

BALD EAGLE ATTACKS ADULT OSPREY

Kleptoparasitism and agonistic interactions between bald eagles (*Haliaeetus leucocephalus*) and ospreys (*Pandion haliaetus*) are well documented (A.C. Bent 1937, U.S. Natl. Mus. Bull. 167; J.C. Ogden 1975, *Wilson Bull.* 87:496–505; J.M. Gerard et al. 1986, *Blue Jay* 34:240–246; Y. Prévost 1979, *Auk* 96:413–414). The details of only one attack by a bald eagle on an osprey have been documented, in this case a nestling which had just received a fish from one of its parents (S.P. Flemming and R.P. Bancroft 1990, *J. Raptor Res.* 24:26–29). The observers were unable to determine the fate of the nestling. Here, we describe an attack that resulted in the death of an adult osprey and we discuss possible reasons for the attack.

The observation was made at a distance of 200 m at a 300 ha lake in northeastern Nova Scotia within 15 km of where the only other described attack (S.P. Flemming and R.P. Bancroft 1990, *J. Raptor Res.* 24:26–29) occurred. At 0615 H on 4 May 1993, a mature bald eagle was seen pursuing a male osprey. The tail and approximately 7 cm of the body of a 12 cm-long white perch (*Morone americana*) could be seen protruding from the osprey's mouth. The osprey flew in an erratic trajectory at heights from 3–12 m above the lake surface in an apparent attempt to evade the eagle. A second eagle joined the chase from where it had been perched in a tree along the shoreline. Both eagles closed to within a few m of the osprey and after about 45 s one of the eagles grabbed the osprey with its talons. Both birds immediately fell to the water at which point the second eagle departed. The osprey ceased struggling within 30 sec of hitting the water and the eagle immediately began using its wings to paddle to the shore 125 m away, pulling the osprey behind it. The eagle began to pluck the osprey as soon as it reached the shore. It then dragged the osprey to higher ground, about 3 m away, and remained there for 45 min while eating it.

We retrieved the remains of the osprey after the eagle had departed. Except for parts of the digestive tract, the viscera had been eaten, along with the entire breast musculature and that of one wing and both legs. The head of the osprey was intact and it still had the perch protruding from its mouth. The crop and pharynx were engorged with a mass (approx. 0.25 kg) of tissue of fish that could not be identified. This tissue was in an advanced stage of digestion, apparently the osprey had been attempting to regurgitate it. The completely undigested white perch was lodged in the buccal cavity in a way that suggested the osprey had been trying to regurgitate it also. It appeared that regurgitating the fish would have been difficult for the flying bird because of the size and shape of the fish and the way the erect dorsal fin was protruding into the palate of the osprey.

The only other attack of a bald eagle on an osprey (S.P. Flemming and R.P. Bancroft 1990, *J. Raptor Res.* 24:26–29) apparently began as kleptoparasitism, a common occurrence, but the eagle was opportunistic in attacking the osprey. Kleptoparasitism can potentially lead to predation, although this has not been documented in birds (H.J. Brockmann and C.J. Barnard 1979, *Anim. Behav.* 28:487–514). It is probable that the attack described here was also a case of intended kleptoparasitism which led to predation; there was no evidence that the perch had been touched by the eagle. A possible reason for the eagle's attack is that it somehow recognized that the osprey was in distress and therefore vulnerable to predation.

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