. L. Yee, and J. G. Evens. 2009. Home range, habitat selection, and movements of California black rails at tidal marshes at San Francisco Bay, California. *Condor* 111:599-610.

DISCLAIMER: This scorecard is designed specifically for the Colorado Parks and Wildlife (CPW) Wetland Wildlife Conservation Program. It does not replace protocols required by U. S. Fish and Wildlife Service (USFWS). Please contact USFWS regarding questions about their required protocols for species listed under the Endangered Species Act.

Habitat Scorecard for Black Rails (v. Nov 2020)

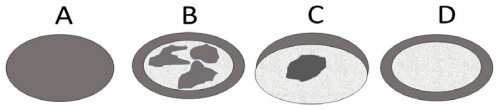
Assessment of habitat before and after restoration or management actions

Project Name: _____ Project Area (acres): _____ Habitat Area (acres): _____

Size of Contiguous Habitat outside Project Area (acres): _____ Ownership (circle): Same / Different / Conservation Easement

Scorecard Instructions: Enter one value that best describes early to mid-summer conditions of each habitat variable, using the numbers in the value column. Habitat variables are in shaded boxes; ranges of condition are directly below each variable. **If condition is outside range or is not described, enter a zero.**

Project Area and Habitat Area: The project area includes the entire area affected by the project. The habitat is the area that will provide (in case of pre-project) or does provide (post-project) habitat for each potential target species within the project area. The habitat area may be the same size as the project area or it might be smaller and it may be defined differently for different target species. If there is contiguous habitat area outside the project area, note the size and whether the ownership of the contiguous areas is the same or different and whether it is under conservation easement or other habitat protection. If the habitat area within your project area is noncontiguous and/or if sections are in very different conditions, consider using multiple scorecards so that each scorecard represents the general conditions. If you use multiple scorecards, identify each habitat area on a map.

Key habitat variable and conditions	Value	Pre-Project	Expected Post-Project	Actual Post-Project
Date of assessment				
Water depth and hydrology (take at least 3 measurements)				
<2.5 inches water and little water fluctuation during breeding season	18.9			
2.5 – 6 inches water and little water fluctuation during breeding season	12.6			
>6 inches water or lots of fluctuation during breeding season	6.3			
Interspersion				
A	17.0			
B	11.3			
C or D	5.7			
Interspersion patterns refer to the diagram at right (stippled = water, solid = vegetation) 				
Percent of emergent vegetation (cattails, bulrush, tall sedges, rushes); if no emergent vegetation, use value of zero				
>75%	17.0			
>50 – 75%	11.3			
25 – 50%	5.7			
Height of emergent vegetation (average from at least 3 measurements); if no emergent vegetation, use value of zero				
>50 – 95 inches	17.0			
40 – 50 inches or >95 – 110 inches	11.3			
<40 inches or >110 inches	5.7			
Height of residual cover (dead growth from previous year; average from at least 3 measurements); if no residual cover, use value of zero				
>18 – 50 inches	15.1			
10 – 18 inches or >50 – 60 inches	10.1			
<10 inches or >60 inches	5.0			
Density of emergent vegetation				
Dense = water not visible through base of stems at water level, difficult to push through stems	15.1			
Moderate = fairly dense vegetation at water level	10.1			
Sparse = water easily visible through widely scattered stems	5.0			
Total (of 100 possible): add all numbers in before or after columns				