

Florida Field Naturalist

PUBLISHED BY THE FLORIDA ORNITHOLOGICAL SOCIETY

VOL. 40, No. 3

SEPTEMBER 2012

PAGES 75-115

Florida Field Naturalist 40(3):75-80, 2012.

DISASSEMBLY OF RED-WINGED BLACKBIRD (*Agelaius phoeniceus*) NESTS BY BOAT-TAILED GRACKLES (*Quiscalus major*)

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INTRODUCTION

Boat-tailed Grackles (*Quiscalus major*; hereafter often “grackles”) are permanent breeding residents of Florida (Stevenson and Anderson 1994). They are found along the coasts and parts of the interior (Kale and Maehr 1990, Robertson and Woolfenden 1992, Sibley 2000) and are a common-to-abundant resident of Pinellas County (Hopkins et al. 2002).

Of especial interest to biologists has been the grackles’ harem-defense polygyny, an unusual colonial breeding strategy in which a lone alpha male, older and heavier than its competitors, defends a territory occupied by numerous females against beta males and aerial predators (Emlen and Oring 1977, Dunham 1990, Post 1994, Post et al. 1996). Once the alpha females form their nests, beta females find protection on the breeding territory (Burger 1981, Post 1992, Picman et al. 2002) by nesting near the alpha females. Within grackle colonies, breeding success is dependent upon several additional factors which include site location and predation (Bancroft 1983, 1986; Dunham 1988, 1990; Post 1998; Picman et al. 2000).

Despite this intensive study of their breeding behavior, there have been no previous reports of grackles destroying the nests of other bird species on their breeding sites, such as I describe here.

In central Florida, nesting begins in early March and continues through July (Bancroft 1984). The birds breed in or near areas where

water is available such as marshes, ponds or lakes (Dunham 1988, Stevenson and Anderson 1994, Post et al. 1996).

MATERIALS AND METHODS

Crescent Lake Park, located near the center of St. Petersburg, Pinellas County, Florida, is the site of an ongoing study of a grackle breeding colony (Snyder 2011). Opened as a municipal 14.57 hectare park in 1927, it is bordered by 22nd Avenue North to the north, 12th Avenue North to the south, Fifth Street to the east, and Seventh Street to the west. The lake is maintained by the city. It is a natural water body expanded and used as a water collection reservoir for numerous storm drains from local neighborhoods.

At the lake's north and south ends, water-borne vegetation include taro (*Colocasia esculenta*), pickerel weed (*Pontederia cordata*), water lettuce (*Pistia stratiotes*), square stem spikerush (*Eleocharis quadrangulata*), duck potato (*Sagittaria latifolia*), dollar weed (*Hydrocotyle umbellata*), softstem bulrush (*Schoenoplectus tabernaemontani*) and giant bulrush (*S. californicus*) (Wunderlin 1998; Haehle and Brookwell 1999). The giant bulrush at the north end of Crescent Lake is a favorite nesting and foraging spot for the grackles.

In the spring of 2011, I made daily visits to locate nests in the giant bulrush habitat (112.94 m²) at the lake's north end outflow. Ultimately, I numbered and flagged 27 nests occupying an area 22.71 m². Visits were limited to 30 min or less to minimize disturbance to the colony.

RESULTS

Nest construction in 2011 began on 8 March in the habitat's southeast corner with six nests (2011/1-6). Initially considered grackle nests, two additional nests (2011/7 and 2011/8) labeled "under construction" were recorded as being smaller, having a saucer-like shape and shallow nest depth. I placed a camera near nest 2011/7 on this date to record its continued development. A series of images from 9-11 March show visits to the nest by a female Red-winged Blackbird (*Agelaius phoeniceus*; hereafter often "blackbird") and a second female blackbird near nest 2011/8 (Fig. 1) Other images illustrate visits by as many as four female grackles at one time. One image (Fig. 2) clearly presents a female grackle extracting nesting material from the side of nest 2011/7 with two additional grackle females nearby. A male grackle is disassembling nest 2011/8 at the same time (Fig. 3). In succeeding images the visits by both grackle sexes to nest 2011/7 continued. The nest material was removed until both nests were gone by 12 March. Prior to this date, a lone male blackbird had been noted singing and displaying within the habitat. Subsequently, no blackbirds were recorded in the habitat.

DISCUSSION

Interspecific nest depredation by both Red-winged Blackbirds and Boat-tailed Grackles has been previously noted. McIlhenny (1937) reported a male grackle taking three blackbird nestlings from a colony

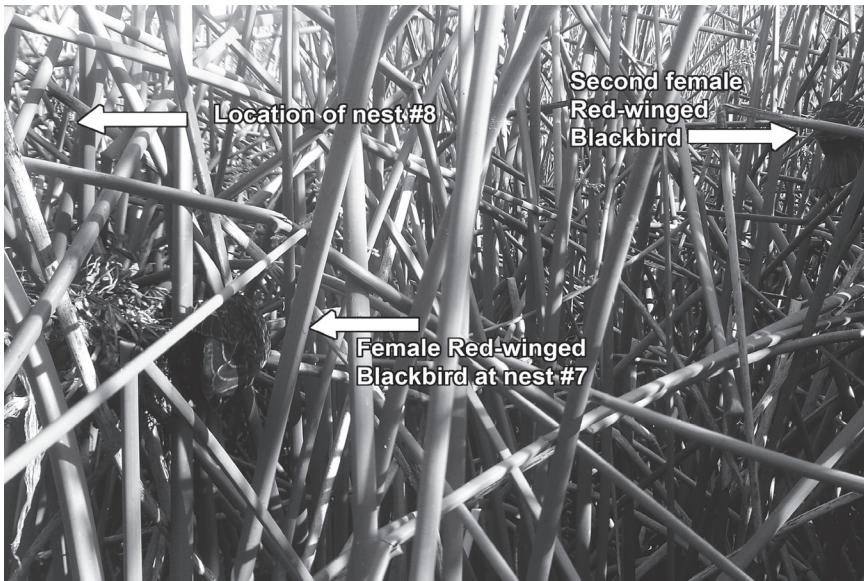


Figure 1. Red-winged Blackbird attends blackbird nest 2011/7. Note second female blackbird at right and position of nest 2011/8. Crescent Lake Park, 12 March 2011. Photograph by Lee F. Snyder.

nest in Louisiana. Sealy (1994) documented predation by a blackbird on the eggs of a Yellow Warbler (*Dendroica petechia*).

Post et al. (1996) noted that Red-winged Blackbirds often share nesting space with Boat-tailed Grackles. To my knowledge, there are no previously published accounts of interspecific nest disassembly by grackles. While female grackles frequently steal material from each other's nests during the construction phase of nest building (Post et al. 1996), no other nests (including several abandoned nests) in the Crescent Lake colony experienced disassembly during the breeding season. It should also be noted that, because the female grackle is unassisted in nest construction, it is unlikely that deconstruction by the alpha male was for the acquisition of nesting material.

Ultimately, approximately 80% of the 2011 habitat remained unoccupied, with the colony of grackles clustered in the habitat's southeast corner. At the time of construction, both blackbird nests were at least 6.5 m from the nearest grackle nest, while the mean distance of closest grackle nests to each other was 61 cm and two of the nests had been abandoned. I assume therefore that crowding was not the reason for the nest disassemblies. The action of the Crescent Lake colony's female and alpha male grackles may have been for the collection of nesting material and/or the elimination of a predatory threat.



Figure 2. Female Boat-tailed Grackle removing material from blackbird nest 2011/7. Crescent Lake Park, 12 March 2011. Photograph by Lee F. Snyder.



Figure 3. Female Boat-tailed Grackle disassembling blackbird nest 2011/7, attended by two other female grackles. A male grackle is barely visible in the upper left of frame at nest 2011/8. Crescent Lake Park, 12 March 2011. Photograph by Lee F. Snyder

ACKNOWLEDGMENTS

Special thanks to Deby Cassill, Beth Forsys, Phil Laipis and Bill Pranty for their constructive and most welcome comments on the manuscript.

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