

A Documented Occurrence of Black Rail (*Laterallus jamaicensis*)
in Nebraska

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INTRODUCTION

Black Rails (*Laterallus jamaicensis*) are the smallest of the rails found in North America. Even though they are broadly distributed in coastal tidal and inland freshwater marshes, they are rarely seen and consequently are poorly known (Eddleman et al. 1994). They prefer areas of moist soil interspersed with scattered small pools of shallow water surrounded by fine-stemmed rushes, grasses, and sedges for use during migratory stopover and nesting (Todd 1977, Eddleman et al. 1994). All populations of Black Rail have declined precipitously over the past century due to the draining of marshes and wetlands and demands on water resources (Eddleman et al. 1994). In 2011, the U.S. Fish and Wildlife Service initiated a review of the species' status to determine whether it warrants protection under the federal Endangered Species Act (<http://www.fws.gov/policy/library/2011/2011-24633.pdf>).

Adult Black Rails are 10-15 cm long with a wingspan of 22-28 cm, and body mass of 29-36 g. Males and females are of similar size, but males are darker overall in color. Adult plumage consists of varying shades of blackish-gray with the top of the head darker gray than the body. The nape of the neck and upper back are chestnut in color. The remainder of the back is varying shades of dark gray washed with chestnut and scattered white spots. The irises are red and the bill black (Eddleman et al. 1994).

During the breeding season the most common vocalization produced by Black Rails, presumably the male, is the 3-note *kickee-do* (also described as *kic-kic-keer*; Reynard 1974, Eddleman et al. 1994). This vocalization often is preceded by 1-4, usually 2, introductory notes and 1-3, usually 1, concluding notes. The duration of the call is 0.4 to 2.0 seconds, the frequency ranges from 1,200 to 3,400 Hertz (1.2 to 2.4 kHz), and the last note is usually lower in frequency than the initial notes (Eddleman et al. 1994). They are most vocal during the night and at dawn and dusk. The *kickee-*

do/kic-kic-keer vocalization is thought to be the male's mating call and not used in territorial defense (Repking 1975, Eddleman et al. 1994).

The status of the Black Rail in Nebraska is poorly known. Even though the Black Rail has been reported, documentation of its occurrence is very limited. There are approximately twenty reports of the species in the state, but only two (Ducey 1980, Brogie and Brogie 1987) have been accepted by the Nebraska Ornithologists' Union Records Committee (NOURC). One accepted record is based on the description of a brief observation of a bird flushing in front of the observer (Ducey 1980) and the other involves an audio recording that the observers noted was of poor quality (Brogie and Brogie 1987). All other sightings are supported by written statements or lack any supporting details. The Black Rail is thought to be a rare casual spring and fall visitor statewide and a possible summer visitor or breeder at Crescent Lake National Wildlife Refuge (NWR; Sharpe et al. 2001). As many as seven reports are from Crescent Lake NWR, including summer reports (Sharpe et al. 2001). Other reports are during spring and fall and are scattered across the state (Sharpe et al. 2001). Currently, there are no accepted records of Black Rails in South Dakota (<http://sdoubirds.org/Birds/Checklist.aspx>); they are considered accidental in Iowa (<http://www.iowabirds.org/Birds/Iowa.aspx>).

Here we report details and provide documentation of an observation of a Black Rail in Nebraska.

METHODS

During the summer of 2016, we conducted surveys for secretive marsh birds in wetlands distributed across Nebraska (by EB and CM). The survey locations included Rainwater Basin wetlands, Eastern Saline wetlands, and Sandhills wetlands. The surveys were conducted following the North American Marsh Bird Monitoring Protocol as developed by Conway (2011) and modified by Harms and Dinsmore (2014). The protocol employs call-broadcast point counts using a 14-minute call broadcast sequence provided by the North American Marsh Bird Monitoring Program coordinator (Conway 2011). Call broadcast surveys were played using a SanDisk MP3 player (Western Digital Technologies, Inc., Milpitas, CA) and JBL Flip 3 Portable Bluetooth speaker (Harmon International, Stamford, CT). The Black Rail *kickee-do/kic-kic-keer* vocalization is the first vocalization included in the call-broadcast sequence. All surveys were conducted from 15 May to 10 July. Each wetland was surveyed twice, once between 15 May and 13 June and once between 14 June and 10 July.

The Black Rail's response to the call-playback broadcast was recorded using a cell phone (iPhone 6, Apple Inc., Cupertino, CA). The spectrogram of the vocalization

was prepared using Raven Pro Version 1.5 acoustic analysis software (Bioacoustics Research Program).

RESULTS

On the evening (8:04 pm CDT) of 15 June 2016, EB and CM heard and recorded the distinctive *kickee-do/kic-kic-keer* Black Rail vocalization at Harvard Waterfowl Production Area (WPA) in Clay County, Nebraska. This was during the second set of surveys conducted at Harvard WPA for the season; no Black Rails were detected during the first survey on 5 May 2016. The bird vocalized constantly for approximately 20 minutes before becoming silent. We estimate the vocalizing bird was 10 meters from the researchers (EB and CM) in a wet sedge meadow (Figure 1). A brief, unsuccessful attempt was made to flush the bird for visual confirmation of the species identification. The wind was calm that evening, so the vocalization and the recording were not distorted.

See Figure 2 for the spectrogram illustrating the distinctive vocalization. Note in particular the 3-note structure of the vocalization (2 introductory notes and 1



Figure 1. Landscape in the general area where the Black Rail vocalization was recorded (photograph taken 18 June 2016; Harvard WMA, Clay County, Nebraska).

concluding note), the lower frequency concluding note, the ~ 0.5 second duration, and the ~1.5 to 2.5 kHz frequency range. The recording is available online at https://www.youtube.com/watch?v=xy_l2f4U1OE and has been submitted to NOURC, where it will be archived.

Only one Black Rail was heard vocalizing on 15 June; no other Black Rails responded to the vocalizing bird. Efforts to relocate the vocalizing bird on 18 June were not successful. No Black Rail vocalizations were heard in any of the other Rainwater Basin wetlands or other wetlands statewide during the remainder of the survey season.

DISCUSSION

The Black Rail observed at Harvard WPA was found in habitat typically occupied by the species (Todd 1977, Eddleman et al. 1994). The area was dominated by sedges that were < 0.3 m tall with variable water levels ranging from moist soil up to 0.5 m. Water levels were average to slightly higher than usual in June 2016 (EB, CM, JGJ, pers. obs.). The habitat at Harvard WPA is the result of wetland management treatments conducted by the U.S. Fish and Wildlife Service Rainwater Basin Wetland Management District (RWBWMD). The area is grazed and burned periodically to mimic historic patterns of disturbance. The RWBWMD installed a submersible well and buried a delivery pipeline at Harvard WPA to provide supplemental water to offset hydrologic deficiencies caused by sedimentation and decreased precipitation runoff. When water is pumped to the WPA, more suitable foraging area is available to marsh birds (J. Drahota, pers. comm.).

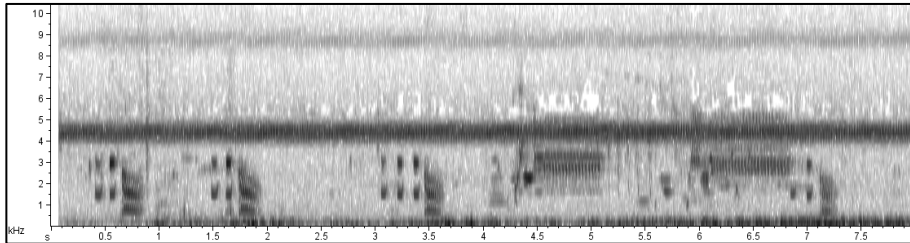


Figure 2. Spectrogram of Black Rail vocalization recorded on 15 June 2016 at Harvard WMA, Clay County, Nebraska, a Rainwater Basin wetland. See spectrograms in Kellogg (1962), Reynard (1974), and Eddleman et al. (1994) for comparison.

Nebraska is just north of areas where Black Rails regularly occur during summer and likely breed. Black Rails are reported regularly in Kansas at several sites including Quivira National Wildlife Refuge, Cheyenne Bottoms Wildlife Area, Coldwater Lake, and Lake Hargis; additional reports are scattered throughout the state (Thompson et al. 2011). There are a number of records of Black Rails from across Oklahoma (Beck and Patten 2007). The species regularly occurs in habitats

associated with John Martin Reservoir in southeastern Colorado (eBird 2016). Harvard WPA is located approximately 280 km (175 miles) north of Cheyenne Bottoms and Quivira. We think it is likely the Black Rail observed at Harvard WPA originated from a site to the south, but this cannot be known with certainty.

It is possible Black Rails regularly breed in Nebraska, including in the Rainwater Basin, but evidence is lacking simply because the species is so difficult to detect. However, call broadcast surveys were conducted at wetlands across the state, including sites (e.g., Crescent Lake NWR, Garden County, and Chet and Jane Fleisbach Wildlife Management Area, Morrill County) where Black Rails have been previously reported; additional call-broadcast surveys were conducted in the Eastern Saline Wetlands, Lancaster County, Nebraska in 2013 (Dinan and Jorgensen 2014). None of these surveys yielded additional evidence that Black Rails regularly occur in Nebraska. Additional observations of Black Rails in Nebraska supported by documentation would be extremely valuable in determining this species' status in the state. We encourage observers to listen for the characteristic Black Rail *kickee-dol/kic-kic-keer* vocalization when in appropriate habitats, but not to call them using recordings. If Black Rails are establishing local populations or are breeding in localized populations in Nebraska, we believe it is best not to interfere with them.

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