Food Animals Used by the Indians at the Angel Site

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This report is based on the laboratory identification of a sample of the bones excavated at the Angel Site (2) in Southwestern Indiana. Although the selection was essentially at random, an attempt was made to obtain material from a wide geographical area and to obtain vertical depth series. Thus, although most of the faunal remains were taken from the main village excavations, part were chosen from the temple mound (Mound F), located one-half mile to the Southwest. Village site data represented excavation levels ranging from 0.0 feet, the modern ground surface, to 2.4 feet, the approximate vertical extent of the midden material.

The sample was first divided according to biological classes, as shown in Table I, and was found to consist of 837 Birds, 222 Fish, 388 Reptiles, 4,640 Mammals, and 2,459 bone fragments which, because of lack of markings, could not be identified. Probably the greatest single factor determining the large size of this latter group is the aboriginal practice of breaking bones to obtain marrow. The inability to identify these fragments is actually of little consequence since they represent in nearly all cases, portions of the diaphysis or shaft of long bones, the joints of which are identified in the remainder of the sample. The true sample then can be said to consist of 6087 identifiable bones and fragments.

The mammal bones were then separated into their respective species as shown in Table I. The "residue" shown in this table includes mammal bones which I have been unable to identify to date for lack of adequate comparative material.

It should be noted here that this sample comprises only a small part of an estimated quarter-million bones recovered from this large village site. In view of this, any suggestions drawn from this study must be considered tentative. For instance, the data indicated that in certain areas of the village large game animals were preferred to small species, while in other areas small animals seem to have been preferred to the larger ones. In one sub-division lying along the river bank, a very high proportion of reptile bones, consisting almost entirely of turtle, was encountered. These differences hint strongly of a possible specialization of hunting, but may be purely an artifact of the sampling method.

An analysis of species occurrence by levels revealed no significant vertical trends, so we can assume *pro tem.* that the food habits remained comparatively stable during the period of habitation.

When comparing the faunal remains from many archaeological sites with checklists of the animals in that area at present, one is impressed by the number of species lacking in the aboriginal refuse. For instance, although some 82 species of mammals were probably indigenous to the vicinity of the Angel Site at the time of habitation, only 21 species were identified in the refuse (1). Table II was made to show the species utilized and their relative importance in this and other midwestern sites.

Bird remains were plentiful in the Angel Site sample, where they constituted more than one-eighth of the total identifiable sample. Fish and reptiles (turtles) were also of some importance as together they form approximately one-tenth of the sample. The remains of bats, moles, shrews, and many of the smaller rodents were lacking in this material. Moles and several species of mice have been reported from other midwestern sites, but I think in every case these represent individuals which died in burrows.

The opossum appears to have been relatively important at this site although shunned by the Illinois Hopewell and Mississippi groups. The present northern range of this animal includes Illinois, but may have been more limited in prehistoric times.

Raccoon formed a substantial article of diet among most midwestern groups, ranking third among mammals at the Angel site.

Marten, fisher, weasel, mink and otter are absent or practically so among the refuse of all groups. Although marten and fisher may have been rare or absent in the hunting area of the Angel Indians, weasel, mink and otter must have been rather plentiful. However, since these were considered as fur animals there is a possibility that they were skinned on the spot rather than carried into the village.

Skunks seem to have played a very minor role among these midwestern groups.

No remains of badger were found at this site, nor would they be expected since their historic range lies north of central Illinois (3, pp. 348-352).

Wolves, coyotes and foxes were of sporadic occurrence among these sites and of little importance in any of them, while domestic dogs were numerous among Illinois Hopewell, but of little consequence among others.

In a tabulation of species from many midwestern sites (1, Tables 5, 6, 7), the cougar is conspicuous by its absence in earlier sites and its almost constant occurrence in Middle and Upper Mississippi sites where it likely supplied both food, hide and ornaments.

Gray and fox squirrels were quite important at the Angel Site, the former being the second most numerous mammal in the sample. While present in the refuse of many other sites, they seldom appear in significant numbers.

Beaver were fairly important to most groups and probably were used for both food and fur.

The rice rat has been reported only from Middle and Upper Mississippi sites in Southern Ohio, Southern Indiana and Central Illinois. The former two locations are just within the known northern range for this species (3, pp. 202-204). However, its presence in Central Illinois represents either a new northern range or transportation, perhaps as pets, into the area from the South.

Muskrat show a fairly widespread aboriginal usage, although they are much less represented in this sample than would be expected.

Porcupine bones have been identified at the Angel Site, but not in this testing of material. They have been reported from several Mississippi sites and must have served as a food source, although their quills may have been utilized in some manner.

Rabbits were used to a considerable extent by Mississippi peoples but seem to have been avoided by Woodland groups. Myer (4, p. 608) points out that the avoidance of rabbit may be due to the belief of southern Indians that rabbit flesh imparts timidity to the consumer. Among certain Eastern Woodlands groups the rabbit represents the Culture Hero and may have been avoided for such reason.

Remains of the swamp rabbit *(Sylvilagus aquaticus)* have not been identified as such from any site in the Ohio Valley to my knowledge. One specimen from the Angel Site may well represent this species by reason of its greater size, but for lack of adequate comparative material, it was listed in this report as the cottontail *(Sylvilagus mearnsii)*.

Wapiti were of widespread use and because of their large size must have been much in demand. Deer, however, seem to have formed the staple animal food for all of these groups, as evidenced by the tremendous numbers of their bones.

The absence of bison remains at the Angel Site has been a particularly disturbing problem. It was thought that perhaps since these inhabitants were a sedentary, agricultural people, they had no need or inclination to hunt this animal. This explanation is considerably weakened by the presence of bison remains in other related sites. In most known bison-hunting tribes the meat is removed from the carcass where it is killed, so one would not necessarily expect to find a large number of bones in the village refuse, even among persons largely dependent on them (5, p. 35). There is an even stronger probability that the variety found in this region during early historic times were representatives of the Eastern Bison, being driven west by European settlement. When it is seen that other Indiana and Ohio sites lack bison remains, this possibility becomes more acceptable. It seems likely then that the Angel Site was deserted for a considerable length of time before bison filtered into this region.

This investigation has raised a number of problems rather than actually solving any. A great deal of work will be involved in answering these questions, and it would be greatly simplified if archaeologists would refrain from listing species in their reports as "Present", "Common", "Abundant", or simply as "25 bushels of deer bones."

Although the fauna from the Angel Site will be rather continuously identified for an indefinite time in the future, the author will be glad to undertake identifications from other Indiana or Midwestern sites at any time.

TABLE I. Fauna from the Angel Site

BIRDS	837
FISHES	222
REPTILES	388
MAMMALS	4640
UNIDENTIFIABLE	2459
Opossum—*Didelphis virginiana*	67
Black Bear—*Euarctos americanus*	9
Raccoon—*Procyon lotor*	182
Eastern Skunk—*Mephitis nigra*	2
Illinois Skunk—*Mephitis mesomelas*	5
Eastern Gray Fox—*Urocyan cinereoargenteus*	2
Gray Wolf—*Canis nubilus*	1
Domestic Dog—*Canis familiaris*	12
Adirondack Cougar—*Felis cougar*	34
Bay Lynx—*Lynx rufus*	10
Southern Woodchuck—*Marmota monax*	3
Franklin Ground Squirrel—*Citellus franklinii*	1
Gray Squirrel—*Sciurus carolinensis*	280
Fox Squirrel—*Sciurus niger*	166
Carolina Beaver—*Castor canadensis*	35
Rice Rat—*Oryzomys palustris*	19
Muskrat—*Ondatra zibethica*	1
Porcupine—*Erethizon dorsatum*	x
Cottontail Rabbit—*Sylvilagus floridanus*	47
American Wapiti—*Cervus canadensis*	20
Virginia Deer—*Odocoileus virginianus*	3609
Residue	133

TABLE II. Species Percentages from Various Reports

	Indian Knoll	Illinois Hopewell	Angel Site	Illinois Middle Miss.	Tennessee Middle Miss.
Birds	5.85	4.1	13.7	14.5	9.3
Fish	1.18	17.4	3.6	12.6	3.1
Reptiles	2.02	10.2	6.3	3.8	4.2
Didelphis virginiana	.14	.....	1.1	.....	1.1
Scalopus aquaticus	.....	.....	.....	.....	.....
Euarctos americanus	.01	2.8	.1	.....	4.6
Procyon lotor	1.47	2.2	2.9	.9	2.7
Martes americana	.....	.....	....	.....	.....
Martes pennanti	.....	.....	.....	.....	.....
Mustela cicognanii	.....	.....	..	.....	.....
Mustela vison	.01	.2	.....	.....	.....
Lutra canadensis	.....	.....	.....	.....	.....
Mephitis nigra	.01	.....	.03	.....	.....
Mephitis mesomelas	.01	.....	.08	.....	.....
Taxidea taxus	.....	.2	.....	.....	.....
Vulpes fulva	.03	.2	.....	.07	.....
Urocyon cinereoargenteus	.03	.....	.03	.07	.....
Canis nubilus	.....	.2	.01	.....	.....
Canis familiaris	.36	3.4	.2	.....	.....
Felis cougar	.....	.....	.5	1.1	1.1
Lynx rufus	.04	.....	.1	.....	.2
Marmota monax	.26	.75	.04	.....	.....
Citellus franklinii	.....	.....	.01	.....	.....
Tamias sp.	.01	.....	.....	.....	.....
Sciurus hudsonicus	.....	.....	.....	.....	.....
Sciurus carolinensis	.09	.....	4.6	.....	.9
Sciurus niger	.09	.....	2.8	.....	.9
Castor canadensis	.05	1.1	.6	.9	.03
Peromyscus leucopus	.....	.....	.....	.....	.....
Oryzomys palustris	.....	.....	.3	.....	.....
Microtus sp.	.....	.....	.....	.....	.....
Ondatra zibethica	.....	.75	.01	.9	.1
Erethizon dorsatum	.....	.....	x	.....	.....
Sylvilagus floridanus	.04	.....	.8	.....	.5
Cervus canadensis	.....	5.3	.3	1.9	.2
Odocoileus virginianus	88.37	50.2	59.3	64.1	74.1
Bison bison	.....	.6	.....	.....	.....

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