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Inbreeding in Ospreys.—James et al. (1987) cite the scarcity of reports of inbreeding in natural populations of birds and report a case of mother-son mating in the Merlin (*Falco columbarius*). This and a case of mother-son mating in the Eastern Screech-Owl (*Otus asio*) (Van Camp and Henny 1975:37) appear to be the only published reports of inbreeding in raptors. Here, I report a case of full-sibling mating in the Osprey (*Pandion haliaetus*).

This pair was first noted in 1981 during my study of a color-banded Osprey population on a series of wildlife floodings around Houghton Lake, Roscommon County, in the north-central Lower Peninsula of Michigan (Postupalsky 1977). Most nests there occur on man-made platforms described by Postupalsky and Stackpole (1974).

Both members of the pair were raised on the same platform nest on the Dead Stream Flooding (also known as Reedsburg Dam Backwater) on the Muskegon River 4 km west of Houghton Lake. The female hatched in 1973, the male in 1974. Their mother was banded as a nestling in 1965 on Fletcher Pond, Alpena County, 100 km northeast of her breeding site, and nested on the same nest for seven seasons, 1970–76. Her mate during the 1972–76 breeding seasons was a banded male. Considering that the survival rate of adult males in my study area is 84% (N = 239; Postupalsky, unpubl. data), and that by 1973–74 very few individuals banded only with a FWS band were left in the population (most were either unbanded, or also had color bands), the probability is very high (84–100%) that the same male was involved in both 1973 and 1974. Therefore, the members of the pair reported here were at least half-siblings, and very likely full siblings.

The female was first found nesting in 1976 on a platform (designated P-2) on the east side of Backus Creek Flooding, 6 km east of Houghton Lake and 21.5 km ESE of her natal site. She nested there for five seasons, 1976–80, with unbanded male(s). The male was first observed nesting on another platform (P-1) near the west side of the same flooding in 1978; his mate during 1978–80 was another individually marked female.

In 1981 the female at P-1 was missing and was replaced by the female from P-2, which had moved about 0.5 km across the flooding, and had formed a pairbond with the resident male at P-1, her younger brother. An unbanded pair took over the P-2 territory. The sibling

TABLE 1
REPRODUCTION OF OSPREY SIBLINGS PAIRED TOGETHER AND WITH PREVIOUS UNRELATED MATES

	Female with unrelated male(s)		Male with unrelated female			Some birds paired together (sibling pair)	
Year	Eggs laid	Young fledged	Eggs laid	Young fledged	Year	Eggs laid	Young fledged
1976	3	0			1981	3	2
1977	3	3			1982	3	3
1978	3	2	2	2	1983	2	0
1979	2	1	3	2	1984	4	2
1980	3	2	3	2	1985	3	1
					1986	4	3
					1987	3	1
Means	2.80	1.60	2.67	2.00		3.14	1.71
Young fledged per egg laid	0.57		0.75			0.55	

pair nested on the P-1 platform in subsequent years and was last seen there during the 1987 season. Both birds were then 21 km from their natal nest. In my study area, mean juvenile dispersal distance is 14.5 km for males (N = 37) and 38 km for females (N = 31). As some individuals, especially long-distance dispersing females, move outside the study area and are not found, the actual mean dispersal distances are probably somewhat longer than these preliminary estimates. Nevertheless, it is apparent that the male had dispersed farther than the mean distance for males, and the female had dispersed over a shorter distance than the mean for her sex.

The reproductive success of both siblings, together and with their respective previous, unrelated partners, is shown in Table 1. No obvious inbreeding depression, as was reported for other species (Greenwood et al. 1978), is evident here. To date, four young produced by these individuals have survived to reproductive age and have been found breeding elsewhere. All four were from the earlier matings with unrelated partners. I should add, however, that of 12 young fledged by the sibling pair to date (Table 1) at most seven would have reached the minimum breeding age by 1987. While most Ospreys start breeding at age 3, many do not until they are 4–6 years old.

I have followed the breeding of 157 individually marked adult Ospreys, and this is the only case of close inbreeding observed to date, suggesting that inbreeding is an uncommon occurrence in this Osprey population.

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Intraspecific nest parasitism by Sharp-tailed Grouse.—Intraspecific nest parasitism by species of Tetraoninae rarely has been documented. In 83 studies including more than 6000 clutches (Bergerud and Gratson, Adaptive Strategies and Population Ecology of Northern Grouse, Univ. Minnesota Press, Minneapolis, 1988), only two authors suggested that intraspecific nest parasitisim had occurred. Darrow (*in* Bump et al., The Ruffed Grouse, Life History—Propagation—Management, The Holling Press, Inc., Buffalo, New York, 1947) stated . . . "a number of grouse nests have been found in which there was every indication that two hens contributed to the clutch present," after examination of more than 2000 Ruffed Grouse (*Bonasa umbellus*) nests in New York from 1930 to 1942. Martin (J. Field Ornithol. 55:250–251, 1984) gave evidence that 4 of >150 nests of Willow Ptarmigan (*Lagopus lagopus*) monitored over three years in Manitoba were parasitized. Here I report one instance of Sharp-tailed Grouse (*Tympanuchus phasianellus*) nest parasitism among approximately 120 nests (first through fourth) examined over a 4-year period in southern Manitoba, 49°10′N, 100°13′W.

On 18 May 1984 I approached for the first time the nest of a yearling I had captured and radio-tagged on 17 April at a lek 8 km away. The female flushed, and I numbered and measured the length and breadth of 17 eggs. I returned to inspect the clutch on 29 May after detecting that the female was no longer attending the clutch and remained 1.5 km away. An unbanded sharptail flushed from the nest and I numbered and measured each of five additional eggs. On 5 and 10 June I again returned and "flushed" an unbanded female from the nest; clutch size remained at 22. I returned on 17 June to capture the female and found that 20 of 22 eggs had hatched. An unbanded hen with >15, day-old chicks was within 10 m of the nest. Unfortunately, she did not respond well to a chick distress call and was not captured. I could not determine from egg dimensions which eggs were laid by which hen. Because of the number of eggs that hatched and the large number under the marked hen (only Hamerstrom, Wilson Bull. 51:105–120, 1939, reports ≥17 eggs for a clutch) I suspect that both hens were laying eggs simultaneously.