

## GENERAL NOTES

**Bald Eagle interferes with an active Osprey nest.**—Ogden (1976, *Wilson Bull.* 87: 496) has evidence from Florida Bay that Osprey (*Pandion haliaetus*) reproduction suffers from close proximity to nesting Bald Eagles (*Haliaeetus leucocephalus*). He attributes the decrease to harassment of breeding adults by the eagles. We report evidence suggesting that direct interference at Osprey nests could also be involved.

On 27 March 1975 (0915) we watched an adult Bald Eagle fly north low and hard across Salt Springs Run, a tributary of Lake George, Lake County, Florida. The eagle flew directly to, and landed on, an active Osprey nest 20 m up in a living bald cypress 0.5 km north of the run. The eagle stood on the nest rim for 45 sec, putting its head down into the nest cup twice, for 10 and 2 sec. It then hopped into the tree canopy's center without prey in bill or talons, remained there out of sight for 45 min, and flew back south over the run. From the time it landed on the nest, two Ospreys continually dive-bombed the eagle. The female Osprey landed on the nest 10 sec after the eagle left the tree; the male pursued the intruder out of sight. After 27 min, the male hopped 1 m from his perch to the nest rim and copulated with the female. That afternoon (1755–1810) we found the female Osprey sitting in the nest cup, the male bringing nest material, and probably witnessed another copulation (the male's head above the female's; all else hidden by the nest rim).

Factors causing the intrusion by the eagle are uncertain. Interspecific nesting territoriality is possible, but unlikely, as Florida eagles fledged their young by the end of March. The eagle may have been gleaning fish scraps at the Osprey's nest. From the activity viewed at this and neighboring nests we believe that the Ospreys were incubating a (probably incomplete) clutch. Thus, we cannot exclude egg predation by the eagle.

We thank John C. Ogden for improving this report.—THOMAS C. GRUBB, JR. AND WILLIAM M. SHIELDS, *Department of Zoology, Ohio State University, Columbus, Ohio 43210*. Accepted 7 Jul. 75.

**The display flight of the North American Ruddy Duck.**—Sexual behavior of the North American Ruddy Duck (*Oxyura jamaicensis*), as summarized by Johnsgard (1965: 323–327), includes a display variously referred to as the ringing rush (Johnsgard 1965: 325; 1967), ring rush (Johnsgard 1966), and/or display flight (Johnsgard 1966, 1967), which males perform as a short rush across the water surface, generally toward females. Differences of opinion exist concerning the description of the sound emitted during the display and the exact mechanics of sound production. Bailey (1919) described “a noise suggesting castanets” accompanying what probably was the display flight. Johnsgard described the noise as ringing (1965: 325) and rattling (1967). Buzzing has been used to characterize the sound produced during the display flight of the Australian Blue-billed Duck (*O. australis*), a display “which appears to correspond exactly” to the ring rush of *O. jamaicensis* (Johnsgard 1966). We prefer to describe the sound as popping. Wetmore (1920: 247), without naming the display, described “a great boiling in the water with wings and feet.” Johnsgard attributed the noise to the wings alone (1965: 325) and, later “wings and/or feet striking the water” (1967), while Palmer (1975: 513) assigned the sound to the feet.

To eliminate these difficulties, we herein present clarifying descriptions of the display compiled from examination of several 35-mm color transparencies and 16-mm color movie footage of Ruddy Duck males engaged in display flights. Four flights of four individual birds were recorded on the films, and slow motion and stop action were used during our examinations. These data were obtained at Tule Lake National Wildlife Refuge, Siskiyou County, California, during the University of California, Davis Wildlife and Fisheries Biology summer field courses June and July 1972–74.

Fig. 1 (A, B, and C) and our examination of the movie footage clearly reveal that the wings do not touch the water surface during the display flight. The water spray follows directly behind the birds' tails and feet, and splashes are absent where the wings would be expected to hit the water. The movies show that the wings are involved, as are the feet, in launching the bird into the display and the first downbeat of the wings does slam into the water, but the distinctive sound begins after the bird is under way. It is plausible that contributing sound is generated from the wing feather surfaces interacting with the air, but most probably the distinct popping sound results only from the feet striking the water.

The birds' tails are noticeably depressed into the water during the display (Fig. 1). The movie film demonstrates that the tail is lifted out of the water at the end of the display as the bird slides to a stop. This tail dragging is probably functional in maintaining the bird's characteristic hunched-over posture, which