

substantial breeding populations included both Bumgard Island in the Mississippi River south of Horse-shoe Lake (16 birds including one nest, 6 pairs and one nesting pair) and Dogtooth Bend (Island) (7 birds, estimate of 3 nesting pairs) in 1980-81 (Evans 1981). (These latter areas should be checked to see if these former populations still exist there.) In fact, 95% of Mississippi Kite sightings during Evans's 1980-81 study occurred between the town of Ware in Union Co. and the Dogtooth Bend (Island) area in southern Alexander County.

Interestingly, breeding birds in areas nearest to Illinois with regular breeding populations are all very close to the southern Illinois breeding population, and large foraging flocks noted in extreme southern Illinois (e.g. the Thebes area), could be made up at least partially from these nearby "out-of-state" breeding populations. Kentucky's first actual nest was just recently found (Brock 2000), although the species is considered to be a regular, but local, breeding resident in small numbers from Ballard County (12 pairs) south to Fulton County along the Mississippi River floodplain at the extreme southwestern edge of the state (Evans 1981; Monroe, Jr. 1994; Palmer-Ball, Jr. 1996). Counts of at least 30 birds have been tallied in mid-June at the Kentucky portion of Reelfoot Lake National Wildlife Refuge (Monroe, Jr. 1994), where the only nest was found. The Ballard County Wildlife Management Area population is just across from Pulaski County, Illinois and the nesting populations there along the Cache River. The thin Missouri breeding population is mostly restricted to the southeastern "boot" area including Marquette Island on the Mississippi River near Cape Girardeau (very close to Illinois' main population), with other small groups that have been at least suspected of nesting at Big Oak Tree State Park (Mississippi County), west and north to Mingo National Wildlife Refuge and Ted Shanks

Wildlife Area (Pike County), and occasionally in the St. Louis area (Evans 1981; Robbins and Easterla 1992). High counts for Missouri are rather small, including 18 (5 adult, 13 subadult) birds near New Madrid (New Madrid County) along the Mississippi River (Robbins and Easterla 1992), although a count of 300 birds on 16 May 1991 at the same location, if correct, is exceptional (Jacobs and Wilson 1997). There are only one-to-two known pairs of breeding kites in Indiana, at Lincoln State Park (Spencer County) along the Ohio River, with at least six birds seen there during the summer of 1999 (Brock 1999, Castrale et al 1998).

Kite food

Beetles, leafhoppers and grasshoppers are by far the most important prey species (Parker 1999, Robinson 1957, Skinner 1962), though dragonflies and both annual (*Tibicen sp.*) and periodic (*Magicalicada sp.*) cicadas (especially periodic) are often given as a prey species (James and Neal 1986, Parker 1999, Turcotte and Watts 1999, Wischusen 1998), including these kites feeding on periodic cicadas in such out-of-range areas as Virginia and New York state (Bolen and Flores 1993, Levine 1998). Here in Illinois, four to nine kites (all subadults), appeared far north of any established breeding population in Illinois and were probably there to take advantage of a large emergence of periodic cicadas in Vermilion County in east-central Illinois, at Kennekuk County Park, staying from late May until 23 June 1987, feeding almost exclusively on the cicadas (Kleen 1988, pers. comm. M. Campbell). Cicadas, when abundant, seem to be an important part of the species diet over most of the species' range. Bent (1937) mentions this bird's fondness for cicadas, and in Arizona, one estimate of 700,000 of these insects per 100 acres was made in riparian forest where periodic cicadas formed 71% of the

food that these kites delivered to their young (Bolen and Flores 1993).

Parker (1999) does not mention caddisflies in his list of insect prey from 24 studies across the species range. However insects from eight orders including beetles (*Coleoptera*), leafhoppers and cicadas (*Homoptera*), grasshoppers and crickets (*Orthoptera*), butterflies and moths (*Lepidoptera*), ants (*Hymenoptera*), dragon and damselflies (*Odonata*), bugs (*Hemiptera*), and flies (*Diptera*) are on his list. Hardin et al. (1977) and Evans (1981) in studies conducted at Union County Refuge and in Alexander County in southern Illinois noted kites feeding on grasshoppers, beetles, cicadas, dragonflies, katydids (*Ensifera*) and butterflies, as well as toads and frogs. During one afternoon, one adult fed six grasshoppers to a fledgling in twelve minutes (Hardin et al. 1977). Skinner (1962) referring to the feeding habits of Mississippi Kites in Alabama, states that an average of ten kites fed together at any one time and that there was a general tendency for all of the kites in the area to feed at the same time and for all to disappear at the same time, which is my impression regarding the way that large flocks of this species in Illinois feed.

Although my first instinct was to think of the large numbers that I have seen in past years in May and the 2003 extraordinary aggregation as migrant flocks, the lateness of the date and the fact that few Mississippi Kites breed farther north, argues more toward an ephemeral association of birds that have already arrived on their breeding territories. It would be interesting to know for sure if these are all breeding within a few miles or are individuals coming from far and wide to take advantage of a temporary, bounteous supply of emerging insects such as mayflies, midges, cicadas and in this instance, apparently caddisflies.