

# The First Nesting Record of Mississippi Kite (*Ictinia mississippiensis*) in Ohio

By Jim McCormac and Aaron Boone

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## Abstract

The Mississippi Kite (*Ictinia mississippiensis*) is a Neotropical migrant that breeds in North America and winters in the Amazonian basin of South America. Ohio's first documented record of this raptor dates from 1978. There have been 23 documented reports since the first record, with the majority from the past 10 years. The overall breeding population of Mississippi Kite has been steadily

increasing since the 1960s, and many new regions have been occupied by nesting pairs.

Some evidence suggests that Mississippi Kites are reclaiming parts of their historical breeding range. Limited archaeological evidence has been given as evidence for this species' occurrence in Ohio yet definitive evidence of breeding was not obtained for Mississippi Kite until August 2007 when an adult was observed feeding a recently fledged bird in Hocking County, Ohio.

## Introduction

Mississippi Kite (*Ictinia mississippiensis*) is a relatively recent addition to Ohio's avifauna. The first record for the species dates to 1978, when one was documented at Green Lawn Cemetery in Columbus, Franklin County on 13 May (Peterjohn 2001). There have been 23 additional documented records including the nesting occurrence reported in this paper (Table 1; Figure 1). With few exceptions, these records were brief sightings of soaring birds that did not linger.

Of the 23 records cited in Table 1 (one reliable yet undocumented record from Scioto County on 01 May 05 is not listed), eight (35%) come from Lucas and Ottawa counties. Additionally, all of these



Figure 1. Mississippi Kite records in Ohio since 1978, by Stephen Matthews.

observations come from May or early June when the Western Lake Erie Basin experiences a heavy influx of birding activity. The spate of records there may reflect the disproportionate number of observers who are afield in that area at that time of year (increasing the odds of detecting vagrant birds, such as raptors, that are unwilling to cross Lake Erie [Kerlinger 1995]) rather than a true geographic and temporal pattern. A similar situation occurs

at Point Pelee in Ontario, Canada, on the other side of Lake Erie, which is only 39 miles from Magee Marsh Wildlife Area on the border of Lucas and Ottawa counties in Ohio. Point Pelee is a well-known migrant trap, and also attracts scores of birders. There have been more than 30 records of Mississippi Kite from Point Pelee (Alan Wormington, unpublished manuscript).

Ohio's Mississippi Kite records



**Figure 2.**  
One adult of the pair of nesting Mississippi Kites, Hocking County, Ohio. Photograph by Michael Packer.



**Figure 3.**  
A recently fledged Mississippi Kite from a newly discovered nesting location in northern Illinois (Winnebago County). Note the heavy markings to the underparts and the long tapered appearance of the wings. The developing tail feathers of this juvenile lack the distinctive white banding but this characteristic is typically evident on hatch-year birds. © Vic Berardi.

span 30 years and show a trend of increasing numbers of records during recent years. In the first third of this period (1978-87), there were five sightings. From years 1988 to 1997, there were only four records. In the years between 1998 and 2008, at least 14 reports of Mississippi Kite have been documented. Sightings in 2008 made it the best year on record, with one probable nesting pair, another possible nesting pair, and three observations of single birds (Lucas, Geauga, & Wood counties). Key identification points for both juvenile and adult Mississippi Kites should be thoroughly reviewed by Ohio birders, especially in the all-too-common event of brief flyover appearances. Quick assessment of a few critical field marks could be

crucial for adding substantially more to the overall knowledge of this species' status in Ohio.

### Field Identification

Mississippi Kites are medium-sized raptors, about the size of a male Cooper's Hawk, with an average wingspan of 31 inches and a length of 14 inches (Sibley 2000). Average weight for males is 245 grams and 311 grams for females (Parker 1999). Mean weights for eastern Cooper's Hawk populations are 338 grams for males, and 556 grams for females (Curtis *et al.* 2006). Mississippi Kites are noted for their buoyant, acrobatic flight, due in part to the light body weight compared to their overall size. A Mississippi Kite gives the impression in soaring flight of

flapping only when it must, similar to the "reluctant" flapping behavior of a soaring Turkey Vulture (Dunne *et al.* 1988). The kite's wing beat is "stiff," which becomes particularly important when similarly shaped Peregrine Falcons (*Falco peregrinus*) are being considered in the identifications of distant birds. Dunne *et al.* (1988) put it best when they state that (p. 121), "most apparent is the difference between the wing beats of the two birds." Falcon wing beats are much more powerful and rapidly delivered, unlike the weaker, hesitant flapping motions coming from a Mississippi Kite.

Adult Mississippi Kite plumage is striking and unmistakable, if seen well. Plumages are similar for males and females; separating the sexes in the field may be possible only when simultaneously considering size, coloration of the head and nape (paler in males), and the presence of white along the inner webs of tail feathers in females (Parker 1999). Adult plumage is acquired in the second calendar year and is characterized overall by light gray body plumage, dark tail, very pale whitish head, gray wings with blackish primaries, and

**Table 1.**

Acceptably documented records (as determined by the authors) of Mississippi Kite in Ohio; all are of single birds unless otherwise noted.

DATE	COUNTY	
1978	May 13	Franklin
1982	May 16	Lucas
1985	May 11	Lucas
1987	June 3	Shelby
	June 23-24	Delaware
1989	May 4	Ottawa
1992	June 7	Ashtabula
1996	May 19	Lucas
1997	May 17	Ottawa
1999	July 4	Summit
2000	July 5-6	Clermont
2002	May 2	Franklin
	June 3	Lucas
2004	May 16	Lucas
	May 17	Hamilton*
	May 31	Hamilton*
	June 4	Hamilton*
2007	June 4 to	Hocking
	September 3	Vinton
	September 20	(adult and juvenile)**
2008	May 20 to July 8	Hocking
		(nesting pair returned)
	May 24	Lucas
	June 7	Gauga
	June 7	Wood
	June 21	Athens & Morgan
		(pair of adults)

\*2004 records from Hamilton County may represent the same bird, which was reported as a juvenile.

\*\*Vinton County record may represent the same birds breeding in Hocking County.

conspicuous whitish upper surfaces to the secondaries (Wheeler 2003). Primaries show a variable amount of reddish-brown (Parker 1999). Subadults are similar in body plumage to after-second-year birds but retain juvenile flight and tail

feathers (Clark and Wheeler 1987). The transition from subadult to adult plumage is complete after birds arrive on the winter grounds for their second winter (Wheeler 2003). Juveniles are much browner overall, with heavy rich reddish streaking on the underparts. Upperparts are prominently marked with large white scallops or spots on the ends of feathers, and the brownish tail is prominently banded with three or four narrow white bands, although some individuals may have only partial banding (Wheeler 2003). This brownish, blotchy appearance on the underside, along with the banded tail of a soaring juvenile, might initially evoke Broad-winged Hawk (*Buteo platypterus*), but close attention to a few key field marks should quickly rule out this small Buteo. The kite wing is slender and pointed, whereas longer secondary feathers on the Broad-winged Hawk give its wing the bulging appearance that its name suggests. The thickness of the body and wings of a Broad-winged Hawk imparts a stockier appearance while a bird is in soaring flight. The combination of these characteristics should impart a different impression than that given by Broad-winged Hawk in flight. In all plumages, Mississippi Kites show a diagnostic shortened outer primary (P10) that is obvious in flight (even from great heights) and unlike other Midwestern raptors (Figure 2 & 3; Wheeler 2003). Structurally speaking, Mississippi Kite is probably closest to Peregrine Falcon (Clark and Wheeler 2001). Any soaring or

gliding raptor, falcon-like in shape and with plumage reminiscent of Broad-winged Hawk, should be studied very carefully and for as long as possible, especially if encountered from May through August.

### Ohio Breeding Record

On 04 June 2007, Rick Perkins was playing a round of golf at the Brass Ring Golf Course in Hocking County, Ohio (Figure 4). An unusual raptor hawking for insects over one of the fairways caught his attention. He identified the bird as an adult Mississippi Kite, and shortly thereafter observed a pair of adults copulating. Word quickly spread out to the Ohio birding community, and soon many additional observations had been made. Because the golf course is heavily used, observers were confined to perimeter roads where observations were still possible.

In late June, McCormac contacted Chad Galloway, superintendent of Brass Ring Golf Course, and arranged to visit the interior of the golf course to search for evidence of nesting. Mr. Galloway and his grounds crew were quite familiar with the kites, and reported seeing them daily since late May or early June, coinciding with Rick Perkins' initial identification of these birds. On 26 June 2007, McCormac and Ohio Division of Wildlife employees Mark Hemming, Mike Reynolds, and Dave Swanson visited Brass Ring and were allowed into the interior of the golf course. Chad

**Table 2.** Likely or confirmed breeding birds within Brass Ring Golf Course and associated habitats. Much of these data are courtesy of the Ohio Breeding Bird Atlas II (<http://www.ohiobirds.org/obba2/>), as accessed 15 September 2008. Brass Ring Golf Course is located in Atlas Block 69D6SE (Logan 6), and all species in this table were recorded within this survey block. The breeding status abbreviations are: OS=Observed, PR=Probable, CO=Confirmed, T1, T7, PO, and VS are categories of Probable status, and ON is a category of Confirmed status (see website above for additional details).

SPECIES	BREEDING STATUS	SPECIES	BREEDING STATUS	SPECIES	BREEDING STATUS	SPECIES	BREEDING STATUS	SPECIES	BREEDING STATUS
Canada Goose	PO	Red-bellied Woodpecker	PR	Barn Swallow	PO	Pine Warbler	T7	Northern Cardinal	CO
Mallard	PO	Downy Woodpecker	PR	Carolina Chickadee	PR	Cardinal Warbler	T7	Rose-breasted Grosbeak	OS
Wild Turkey	OS	Hairy Woodpecker	T1	Tufted Titmouse	PR	Black-and-white Warbler	PR	Indigo Bunting	PR
Northern Bobwhite	PR	Northern Flicker	PR	White-breasted Nuthatch	CO	American Redstart	OS	Red-winged Blackbird	T7
Great Blue Heron	PO	Pileated Woodpecker	OS	Carolina Wren	PR	Worm-eating Warbler	PR	Eastern Meadowlark	T7
Turkey Vulture	PO	Eastern Wood-Pewee	PR	House Wren	PR	Overbird	PR	Common Grackle	VS
Mississippi Kite	CO	Acadian Flycatcher	PO	Blue-gray Gnatcatcher	PR	Louisiana Waterthrush	T7	Brown-headed Cowbird	PR
Bald Eagle	PO	Eastern Phoebe	PO	Eastern Bluebird	CO	Kentucky Warbler	T7	Orchard Oriole	CO
Sharp-shinned Hawk	PR	Great Crested Flycatcher	T7	Wood Thrush	PR	Common Yellowthroat	PR	Baltimore Oriole	T7
Rod shouldered Hawk	PO	Eastern Kingbird	OS	American Robin	PO	Hooded Warbler	PR	House Finch	T7
Broad-winged Hawk	PO	White-eyed Vireo	CO	Gray Catbird	PO	Yellow-breasted Chat	T7	American Goldfinch	PO
Red-tailed Hawk	PO	Yellow-throated Vireo	PO	Northern Mockingbird	PR	Summer Tanager	T7	House Sparrow	PO
Killdeer	PO	Warbling Vireo	T7	Brown Thrasher	PO	Scarlet Tanager	PO		
Mourning Dove	CO	Rod-eyed Vireo	PR	European Starling	CO	Eastern Towhee	PR		
Yellow-billed Cuckoo	OS	Blue Jay	PR	Cedar Waxwing	PO	Chipping Sparrow	PR		
Chimney Swift	PO	American Crow	PO	Yellow Warbler	T7	Field Sparrow	PR		
Ruby-throated Hummingbird	OS	Tree Swallow	ON	Yellow-throated Warbler	PR	Song Sparrow	CO		

Galloway took us to an area of the course that the kite seemed to frequent, and within short order the kite appeared and perched in a tree where course personnel had often seen it. We observed the kite for one-half hour. No evidence of nesting was noted, nor did we see a second kite. We did observe the kite engage in an antagonistic encounter with a Broad-winged Hawk, which the kite chased from the area that Galloway had previously identified as a source of frequent observations.

Sightings continued from multiple observers throughout July and August, as evidenced by numerous postings to the more than 1,200-subscriber Ohio Birds e-mail discussion list sponsored by the Ohio Ornithological Society. McCormac maintained contact with Chad Galloway throughout the summer, and received periodic updates about the kite. On 27 August 2007, Galloway reported that there were definitely two kites present, and that one of them appeared to be feeding the other. Aaron Boone, Scott Albaugh, and McCormac traveled to the Brass Ring course, arriving at approximately 8 a.m. on 31 August. Within minutes of the group's entering the area of primary kite activity a soaring adult affording diagnostic views was detected high overhead. This bird disappeared from sight over the treeline, but soon afterward, a two-noted whistle call, reminiscent of a portion of the call of Olive-sided Flycatcher (*Contopus cooperi*), was detected near where the adult had disappeared.

We observed the calling bird, a juvenile Mississippi Kite (Figure 5) high in the dead limbs of a Shagbark Hickory (*Carya ovata*). This bird had down feathers protruding from several feather tracts. The bird's calls increased in intensity, signaling the arrival of an adult kite, which swooped in and quickly delivered a cicada to the juvenile (Figure 6). We observed the juvenile for about an hour, and it was fed twelve times by the adult within that span (about one feeding every five minutes.)

Nearly every food item was a cicada, and large numbers of Linne's Cicada (*Tibicen linnei*) were present in the wooded areas, as well as small numbers of Scissor-grinder Cicadas (*T. pruinosa*). The adult kite was observed coursing low over the forest canopy, picking off cicadas as they flew from the treetops. There were also numerous Green Darner dragonflies (*Anax junius*) about, and other observers reported the kites catching those on the wing, although we did not see any provided to the youngster. The young kite was seen attempting to grab a large butterfly, but failed even though the young bird was capable of strong flight.

The last date that Galloway or any of his staff observed the birds was either 02 or 03 September, and Art Osborn saw three birds and photographed one of them on 03 September, apparently the last birder to report the kites. Interestingly, there was a sighting of a pair of Mississippi Kites – an adult and a juvenile together – on 20 September in Vinton County, about 25 miles

**Figure 4.**

Aerial view of OBBA2 survey block (69D6SE; ~10 sq. mi. area) that includes the southern portion of Logan, Ohio and the Brass Ring Golf Course. Most sightings came from birders along Keller Road, on the north side of the golf course. Image courtesy of the USGS.



from the Brass Ring Golf Course.

#### Habitat of Ohio Breeding Locality

Despite a concerted effort, the nest was never discovered, although we have a good idea as to the approximate location. In general, the center of kite activity was near the middle of the Brass Ring Golf Course, section 33, Green Township, Hocking County (Figure 4). The golf course is situated just above the floodplain of the Hocking River, a large stream that drains into the Ohio River at Hockingport in Athens County.

The golf course is a mosaic

of open fairways and greens, interspersed with copses of mature trees. Unlike many golf courses, Brass Ring is very heavily wooded in places, especially towards the higher, better drained western end. The area where the kite was most often seen and where the nest was suspected to be is dominated by oak-hickory associations on the highest ground (Figure 7), mostly Black Oak (*Quercus velutina*), White Oak, (*Q. alba*), and Shagbark Hickory (*Carya ovata*). Forest communities grade into American Beech (*Fagus grandifolia*), Red Oak (*Quercus rubra*), Sugar Maple (*Acer saccharum*), and Tuliptree



**Figure 5.**

*Juvenile Mississippi Kite recently fledged from Brass Ring Golf Course (Hocking County, Ohio). Note the heavy markings on the underparts and the noticeably banded tail, which in combination during soaring flight may superficially resemble Broad-winged Hawk. Also note that the tips of primaries extend past the tip of the tail. Photograph taken by Aaron Boone 31 Aug 2007, shortly after the birds' discovery.*



**Figure 6.**

*Adult Mississippi Kite, presumably the male, feeding a cicada to the fledgling at Brass Ring Golf Course. When the fledgling sounded its two-note call, the adult appeared within seconds to deliver food. Photograph by Aaron Boone.*



**Figure 7.**

*The habitat at Brass Ring Golf Course where the Mississippi Kite nest was thought to be. Photograph by Aaron Boone.*

is minimized in many areas, and the diversity of flowering plants is noteworthy, including many native species. Forested areas have largely been maintained with fairways and greens being built around them. These factors likely have created better conditions for the kites, as well as many other breeding birds. At least 85 probable nesting species have been recorded on golf course property; an impressive list for an Ohio golf course (Table 2).

### Mississippi Kite Breeding Distribution

The core breeding range is in the central and southern Great Plains and along the lower Mississippi River and eastern Gulf states. There are outlier breeding populations in

Arizona and New Mexico in the west and western Tennessee, eastern Missouri, and southwestern Illinois to the east. Additional breeding groups have been described from northeastern Virginia, North Carolina, southwestern Indiana, Nebraska, and Colorado (Parker 1999). Polk County, Iowa possesses the most northerly of these outlier breeding populations (Jackson *et al.* 1996).

Historically, Mississippi Kite was probably a common breeder throughout the Mississippi River valley, north to Illinois and Nebraska, and ranging up the Ohio River valley to southern Indiana and possibly Ohio (Parker and Ogden 1979). The only evidence of historical breeding in Ohio comes from two humeri found in a Jackson County sandstone rock shelter (Wetmore 1932). These remains were in association with skeletal remains of several other bird species, as well as human artifacts and skeletons. Such evidence cannot confirm breeding, in our view, as native peoples were known to trade goods and transport them over considerable distances. It is impossible to ascertain with certainty that the Jackson County specimen was in residence as a local breeder.

### Discussion

Parker and Ogden (1979) were prophetic when they stated "there is no apparent reason why population increases should not continue in both the East and West." The surge in Ohio records during recent decades reflects an overall increase in the Mississippi Kite population.

It was not entirely unanticipated that the species would eventually nest in Ohio; an article in the inaugural issue of the newsletter for the Ohio Breeding Bird Atlas II predicted that the species might be found breeding during this five-year project (McCormac 2007).

This confirmed Mississippi Kite breeding record is not only a first for Ohio, but is part of a larger pattern of expansion of Mississippi Kites that will likely continue into the Ohio River Valley and its northern tributaries. Continued maturation of Ohio's forested communities coupled with overall increases in kite numbers may be creating conditions that will allow Mississippi Kites to re-colonize former parts of their breeding range, or expand into new territory. This species has adapted to human-modified environments, and is well-known for nesting on golf courses with forested habitats (Parker 1999).

Summer 2008 has proven to be an interesting year for extra-limital nesting records of Mississippi Kites. This season, adult kites maintained a presence in far north-central Illinois (Winnebago County), and subsequent searching showed that they were indeed breeding locally (Figure 3) with a second nesting pair suspected soon after the original discovery (Daniel Williams, personal communication). Mississippi Kites do nest in Illinois, but the closest breeding stronghold is far to the southwest in the floodplains of the Mississippi River (Wheeler 2003). Even more remarkable was the discovery of an active

nest in Rockingham County, New Hampshire (Retter 2008). This is the first nesting record for the northeastern region of the United States, and the most northerly breeding record for the species (the colony of kites in central Iowa is approximately 1.5 degrees of latitude south of this New Hampshire pair). Similar to the Illinois records, a second nest was discovered nearby but then confirmed, soon after the discovery of the first nest (Tony Vazanno, personal communication). Connecticut was also discovered to be harboring a pair of nesting kites this summer (Hartford County). Interestingly, this same location was frequented by a pair of kites in 2005 and 2006 (Roy Harvey, personal communication). This year's discoveries of extra-limital nestings recalls the initial range expansion of Mississippi Kites into the Great Plains once habitat became available there in the mid-1900s (Parker 1999).

A pair of Mississippi Kites returned to the Brass Ring Golf Course again in 2008, and indications are that they continue with nesting at this site. It also seems possible that the pair of kites reported at Burr Oak State Park in Athens County in 2008 (Table 1) are also nesting, but this has yet to be confirmed. Given the pattern of extra-limital breeding records followed by discoveries of additional nearby nests, it would not be surprising if the pair of kites found at Burr Oak were also nesting. The habitat in this area is appropriate

and not dissimilar to that found at Brass Ring Golf Course; these two sites are only about 19 miles apart. We anticipate increased records of Mississippi Kites in Ohio in coming years, both of wandering individuals and breeding pairs, with the Brass Ring pair perhaps founding an eventual breeding colony in central Ohio.

### Acknowledgments

We wish to thank Chad Galloway, superintendent of the Brass Ring Golf Course, for allowing us access, and to him and his staff for taking an active interest in the kites and reporting their observations. Rick Perkins deserves major credit for first discovering these birds and making them known. Brian Wheeler made helpful comments about Mississippi Kite distribution and plumages. We are grateful to the birders that shared their observations of the Mississippi Kites as well as the other species that they found while in the area. Finally, we thank the Ohio Division of Wildlife for supporting our research, and the Ohio Breeding Bird Atlas II for making resources available.

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