ON THE RECOGNITION OF OFFSPRING BY RAPTORS

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Introduction

Postupalsky and Holt (1975) reported the results of placing two Bald Eagle (*Haliaeetus leucocephalus*) chicks, whose nest had been destroyed, into two other Bald Eagle nests. Each of the latter nests already had a single eaglet of about the same age as the introduced chicks. Within about four weeks both the introduced and the original eaglets fledged and, at subsequent observations, appeared quite healthy. The adults at the two foster nests were never observed to show aggressive behavior towards the introduced eaglets. Postupalsky and Holt (1975:19) suggest that this "further supports the view that raptors, in contrast to colonial breeders, such as gulls, have not evolved an ability to recognize their own offspring." In this paper, I describe two observations of Osprey (*Pandion haliaetus*) behavior that indicate that Ospreys may be capable of recognizing their own young. Both the observations described below were made in Mathews County, Virginia.

Observations

On 10 August 1975 a Virginia Commission of Game and Inland Fisheries warden brought a young Osprey, which had been found with one foot caught in a pound (fishing) net, to Dr. Mitchell A. Byrd at the College of William and Mary. The newly fledged bird apparently had been trying to catch fish from the net and had become entangled. The bird handled the foot awkwardly, but it was not broken. The bird was kept at the College of William and Mary until it had regained the normal use of its foot. The age and origin of the bird were determined from the U.S. Fish and Wildlife Service aluminum band and three plastic color bands which had been placed on it a few weeks earlier.

On 14 August 1975 Barbara Warren and I returned the bird to its nesting area, a lighted navigational aid near New Point Comfort. The nest itself had been torn down by the Coast Guard after the chicks had fledged. I placed the chick on the railing of the structure and left the immediate vicinity. The chick whistled many times over the course of about four minutes. About five minutes after the chick was left at the nest site, the chick's parents and two siblings (the latter identified by the color bands they were wearing) appeared over the woods on the shore about one-half kilometer away. The four birds flew directly to the nest site, with the two adults in the lead, and all four landed on the railing beside the third chick. There were other Ospreys in the area which did not respond to the lone chick's whistling. This observation suggests that Osprey adults may be capable of recognizing their chicks by sound. Individual recognition based on sound (*e.g.*, Ramsey 1951, Evans 1970) is commonplace enough in birds for such speculation to be unsurprising.

A second series of observations relates only indirectly to the question of whether or not raptors are capable of recognizing their own young, but it does suggest that Ospreys have recognitional abilities with which they are not generally credited. Skutch (1976:314) cites similar examples for a variety of avian species.

On 16 and 20 July 1975 I visited a nest on a navigational aid in Davis Creek to weigh the single chick in that nest. On both occasions the parents were unusually aggressive towards me; the male Osprey "chased" and dove at my boat for nearly ten kilometers after I left the nest. Since it was my general practice to visit that nest as my last stop on the way back to the boat ramp in the East River, I usually passed near this nest once before I actually visited it. On 28 July 1975, during the first passage past this nest, the male Osprey met the boat about two kilometers from the nest; he dove at the boat continuously until we were two kilometers on the other side of the nest. We were never within one kilometer of the nest on that passage. On the return trip, when I was about two kilometers from the nest, the male appeared and began diving at the boat. He followed the boat to the nest where I weighed the chick. Afterwards the male dove at the boat and "chased" it nearly twelve kilometers to the East River.

The exact series of behaviors, including being met by the male any time the boat approached within two kilometers of the nest regardless of whether or not we were headed for the nest, was repeated on two subsequent dates (4 and 14 August 1975). On the latter date the chick had fledged and was not at the nest. Despite the apparent hostility directed at my boat, in about 13 hours of observing that nest from the shore, I never saw any such reaction to the many other boats which passed that beacon.

Discussion

I have tried to show that there is some reason to suspect that Ospreys might be capable of recognizing their own young. Postupalsky and Holt (1975) have demonstrated that Bald Eagles, like many other raptors (including Ospreys [Kennedy 1971, Postupalsky and Holt 1975], will not drive away unfamiliar chicks placed in their nests. The significance of the observations of Postupalsky and Holt (1975) seems to be, not that raptors fail to recognize their own young, but that even if raptors are capable of recognizing their own young they do not react aggressively towards strange young. Their reaction may be due to the infrequency of times when raptors in natural situations are confronted with strange and hungry chicks. With gulls (*e.g.*, Tinbergen 1967) and other birds which frequently encounter and often drive away strange chicks, one can speculate that there has been selection for aggressive behavior towards strange chicks to promote the survival of the parent's own chicks and to avoid the wasteful (in terms of natural selection) feeding of unrelated chicks. Raptors apparently have never had occasion to evolve that behavior. Thus, as Postupalsky and Holt (1975) have pointed out, foster parent programs have real potential for the propagation of threatened and endangered species of raptors.

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SECOND NOTICE – 1976 MEETING OF THE RAPTOR RESEARCH FOUNDATION

As approved by the Board of Directors at the annual meeting in Boise last November, the 1976 meetings will be held at Ithaca, New York, home of Cornell University, with Dr. Tom Cade serving as local chairman. Cosponsoring organizations include the Laboratory of Ornithology and the Peregrind Fund. The meetings will commence on Friday, October 29, and run through Monday, November 1. The Ramada Inn in Ithaca will serve as conference headquarters, with some activities planned for the Laboratory of Ornithology at Sapsucker Woods. A call for papers and other details will be forthcoming in an announcement brochure to be mailed to all members in the near future.

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