

I thank Robert W. Dickerman and Helen Hays for suggesting sources and reviewing this paper.—ROGER F. PASQUIER, 235 East 73rd Street, New York, N.Y. 10021. Accepted 20 Jan. 1975.

The Mexican chicken bug as a source of raptor mortality.—From 8 May to 3 July 1974, I examined the reproductive success of cliff-nesting raptors in north-eastern New Mexico. The birds were nesting in extensive canyonlands made up of 6–35 m sandstone cliffs. Species observed included the American Kestrel (*Falco sparverius*), Red-tailed Hawk (*Buteo jamaicensis*), Prairie Falcon (*Falco mexicanus*), and Golden Eagle (*Aquila chrysaetos*). I found 32 cliff nest sites and 92 eggs and/or young.

The abandonment of one clutch of 3 Prairie Falcon eggs and death of 7 young Prairie Falcons (broods of 4 and 3) and a brood of 2 young Red-tailed Hawks I attribute to the presence of the Mexican chicken bug (*Haemotosiphon inodorus*) (Usinger, Monograph of Cimicidae, Horn-Shafer Co., Baltimore, 1966). These bugs feed by sucking blood from their hosts. I counted as many as 30 bugs attached near the eyes and at the base of legs and wings of a single week-old Prairie Falcon. Usinger (1966:475) identified the Mexican chicken bug's native hosts as birds of prey. It has been found in the nests of the California Condor (*Gymnogyps californianus*), Golden Eagle, Great Horned Owl (*Bubo virginianus*), and Barn Owl (*Tyto alba*) (Hicks, Checklist and Bibliography on the Occurrence of Insects in Bird Nests, Iowa State Coll. Press, Ames, 1959; Hicks, Iowa State J. Sci. 36:233–344, 1962).

The Mexican chicken bug commonly infests poultry; Usinger (1966:261) suggests that predatory birds could become infested with the bugs by preying on chickens. This seems unlikely at the nests I observed, since I visited most ranches in the area and found chickens at only one location. In addition, I inventoried remains of 65 prey items and examined 87 pellets and found no evidence of chickens having been consumed.

H. inodorus is indifferent to light (Lee, Pan-Pac. Entomol. 30:159–160, 1954) and can be active throughout the daylight hours. Population densities can reach very high levels; Lee (Pan-Pac. Entomol. 31:47–61, 1955) reported 1778 bugs in a single Barn Owl nest.

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American Kestrels sit on Wood Duck eggs.—While conducting a study of breeding Wood Ducks (*Aix sponsa*) in nest boxes at Great Swamp National Wildlife Refuge, Morris Co., New Jersey, I found 2 female American Kestrels (*Falco sparverius*) that were sitting on Wood Duck eggs as well as their own.

The first such occurrence, initially noted on 17 April 1973 involved incubation of 5 kestrel eggs and 1 duck egg. This box, when checked on 27 March, contained only pine shavings. On 17 April it contained several unidentified down feathers as well as 2 pieces of fur. The viable duck egg was found among kestrel eggs. The shavings formed a cup

similar to that found by Richards (Condor 72:476, 1970) so that the duck egg remained with those of the kestrel without any attention required on the part of the kestrel. I numbered all eggs with pencil.

On 3 May the bird was incubating 4 kestrel eggs and the same duck egg. The pencil markings had been rubbed off somewhat, presumably due to the incubating bird. There was no trace of the fifth kestrel egg. The positions of all remaining kestrel eggs had been changed so that each egg had been moved at least 90 degrees. The duck egg, however, had been moved only about 45 degrees. It now was situated on the outside of the clutch, but it still remained with the kestrel eggs in the cup of shavings without rolling out.

Apparently the kestrel eggs were near their hatching date because my next inspection on 24 May revealed 3 young kestrels with well-developed plumage including brownish-red primaries and rectrices. Many regurgitated pellets were present but the Wood Duck egg was gone.

The other instance of kestrel occupation occurred in a Wood Duck box with 2 compartments. During an inspection on 24 April I was repeatedly harassed by a flying kestrel (sex unknown) while observing a kestrel egg in one compartment. The kestrel was sitting in the compartment on 8 May. It continued to sit on the egg throughout my inspection and note-taking. In the adjoining compartment, I found 33 Wood Duck eggs abandoned and removed them to allow renesting by other ducks. The kestrel sat on at least one duck egg, again atop a 10 cm pile of shavings. Since the bird was sitting on the clutch, the positions of any other eggs were not noted. The duck egg, however, was located partly beneath the bird's right shoulder. Approximately half of the egg's surface was exposed. I do not know if the shavings formed a cup.

On 20 June I found one young kestrel about 3 weeks of age in the box along with regurgitated pellets and 2 duck eggs. One of the duck eggs was still viable. The other kestrel egg was missing. The young kestrel was gone by 2 July.

A similar report, published by Bent (U.S. Natl. Mus., Bull. 170, 1938), involved a kestrel sitting on an egg of a Common Golden-eye (*Bucephala clangula*).—STEPHEN J. ZIPKO, Dept. of Zoology, Rutgers Univ., Newark, NJ 07102. Accepted 30 Jan. 1975.

Wildlife occupying potential Wood Duck tree nest sites.—Natural cavities suitable as Wood Duck (*Aix sponsa*) nest sites are often judged scarce and normal management is to erect nest boxes to alleviate the shortage. This procedure is often quite effective (McLaughlin and Grice, Trans. North Am. Wildl. Conf. 17:242–259, 1952; Bellrose et al., J. Wildl. Manage. 28:661–676, 1964). Wildlife other than Wood Ducks often use the nest boxes and natural cavities so that many are unavailable for Wood Duck use. Several investigators have listed nest box occupants (Brown and Bellrose, J. Wildl. Manage. 7:298–306, 1943; Frank, J. Wildl. Manage. 12:128–136, 1948; McLauhlin and Grice, op. cit.; Klein, N.Y. Fish & Game J. 2:68–83, 1955), but few have studied the occupants of natural Wood Duck nest sites (Bellrose et al., op. cit.; Wier, Wood Duck Manage. and Res. Symp. p 91–112, Wildl. Manage. Inst., Wash. D.C., 1964). This note summarizes data on this subject which were gathered during a Wood Duck production habitat inventory (Boyer, M.S. thesis, Central Michigan Univ., 1974).

The area of study was the Shiawassee National Wildlife Refuge in east-central Michigan. Within the Refuge, the Tittabawassee, Cass, Shiawassee, and Flint rivers, plus several smaller creeks converge to form the headwaters of the Saginaw River. The Saginaw Valley is characteristically flat and is subject to extensive spring flooding. The