

## **Bald Eagle Swims to Shore with Ross's Goose**

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## LETTERS

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### BALD EAGLE SWIMS TO SHORE WITH ROSS'S GOOSE

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The Bald Eagle (*Haliaeetus leucocephalus*) is a versatile predator of fish, waterfowl, and mammals taken from fresh and marine waters (Bent 1937, Stalmaster 1987). Prey items too heavy to lift are towed to shore by swimming with rowing wing strokes (Brewster 1880, Danielsen 1967, Campbell 1969, Merrell 1970, Hatler 1974, Ofelt 1975, Jacklet 2007). Little is known about the distance that eagles swim with prey, the weight classes of prey that are towed, or water and air temperatures experienced during swimming events. Here I report an observation that provides information on prey weight and towing distance.

On 12 March 2019, I watched an adult Bald Eagle chase a strongly flying Ross's Goose (*Anser rossii*) in wide circles over the southern end of Norfolk Lake (89 km<sup>2</sup>) in Baxter County, Arkansas (Fig. 1). The eagle gradually closed the distance, but before it could strike, the goose pitched sharply toward the lake and splashed down approximately 780 m north of my shoreline observation site (36°15.40'N, 92°14.39'W). I observed subsequent events through a 20–60× scope and took photographs with a Canon EOS 60D camera equipped with a 400-mm lens. Overwater distances are notoriously difficult to estimate (Button et al. 2016). I used shoreline landmarks, trigonometric calculation, and the line tool in Google Earth Pro to estimate the location of the splashdown. Surface water temperature (8°C) was measured with a commercial pool thermometer. Air temperature (10°C) was obtained from the National Weather Service station at Baxter County airport (36°22.14'N, 92°28.23'W).

The eagle circled and stooped at the swimming goose, which dodged and partially submerged during each pass. The eagle finally seized the goose and drove it below the

surface. There was no visible struggle. The eagle balanced on the submerged goose and briefly attempted liftoff before falling forward in the water. The eagle raised its head and began swimming with synchronized rowing wing beats toward the nearest shoreline. Wing stroke frequency was relatively uniform (37–39 strokes/min) throughout the 33-min swim, which covered approximately 430 m (assuming a direct path to shore). The eagle's remiges appeared waterlogged during the final stage of the swim. When the eagle reached shallow water, it pulled the goose on the rocky shore and began plucking it without pausing to rest. Seven minutes later, the eagle took flight to drive away an approaching immature eagle that was noticeably larger. The size disparity suggested that the adult eagle was male (Stalmaster 1987). It resumed feeding on the goose after chasing away the immature eagle.

A literature search revealed four references that estimated prey-towing distances of swimming eagles. Danielsen (1967) observed an eagle swim approximately 100 m with a large salmon (*Oncorhynchus* sp.) in Alaska, Merrell (1970) witnessed an eagle swim approximately 23 m with a Barrow's Goldeneye (*Bucephala islandica*) in Alaska, and Campbell (1969) reported a Pelagic Cormorant (*Phalacrocorax pelagicus*) that was towed approximately 137 m in British Columbia. Brewster (1880) quoted Nathan Cobb, a renowned 19<sup>th</sup> century waterfowler from coastal Virginia: "A Brant or Duck is carried off bodily to the nearest marsh or sand-bar, but a Canada Goose [*Branta canadensis*] is too heavy to be thus easily disposed of. The two great birds fall together to the water beneath, where the Eagle literally tows his prize along the surface until the shore is reached. In this way one has been known to drag a large Goose for nearly half a mile [805 m]."

The scant available data suggest that male Bald Eagles of the relatively small-bodied resident populations in the southeastern United States can lift and carry a maximum weight of <2 kg in level flight. Williams (1983) reported that an eagle killed a Snow Goose (*Anser caerulescens*) on a

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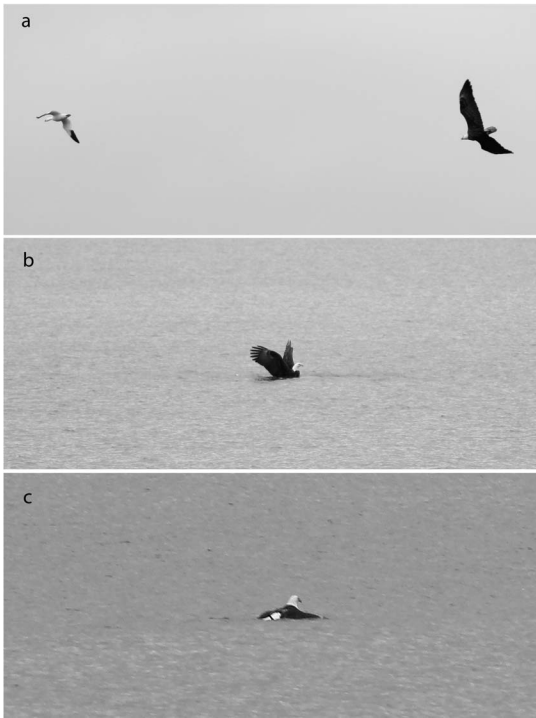


Figure 1. Bald Eagle predation on Ross's Goose: (a) aerial pursuit; (b) eagle attempting to fly immediately after striking the swimming goose; (c) eagle towing the goose to shore.

reservoir in Oklahoma but failed four times to lift it from the water before it gave up. Body mass of Snow Geese wintering in this region ranges from 1.6–2.6 kg (Flickinger and Bolen 1979). Wintering Ross's Geese are substantially smaller at 1.1–1.6 kg (Jónsson et al. 2013).

The present observation suggests that Bald Eagles are capable of towing prey items as large as small geese for considerable distances (>400 m), certainly far enough to reach the shoreline of many rivers and freshwater lakes in the lower Mississippi Valley. Water repellency of *Haliaeetus* plumage has not been studied, but the threat of hypothermia may limit the duration of prey towing, or dissuade

eagles from attempting it when water and air temperatures are too low.

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