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PORCUPINE QUILL AND BEETLES IN PEREGRINE CASTINGS, YUKON RIVER, ALASKA

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Many details regarding food habits of the Peregrine (*Falco peregrinus*) in interior Alaska are available. Prey have been identified by Osgood and Bishop (1900), Cade (1960), Cade et al. (1968), Enderson et al. (1972), and Ritchie (1979 unpubl. report to USFWS, Anchorage, Alaska). Traditionally these prey analyses have depended on species identification from uneaten parts.

In 1978 attempts to determine species consumed in dissected castings did not provide additional species identification. However, 2 items of interest did emerge from their dissection. First, insect parts, mainly elytra and disarticulated body parts, were found in 14% of the castings. Three species were identified including a long-horned beetle (family Cerambycidae), leaf beetle (*Calligrapha serpentina*), and a ground beetle (*Colosoma scrutator*). The latter is a ravenous carnivore (Lindroth 1969) and probably common at decaying prey near eyries. The other two are foliage and tissue feeders of plants (Borror and White 1970) but could easily be found in or adjacent to a perch or eyrie. These families have not been observed commonly in raptor nests, (Philips and Dindal 1977) and may represent prey of insectivorous birds eaten by Peregrine Falcons. Other data for Peregrine prey in Alaska do not include insects (Sherrod 1978). However, Bent (1950) and Fisher (1893) recorded beetles in the diet of peregrines. Snyder and Wiley (1976) determined that invertebrates represented 19.8% of all items in a sample of peregrine stomachs and grasshoppers and cicadas were recorded in food of Australian Peregrines (Pruett-Jones, et al., 1981).

Second, the quill of a porcupine (*Erethrizon dorsatum*) was painfully discovered in a casting. Porcupines have been identified in the diet of large raptors, such as the Golden Eagle (*Aquila chrysaetos*) (Olendorff 1976), but it is doubtful that Peregrines would pursue even a young porcupine. An accidental confrontation might explain its origin. Quills found in the foot of a Sharp-shinned Hawk (*Accipiter striatus*) probably occurred this way (Kelley and Kelley 1969). It is more likely, however, that this quill was acquired by the Peregrine in some indirect manner: (1) the quill was imbedded in a prey species which may have fed on porcupine carrion (e.g., Gray Jay [*Perisoreus canadensis*]); or (2) the quill was already in the eyrie and adhered to prey eaten at the nest.

The second speculation seems plausible since porcupines in interior Alaska are often observed on cliff areas used by Peregrines. They probably seek out overhangs and ledges associated with these cliffs for shelter (Vaughan 1972). More accessible eyries would provide temporary shelters. Porcupine scat has been observed in close proximity to Yukon River eyries. External injury by quills would be quite obvious (Kelley and Kelley 1969). Internal damage might be more significant and affect the bird long after ingestion.

These results suggest casting dissection should complement food studies based primarily on species identification from uneaten parts. It is a useful tool in the determination of unusual and often overlooked items ingested by raptors.

Robert "Skip" Ambrose and James A. Curatolo helped collect specimens. Data were gathered under contract with the USFWS, Anchorage, Alaska. Dr. Richard Werner, Research Entomologist, Institute of Northern Forestry, Fairbanks, assisted with beetle identification.

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AN ENCOUNTER BETWEEN A NESTING BARN OWL AND A GRAY RAT SNAKE

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On 20 April 1981 at 1700 we climbed to the top of an abandoned concrete silo in Oktibbeha Co., Miss., to measure a brood of 4 Barn Owsl (*Tyto alba*) which ranged in age from 8 to 16 days old. The silo was constructed of poured concrete and had smooth sides with a few Virginia creeper (*Parthenocissus quinquefolia*) vines growing the 12 m to the "room" just below the broken cone-shaped concrete top. Our access to the top was by way of a series of metal rungs built into a concrete tube leading vertically to the top. Each day one or both adult Barn Owls flew as the first person started up the ladder; this date one owl flew. At the top, we found the 4 young owls in their normal position against the back wall of the 3.5 m diameter chamber; stretched out along the opposite wall was a large gray rat snake (*Elaphe obsoleta spiloides*). The snake pulled its head back and raised it slightly as we entered the chamber, but remained motionless 2 m away (for about 5 min) as we weighed and measured each owlet. When finished we climbed from the chamber to a point where we could just peer over the edge to view owls and snake. After 4 min, the snake began slowly moving toward the 4 owlets that had meantime settled back into "huddled" positions—2 groups of 1 large and 1 small chick. The snake moved along the edge of the wall to within 0.3 m of the closest owls before we climbed into the chamber to stop its advance. The owlets noticed the snake, but appeared to view it with curiosity rather than with fear. They huddled together but did not retreat as the snake approached.