

FIRST RECORD OF NORTHERN HARRIER NESTING IN MISSISSIPPI

Fred J. Broerman

*U.S. Fish and Wildlife Service
Mississippi Wetland Management District
P.O. Box 1070, Grenada, Mississippi 38901*

I report here the first record of a Northern Harrier (*Circus cyaneus*) nest in Mississippi. On 28 May 1997, on a fallow 130 ha parcel in northern Quitman County, Mississippi, I found a Northern Harrier nest containing five downy young (Figure 1). A male and three female adult-plumaged harriers were also seen flying over the nest and hunting on the parcel. Photographs were taken of the nestlings on 28 May, and copies have been deposited in Mississippi Ornithological Society Records Committee File at the Mississippi Museum of Natural Science. A "four-wheeler" was used to search the parcel for additional nests on 28 and 30 May, but none was found. During both May visits, the male harrier was seen making repeated aerial dives at a Red-tailed Hawk (*Buteo jamaicensis*) perched about 0.5 km from the nest.



Figure 1. Northern Harrier nest with 5 Downy young, 1.5 miles north of Sledge, Quitman Co., Mississippi, 28 May 1997. Photo by Fred Broerman.

On visits to the parcel on 30 May and 5 June, I saw only one female and one male harrier near the nest. The nest was not checked on these dates. On visits to the area on 25 and 26 June, I observed the male and female and two or three young flying in the vicinity of the nest. I watched aerial food exchanges from the male to the female and fledged young on several occasions. Judging from their size, the prey items of these exchanges appeared to be cotton rats (*Sigmodon hispidus*), the most abundant small mammal in abandoned fields in the Mississippi Alluvial Valley (Hamel pers. com.) And a common prey species of wintering harriers in Mississippi (Jackson et al. 1972). On 30 June, four fledgling harriers were present at the parcel but no adult harriers were seen, nor were there young harriers at the nest. No harriers were seen in the area on 22 July.

The nest was found on public land managed by the U.S. Fish and Wildlife Service (FWS) about 2.4 km north of Sledge, in northwestern Mississippi at 34° 27' 27.57"N 90° 13' 6.69"W. The nest was in a field that had been fallow since 1987 and which supported a mixture of plant species typical for abandoned fields of the area. The nest was in a low lying area of the parcel. Among the plant species seen here were broom-sedge (*Andropogon virginicus*), curly dock (*Rumex crispus*), soft rush, (*Juncus effusus*), trumpet creeper (*Campsis radicans*), ladies' eardrops (*Brunnichia ovata*), marsh elder (*Iva annua*), and scattered green ash (*Fraxinus pennsylvanica*) saplings. Black willow (*Salix nigra*) and a small amount of cattail (*Typha latifolia*) were found in the wetter areas. This old field habitat made up approximately 70% of the 130 ha fallow parcel. A 10-ha shallow impounded wetland has been constructed on the parcel, and small remnants of the original bottomland hardwood forest are nearby.

Within 3 km of the nest site, immediately east of Sledge (at 34° 25' 7.55"N 90° 12' 55.44"W), lies another parcel managed by FWS consisting of 303 ha which also was removed from cultivation in 1987. Its vegetation is similar to the nest parcel, but is a wetter site having proportionally more acreage in dense stands of *Juncus* and sedges (Cyperaceae). I made several brief visits to this larger parcel while making observations of the nesting activities of the harriers. I observed no harriers during these visits; however on several occasions I watched the adult male harrier leave the nest site parcel and fly southeast in the direction of the larger parcel, eventually returning with prey. These two parcels were the only uncultivated tracts of old field habitat within 6.5 km of the harrier nest. Both parcels are located in the Mississippi Alluvial Plain of northwest Mississippi where land use is dedicated mostly to intensive row-crop farming of cotton, corn, rice and soybeans.

Besides the Red-tailed Hawk, the following birds listed in order of decreasing relative abundance, were seen during my daytime visits to the nest parcel: Dickcissel (*Spiza americana*), Red-winged Blackbird (*Agelaius phoeniceus*), Eastern Meadowlark (*Sturnella magna*), Northern Bobwhite (*Colinus virginianus*), Common Yellowthroat (*Geothlypis trichas*), Barn Swallow (*Hirundo rustica*), Blue Grosbeak (*Guiraca caerulea*), Least Bittern (*Ixobrychus exilis*).

One or two American Bitterns (*Botaurus lentiginosus*) were also seen on 28 and 30 May and 25 June. These are late records for American Bittern, which has yet to be documented as nesting in the state. Northwestern Mississippi received substantial amounts of rainfall from February through June of 1997 keeping wetlands moist well into summer. This probably contributed to the American Bitterns and Northern Harriers lingering into late June.

The Northern Harrier is a fairly common winter resident in northwestern Mississippi and by mid-April most wintering harriers have departed. It does not nest regularly east of the Mississippi River south of Kentucky. It is not known to breed in Alabama, but pairs have been recorded several times there in summer (Imhof 1976). There are two nest records for Arkansas (James and Neal 1986). Robinson (1990) documents no nests for Tennessee, but lists two late May records and seven records in June and July. For Louisiana, Lowery (1974) reports only one summer record, an adult female seen on 28 July 1954. Robertson and Woolfenden (1992) list Northern Harrier as having nested in the northern peninsula of Florida, but report no breeding records since 1908.

ACKNOWLEDGMENTS

I thank the following individuals for their help and encouragement. Robert Stewart, Delta State University, gave assistance with the vegetation analysis of the two parcels. Marvin Davis, University of Mississippi, provided much assistance with the literature search and reviewed an early draft of the manuscript. Sam D. Fitton, Bureau of Land Management, Hollister, California made several suggestions which helped clarify the manuscript.

LITERATURE CITED

- Imhof, T.A. 1976. Birds of Alabama. University of Alabama Press, University, Alabama.
- Jackson, J.A., M.W. Roberts, and J.E. Wright. 1972. The winter roosts and food habits of Marsh Hawks in east central Mississippi. *Mississippi Kite* 2:25-32.
- James, D.A., and J.C. Neal. 1986. Arkansas Birds; their distribution and abundance. University of Arkansas Press, Fayetteville, Arkansas.
- Lowery, G.H. 1974. Louisiana Birds. 3rd ed. Louisiana State University Press, Baton Rouge, Louisiana.
- Robertson W.B., Jr., and G.E. Woolfenden 1992. Florida bird species, an annotated list. Florida Ornithological Society, Gainesville, Florida.
- Robinson, J.C. 1990. An annotated checklist of the birds of Tennessee, University Tennessee Press, Knoxville, Tennessee.