

REMAINS OF RARE AND EXTINCT BIRDS FROM
ILLINOIS INDIAN SITES

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A GREAT deal of information concerning past distribution and abundance may be derived from the remains of animals once utilized by aboriginal Indians. Identification of the shell and bone often found in considerable quantities in refuse pits and kitchen midden deposits enables us to visualize better the ecological and environmental conditions that existed in a given area in prehistoric times. The extensive prairies, thousands of miles of streams and rivers, and the countless numbers of sloughs, marshes, backwater ponds and lakes apparently provided an almost limitless supply of game to the Indians once occupying Illinois.

The Indians that formerly occupied Illinois may be divided into three general categories, based primarily on time periods and cultural traits: First, the Archaic, a prepottery group dating from about 8,000 (?) to 1,500 B. C. They apparently had no agriculture and depended upon local flora and fauna for their existence. The Modoc Rock Shelter Site, Randolph County, is an archaic site in southwestern Illinois that contained large quantities of mollusk shells and bone. Remains of the Whitetail Deer (*Odocoileus virginianus*) far outnumber all other species encountered, thus indicating its apparent former abundance and importance as a food to the people once occupying this site. In the case of birds, almost 80% were those of ducks, geese and swans (Fowler, Winters and Parmalee, 1956).

The second major group is referred to as the Woodland Culture, occupying a time period from about 1,500 B. C. to 1,200 A. D. and reaching the climax of cultural development in the Hopewell phase—at or shortly after the time of Christ. This period saw the development of pottery and the beginning of agriculture, although wild game still formed a large percentage of their diet. Faunal remains recovered from Hopewell and other Woodland village sites in Illinois also point to extensive use of waterfowl. All Indian sites in the state are, or were, located along some body of water, a habitat that generally provided an abundant supply of mollusks, fish and birds; in almost all sites, the Anatidae constitute over 70% of the avian remains.

The final prehistoric cultural faction, the Middle Mississippi, is thought to have lasted for about 350 years, from 1,200 to 1,550 A. D. Agriculture flourished and the growing of corn and probably other crops supplemented the diet of wild game to a greater extent than previously. Apparently the bow and arrow were developed and, as indicated by the faunal material excavated at the Cahokia Site (Madison Co.), there must

have been more selective hunting for preferred game rather than indiscriminate collecting. This is indicated by the large number of remains of certain species (e.g. Whitetail Deer, squirrel (*Sciurus* spp.), Turkey, Greater Prairie Chicken, Trumpeter Swan) uncovered recently at the Cahokia Site, probably the largest Middle Mississippi site in North America.

Bone provided the Indian with a source of raw material for the manufacture of tools, ornaments and utensils. The awl, a tool (used as a punch) usually formed from a split or broken long bone sharpened at one end, is one of the bone artifacts generally found most abundantly and consistently through all cultural levels. The ulna, metatarsal and metacarpal of deer, as well as splinters of these and other heavy bones, were also used, but many of the finer awls were often fashioned from wing and leg bones of birds, particularly the Turkey. Beads were made from cut lengths of wing bones, notably eagle and swan, and a variety of ornaments, tools and utensils were manufactured from bird bones. The function or use of many, however, is often obscure. An unusual instrument, possibly a whistle or flute, was found with a burial in the Carlson Annis Mound in Kentucky and was tentatively identified by Dr. Wetmore as an ulna of the Whooping Crane (Webb, 1950). The following accounts are noteworthy as indicating prehistoric distribution and abundance of birds now extinct or rare in Illinois.

ACCOUNTS OF SPECIES

White Pelican (*Pelecanus erythrorhynchos*)—The distal end of a tarsometatarsus was recovered from Hopewell village refuse (Snyder Site, Calhoun County) in July, 1955, by Mr. Perino. The proximal end of a cut humerus was found in the midden debris at Cahokia by Mr. Perino during the 1956 fall excavations. These two records are thus far the only archaeozoological evidence of the White Pelican in Illinois. The bird is presently listed as a rare migrant in the state, although formerly, according to Nelson (Cory, 1909), they were regular and rather common migrants.

Brown Pelican (*Pelecanus occidentalis*)—The occurrence of this species in Illinois is accidental and there are only three records (1873, 1903 and 1948) (Smith and Parmalee, 1955). A tibiotarsus section (plus a coracoid fragment probably assignable to this species) was found in the archaic Modoc Rock Shelter, Randolph County in July, 1956, by the Illinois State Museum archaeological field party, and remains of this maritime species at the Modoc Site is especially noteworthy since it is the first and only archaeological record for Illinois and falls in an early time period prior to at least 1,500 years B. C.

Trumpeter Swan (*Olor buccinator*)—"The Trumpeter Swan occurs sparingly in Illinois and Wisconsin during the migrations. It is fast becoming a very rare bird, at least east of the Mississippi." (Cory, 1909). Judging from the quantity of bones excavated by Mr. Gregory Perino at the Cahokia Site, this bird (now extirpated east of the Mississippi) must have been exceedingly abundant in Illinois in prehistoric times. The Indian apparently favored the long bones of the swan, primarily the humerus and ulna, for making beads and other objects since numerous ends of these bones encountered at Cahokia showed evidence of having been cut off. Approximately 375 bones of the Trumpeter Swan were identified from the sample of midden material excavated at Cahokia by Mr. Perino during the latter part of 1956. Several bones were identified as being those of the Whistling Swan (*Olor columbianus*), but these were few in comparison to *O. buccinator*. Several remains of the Trumpeter Swan have been identified from the Fisher Site (Will Co.), Snyders Site (Calhoun Co.), et.al., but the greatest concentration found thus far has been at Cahokia. Although certain historic tribes found a market for swan skins (plumage) in England and Europe (Audubon, 1828), the prehistoric groups probably utilized the flesh for food and their bones, in some instances, as ornaments.

Swallow-tailed Kite (*Elanoides forficatus*)—According to Ridgway (1889) and other early workers, this Kite was common throughout the state in former years, but now it is certainly of accidental occurrence; apparently there have been no records since 1906. A complete femur and tibiotarsus were recovered from a refuse pit at Cahokia in November, 1956, by Mr. Perino. There is archaeozoological evidence of this species in Ohio (Goslin, 1955), and, although it was reported as formerly common in Illinois prior to 1900 (and therefore to be expected in midden refuse), these two bones from Cahokia represent the first prehistoric records for the state.

Mississippi Kite (*Ictinia mississippiensis*)—Cory (1909) states that, "The Mississippi Kite is not uncommon in southern Illinois in summer" and refers to a statement by Nelson that it is an "abundant summer resident in the southern portion of the state, probably occurs in northern Illinois." Although a few recent Illinois records of this species are known (Smith and Parmalee, 1955), it is now of accidental occurrence. A complete left humerus was found in 1956 in the lower levels of the Modoc Site, an extremely early time period. The two humeri identified by Wetmore (1932) from sites in Jackson County, Ohio, represented a new Ohio record as well as the first archaeozoological record. The Modoc Site humerus is the first archaeozoological record for the state. As in the case of the Brown Pelican, this represents an extremely early time period.

Golden Eagle (*Aquila chrysaetos*)—Black (1937) lists over 40 records of this eagle collected in Illinois although it is now generally considered a rare migrant or visitant. A bill, tarsometatarsal and carpometacarpal were found at Cahokia in November, 1956, by Mr. Perino, which apparently represent the first occurrence of this species from an Illinois Indian site. Of interest also are the remains of the Bald Eagle (*Haliaeetus leucocephalus*) from Cahokia, a locally common winter resident along the large rivers and an uncommon nester along the Mississippi River in southern Illinois; a single tarsometatarsal, two phalanx and 26 carpometacarpals, representing at least 16 individuals, were identified. The prevalence of carpometacarpals, the bone supporting the primaries, points to the possibility that the eagles were killed for their plumage and that the wing tips were used for decoration, or for ceremonial or other functions.

Greater Prairie Chicken (*Tympanuchus cupido*)—Although this bird is not considered rare in Illinois, it is uncommon and the present dwindling populations are in no way comparable to their former distribution and abundance in early times. Approximately 120 bones of this species have been identified from midden material excavated at Cahokia by Mr. Perino, a noteworthy record since it indicates an abundant former population in that area.

Sandhill Crane (*Grus canadensis*)—Remains of this former nester (Ridgway, 1895), but now rare migrant (Smith and Parmalee, 1955), have been found rather sparingly in midden refuse throughout Illinois. Baker (1937) refers to a bone of the more western race, *G. c. canadensis*, from a site in Jackson Co., and a carpometacarpal fragment of that subspecies was found in the archaic Modoc Rock Shelter Site, Randolph County, in 1953 (Fowler, Winters and Parmalee, 1956). During the 1956 summer excavations at Modoc by the Illinois State Museum archaeological field party, six tarsometatarsals of the Sandhill Crane (in addition to a bundle of approximated 80 goose radii, *Chen* and *Branta*), were found in association with a human burial. The largest number of remains of this crane, approximately 100 bones, primarily of wing and leg, were excavated by Mr. Perino at the Cahokia Site in west-central Illinois. Although the Indian may have utilized the crane for food, it, as well as certain other birds such as eagles, owls, etc., may have been collected for their plumage or used in other capacities. Apparently there have been no new records of the Whooping Crane (*Grus americana*) from Illinois since Baker (1941) referred to that species remains from the Kingston Site (Peoria Co.) and from a site in Jackson County.

Shorebirds—A humerus of the Marbled Godwit (*Limosa fedoa*), once

a common species in Illinois but now a rare migrant, was found at the Steuben Site (Marshall Co.). Fowler, Winters and Parmalee (1956) record the Whimbrel (*Numenius phaeopus*) from the archaic Modoc Site in Randolph Co., a species that is also presently considered a rare migrant in the state. Three ulnae, two radii, two carpometacarpals and a section of tibiotarsus, at least three individuals being represented, were identified as Whimbrel from a sample of midden refuse recovered by Mr. Perino in April, 1957, at the McDonough Lake Site, Madison County. An ulna of the Long-billed Curlew, *Numenius americanus*, now of accidental occurrence in Illinois, was reported from the Kingston Site, Peoria Co. by Baker (1936), while another ulna and a skull section were found in a refuse pit at Cahokia in November, 1956, by Mr. Perino. Four additional radii from Cahokia also are probably assignable to this species. Remains of now rare shore birds, as well as the more common species such as the Killdeer and the Dowitcher, and of other birds associated with an aquatic environment (herons, bitterns, rails, etc.) are usually uncommon. The immense areas of water that once covered large sections of Illinois must have provided excellent habitat for numerous aquatic species of birds and, although limited remains of certain species provide an index to former distribution, large concentrations of one or a group of birds (e.g., ducks, geese, swans) indicate preference on the part of the Indian as well as abundance of certain species.

Passenger Pigeon (*Ectopistes migratorius*)—Considering the number of birds once residing in and migrating through Illinois, relatively few remains of this extinct species have been encountered thus far. Fowler, Winters and Parmalee (1956) recorded two bones (humeri) from the archaic Modoc Rock Shelter Site in southwestern Illinois, but since publishing their Preliminary Report, 32 additional bones (14 humeri, four phalanx, five ulnae, two tarsometatarsals, two coracoids and five carpometacarpals) were found in the faunal material excavated in the summers of 1955–1956. Further south in Jackson County, an ulna and tarsometatarsal were found at the Fountain Bluff Site, and a tarsometatarsal and coracoid at Peter's Cave. Both sites are of Late Woodland—Middle Mississippi Culture. The distal ends of two humeri and a carpometacarpal were uncovered at the Huber Site (Cook Co.); two humeri fragments were recovered from the Fisher Site (Will Co.); two carpometacarpals come from the McDonough Lake Site (Madison Co.) and the distal end of a humerus was found at Starved Rock (LaSalle Co., north-central Illinois). In the recent excavations at Cahokia (Madison Co.; East St. Louis area) by Mr. Perino, which have produced a tremendous quantity of bird material, only six bones of the Passenger Pigeon (two humeri, two ulnae, one radius and one carpometacarpal) were

recovered. Mr. William R. Adams, Indiana Laboratory of Osteology, Bloomington, identified a single humerus of this species that was collected by the University of Michigan archaeological field party in 1950 (personal communication). Goslin (1955) found Passenger Pigeon remains quite numerous in several rock shelter sites in Ohio. Their general scarcity in midden refuse from Indian sites in Illinois may be attributed to greater local abundance or availability of more preferred species.

Carolina Parakeet (*Conuropsis carolinensis*)—During the summer of 1953, Mr. Perino uncovered numerous bones in a village refuse pit at Cahokia, including nine bills of this species, identified by Mr. Adams. They apparently represent the first archaeozoological records of the extinct parakeet in Illinois. Five were retained by Mr. Adams for the comparative collection at the Indiana Laboratory of Osteology, and two were given to the Illinois State Museum by Mr. Perino. Since these bills were found together in a single refuse pit (none having been encountered in later excavations), it is plausible to assume that they may have been used as ornament or decoration by the Indian, although they show no signs of having been worked. A single tarsometatarsal and two ulnae were found in the faunal material excavated during the late fall of 1956 by Mr. Perino. Audubon (1828) refers to the large number of parakeets in the Ohio River bottom in southeastern Illinois, and they apparently were not uncommon locally in similar habitats farther north, so it is somewhat surprising that remains of this colorful bird are not more common in Indian sites.

Ivory-billed Woodpecker (*Campephilus principalis*)—Ridgway (1889) states that "The writer has a distinct recollection of what he believes to have been this species in White county, some forty miles south of Mount Carmel, . . ." Except for this possible sight record there are few or no other published accounts of this woodpecker in Illinois and apparently there are no specimens known definitely to have been collected in the state. Widmann (1907) refers to a specimen collected in southeastern Missouri (Scott County) and Bent (1939) considers southern Missouri and Illinois as the most northwestern extension of its former range. The presence of a tarsometatarsal bone in the village midden material excavated at Cahokia by Mr. Perino in November, 1956, is of special interest since it extends the range of the Ivory-billed Woodpecker approximately 120 miles further north in western Illinois. As Wetmore (1943) pointed out in the case of Ivory-bill remains (metatarsus) from Scioto Co., Ohio, the leg bone would not have been of special interest or use to the Indian and therefore represents the remains of a bird that probably died or was killed locally and not an imported or bartered trade item. The natural presence of this woodpecker in the Cahokia region

is quite plausible, since the heavily wooded bottoms and flood plain forests along the Mississippi River could have provided suitable habitat.

Common Raven (*Corvus corax*)—Cory (1909) lists several references dealing with the former occurrence and abundance of the Raven in Illinois. Apparently they were most numerous in the northern sections, particularly along the shore of Lake Michigan but by 1900 the bird was considered rare and today its presence in Illinois is listed as accidental (Smith and Parmalee, 1955). Remains of the Raven are rare in kitchen midden refuse throughout the midwest region. Goslin (1955) refers to two bones of this species found in an Ohio cave, and Baker (1941) records the humeri of two individuals found in a pit on Plum Island (Starved Rock Site, LaSalle Co.). Faunal remains excavated at Cahokia, Madison County, by Mr. Perino in October, 1956, contained the radius, ulna and carpometacarpal of a Raven. Sections of a radius and ulna were identified from the extensive midden deposits at the Fisher Site (Will County, northern Illinois), excavated by George Langford about 1924.

SUMMARY

A number of species now extinct, extirpated in Illinois, or rare today are represented by remains in Indian sites. These remains throw light on former abundance and on ecological conditions.

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