## SHORT COMMUNICATIONS

### NEST SITE AND PREY OF A PAIR OF SHARP-SHINNED HAWKS IN ALBERTA

## MICHAEL S. QUINN<sup>1</sup>

Department of Forest Science, University of Alberta, Edmonton, AB Canada T6G 2H1

Sharp-shinned Hawks (Accipiter striatus) nest mainly in coniferous and mixed coniferous/deciduous forests (Platt 1976, Evans 1982, Reynolds et al. 1982) where they prey on small to medium-sized birds (e.g., Snyder and Wiley 1976, Duncan 1979, Reynolds and Meslow 1984). Information on prey delivered to the nest is available from few regions within this hawk's range. Here I present data on the food habits of a pair of Sharp-shinned Hawks in the aspen parkland of Alberta, and describe their nesting habitat.

### **METHODS**

I found the Sharp-shinned Hawk nest containing three young on 6 July 1987, 0.6 km from the southeast shore of Beaverhill Lake, Alberta (53°24'N 112°31'W). Based on size and feather development (Brown and Amadon 1968), I judged the young to have hatched about 27 June. The nest was observed from a blind 6.6 m east of the nest tree during 18 observation periods, from 14–24 July. Observation periods were 1.5–2.0 hr long for a total of 31 hr of observation. The adult male and female could be distinguished by size, plumage, and after 2 d of observation, by vocalization. I identified prey items, as well as which adult caught and delivered the prey, for each observed feeding. I compared prey remains (mainly feathers) found in or below the nest to specimens in the University of Alberta Zoology Museum collection.

## RESULTS

The Sharp-shinned Hawks had three young and one egg that did not hatch. After fledging on 20 July and 22 July, the hawks continued to use the nest as a feeding site for at least 5 days. Young were seen in the immediate vicinity of the nest until 7 August.

The Sharp-shinned Hawks nested in deciduous forest. The nest was 2.4 m high in a stunted Trembling Aspen (Populus tremuloides; height = 4.5 m). The nest was concealed within a dense stand of willows (Salix spp.; 65, 820 stems/ha,  $\bar{X}$  height = 3.5 m). Canopy closure was 82.5%. Horizontal cover at heights up to 3 m (Noon 1981) ranged from 74–100%. Forest tent caterpillars (Malacosoma disstria) reduced foliage density throughout the nesting period. The ground below the nest was ephemerally wet.

Sixteen of the deliveries to the nest were by the female,

<sup>1</sup> Present address: Faculty of Physical Education and Recreation, University of New Brunswick, Box 4400, Fredericton, NB Canada E3B 5A3.

3 by the male, and 2 were undetermined. The adult female rarely left the nest area whereas the male was rarely seen there. Prey transfers were initiated by the male calling from about 20 m south of the nest. The female then flew toward the male and returned within 1 min with prey.

I observed the male Sharp-shinned Hawk hunting on four occasions. Two were unsuccessful attempts to capture fledgling Red-winged Blackbirds (*Agelaius phoeniceus*). The other two observations were at dusk when the hawk caught two large moths in flight.

Twenty-one prey items were delivered to the nest in 31 hr of observation: 20 birds and one small mammal resembling a vole (Microtus sp.). I was able to identify 12 of the 21 items to species. Six were fledgling Red-winged Blackbirds and one each of Yellow Warbler (Dendroica petechia), American Goldfinch (Carduelis tristis), flycatcher (Empidonax sp.), American Robin (Turdus migratorius) and a Tree Swallow (Tachycineta bicolor). In addition, prey remains consisted of Black-billed Cuckoo (Coccyzus erythropthalmus), flycatchers (Empidonax sp.), Purple Martin (Progne subis), Black-capped Chickadee (Parus atricapillus), House Wren (Troglodytes aedon), Veery (Catharus fuscescens), American Robin, Savannah Sparrow (Passerculus sandwichensis), Clay-colored Sparrow (Spizella pallida), Red-winged Blackbird, American Goldfinch, Yellow Warbler, Tree Swallow, Downy Woodpecker (Picoides pubescens), Wilson's Phalarope (Phalaropus tricolor), and Meadow Vole (Microtus pennsylvanicus).

I found 14 celluloid color bands in regurgitated pellets. These bands were from fledgling House Wrens studied in the same area (Quinn 1989). No bands from adult House Wrens were found, although the majority of the population had been banded (74% of known breeding population). The Sharp-shinned Hawk nest was located on the west edge of a 7.65 ha study grid containing 71 nest boxes, 50 of which were occupied by House Wrens.

# Discussion

The tree species composition and height of canopy at the Beaverhill Lake nest-site differed from those previously described in the literature (Platt 1976, Reynolds et al. 1982). There were no conifers within 5 km of the nest and the crown height of the nest tree was only 4.5 m. Similarities in nesting habitat between the Beaverhill Lake nest and those previously reported are the high vegetation density, well developed canopy, mesic conditions and close proximity to water.

The dominance of avian prey in the present study is consistent with previously reported data (Snyder and Wiley 1976, Duncan 1979). The relatively high number of juvenile Red-winged Blackbirds and especially House Wrens in the prey sample suggests selection for juvenile birds.

RESUMEN.—Una pareja de Gavilán Pechirrojo Menor (Accipiter striatus), en época de anidar, ha sido observada cerca de Beaverhill Lake, Alberta. El nido estaba ubicado a 2.4 m sobre el suelo en un bajo Alamo Temblón (Populus tremuloides) dentro de una área densa de sauces (Salix spp.). La hembra puso cuatro huevos, tres de los cuales incubaron bien, y las crías emplumaron hasta volar. El macho fue el que hizo la mayoría de la caza, haciendo presa, predominantemente, de jóvenes Tordos Sargento (Agelaius phoeniceus) y de Trogloditas Continental (Troglodytes aedon). Se observó que el macho capturaba y consumía grandes polillas.

[Traducción de Eudoxio Paredes-Ruiz]

#### ACKNOWLEDGMENTS

I thank Sheila Braun, Valerie Kerr, Dick Decker and Matt Besko for assisting with the observations. I am grateful to the Beaverhill Bird Observatory for cooperation on the research area. The comments of Drs. W.M. Samuel and G.L. Holroyd on this manuscript were greatly appreciated. This research was supported by the Canadian Wildlife Service, the University of Alberta and the Alberta Summer Temporary Employment Program through a grant to the Edmonton Natural History Club.

### LITERATURE CITED

Brown, L. and D. Amadon. 1968. Eagles, hawks and falcons of the world. McGraw-Hill Book Co., NY.

DUNCAN, S. 1979. An analysis of the stomach contents of some Sharp-shinned Hawks (Accipiter striatus). J. Field Ornithol. 51:178.

EVANS, D.L. 1982. Status reports on twelve raptors. USDI Fish and Wildlife Service, Special Scientific Report—Wildlife, No. 238.

NOON B.R. 1981. Techniques for sampling avian habitats. Pages 42–50 in D.E. Capen [Ed.], The use of multivariate statistics in studies of wildlife habitat, Workshop proceedings. U.S. Forest Service, General Technical Report RM-87, Fort Collins, CO.

PLATT, J.B. 1976. Sharp-shinned Hawk nesting and nest site selection in Utah. *Condor* 78:102-103.

QUINN, M.S. 1989. Factors regulating the breeding population, reproductive success and mating system of House Wrens (*Troglodytes aedon*) at Beaverhill Lake, AB. M.Sc. thesis, Department of Forest Science, University of Alberta, Edmonton.

REYNOLDS, R.T. AND E.C. MESLOW. 1984. Partitioning of food and niche characteristics of coexisting accipiter during breeding. *Auk* 101:761-779.

———, E.C. MESLOW AND H.M. WIGHT. 1982. Nesting habitat of coexisting accipiter in Oregon. J. Wildl. Manage. 46:124-138.

SNYDER, N.F.R. AND J.W. WILEY. 1976. Sexual size dimorphism in hawks and owls of North America. Ornithological Monographs No. 20, American Ornithologists' Union, Lawrence, KS.

Received 19 June 1990; accepted 28 November 1990

J. Raptor Res. 25(1):19-20 © 1991 The Raptor Research Foundation, Inc.

# ORNATE HAWK-EAGLE FEEDING ON GREEN IGUANA

# JACK CLINTON-EITNIEAR

Center for the Study of Tropical Birds, Inc., 218 Conway, San Antonio, TX 78209-1716

MICHAEL R. GARTSIDE P.O. Box 20219, Charleston, SC 29413

# MARK A. KAINER

Department of Biology, Southwest Texas State University, San Marcos, TX 78666

The Ornate Hawk-eagle (Spizaetus ornatus) is a scarce resident of dense subtropical and tropical forests from southern Mexico to northern Argentina (Eitniear 1986, 1988, Brown and Amadon 1968). The species is stated to

be the rarest of the three hawk-eagles in Belize (Hartshorn el al. 1984). Lyon and Kuhnigk (1985) documented both mammalian and avian prey species but considered the Ornate Hawk-eagle a specialist on birds. This note doc-