

SHORT COMMUNICATIONS

BALD EAGLE ATTACKS OSPREY NESTLING

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The incidence of kleptoparasitic and agonistic interactions between Bald Eagles (*Haliaeetus leucocephalus*) and Ospreys (*Pandion haliaetus*) are well documented (Bent 1937, Ogden 1975, Gerrard et al. 1976, Prévost 1979). However, to our knowledge, there has been no recorded observation of a physical attack by a Bald Eagle on an Osprey. Here, we describe such an observation, and discuss possible reasons for its occurrence.

The observations were made in northeastern Nova Scotia while conducting research on the social behavior of Ospreys. On 16 August 1985, a 20 cm Winter Flounder (*Pseudopleuronectes americanus*) was brought to a single unfledged nestling by its female parent Osprey between 1833 H and 1835 H. At 1835 H an adult Bald Eagle flew directly to the nest from the same direction as the Osprey, landing on the nestling, aged 55 days (mean nestling period was 55.3 days, $N = 10$). The Bald Eagle maintained its grip for 25 sec. During this time the chick moved across the nest and finally fell after much struggle and wing flapping. It was subsequently lost from view at our blind 300 m away. The eagle then grabbed the flounder with its talons and flew to a nearby tree, where the female Osprey began diving at it. After approximately 11 min the eagle departed, pursued by the Osprey. The nestling was not located despite a search and a further week of nest observations. Whether it survived the attack or died near the nest is unknown.

It seems likely that the eagle was originally intent on stealing the adult Osprey's flounder, a common occurrence on foraging sites and near nests in our study area. However, when the eagle's attention was diverted to the nest by the fish delivery, it was suddenly confronted with a nestling as well as the flounder. The eagle may have interpreted this in at least two ways. The nestling could have been perceived as an obstruction to the flounder and was subsequently attacked, or the eagle may have chosen to attack the nestling because it represented a more profitable prey item than the flounder.

If the eagle was simply trying to take the flounder from the nestling, this behavior differs little from typical kleptoparasitism, except for the physical contact. However, given the aggressive nature of the attack, it seems at least equally likely that the eagle acted opportunistically to

exploit a larger food reward. If so, this observation could represent the first recorded switch from kleptoparasitism to predation. Brockmann and Barnard (1979) stated that an important interspecific association that may lead to kleptoparasitism is the one based on predation. But, they also noted that kleptoparasitism leading to predation can also be envisioned, yet no documented case exists.

The unusual circumstances surrounding this observation could explain why it may have been the exception to the pattern identified by Brockmann and Barnard (1979). Several constraints probably limit the viability of switching from kleptoparasitism to predation. Among the most obvious are 1) the low probability of success due to inexperience and possible anatomical constraints, and 2) the loss of a food item every time a predation attempt is made, since it would be dropped in the pursuit. In this case, the host was a nestling that was unprotected and inexperienced, something the eagle may have surmised. Moreover, the eagle was almost certain to obtain the flounder regardless of the outcome because it was readily available on the nest. Under these conditions, the eagle may have viewed a predation attempt as viable.

RESUMEN.—Mientras observábamos, desde un escondite, Águilas Pescadoras (*Pandion haliaetus*) en un estudio del comportamiento social de esta especie, notamos que una Águila cabeciblanca (*Haliaeetus leucocephalus*) atacaba en el nido a un polluelo de Águila Pescadora. El ataque se produjo entre 1 y 2 minutos después que el polluelo había recibido un pescado de su progenitor. En lugar de apropiarse del pescado el ataque fue contra el polluelo. Pensamos que la original intención del atacante era la de robar el pescado. El Águila Cabeciblanca puede haber atacado al polluelo, ya casi en estado adulto, por una de las siguientes razones: 1) Porque el polluelo *Pandion haliaetus* representaba una amenaza al atacante en su intento de robar el pescado, o 2) Porque el Águila Cabeciblanca consideraba al polluelo mejor presa que el pescado.

[Traducción de Eudoxio Paredes-Ruiz]

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ORIENTATION OF AMERICAN KESTREL NEST CAVITIES: REVISITED

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Recently, Raphael (1985) reviewed Balgooyen's (1976) orientation data of American Kestrel (*Falco sparverius*) nest cavities and trees at Sagehen Creek, 1800 m elevation, Sierra and Nevada Counties, California. Balgooyen suggested that kestrels select nest cavities with east-facing exposures to gain a thermal advantage. Raphael confirmed a preference for east-facing cavities when alternatives were available.

Assuming a thermal advantage, woodpeckers and kestrels could prefer, or be independent of certain environmental temperatures, thus possibly forcing species to compete for cavities. Clearly, available cavities are neither evenly spaced nor random in orientation (Raphael 1985) suggesting, among other possibilities, that these species are not independent of the thermal environment particularly in "cold" environments. At Sagehen Creek, inclement weather during the breeding season enters from the South (SE, S, SW). Predictably, both kestrels (19.0%, N = 11/58) and woodpeckers (21.9%, N = 23/105) avoid this "cold" direction. In addition, both kestrels (25.8%, N = 15/58) and woodpeckers (28.6%, N = 30/105) nested at relatively low frequency in the "hot" directions of the West (SW, W, NW) (Balgooyen 1976, Raphael 1985).

Woodpecker cavities were oriented to the North (N = 105, mean azimuth = 14°), yet kestrels, which depend on woodpeckers, (60.53%, N = 35/58, mean azimuth = 59°) and woodpeckers (only 40.0%, N = 42/105) nested in cavities facing easterly. The opposite occurred to the North with nesting frequencies of 41.3% (N = 24/58) for kestrels and 57.1% (N = 60/105) for woodpeckers. It is possible that woodpeckers and kestrels possess different thermal preferences during nesting, kestrels seemingly preferring warmer places than woodpeckers. An apparent difference

in thermal preference might reflect different racial histories of woodpeckers from northern areas and kestrels from grassland-savanna systems. There is, however, opportunity for direct competition for a given cavity. This has been directly but infrequently observed at Sagehen Creek (Balgooyen 1976).

In 1983, 29 breeding pairs of American Kestrels were located in western Venezuela. In the States of Zulia and Tachira, 23 of the 29 pairs nested within the southwestern base of the Andes Mountains south of Lake Maracaibo (8°2'N Lat., 72°16'W Long). Four pairs nested in the basin of the Rio Chama, Merida, 1 pair resided in Barquisimeto, Lara, and the last pair nested near Barines, Barines. A wet nonbreeding and dry breeding season characterize the

Table 1. Nest orientation of American Kestrel nests in western Venezuela, S.A.

DIRECTION	MIDPOINT AZIMUTH OF GROUP (°)	NEST	
		ENTRANCE ORIENTA- TION (N = 29)	%
North	0	7	24.1
Northeast	45	2	6.9
East	90	2	6.9
Southeast	135	2	6.9
South	180	7	24.1
Southwest	225	3	10.3
West	270	2	6.9
Northwest	315	4	13.8



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