

*Wilson Bull.*, 112(3), 2000, pp. 416–417

## Northern Harrier Predation of White-faced Ibis

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**ABSTRACT.**—The Northern Harrier (*Circus cyaneus*) is a widespread raptor that preys mainly upon small mammals and, to a lesser extent, birds. Most published accounts of harrier food habits report the majority of avian prey items are passerines with few large (> 500 g) birds taken. In fall 1999, I observed a Northern Harrier that appeared to have attacked and killed a White-faced Ibis (*Plegadis chihi*) foraging in a playa wetland in Meade County, Kansas. Field observations of the harrier, in addition to physical evidence, suggest the attack was on an apparently healthy individual that did not have any obvious physical deformities. Northern Harriers appear to attack and kill White-faced Ibis and may prey on large birds more often than reported previously. Received 26 Jan. 2000, accepted 31 March 2000.

At 09:50 (CST) on 25 September 1999, I flushed a Northern Harrier (*Circus cyaneus*) in female or juvenile plumage from vegetation surrounding a shallow (ca 10 cm deep) playa wetland in Meade County, Kansas. After flushing the harrier from the vicinity of the playa, I examined the area it left and discovered the fresh remains of a White-faced Ibis (*Plegadis chihi*). The ibis was in moderate cover of moist-soil vegetation (mainly *Polygonum bicorne* and *Echinochloa colona*); its feathers and blood were scattered within a 1 m radius surrounding the carcass. The ibis was decapitated and muscles were removed cleanly from the anterior end of the vertebral column and both humeri. The right side of the pectoralis muscle was completely removed but the left side was intact. The carcass was eviscerated; parts of the intestine were nearly

1 m from the carcass. The heart was intact and the wings and legs were still attached to the carcass. The bill, wings, and legs lacked obvious physical deformities that may have contributed to its capture. The fourth digit on the left foot appeared to have been previously broken but had healed and likely had no role in the attack.

Several clues suggest the ibis was killed shortly before I discovered it. The stomach was filled with invertebrate prey (e.g., Anisoptera, Notonectidae, Gyrinidae) suggesting it had been foraging shortly before it died. The presence of soft-bodied Anisopteran larvae in the stomach suggests the bird was discovered immediately after it was killed because soft-bodied invertebrates are quickly digested in the stomach (Swanson and Bartonek 1970, Rundle 1982), even after death of the predator (Dillery 1965). In addition, the carcass was fresh, had not undergone decomposition, and lacked necrophilic invertebrates (e.g., Dipteran larvae).

To my knowledge, this is the first report of Northern Harrier predation on a White-faced Ibis (Ryder and Manry 1994; MacWhirter and Bildstein 1996; E. Kelchlin, pers. comm.). Northern Harriers are believed to prey upon nestling ibis in rookeries (E. Kelchlin, pers. comm.), but predation of a juvenile or adult ibis (age of the ibis was unknown) is undocumented. Based on the evidence, it seems plausible that the harrier I observed killed the ibis because Northern Harriers have been reported to take prey as large as 1 kg (Barnard et al. 1987, MacWhirter and Bildstein 1996), a range that includes White-faced Ibis (Ryder and Manry 1994).

An alternative interpretation of my observation is that the ibis was killed by another predator and was scavenged by the harrier. This explanation is unlikely because scaveng-

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ing by harriers is thought to be restricted to stressful weather periods (K. Bildstein, pers. comm.). Temperatures in Meade County were similar to the 51 year average for 25 September and several days prior, indicating that conditions were not stressful enough to induce scavenging. Therefore, all evidence suggests the harrier attacked and killed the White-faced Ibis the morning of 25 September. Moreover, this observation indicates that White-faced Ibis are likely prey items of Northern Harriers and suggests this raptor takes large avian prey more commonly than previously reported (Barnard et al. 1987, Collopy and Bildstein 1987, MacWhirter and Bildstein 1996).

#### ACKNOWLEDGMENTS

I thank K. Bildstein, E. Kelchlin, and R. Ryder for instructive conversations about harrier-ibis interactions and M. Knapp for sharing weather data. C. Braun, D. Rintoul, C. Smith, M. Smith, R. J. Safran, and an anonymous reviewer provided constructive comments that improved the quality of the manuscript. Data were gathered peripheral to other ecological studies supported by the Environmental Protection Agency (Grant # CD 997248-01) and Kansas State University (Division of Biology and Dept. of Horticulture, Forestry, and Recreation Resources).

*Wilson Bull.*, 112(3), 2000, pp. 417–421

## Comparable Reproductive Success at Conifer Plantation and Non-plantation Nest Sites for Cooper's Hawks in Wisconsin

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**ABSTRACT.**—Some birds that attempt to nest in habitats such as conifer plantations may experience lower reproductive success and diminished fitness in comparison to conspecifics in other habitats, rendering such habitats sinks or ecological traps. We did not detect significant differences between conifer plantation and non-plantation nests in terms of clutch size, number of bandable young per nest, or nest success for

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Cooper's Hawks (*Accipiter cooperii*) in Wisconsin during 1980–1998. Pine plantations contributed recruits to subsequent breeding generations in proportion to their productivity of bandable nestlings. Conifer plantations in Wisconsin also contained nesting densities and productivity indices for Cooper's Hawks that are among the highest reported for the species. Thus, conifer plantations in Wisconsin are neither ecological traps nor population sinks for nesting Cooper's Hawks. *Received 4 Jan. 2000, accepted 22 April 2000.*

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Some breeding bird species may be poorly adapted to compositionally, structurally, or otherwise novel, exotic, or human-modified