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Human incursion and nesting sites of the Belted Kingfisher.—In North America the Belted Kingfisher (*Megaceryle alcyon*) is typically regarded as a bird of river and stream courses as well as pond and lake edges. Nesting sites are usually in mud or sand banks caused by water erosion, but in north central Minnesota, a unique situation prevails.

Itasca State Park, at the headwaters of the Mississippi River, and the surrounding region are dominated by a rough and uneven terrain left by Pleistocene glaciation. The park, established in the late 1890s, is characterized by mature pine, spruce, and maple-basswood forests, and hundreds of lakes and ponds dominate the landscape. Natural nesting habitat for the Belted Kingfisher is limited, but the plentiful waters should assure the species an ample food supply.

A current study being conducted on aspects of the breeding biology of the Belted Kingfisher has shown that the species does, in fact, breed in the Itasca region. During the breeding seasons of 1970, 1972, and 1973, 25 nests were found, 84% of them in habitats that are the result of human incursion (Table 1).

Bent (1940, U.S. Natl. Mus. Bull. 176: 111), Roberts (1932, The birds of Minnesota, vol. 1, Minneapolis, Univ. Minnesota Press, pp. 657-661), and Cornwell (1963, *Condor* 65: 426) have reported that kingfishers prefer an exposed soil surface devoid of vegetation for nesting. My experiences support their findings. Only 16% of the nests in this study were on natural slopes, and these were excavated in mud slides formed by beaver (*Castor canadensis*). Of nine nests Cornwell (ibid.) studied in the Itasca region, only one was in a natural site.

Such observations suggest that the breeding population of Belted Kingfishers in the Itasca region would be limited by features of the natural terrain, but human incursion creates an artificial situation that supports the current population. Nesting sites that formerly supported breeding kingfishers for several years have recently been vacated. Erosion often transforms vertical embankments into talus slopes covered by sod and woody shrubs. The future of the breeding population of Belted Kingfishers

TABLE 1
BELTED KINGFISHER NESTING SITES IN THE ITASCA REGION, MINNESOTA

Year	Gravel pits and sanitary land fills	Roadcuts	Natural sites	Total
1970	3	2	2	7
1972	6	1	1	8
1973	4	5	1	10
E total	13	8	4	25
E %	52	32	16	100

in the Itasca region is not necessarily dependent on man, but man could be responsible for an expanded population.

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Red-bellied Woodpecker predation on nestling Carolina Chickadees.—Beal (1895, U.S. Dept. Agr. Bull. 7) found no evidence of Red-bellied Woodpecker (*Centurus carolinus*) predation on birds. Norris (1958, Univ. California Publ. Zool. 56: 255), suspected that the Red-bellied Woodpecker preyed on nestling Brown-headed Nuthatches (*Sitta pusilla*). He also had circumstantial evidence that the Hairy Woodpecker (*Dendrocopos villosus*) had preyed on nestling Pygmy Nuthatches (*Sitta pygmaea*). Bent (1939, U.S. Natl. Mus. Bull. 1974) stated that Bendire observed Red-headed Woodpeckers (*Melanerpes erythrocephalus*) kill and eat nestling Eastern Bluebirds (*Sialia sialis*) and Tufted Titmice (*Parus bicolor*). As the genera *Centurus* and *Melanerpes* are closely related (Mayr and Short 1970, Publ. Nuttall Ornithol. Club 9: 56), similar predatory habits might be expected.

In early May 1973 near Ironto, Virginia, a pair of Carolina Chickadees (*Parus carolinensis*) bred in a nest box 1.5 m above the ground attached to a tree. The clutch of seven eggs hatched by 7 May. On 10 May a male Red-bellied Woodpecker found the nest and hammered at the entrance in an apparent attempt to enlarge the hole. The woodpecker subsequently extracted and ate one of the seven nestling chickadees. Between 10 and 12 May the woodpecker removed and carried off in its bill three more of the remaining six immatures. While pulling the nestlings from the box, the woodpecker also pulled out nest material that it promptly dropped. I fortified the entrance against further predation on 12 May and did not see the woodpecker again. The three remaining Carolina Chickadees fledged successfully.—RICHARD N. CONNER, *Department of Forestry and Wildlife, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061*. Present address: *Department of Biology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061*. Accepted 23 Oct. 73.

Joint "leap-frog" feeding by ardeids.—Meyerricks (1960, Nat. Hist. 59: 46) reported a peculiar mode of feeding by Cattle Egrets, *Bubulcus ibis*, which he called "leap-frogging." This behavior apparently enables flock members to flush prey for themselves and each other in the absence of large herbivores. We watched and filmed leap-frogging Cattle Egrets on several occasions 9–14 August 1973, and noticed three other species of ardeids participating, including two Great Egrets, *Casmerodius albus*, four Little Blue Herons, *Florida caerulea*, and one Snowy Egret, *Egretta thula*. The egrets were feeding on a 20-ha tract of tall (0.5–1.0 m), annually burnt *Bahia* grass containing extensive patches of *Solidago altissima*, *Ambrosia artemisiifolia*, *Solanum carolinense*, and *Rubus* sp., 3 km north of the Florida State line along S1591 in Grady County, Georgia.

Leap-frog feeding by 69 Cattle Egrets and a single Great Egret was first seen at 10:00 9 August. Feeding 5–14 individuals abreast, the rather compact flock rapidly advanced through the tall vegetation by alternately walking and feeding, then flying. Egrets in the rear arose, flew 6–12 m, landed 2–3 m in front of the flock, and resumed feeding. As these birds settled, the rearmost birds arose and repeated this process.