Turtles as a Food Source of Nesting Bald Eagles in the Chesapeake Bay Region.—The food habits of nesting Bald Eagles (*Haliaeetus leucocephalus*) have been reported for many geographic populations (Lincer et al. 1979). Fish of many species make up the bulk of their diet, however many species of birds and a few species of mammals occur regularly as food items. Turtles have been reported as incidental food items of the Bald Eagle, primarily in the eastern portion of its range (Table 1). Most of these reports were based on the presence of empty turtle shells at Bald Eagle nests. Data gathered during a Chesapeake Bay Bald Eagle nestling banding project show that a much greater portion of this population is regularly taking and eating turtles of 5 species than had been previously reported from this or any other breeding population.

Methods.—During the 5-year period, 1977–1981, a field team from the Raptor Information Center visited 207 of the 234 known successful Bald Eagle nests in the Chesapeake Bay Region to band and color tag the eaglets. Visits were also made to 146 unsuccessful

TABLE 1. Previous reports of turtles as food items of the Bald Eagle.

State or province	Number and species of turtle	Collection circumstances	Reference
Ontario[a]	18 musk turtles	shells in nest	Broley[b]
Ontario[a]	12 musk turtles	shells in nest	Bendell 1959
Minnesota	1 turtle (species not given)	not given	Dunstan 1975
New Hampshire	4 musk turtles	under roost tree	Smith[c]
Maryland-Virginia	3 mud turtles, 1 painted turtle (# of nests not given)	shells at nests	Imler & Kalmbach 1955
Maryland	1 spotted turtle	shell in nest	Smith 1936
Maryland	1 diamondback terrapin	eagle observed feeding	Meanley & Schmid 1960
Virginia	1 snapping, 1 painted, and 2 mud turtles	shells in nest	Tyrell 1936
Virginia	1 mud, 1 musk turtle and 1 diamondback terrapin	shells at nest	Weimeyer[d]
Tennessee	musk turtles	eagles feeding on turtles drowned in fishing nets	Ganier 1951
Tennessee	large number of musk turtles	shells in nest	Spofford 1945
Arizona	1 "soft shell" turtle	shells in nest	Rubinck 1976
Florida	12 snapping turtles	shells in nest	Anon. 1954
Florida	1 "soft shelled" turtle	shell at nest	Broley 1947
Florida	1 turtle	shell under nest	May 1935
Florida	1 turtle	shell in nest	Sprunt 1955
Florida	2 Florida red-bellied turtles	shells at nest	McEwan 1977

[a] These reports may refer to the same incident.
[b] Personal Communication to Elton Fawks, 1955.
[c] Personal Communication to the author, 1980.
[d] Personal Communication to the author, 1977.

TABLE 2. Frequency of Bald Eagle nests with turtle remains in the Chesapeake Bay Region.

Species	No. of nests					
	1977	1978	1979	1980[a]	1981	Total
Diamondback Terrapin	5	6	5	2	9	27
Eastern Mud Turtle	1	2	2	1	2	8
Musk Turtle	0	4	3	6	11	24
Snapping Turtle	1	1	0	0	1	3
Eastern Box Turtle	2	1	2	2	0	7
Successful nests						
Visited	35	39	39	45	49	207
With turtle remains	7 (20)[b]	9 (23)	7 (18)	12[a] (27)	16 (33)	51 (25)
Unsuccessful nests						
Visited	3	38	38	35	32	146
With turtle remains	0 (0)[b]	1 (3)	1 (3)	0 (0)	3 (9)	5 (3)

[a] "Turtle remains" with no species reported at one nest.
[b] Percent of nests with turtle remains given in parentheses.

nests in order to retrieve unhatched eggs or shell fragments. Food remains, including turtle shells, were collected in and under the nest during the single visit.

Results and discussion.—Turtle shells were found at 51 of the 207 (25%) of the nests visited that contained eaglets of banding age (Table 2). Occasionally the remains of more than one species of turtle were found at a nest.

Nests with shells of the diamondback terrapin (*Malaclemys terrapin*) and the musk turtle or stinkpot (*Sternotherus odoratus*) were encountered most frequently, usually with more than one shell per nest. Up to 14 shells of this latter species had been collected from one nest. The remaining species, the eastern mud turtle (*Kinosternon subrubrum*), the snapping turtle (*Chelydra serpentina*), and the box turtle (*Terrapene carolina*) occurred in a few nests as single shells.

Table 2 shows an increasing number of nests with turtle shells during the last 2 years, corresponding to an increase in the number of successful nests. Moreover, the percentage of successful nests with turtle remains also increased during this period. A live diamondback terrapin was found in a Virginia nest in 1979. Both left legs had been eaten and the climber observed one of two eaglets nibbling on the turtle. During banding, the turtle crawled to the edge of the nest and fell to the ground. It was returned to the nest and was still alive when we left the nest.

Some turtle shells of 4 of the species, excluding the box turtle, were found with fresh flesh on them, suggesting that they may have been taken alive. These 4 specimens occur in marsh and shore environments where this eagle hunts. The turtles frequently sun themselves on a bank or log and are then most likely captured by eagles.

Dr. Carl Ernst (co-author of "Turtles of the United States" pers. comm.) indicated that the diamondback terrapin searches only the horizon during sunning and therefore would be easy prey for an eagle stooping on it from above. Box turtles are most likely only taken as carrion because of their occurrence in upland habitats and their ability to completely close their shell. This is supported by the lack of fresh flesh on the shells on this species found at eagle nests. Although some box turtle shells were found in the eagle nests, the shells of some found on the ground under nests may not have resulted from consumption by eagles.

Most of the turtle remains were found in successful nests. Unsuccessful nests are probably abandoned before turtles become active.

In summary, over the 5 year period, 25%, a considerable portion, of the successful Bald Eagle pairs nesting in the Chesapeake Bay Region captured 4 species of turtles, many likely alive. A fifth species of turtle was also eaten, probably as carrion.

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An Observation of Copulation and Allopreening of a Pair of Whiskered Owls.—Herein we describe copulation and record the first observation of allopreening by a pair of Whiskered Owls (*Otus trichopsis*). Martin (1974) described vocalization of Whiskered Owls during copulation. Forsman and Wight (1979) reviewed published records of allopreening in 11 owl species and explored functions of this behavior.

We observed a Whiskered Owl pair on 6 June 1979 at the Bogsprings Campground, Madera Canyon, in the Santa Rita Mountains of Arizona. Surrounding habitat was oak-juniper (*Quercus-Juniperus*) woodland.

On 6 June 1979 we heard the faintly audible 8-note territorial call of a Whiskered Screech Owl at 0300. One of us (AD) imitated the call and received an immediate response. Thereafter AD imitated the territorial song at short intervals for a period of 2–3 min. Two owls responded by giving the territorial call, and moved closer. One of the owls stooped within 1–1.5 m of us, then switched to the 4-note syncopated call described by Martin (1974) as paramount in copulatory behavior. The second owl responded with the syncopated song slightly higher in pitch and frequency. Both owls began a duet, repeating