

YOUNG, H. 1955. Breeding behavior and nesting of the Eastern Robin. *Am. Midl. Nat.* 53:329-352.

PETER E. LOWTHER, *Museum of Natural History, University of Kansas, Lawrence, KS 66045.* Received 22 Sept. 1980; accepted 31 Jan. 1981.

Further Notes on Wilson's Phalarope-American Avocet Feeding Associations.—Wilson's Phalaropes (*Steganopus tricolor*) commonly form feeding associations with other water birds. Williams (Condor 55:158, 1953) reported that swimming Wilson's Phalaropes followed wading American Avocets (*Recurvirostra americana*) and he suggested that food consumed by the commensal phalaropes was stirred up by the feet of the avocets. Siegfried and Batt (Auk 89:667-668, 1972) found that wading phalaropes following Northern Shovelers (*Anas clypeata*) pecked at prey at almost 3 times the rate measured for a phalarope feeding alone; they also noted that females often occupied the choice lead positions.

Beginning at 1900 on 9 May 1980 I observed a Wilson's Phalarope-American Avocet feeding association in a shallow pond near Belden, Mountrail Co., North Dakota. In approximately 5-7 cm of water, a single female phalarope followed 1 of 2 avocets which foraged 10-40 m apart. The phalarope waded behind or next to one of the avocets, picking food from the surface as the avocet apparently obtained food from the bottom of the pond. When the avocet ceased feeding, the phalarope promptly flew to the second bird and foraged with it until this avocet ceased feeding, whereupon the phalarope returned to the first avocet. Six such changes were observed in the following hour. The distances traveled by the phalarope in moving from one avocet to the other indicated that it was responding to the sight of a foraging avocet and not to the detection of food released or stirred up by the foraging birds. When one avocet ceased feeding but continued wading, the phalarope always ceased feeding and sometimes flew to the other avocet, indicating that the avocets' foraging activity and not their wading resulted in prey suitable for the phalarope. Although the feeding phalarope always remained within 1 m of a foraging avocet and followed closely by moving in a similar direction, neither avocet behaved aggressively toward it.—BEN C. PINKOWSKI, *Fort Berthold College Center, P. O. Box 308, New Town, ND 58763.* Received 6 Nov. 1980; accepted 24 March 1981.

Barn Owl Takes an American Kestrel.—On 19 July 1980, while conducting studies of the Barn Owl (*Tyto alba*) in northern New Jersey, I found the remains of an American Kestrel (*Falco sparverius*) in an active Barn Owl nest. The nest site was an old wooden water tank, 7 m above the ground in an open field. The tank had been dry for many years and was regularly used by Barn Owls.

The tank contained three 4- to 5-week-old owlets. On the floor were the remains of the recently killed American Kestrel. Examination of the feathers and bones revealed the Kestrel to be an approximately 4-week-old female. It had probably fledged because its primary wing feathers were almost completely unsheathed.

Diets of Barn Owls show geographic, seasonal, and individual variations. Most studies of food habits indicate small percentages of avian prey, although numerous species have been recorded. (Bent, U.S. Natl. Mus. Bull. 170, 1938; Rusling, Proc. Linn. Soc. N.Y., 1951). I believe the taking of an American Kestrel as prey by a Barn Owl is highly unusual, and this is the first such occurrence known to me.—LEONARD J. SOUCY, JR., *1390 White Bridge Rd., Millington, NJ 07946.* Received 11 Sep. 1980; accepted 21 Mar. 1981.

Individual Recognition of Nestlings.—In studies of bird nesting it is often important to recognize individual young. Ricklefs (1973, *Bird-Banding* 44:63) reported a method of tattooing nestlings with India ink, but noted that tattoos disappeared or faded at about 2 weeks of age. Also, an injection was required and one had to be careful not to inject into the abdominal cavity.

While ink is useful for marking eggs, I have found a better method to be marking young around the legs with threads of different color. I have tried and do not recommend nail polish, paint, or black India ink on the claws or other parts of the body. Ink marking had to be repeated almost daily, and it is time consuming to read combinations of 2 claws.

Marking with thread has been consistently the best method in several years of nest study in the tropics and elsewhere. Thread should be replaced as the nestling leg grows. It can ultimately be replaced by a color band as used for adults. A square or double knot was needed to tie the thread securely, and the ends had to be cut short enough to not attract adult attention. Regular sewing thread (no. 40) was best, since thicker thread was difficult to tie and was more conspicuous. Dull-colored thread (such as gray, black, light yellow) was best; red attracted the adult's attention. Such birds as Slaty Antshrikes (*Thamnophilus punctatus*), which peer carefully in the nest after feeding or before and during brooding, sometimes saw the thread and pecked at or tried to pull it out (Oniki 1975, Anais Acad. Brasil. Ciencias 47:477-515), but young were never thrown out of the nest. In birds that do not peer much in the nest, such as Rufous Gnateaters (*Conopophaga lineata*) in São Paulo (pers. obs.), the thread remains unnoticed.

I appreciate comments of anonymous referees.—YOSHIKA ONIKI, *Department of Biology, University of Miami, P. O. Box 249118, Coral Gables, FL 33124*. Received 4 Aug. 1980; accepted 28 Nov. 1980.

Reproductive Success of Purple Martins in Aluminum Versus Wooden Birdhouses.—In the mid-1960's, the Trio Manufacturing Company of Griggsville, Illinois, began commercially manufacturing aluminum Purple Martin (*Progne subis*) houses. The president of that company published a book (Wade, *What You Should Know About the Purple Martin*, Trio Manufacturing Co., Griggsville, Ill., 1966) describing the development of the martin house industry. In that book and other brochures and advertisements, Wade has suggested that Purple Martins breed more successfully in aluminum houses than in wooden houses or gourds. He claimed (Wade 1966) that aluminum houses are cooler than wooden houses and fewer young birds are lost in aluminum houses (principally because the young remain in the nest longer and thus do not fledge prematurely). Wade indicated that this is a primary reason that people should erect aluminum Purple Martin houses.

However, certain aspects of the Trio birdhouse promotion have been shown to be misleading, e.g., implying that Purple Martins eat mosquitoes (see Kale, *Auk* 85:654-661, 1968) and that Starlings (*Sturnus vulgaris*) do not nest in Trio houses (see Brown, *Bull. Texas Ornithol. Soc.* 10:31-35, 1977). I think it thus appropriate to examine comparatively the reproductive success of Purple Martins in aluminum and wooden martin houses.

My studies were conducted in Sherman, Grayson County, Texas, from 1972-1978 as part of an investigation of martin breeding biology (Brown, *Southwest. Nat.* 23:597-604, 1978a), although initially I had not planned to compare reproductive success in different types of birdhouses. Colonies, methods, and data were those used earlier (Brown 1978a), except additional data were gathered at 5 martin colonies in 1977 and 1978. Data on nestling periods were obtained at a large, intensively-studied colony that contained both wooden and aluminum houses. Nestling period was defined as the number of days from hatching of the first egg until fledging of the first young. Aluminum martin houses in Sherman were 6-, 12-, and 24-room ones of the Trio line, or modified versions of the Trio houses that were distributed by Sears, Roebuck, and Company. Wooden houses were homemade ones which largely followed the Trio specifications, including porches with railing and 15 × 15 × 15 cm compartment sizes.

Table 1 presents values for nestling periods of Purple Martins in wooden and aluminum martin houses; there is no statistically significant (*t*-test) difference for these data. Young martins did not remain for significantly longer periods in aluminum houses. Percent original clutch fledged also was similar for aluminum-nesting and wooden-nesting Purple Martins (Table 1). (The overall fledging percent for Purple Martins in Grayson County, Texas, was 84.3% of the original clutch (Brown 1978a).) The objective of this study was not to determine nest site preferences of martins; Jackson and Tate (*Wilson Bull.* 86:435-449, 1974) found no statistically significant difference between martin occupancy of wooden and aluminum martin houses.

My data do not support Wade's (1966) contention that Purple Martins are more successful in aluminum birdhouses than in suitable wooden houses. When researchers and birders install a martin house, an aluminum house should not be chosen solely because