

VERTEBRATE REMAINS FROM EARLY EUROPEAN AND HISTORIC INDIAN OCCUPATIONS AT THE WATERMAN SITE, RANDOLPH COUNTY, ILLINOIS

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ABSTRACT

Excavation of portions of the Waterman site in 1971, a former Indian village in Randolph County, Illinois that was occupied by the Michigamea and Kaskaskia, yielded ca. 4900 remains of at least 38 vertebrate species. Aboriginal occupation of the area was directly associated with Fort du Chartres, a fort built by the French in 1720 and later occupied by the British from 1765 to 1772. The Indians had relied heavily on the white-tailed deer as a major meat staple in their food economy, with a variety of smaller mammals, aquatic turtles, and fish serving as important diet supplements. Several features and a house structure at this site represented a later (ca. 1820-40) farmstead; remains of pig dominated the faunal remains from this period.

INTRODUCTION

The animal remains examined during this study were recovered at the Waterman site in September and October, 1971, by an archaeological field crew under the direction of Dr. Margaret K. Brown. Excavations were carried out in the village area, once occupied by the Michigamea and Kaskaskia, which is located $\frac{1}{4}$ mile north of the present Fort du Chartres. The fort was built by the French in 1720; however, because of damage due to flooding by the Mississippi River, it was rebuilt in 1727. The third and final construction (of stone) at a more favorable location was completed in 1756 and the fort remained in French hands until British troops took possession in October, 1765. It was then renamed Fort Cavendish and served as the seat of British government in the Illinois Country until it was abandoned and destroyed in 1772.

Bone was encountered in the plow zone, 12 houses, and in 17 features that were recognized as having been a part of the general village area occupied by Indian groups. Cultural materials found in these houses and features, especially the European trade goods (glass beads, copper, lead, ceramics, silver), indicate that the accumulation of associated faunal debris resulted from animals that had been used by Indians (Table 1). Animal remains from House 8 and features 34, 36 and 67 (Table 2), however, represent refuse that is thought to have come from a later (ca. 1820-40) farm in the area. A total of approximately 32 native species were represented in the sample, including 5 fish, 1 amphibian, 10 birds and 11 mammals. Canid remains from six of the houses and four features probably represent Indian dogs which were apparently associated with the village settlement. At least seven dogs were represented, three of which were pups with deciduous dentition. Elements of four domestic animals (chicken, cow, horse, pig) were recovered in the faunal sample, but only 22 pieces (17 cow, 2 pig, 3 horse) occurred in features associated with Indian occupation. Although the Indians may have had their own domestic stock, or on occasion received animals kept by the European inhabitants, these few remains (like *Rattus* and the house mouse in House 8) may be intrusive in the features. A total of approximately 3600 bone pieces from the aboriginal occupation, and 1300 from the early farmstead were examined.

SPECIES UTILIZATION

Bones of the white-tailed deer occurred in all 12 houses and in 14 of the 17 features. At least 20 individuals were represented; in addition to the 689 elements specifically identified as deer, approximately 1,500 unidentifiable large mammal bone fragments were also probably of this animal. A ca. 2-month old fawn from house 15 and a ca. 3 to 4-month old fawn from House 14 suggest that these structures were occupied at least during the middle-to-late summer period. The frequency of deer bone throughout the excavated areas of the village site reflects the animal's significance to these people as a basic source of food, undoubtedly hides, and to a lesser extent bone and antler for the manufacture of utensils and other objects. The deer meat staple was supplemented with a variety of other species such as the bowfin, both aquatic and terrestrial turtles, raccoons and muskrats. The black bear would have also provided a considerable quantity of meat, but judging from the relatively small number of elements recovered (25 pieces, 3 individuals) during the 1971 excavations at Waterman, the animal apparently was taken only occasionally.

A similar limited use of several other mammalian species may be noted. The occurrence of cougar remains (scapula) and those of the bobcat (humerus, radius, ulna) in Feature 67 is of interest, although the use made of these felids is not evident from these unmodified elements. Like most of the other terrestrial species represented by one or a few individuals, they were probably taken in relation to availability. Recovery of only three pieces of beaver bone, an innominate section from Feature 37 and lower jaw and skull section from Feature 47, is surprising in light of the animal's known value to nearly all Indian groups as a source of meat and furs. Possibly the local beaver populations had already been depleted by trappers. Suitable habitat for these large aquatic rodents was present as evidenced by the recovery of muskrat elements in House 10 and Features 7, 37, and 67. At least four muskrats were represented in Feature 37.

Butchering and/or skinning cuts were noted on several elements. Scored white-tailed deer bones included 2 distal humeri (severing the forelimb at the "elbow"), 1 distal tibia (removal of the hind foot at the hock), and 1 scapula (separating the shoulder at the head or proximal end of the humerus); 1 proximal metacarpal, 1 distal metatarsal, 1 sternabra, and 2 carpals exhibited knife marks which may have resulted from the skinning operation rather than from dismemberment of the carcass. The skull section of a large buck found in Feature 8 still had the antlers attached although the left beam had been chopped off about six inches from the base (skull). A section of a large antler beam recovered in Feature 69 had been cut off at the base. Scored marks occurred on the distal end of a muskrat tibia, inflicted during removal of the hind foot. It is of interest to note that a canid (dog?) cervical vertebra from House 13 and ulna and distal tibia sections from House 10 bore knife marks. This evidence suggests that dogs were butchered and eaten on occasion.

Birds played a negligible part in the subsistence of these people, judging by the paucity of avian material in this sample. Only eight species were identified, and, except for remains of two individual ducks associated with Feature 47 and from the plow zone, no more than one individual of each was represented. Combined, bird bones totaled less than one percent of all elements recovered.

The meager quantity of avian bones from the Waterman site is surprising, considering the variety of species and the number of birds that would have been available to these people, especially waterfowl, during migrations. An interesting contrast in the exploitation of an avian food resource by another historic Indian group (Sauk-Fox) may be noted in the variety of species and quantity of bird remains reported from the Crawford farm Site, Rock Island County, Illinois (Parmelee 1964). This village site, situated near the confluence of the Rock and Mississippi rivers, was occupied ca. 1790-1810. Although bird elements (172 identified pieces) constituted only 3 percent of the total sample, there were at least 28 species represented. The occupants of the Michigami village appear to have been either little interested in birds as a source of food, or else they may have been absent from the village during the spring and fall bird migrations. The lack of turkey bones in the sample (the turkey would have been available throughout the year) also points to a possible general disinterest in birds as a food resource.

There were approximately 10 unidentifiable bird bone pieces, four of which had been cut, drilled, scraped or otherwise modified as a tool or ornament. One element, a proximal ulna section of a trumpeter swan which had been cut off by the "groove-and-snap" technique, occurred in Feature 54. Ends of humeri, ulnae, and radii of large birds (e.g. swans, geese, cranes) and occasionally limb elements of mammals were often removed in this fashion and the shaft sections were then modified for use as whistles, special tubes, or for other decorative purposes (Parmalee 1976). Since only the modified shaft portions of the other four worked bird bones were recovered (1 from House 5 with four incised grooves at one end; 1 from House 8 with two incised grooves and four drilled holes at one end), specific determinations could not be made. In spite of the apparent little use of birds as a food supplement, wing bones of large species appear to have been desirable for the manufacture of implements.

The species of fish and aquatic turtles identified from the Indian features are indicative of backwater lakes and sloughs, and it appears that these habitats, rather than the main river channel, were a source of these animals. Although a few buffalo and catfish were taken, the bowfin appears to have been the preferred species; 210 elements of *A. calva* occurred in Feature 69, representing at least seven individuals. Considering the total size of the faunal sample (number of remains and individuals), turtles were of importance as an occasional food supplement in the diet. Large red-eared turtles (*Chrysemys* cf. *scripta*) appear to have been especially prized, although remains of the smaller painted and box turtles were numerous. Aquatic species were the most important. There were at least 65 individuals represented in the Waterman site faunal sample and the number of pieces of turtle shell and bone comprised 20 percent of the total. Turtle remains occurred in 6 of the 12 houses and in 7 of the 17 features. None of the carapace sections bore evidence of having been modified (cut and/or scraped) for use as a bowl or dish, so the use of turtles appears to have been only for food. A plastron section and coracoids from two snapping turtles exhibited butchering cuts. It is of interest to note that no turtle elements were found in the early American structures/features (Table 2).

Freshwater mussels could have served as another easily accessible source of food, but only two unmodified valves were recovered. A right valve of the pocketbook (*Lampsilis ovata*) occurred in House 14 and a left valve of the black sandshell (*Ligumia recta*), was found in Feature 47. An axis section of a small marine gastropod (House 10) was the only other mollusk encountered in the excavations.

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REFERENCES CITED

- Parmalee, P.W. 1964. Vertebrate remains from an historic archaeological site in Rock Island County, Illinois. Trans. Illinois St. Acad. Sci 57:167-174.
——— 1976. A general summary of the vertebrate fauna from Cahokia. In: "Perspectives in Cahokia Archaeology," Ill. Arch. Survey Bull. No. 10:137-155.

Table 1. Vertebrate remains from Indian structures/features at the Waterman Site, Illinois.

Species	No. of pieces	%	Min. no. individ.	% MNI
FISHES	461	12.83	36	21.95
Gar, <i>Lepisosteus</i> sp.	6	.17	1	.61
Bowfin, <i>Amia calva</i>	344	9.57	23	14.02
Buffalo, <i>Ictiobus</i> sp.	10	.28	2	1.22
Buffalo/Sucker: Catostomidae	4	.11	2	1.22
Catfish/Bullhead, <i>Ictalurus</i> spp.	35	.97	8	4.88
Indet. fish bones	62	1.73	—	—
REPTILES (TURTLES)	734	20.43	65	39.63
Snapping Turtle, <i>Chelydra serpentina</i>	44	1.22	9	5.49
Eastern Box Turtle, <i>Terrapene carolina</i>	5	.14	4	2.44
Box Turtle, <i>Terrapene</i> sp.	66	1.84	14	8.54
Painted Turtle, <i>Chrysemys picta</i>	25	.70	11	6.71
Red-eared Turtle, <i>Chrysemys</i> cf. <i>scripta</i>	127	3.53	26	15.85
cf. Map Turtle, <i>Graptemys</i> sp.	2	.06	1	.61
Turtle: <i>Chrysemys/Graptemys</i> group	411	11.44	—	—
Indet. Turtle Bone	54	1.50	—	—
BIRDS	28	.78	10	6.10
Trumpeter Swan, <i>Olor buccinator</i>	1	.03	1	.61
Mallard/Black Duck/Pintail, <i>Anas</i> sp.	1	.03	1	.61
cf. Blue-winged Teal, <i>Anas discors</i>	1	.03	1	.61
cf. Redhead, <i>Aythya americana</i>	3	.08	1	.61
Duck spp.	7	.19	2	1.22
Golden Eagle, <i>Aquila chrysaetos</i>	1	.03	1	.61
King Rail, <i>Rallus elegans</i>	1	.03	1	.61
cf. Common Snipe, <i>Capella gallinago</i>	1	.03	1	.61
Passenger Pigeon, <i>Ectopistes migratorius</i>	3	.08	1	.61
Indet. Bird Bones	9	.25	—	—
MAMMALS	2370	65.96	53	32.32
Opossum, <i>Didelphis marsupialis</i>	1	.03	1	.61
Black Bear, <i>Ursus americanus</i>	25	.70	3	1.85
Raccoon, <i>Procyon lotor</i>	23	.64	7	4.27
cf. Dog, <i>Canis familiaris</i>	49	1.36	7	4.27
Cougar, <i>Felis concolor</i>	1	.03	1	.61
Bobcat, <i>Lynx</i> cf. <i>rufus</i>	4	.11	1	.61
Beaver, <i>Castor canadensis</i>	3	.08	1	.61
Marsh Rice Rat, <i>Oryzomys palustris</i>	1	.03	1	.61
Muskrat, <i>Ondatra zibethica</i>	37	1.03	7	4.27
White-tailed Deer, <i>Odocoileus virginianus</i>	689	19.18	20	12.20
Cow, <i>Bos taurus</i>	17	.47	2	1.22
Pig, <i>Sus scrofa</i>	2	.06	1	.61
Horse, <i>Equus caballus</i>	3	.08	1	.61
Indet. Mammal Bones	1515	42.17	—	—
Totals	3593	100.00	164	100.00

Table 2. Vertebrate remains from early American structures/features at the Waterman Site, Illinois

	House 8	Fea. 34	Fea. 36	Fea. 67	Total no. of pieces	%	MNI
FISHES					405	31.15	20
Smallmouth/Black Buffalo, <i>Ictiobus</i> sp.				14	14	1.08	1
Buffalo, <i>Ictiobus</i> sp.	7				7	.54	1
Black Bullhead, <i>Ictalurus melas</i>	1				1	.08	
Brown, Bullhead, <i>Ictalurus nebulosus</i>	14				14	1.08	
Bullhead, <i>Ictalurus</i> sp.	368				368	28.31	18*
Indet. Fish Bones			1		1	.08	—
AMPHIBIANS					1	.08	1
Eastern Spadefoot, <i>Scaphiopus holbrookii</i>	1				1	.08	1
BIRDS					92	7.08	9
Trumpeter Swan, <i>Olor buccinator</i>			3		3	.23	1
Mallard/Black Duck/Pintail, <i>Anas</i> sp.			39		39	3.00	3
cf. Green-winged Teal, <i>Anas crecca</i>			1		1	.08	1
Duck sp.			12		12	.92	—
Domestic Chicken, <i>Gallus gallus</i>	4		5	2	11	.85	3
cf. Redwinged Blackbird, <i>Agelaius phoeniceus</i>			1		1	.08	1
Indet. Bird Bones			24	1	25	1.92	—
MAMMALS					802	61.69	
Raccoon, <i>Procyon lotor</i>				1	1	.08	1
Squirrel, <i>Sciurus</i> sp.			3		3	.23	2
Eastern Cottontail, <i>Sylvilagus floridanus</i>			4	4	8	.62	2

Rat, <i>Rattus</i> sp.	1			1	.08	1	
House Mouse, <i>Mus musculus</i>	1#			1	.08	1	
White-tailed Deer, <i>Odocoileus virginianus</i>		4	1	5	.38	2	
Cow, <i>Bos taurus</i>	1	1	1	3	.23	1	
Pig, <i>Sus scrofa</i>	29		141	86	256	19.69	14
Indet. Mammal Bones			430	94	524	40.31	—
Totals	427	1	668	204	1300	100.00	54

*MNI, all bullheads, House 8
#Complete skeleton