TRANSACTIONS, ILL. STATE ACAD. SCI.
Vol.67, No. 3 (1974)

FAUNAL REMAINS FROM A LEWIS FOCUS STONE FORT IN SOUTHERN ILLINOIS

M. J. Sabra Noyes and Frederick C. Hill
Water Resources Laboratory
University of Louisville
Louisville, Kentucky

Abstract. The Hog Bluff Site, a Lewis Focus Late Woodland archaeological site in southern Illinois, has provided the first opportunity to study the animal remains from a southern Illinois Late Woodland stone fort. Nearly a thousand remains of mammals, birds, reptiles, and mussels representing 28 individuals reveal that the forest surrounding the site was the principal resource area exploited.

The significance of "stone forts" in Southern Illinois and their relationship to other stone walled sites in Eastern North America is not understood. To gain insight into this problem, the Hog Bluff site, a "stone fort" located in Johnson Co., Illinois, was excavated in the summer of 1973 by the University Museum, Southern Illinois University at Carbondale. This site was occupied between AD 600 and AD 1200 during the Lewis focus of the Late Woodland period (Brieschke 1973:20).

Previously excavated "stone forts" lack faunal data due to poor bone preservation and a lack of awareness of its possible importance. The faunal materials from the Hog Bluff site are well preserved and offer an additional means for understanding its inhabitants and their relationship to the Eastern North American Late Woodland period.

RESULTS

The faunal material from the Hog Bluff site is from a single unstratified midden which contained 939 skeletal fragments. Mammals, birds, reptiles and mussels are represented; however, neither amphibian nor fish remains were present. The number of identifiable bone fragments, the minimum number of animals represented, and their percentages are given in Table 1.

Mammals

Remains of eight species of mammals occurred at the site. The white-tailed deer supplied the greatest amount of meat to the Hog Bluff people. No deer mandibles were complete enough to be aged though at least one individual was immature as evidenced by the presence of a deciduous maxillary molar and the incomplete fusion of the epiphysis and diaphysis of one ulna. Nearly all deer skeletal elements are represented which suggests that the entire animal was brought back to the camp. The long bones are fragmented indicating the extraction of marrow. Butchering and skinning marks as defined by Guilday,et al.

TABLE 1. Animals from the Hog Bluff Site.

Animals	Total Identified	Minimum Number	Percent of Total Minimum Number
MAMMALS	722	11	39.27
Odocoileus virginianus (Zimmerman) White-tailed deer	107	3	10.71
Procyon lotor (Linnaeus) Raccoon	5	2	7.14
Castor canadensis Kuhl Beaver	2	1	3.57
Urocyon cinereoargenteus (Schreber) Gray fox	2	1	3.57
Scalopus aquaticus (Linnaeus) Eastern mole	2	1	3.57
Mephitis mephitis (Schreber) Striped skunk	1	1	3.57
Sciurus carolinensis Gmelin Eastern gray squirrel	1	1	3.57
Sylvilagus sp. Gray Rabbit	1	1	3.57
Indeterminate mammals	601	-	-
Indeterminate bird or mammal	26	-	-
BIRDS	35	4	14.28
Meleagris gallopavo Linnaeus Turkey	5	1	3.57
Tympanuchus cupido (Linnaeus) Prairie chicken	2	1	3.57
Bonasa umbellus (Linnaeus) Ruffed grouse	1	1	3.57
Dryocopus pileatus (Linnaeus) Pileated Woodpecker	1	1	3.57
Indeterminate birds	26	-	-
REPTILES	120	9	32.14
Terrapene sp. Box turtle	46	3	10.71
Tarrapene caroline (Linnaeus) Eastern box turtle	1	1	3.57
Pseudemys-Graptemys-Chrysemys	4	1	3.57
Sternothaerus odoratus (Latreille) Stinkpot	1	1	3.57
Indeterminate turtle	59	-	-
Crotalus sp. cf. *C. horridus* Linnaeus Timber rattlesnake	2	1	3.57
Natrix sp. Watersnake	1	1	3.57
Colubrinae	1	1	3.57
Indeterminate snake vertebrae	5	-	-

MUSSELS	36	4	14.28
Megalonaias gigantea Washboard	2	1	3.57
Megalonaias gigantea (Barnes)	2	1	3.57
Amblema plicata (Lamarck) Washboard or Three ridge			
Anodonta grandis Say Floater	1	1	3.57
Lampsilis sp.	1	1	3.57
Indeterminate mussels	30	-	-
Total number	939	28	99.97

(1962:63-64) appear on the anterior border of one scapula and below the proximal head of a metacarpal. Deer bone artifacts consist of one proximal phlange modified by the removal of its proximal and distal ends. Artifacts of this type are described by Guilday (1963) as being cup and pin games. Two deer ulna shafts were modified into what appear to be awls. Skinning marks appear on a raccoon maxilla between the jugal bone and the second molar and on the ventral labial portion of a beaver mandible. Skinning marks on the raccoon and beaver resulted from the separation of the pelt from the head. All mammals recovered are found in forest and forest edge habitats.

Birds

The prairie chicken is the only animal represented in the faunal assemblage that is restricted to a prairie/bushy grassland habitat. The pileated woodpecker, turkey, and ruffed grouse are associated with forest habitats. One turkey tarsometarsus was modified into an awl.

Reptiles

No modifications appear on either the identifiable or unidentifiable turtle bones. The one box turtle plastron from which sex could be determined is a male. It is a matter of speculation whether the snake remains resulted from direct food gathering activities or if their presence occurred independent of human agency. The eastern box turtle and timber rattlesnake are restricted to wooded areas while *Natrix* sp., *Sternothaerus odoratus*, and *Pseudemys-Graptemys-Chrysemys* group are aquatic reptiles.

Mussels

Anodonta grandis, *Megalonaias gigantea*, and *Amblema plicata*, presently found in rivers and streams near the site, probably were collected from the Ohio River. Differential preservation may have decreased the number of recoverable mussel shell remains since shells are rapidly eroded if soil conditions become acidic. However, the distance of the site from the Ohio River would make mussels less desirable as a food source, thus reducing the number in the remains. One mussel fragment was cut or sawed from the ventral margin approximately two millimeters inward. The function of this artifact is unknown.

DISCUSSION

The faunal material from the Hog Bluff site contained a limited number of mammal, bird, reptile, and mussel remains. Mammals comprised the largest group with deer being the most valuable animal food resource. Various other animals subsidized the diet.

Exploitation of animals was based primarily around forest and forest edge habitats, the animals from these habitats comprising at least 65 percent of the total minimum number. Only the prairie chicken is restricted to a prairie/bushy grassland. The lack of fish remains and the restricted number of mussels, amphibians, and aquatic reptiles indicates that the exploitation of aquatic resources was minimal. This is probably due to the distance of the site from the Ohio River.

The present day ranges of all species recovered from the midden, except

the prairie chicken and ruffed grouse, include the area of the site. Evidences from bone remains found in other archaeological sites in the Midwest indicate that the prehistoric range of the prairie chicken was much more extensive than it is presently. It is likely that during occupation of the stone fort this bird was found near the site in small prairie areas. Although probably presently extirpated in the area of the Hog Bluff Site, the ruffed grouse was prehistorically more than likely a common bird around the site.

ACKNOWLEDGMENTS

We wish to express our thanks to Dr. Walter Brieschke and Mr. Frank Rackerby of Southern Illinois University, Carbondale for allowing us to study the Hog Bluff animal remains and for supplying information concerning the archaeology of the site. We are indebted to Dr. Paul W. Parmalee of the Illinois State Museum who has again graciously aided in identification of certain bird materials. We also wish to express thanks to Mr. David White of the University of Louisville for his critical reading of the final manuscript.

LITERATURE CITED

Brieschke, W. L. and F. Rackerby. 1973. The "stone forts" of Illinois, Outdoor Illinois Magazine 12:19-26.

Guilday, J. E. 1963. The cup-and-pin game. Bull. Soc. Penn. Arch. 33:159-163.

Guilday, J. E., P. W. Parmalee, and D. P. Tanner. 1962. Aboriginal butchering techniques at the Eschelman site (36 La 12) Lancaster County, Pennsylvania. Bull. Soc. Penn. Arch. 32:59-83.