

Introduction

The Gottschall site (47 Ia 80) is a sandstone rockshelter situated at the head of a small valley in northwestern Iowa County, southwestern Wisconsin (Salzer 1987:419-420). In

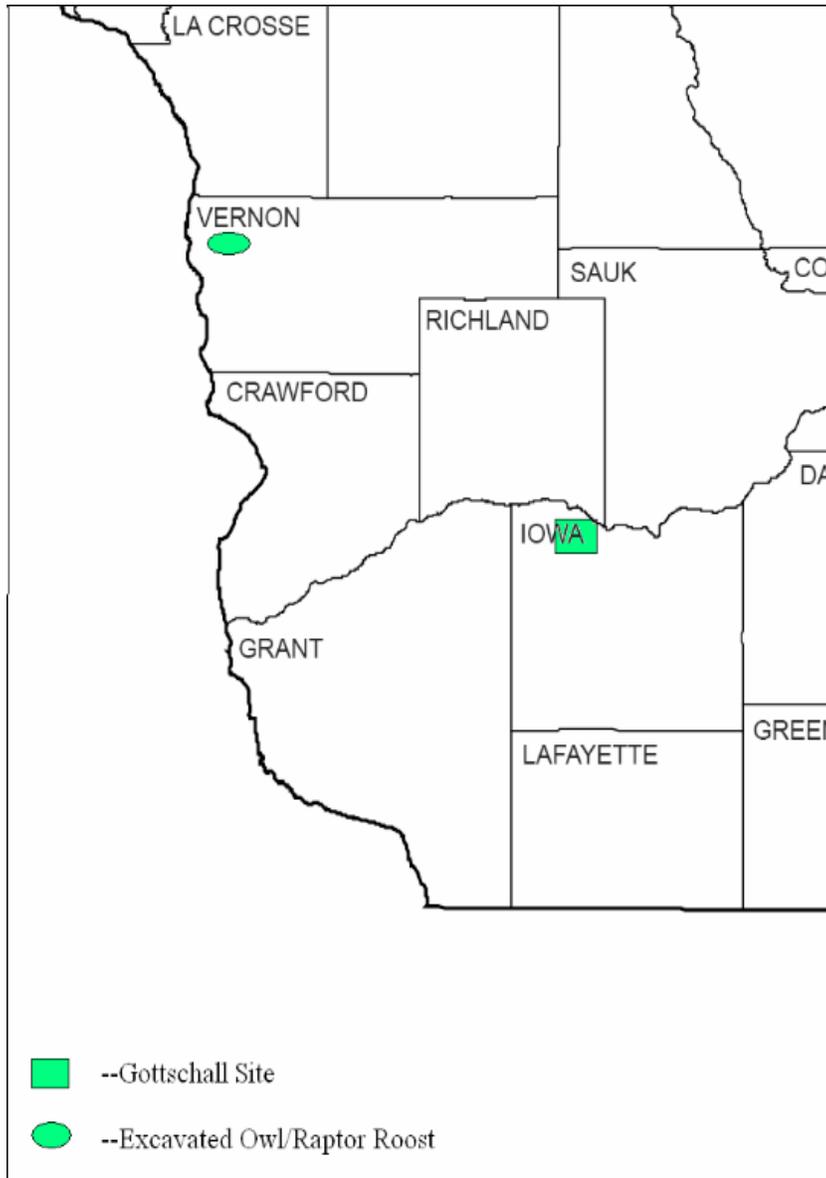


Figure 1: Site Locations in Western Wisconsin

addition to more than forty pictographs and several petroglyphs, this site is important due to its excellent bone preservation, its relatively undisturbed and stratified cultural and natural deposits, and its location (Salzer 1987:419, 2001:1). Due to these criteria, the

Gottschall site has yielded an enormous quantity of mammalian skeletal remains including small mammals whose preservation is limited in western Wisconsin. The excellent preservation of these specimens has allowed for two analyses of this small mammal component: environmental reconstruction and taphonomic analysis.

Environmental Reconstruction

Analysis of archaeological faunal assemblages allows for the reconstruction of past environments and may illustrate shifts in these environments over the occupation periods of a site. The species represented within these assemblages range from those with very general preferred habitats and large scale home ranges to those with very specific environmental requirements and small scale home ranges. The latter species provide a more specific view of the environment that surrounded the site and was exploited by its occupants. Small mammals typically have smaller home ranges and many have specific requirements for the establishment and maintenance of a viable population. Therefore, these species provide a better basis upon which an environmental reconstruction may be produced (Reitz and Wing 1999:307).

Another criterion which aids in the reconstruction of past environments is the site location. Sites located within areas on the periphery of multiple and distinct habitats allow an analyst to more accurately view shifts in the represented habitats and animal communities associated with those habitats (Semken 1980:67). The Gottschall site lies within such a location. The site is located within a small valley cut through the local sandstone by a small intermittent stream (Salzer 1987:420). Prehistorically, the site was located in the vicinity of bluestem grass prairies; savannahs; lowland wet prairies and forests of willows, boxelders, maples, oak, and hickory; forests of yellow birch, maples,

and white pine lining the coulees; and floodplains both underdeveloped (the site's valley) and well developed (Wisconsin River) (Salzer 1987:420-422). Therefore, the site was proximal to various habitats that would have provided necessary niches for those species with specific habitat requirements. Thusly, the Gottschall site meets the above mentioned requirements for a valid environmental reconstruction that may better illustrate prehistoric environmental conditions in an area for which little data is available.

Taphonomic Analysis

Taphonomy is concerned with post-death history (pre- and post-deposition) of faunal specimens. The definition of taphonomic agents that have influenced these histories will further add to knowledge of the activities and processes that have produced archaeological assemblages. These more exact taphonomic histories are desired by archaeologists who wish to better define the anthropogenic and non-anthropogenic processes recorded in the assemblages. Thusly, archaeologists can more precisely measure the species important to past subsistence practices as well as the accuracy with which past local environments can be reconstructed (Lyman 1994).

The latter purpose mentioned above is of importance in the analysis of the Gottschall assemblage. Owls and other raptors frequently use rockshelters as roosting areas where they deposit regurgitated pellets. Owls may regurgitate one to two pellets per day which are made up of undigested materials such as matted fur or hair, bones, and teeth. In this way, owls and other raptors have the potential to deposit significant assemblages of bone (Kusmer 1990). These owl/raptor bone assemblages may affect environmental reconstructions since raptors have large hunting ranges and the deposited pellets may hold

species outside the defined proximal habitats of a site. Therefore, significant deposition of regurgitated pellets may alter environmental data derived from a faunal assemblage.

The Gottschall Rockshelter, therefore, presents a unique opportunity to examine the assemblage with respect to these two analyses. The preservation of small mammals at the site will allow for the reconstruction of the past environment and environmental changes. This environmental reconstruction can be further critically examined with a taphonomic analysis of possible owl/raptor depositional processes. Such an analysis was conducted utilizing an excavated owl/raptor roost and past taphonomic studies of owl/raptor pellets. This paper will focus upon the interplay between these two analyses in order to better define a possible agent in the taphonomic history of the site as well as its possible impact upon the data derived from the environmental reconstruction utilizing the recovered faunal assemblage.

Methods

Taphonomic Analysis

The excavated owl/raptor roost specimens were identified to skeletal element and the most exact taxonomic designation possible through comparison with the comparative collection housed at the Laboratory of Archaeology located on the University of Wisconsin-La Crosse campus. Breakage patterns and other observed characteristics were then recorded for each specimen. Finally, the presence, degree, and location of ingestion damage were recorded for each specimen.

The MNI (Minimum Number of Individuals) was determined for each identified species within the excavated owl/raptor roost and the Gottschall assemblage through the use of the most numerous element of a specific side. The percentage present and the relative

frequency were determined for the species represented, elements, breakage patterns, and ingestion damage for both the excavated owl/raptor roost and the Gottschall assemblages. The above derived data was statistically analyzed using an F-test which compared two data sets (the Gottschall and the excavated owl/raptor roost data) under the assumption that they possessed similar variances. This same statistical test was performed for the Gottschall and excavated owl/raptor roost to past studies on owl/raptor pellet composition. These tests were then compared and interpreted to determine if possible owl/raptor activity had any effect upon the deposition of small mammals at the Gottschall Rockshelter.

Environmental Reconstruction

The Gottschall specimens were initially separated into two subgroups: specimens labeled NVC (No Vertical Control) and specimens with precise provenience data. This initial step was taken to ensure that identified species could be precisely placed within the site stratigraphy. The specimens were then identified to skeletal element and the most exact taxonomic designation possible through comparison with the comparative collection housed at the Laboratory of Archaeology located on the University of Wisconsin-La Crosse campus. Also, data for each specimen was recorded with respect to breakage patterns, human modifications, burning, gnawing, and other observed characteristics. Finally, the location and degree of damage due to ingestion was recorded for each specimen. The specimens were then allocated a catalog number and placed within polyethylene bags or plastic snap cases labeled with the above data.

The specimens identified to the species level were then separated by stratigraphic level. The MNI was determined for the allocated species with precise provenience for each of these stratigraphic levels through the use of the most numerous element of a specific side.

In addition, the preferred habitat, natural range, and species specific behaviors were determined for each species represented in the Gottschall assemblage. The preferred habitat data was then used to determine the percentage of representation for each habitat with respect to each stratigraphic level. For those species with wide ranging preferred habitats, their relative representation was recorded for all of the noted favored habitats. This data was then used to observe changes in the relative representation of each habitat in order to determine any environmental changes over time. Finally, other species specific information was utilized to determine other environmental indicators.

Driftless Area

The Driftless Area is a geographic region, approximately 15,000 square miles in size, which lies mainly in Wisconsin but also extends into Minnesota, Iowa, and Illinois (Martin 1965:83). The distinctive topography of the area is due to the lack of direct glaciation by the major ice sheets that extended into the area during the late Pleistocene (Blanchard 1924:9-11). The area was described by Stephen H. Long during his topographical survey in 1817 and Edward Daniels, the first state geologist, in 1854 as composed of many prairie crested ridges that are separated by stream cut valleys. The valleys dropped from their ridgetops via precipitous cliffs into well formed valley floors dotted in places with woodlands (Martin 1965:84, Kane et al. 1978:86). While the area was not directly affected by glaciation, glacial outwash deposits are found in larger valleys and wind blown loess was deposited upon ridgetops (Hole 1976:51-60).

As described above, the Driftless Area prehistorically consisted of mainly prairie and savannah habitats with protected area producing various woodland habitats. Of interest in



Figure 2: Glacial Map of Wisconsin (Courtesy of Maps ETC)

this study is the presence of microhabitats within this area. The region as a whole has an average temperature range of 13.8 to 83.4 degrees Fahrenheit (Moran and Hopkins 2002:294, Appendix D). However, studies of floral species present in the Driftless Area have shown soil temperature differences of around 35 degrees Fahrenheit during the summer months (Curtis 1959:40-41). Microhabitats caused by such microclimates have been shown to exist in the Driftless area through floral studies (Curtis 1959:14, 153, Hartley 1966:17-20). Similarly, observations have shown that certain faunal species exist as *refugium* species in certain valleys (Theler, personal communication).

The existence of these microhabitats is crucial to any analysis of the Driftless Area. The Gottschall site is rare for this area in its production of small mammal assemblages and as such its data must be correctly analyzed. Since rockshelters are utilized by owls and other

raptors as roosts, owl/raptor pellet deposition may have been a factor at the Gottschall site. This presents a problem for environmental reconstruction since the Driftless Area possesses these *refugium* species. Owls and other raptors have variable ranges depending upon the season, prey availability, and other factors (Newton 1979). This increase in predation range may affect the species represented in the assemblage and thereby skew the interpretation of said data. Therefore, taphonomic analysis of the Gottschall site is necessary for a more precise interpretation.

Excavation History

Gottschall Site

The excavations at the Gottschall site were initiated with a two meter wide L-shaped trench (N-S and E-W arm orientation) to determine the extent of the disturbance and mixture of stratum present at the site. Each stratum was excavated in arbitrary 10 cm levels until a new stratum was uncovered. Each stratum was labeled with an alphabetical zone designation (Zone A, B, etc.). The trenches were excavated in alternative two meter squares in order to analyze soil profiles and allow for reserves. Sediment samples were collected from each zone and the entire contents of features were collected (Salzer 1987:425-427, 2001:7).

An alternative strategy was developed for later excavations. The second strategy was the excavation of one meter squares at arbitrary 2 cm levels for each stratum. This strategy also included the intensification of information recording including pedestaling of items larger than a quarter, photography, mapping, and designation of piece plot numbers (Salzer 1987:427-428, 2001:8).

Throughout all excavation seasons, the uncollected sediment was passed through quarter inch mesh hardware cloth. All collected sediment for each stratum and feature was floated. During the 1986 and 1987 excavation seasons, all sediment from the squares under the rock art was collected and floated (Salzer 1987:428).

Owl/Raptor Roost

The owl/raptor roost was excavated in a one meter by forty centimeter square at a depth of three quarter centimeters against a rock face in Vernon County in 1986. The collected pellets were opened and the skeletal elements removed. The collected sediments were water screened through one sixteenth inch screens in order to recover as much organic material as possible. (Theler, personal communication)

Assemblage Data

Gottschall

The Gottschall assemblage contained 1,260 non-artifactual skeletal elements that were able to be identified to genus and species level. One specimen was artifactual in nature as will be discussed below. The skeletal elements identified to genus and species level represent 34 mammalian taxa listed in Table 1. The following discussion will describe the various genus and species identified not discussed in the environmental reconstruction.

Black Bear. Only two black bear (*ursus americanus*) skeletal elements were identified from the Gottschall assemblage. These two elements are represented by two phalanges, one of which is a distal phalange (Figure 3). Such leg extremity elements were described as having been left upon the hide. Such elements are typically associated with skull parts from which the canine teeth are extracted (Theler 2000:127). Therefore, the

presence of these black bear extremity elements may represent the harvesting of their claws for ornamentation.

<u>Scientific name</u>	<u>Common name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<u>Blarina brevicauda</u>	Short-tailed Shrew	<u>Mustela vison</u>	Mink
<u>Canis familiaris</u>	Domestic Dog	<u>Mephitis mephitis</u>	Striped Skunk
<u>Canis latrans</u>	Coyote	<u>Myotis lucifugus</u>	Little Brown Bat
<u>Castor canadensis</u>	Beaver	<u>Odocoileus virginianus</u>	White-tailed Deer
<u>Didelphis virginiana</u>	Opossum	<u>Geomys bursarius</u>	Pocket Gopher
<u>Eptesicus fuscus</u>	Big Brown Bat	<u>Mustela frenata</u>	Long-tailed Weasel
<u>Felis catus</u>	Domestic Cat	<u>Peromyscus leucopus</u>	White-footed Mouse
<u>Glaucomys volans</u>	S. Flying Squirrel	<u>P. maniculatus</u>	Deer Mouse
<u>Lutra canadensis</u>	Otter	<u>Ondatra zibethicus</u>	Muskrat
<u>Lynx rufus</u>	Bobcat	<u>Procyon lotor</u>	Raccoon
<u>Marmota monax</u>	Woodchuck	<u>Scalopus aquaticus</u>	Eastern Mole
<u>Martes pennanti</u>	Fischer	<u>Sciurus carolinensis</u>	Gray Squirrel
<u>Microtus ochrogaster</u>	Prairie Vole	<u>Sciurus niger</u>	Fox Squirrel
<u>Microtus pennsylv.</u>	Meadow Vole	<u>Sperm. Trideceml.</u>	13-lined ground Squirrel
<u>Mus musculus</u>	House Mouse	<u>Sylvilagus floridanus</u>	Cottontail Rabbit
<u>Taxidea taxus</u>	Badger	<u>Tamias striatus</u>	Eastern Chipmunk
<u>U. cinereoargenteus</u>	Gray Fox	<u>Ursus americanus</u>	Black Bear

Table 1: Identified species from Gottschall assemblage

Small mammals. The bobcat (*Lynx rufus*) is represented by a single atlas. One lower molar was also identified to the Lynx species (Figure 4). As with the black bear, these



Figure 3: Bear elements represented in Gottschall assemblage

elements may represent the harvesting of specific element for either ornamental or ritualistic purposes. Similarly, the low element representation of the otter (*Lutra Canadensis*-1), Fischer (*Martes pennant*-13), Long-tailed weasel (*Mustela frenata*-15), Mink (*Mustela vison*-16), gray fox (*Urocyon cinereoargenteus*-1), and Badger (*Taxidea taxus*-1) may represent ornamental and/or ritualistic purposes (Theler 2000:127). This is supported by the fact that a Fischer canine was recovered that had a hole drilled into it in order for it to be used as ornamentation (Figure 5). However, the inclusion of the small number of elements of opossum (1), Woodchuck (4), Rabbit (12), and Skunk (2) may represent inclusion in the subsistence activities rather than ritualistic or ornamental activities since their inclusion has not been argued to be ritualistic or ornamental in nature (Theler 2000).



Figure 4: Lynx skeletal elements from the Gottschall site



Figure 5: Fischer elements from the Gottschall site.

Canids. Canid elements represent the fourth largest number of identified small mammal skeletal elements represented in the Gottschall assemblage (62). The vast majority

of these identified elements are representative of domesticated dogs (58/62). The remainder of the canid elements is represented by the coyote (4/62). Figure 6 illustrates the cultural



Figure 6: Domestic dog elements from the Gottschall site

nature of the dog skeletal elements (Figure 6). Two specimens show burning while four elements show evidence of cut marks and one showed greenbone fracture.

Raccoon. The skeletal elements representing Raccoon (*Procyon lotor*-64) represent the third most numerous species represented in the small mammal component. Several elements (Figure 7) show canid impact marks and gnawing as well as greenbone fracture and cut marks (S20 W11 H 9/2). This suggests that Raccoon skeletal remains are cultural in nature and may represent an addition to the occupant's subsistence activities.



Figure 7: Raccoon elements for the Gottschall site

Riparian mammals. Two species of mammals associated with permanent water were found in the Gottschall assemblage. Thirteen elements were identified as beaver (*Castor canadensis*). Eight of the thirteen elements (62%) are represented by incisors. Beaver are a species that require permanent water and as such represent a river habitat proximal to wooded areas (Jenkins and Busher 1979). It has been proposed that the existence of such remains as seen in the Gottschall assemblage represent the use of these elements as woodworking tools (Theler 200). This is supported by the preponderance of incisors within the assemblage as well as the fact that one such incisor shows signs of striation (figure 8). Muskrats (*Ondatra zibethicus*) are represented by only two dentition



Figure 8: Beaver elements from the Gottschall site

elements. While Muskrat have similar habitat preference (Willner et. al 1980.), they are not of similar cultural significance since their incisors are not valued as woodworking tools (Theler 2000).

Excavated Owl/Raptor Roost

The excavated owl/raptor roost contained 505 mammalian skeletal elements able to be identified to genus and species level (Table 2). It also contains 121 avian elements, 17 fish, 5 amphibian, and one crayfish element identified to genus and species level (Table 3). Thirteen Mammalian, nine avian, two fish, one crayfish, and one amphibian taxa were recorded for the roost assemblage.

While owl's prey does contain large numbers of small mammals such as rodents, larger owl species such as the great horned owl do prey upon larger species (Sparks 1970). The 1956 study by Craighead and Craighead recorded that a great horned owl prey species

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<u>Mephitis mephitis</u>	Striped Skunk	<u>Ondatra zibethicus</u>	Muskrat
<u>Sylvilagus floridanus</u>	Cottontail Rabbit	<u>Sciurus niger</u>	Fox Squirrel
<u>Rattus norvegicus</u>	Norway rat	<u>Blarina brevicauda</u>	Short-tailed Shrew
<u>Didelphis virginiana</u>	Opossum	<u>Mustela erminea</u>	Short-tailed weasel
<u>Eptesicus fuscus</u>	Big Brown Bat	<u>Microtus ochrogaster</u>	Prairie Vole
<u>Microtus pennsylv.</u>	Meadow Vole	<u>Peromyscus leucopus</u>	White-fted Mouse
<u>Peromyscus maniculatus</u>	Deer Mouse		

Table 2: Identified mammal species for roost assemblage

<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>
<u>Bonasa umbellus</u>	Ruffed Grouse	<u>Zenaida macroura</u>	Mourning Dove
<u>Quiscalus quiscula</u>	Common Grackle	<u>Agelaius phoeniceus</u>	Red-winged Blackbird
<u>Turdus migratorius</u>	American Robin	<u>Colaptes auratus</u>	Northern Flicker
<u>Columba livia</u>	Rock Dove/Pigeon	<u>Corvus brachythy.</u>	American Crow
<u>Cyanocitta cristata</u>	Blue Jay	<u>Catostomus comm.</u>	White Sucker
<u>Hypentelium nigr.</u>	N. Hog Sucker	<u>Cambarus diogenes</u>	Devil Crayfish
<u>Rana pipens</u>	N. Leopard Frog		

Table 2: Fish, bird, amphibian species identified from roost assemblage

included suckers, ducks, medium and small birds, grouse, and rabbits (Craighead and Craighead 1956:407). In fact, great horned owls have been hunted since hunters have argued that they took too many such species (Sparks 1970:116). However, the small number of identified specimens for the striped skunk and opossum may illustrate predation

upon species killed upon the local roadway. The inclusion of calanci and astragali for other species such as rabbits show the consumption of whole individuals.



Figure 9: Typical breakage pattern for large species in roost assemblage

The large species represented at the site show differences in breakage patterns as seen in figure 9. Larger numbers broken elements are represented by these larger species while the smaller species show more whole elements as seen in figure 10. Larger species also demonstrate fewer instances of digestion than the smaller species. The digestion patterns seen in the elements of the assemblage show that the proximal and distal ends of long bones are the first to be affected by digestive juices (Figure 11). Juvenile individuals as seen with many of the rats in the assemblage show more intense digestion throughout elements.



Figure 10: Typical breakage patterns for small species in the roost assemblage



Figure 11: Digestion patterns for elements from the roost assemblage

Results and Discussion

Taphonomic Analysis

The percent present (PP) for the Gottschall and excavated owl/raptor roost assemblages was calculated using the following formula:

$$PP = \text{NISP observed} / \text{NISP expected}$$

The expected NISP (Number of Identified Specimens) was calculated by doubling the MNI determined for each assemblage (Kusmer 1990:630). This figure measures the relative representation of the skeletal elements recovered from pellet assemblages. Kusmer argued that PP figures for large owl pellet assemblages would remain high and his study showed PP figures that ranged from 0.61 to 1.00 (Kusmer 1990:630). Table 1 illustrates that the excavated owl/raptor roost from Vernon County, Wisconsin does not match Kusmer's assemblage figures. Similarly, the PP figures from Gottschall and

Element	Entire Roost	Sm. Mammal	Gottschall	Westbury
Maxilla	0.37	0.97	0.21	0.30
Mandible	0.51	0.54	0.85	0.11
Scapula	0.15	0.04	0.07	0.03
Humerus	0.58	0.49	0.23	0.24
Radius	0.22	0.04	0.12	0.06
Ulna	0.38	0.16	0.12	0.10
Pelvis	0.45	0.22	0.10	0.04
Femur	0.72	0.33	0.35	0.23
Tibia	0.53	0.12	0.27	0.22
Fibula	0.07	0.01	0.06	N/A

Table 1: Representation of paired skeletal elements for discussed assemblages

another study from Westbury, England (Andrews 1990) do not match Kusmer's findings overall. Another set of PP figures for the excavated owl/raptor roost was determined for only those mammals identified that were small enough to be swallowed whole by owls since Kusmer argued that this factor was determinate for his derived PP figures (Kusmer 1990:630). A similar study performed by Rebecca Terry also illustrated similar PP figures to Kusmer's study for the same factor (Terry 2004). However, these new PP figures illustrated that high PP figures were not necessarily indicative of roost pellet assemblages. This lack of high PP figures for the excavated owl/raptor roost, Gottschall, and the Westbury assemblages may indicate that geographic location may play a factor in the preservation of skeletal elements due to soil, climatic, watershed, and other conditions. Discrepancies between the PP figures for the small mammal component owl/raptor roost and Gottschall were also present. While many of the lowest PP figures were for similar skeletal elements, the PP figures were lower for many in the owl/raptor roost. Humeri, ulnae, and maxillas had higher PP figures for the owl/raptor roost than for the Gottschall assemblage and the Gottschall assemblage had significantly higher PP values for mandibles. This discrepancy is unlikely to be linked to a lack of preservation since these some of these elements are more robust in nature than others. Also, there are discrepancies between the Westbury and Gottschall assemblages which both have similar post-depositional histories. This suggests that the deposition of paired skeletal elements differed for these assemblages.

Table 2 lists the relative completeness of the above mentioned skeletal elements for the entire and small mammal component of the owl/raptor roost, Gottschall, and the Westbury study (Andrews 1990). Kusmer's study found that large owl pellet assemblages showed a

high percent of element completeness (67-100%) for all elements except scapulas (Kusmer 1990:630-633). The owl/raptor roost and the Westbury study, however, have low percent of whole elements in the assemblages (Andrews 1990). This may again indicate the conditions for variable geographic regions may alter the taphonomic signature of an assemblage. The Westbury study was conducted in non-cultural cave deposits which suggest that burial would affect the preservation of complete skeletal elements (Andrews 1990). A study performed by Naomi Smoke and Peter Stahl demonstrated that sediment type and overburden will significantly alter the completeness and observed breakage patterns in pellet assemblages (Smoke and Stahl 2004). This pattern is not illustrated in the Gottschall assemblage. The percents of whole elements are

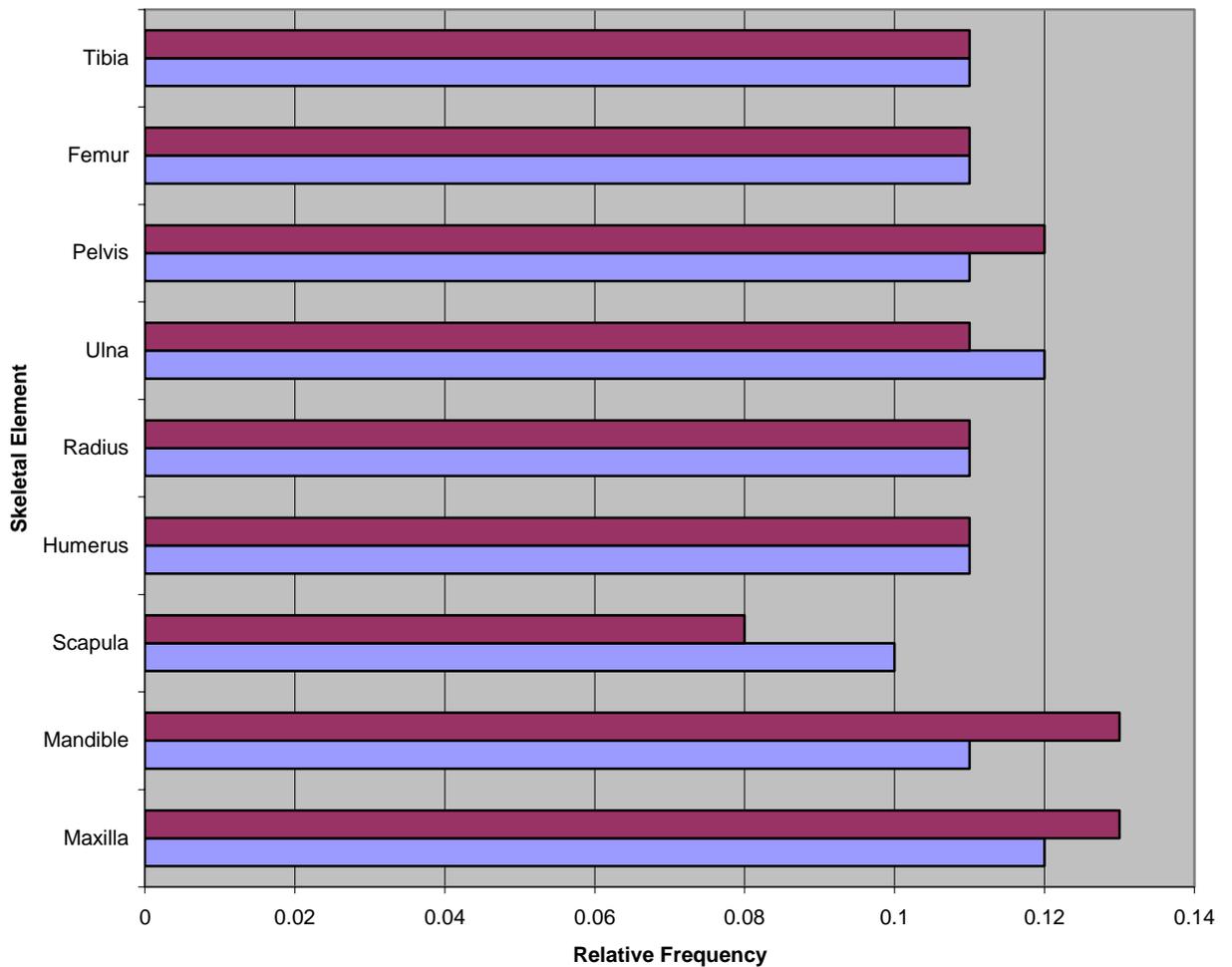
Element	Entire Roost	Small Mammal	Gottschall	Westbury
Maxilla	1%	14%	37%	N/A
Mandible	23%	14%	28%	N/A
Scapula	0%	0%	21%	N/A
Humerus	34%	55%	48%	8%
Radius	64%	95%	36%	N/A
Ulna	44%	68%	46%	5%
Pelvis	2%	10%	16%	N/A
Femur	30%	77%	48%	8%
Tibia	10%	54%	45%	14%
Fibula	7%	0%	50%	N/A

Table 2: Percent completeness of skeletal elements

higher for several of the less robust represented elements. The Gottschall assemblage was subject to similar overburden and sediment type as discussed in Smoke and Stahl's study

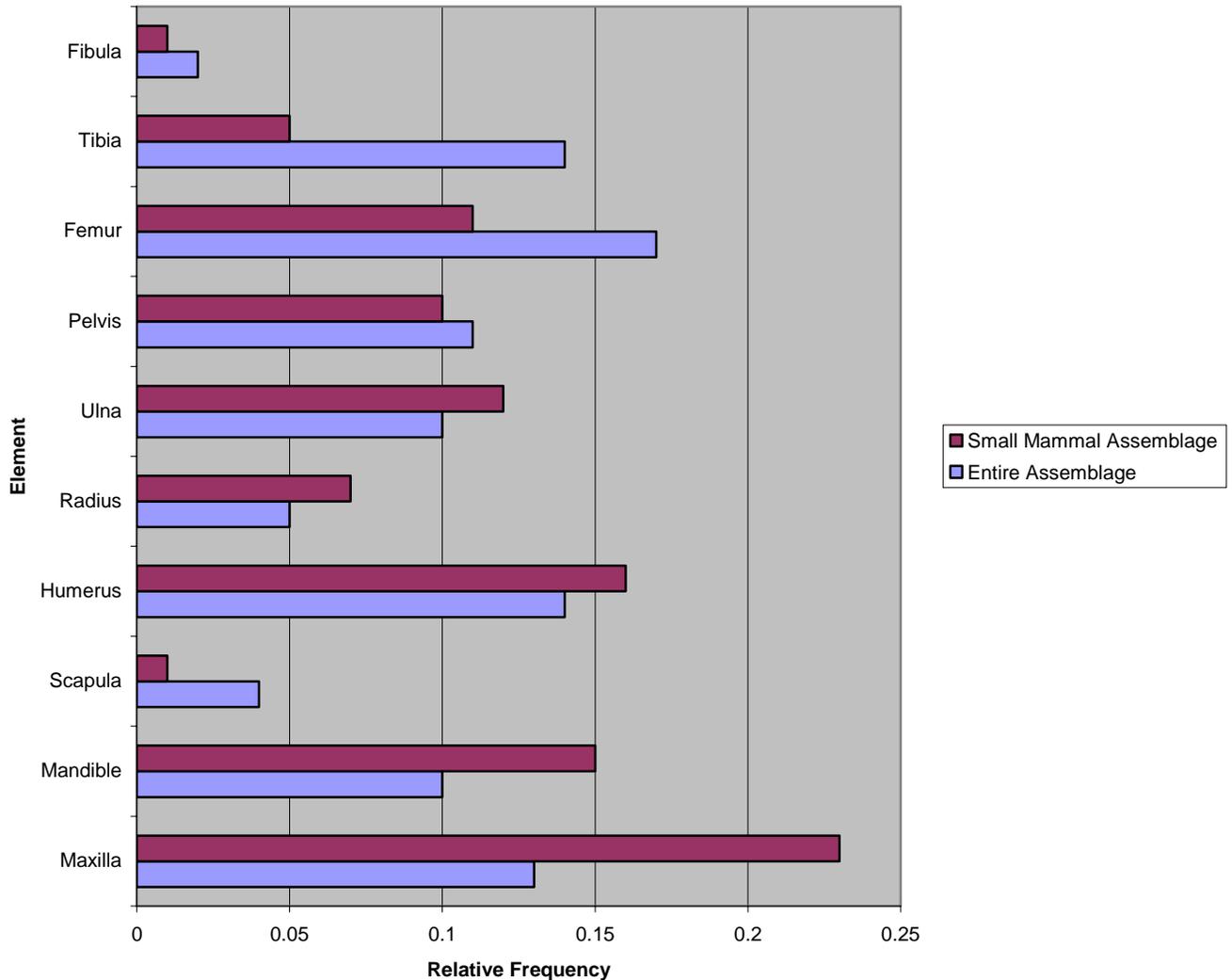
(Smoke and Stahl 2004). In addition to their experiment on overburden and sediment type on owl pellets, Smoke and Stahl subjected whole undigested elements to the same tests. Their study found that undigested elements retain more of their completeness than do elements subjected to digestion by owls (Smoke and Stahl 2004). This conclusion and the relative high percent of whole elements for the Gottschall assemblage suggest that pellet deposition was not a factor at the Gottschall site.

Graphs 1-4 demonstrate the relative frequency of skeletal elements for the owl/raptor roost, Kusmer’s study, Gottschall, and the Westbury study. Kusmer’s study showed that



Graph 1: Relative Frequency of Skeletal Elements for Kusmer Study

skeletal elements were mostly equal in their relative frequency (Kusmer 1990:632). This pattern is not illustrated by the excavated owl/raptor roost, the Gottschall assemblage, or the Westbury study (Andrews 1990). While the effect of burial over an extended period of time on the relative frequency of elements may be argued, the excavated owl/raptor

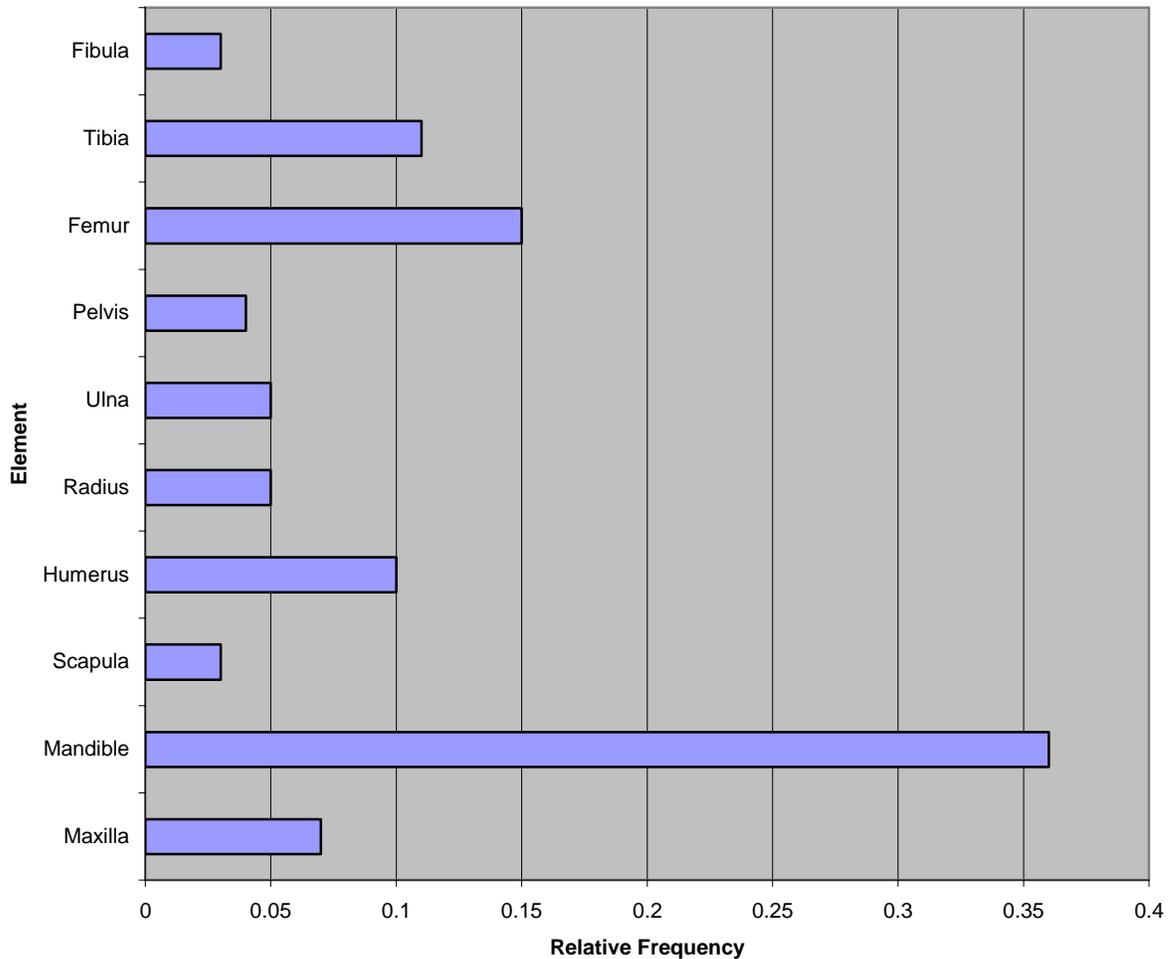


Graph 2: Relative Frequency of Skeletal Elements for Owl/Raptor Roost

illustrates relative frequency patterns similar to Gottschall and the Westbury study.

Therefore, the data suggests again that geographic factors may alter the taphonomic signature of a pellet assemblage. The relative frequencies of the Gottschall and Westbury

assemblages differ with respect to mandibles, maxillas, humeri, and tibias. This discrepancy suggests that owl pellet deposition may not have been a factor at the

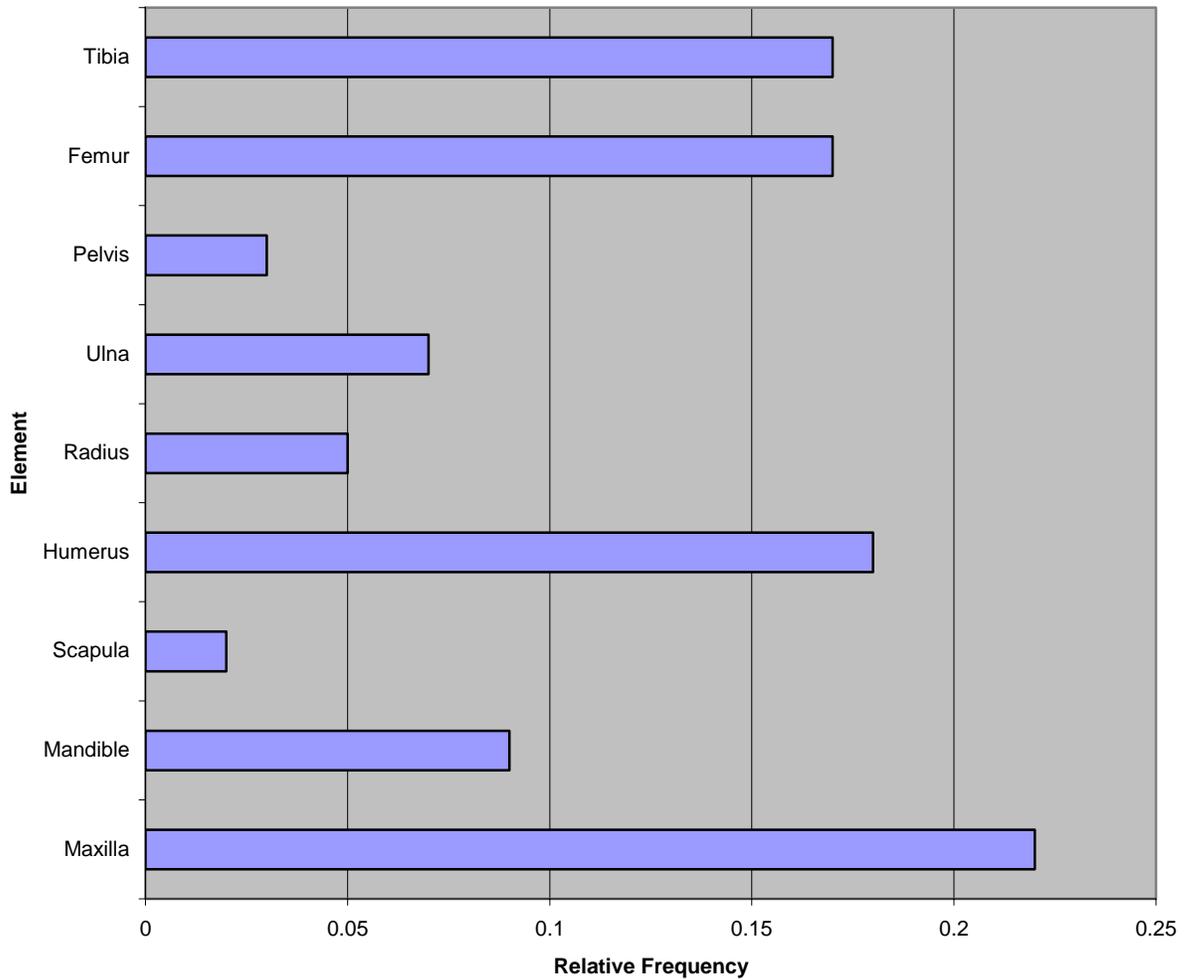


Graph 3: Relative Frequency of Skeletal Elements for the Gottschall Site

Gottschall site.

Finally, the relative frequency of skeletal elements was subjected to a statistical analysis. Table 3 presents the variance and standard deviation of the relative frequency of elements for the above studies. The standard deviation and variance for the excavated owl/raptor roost, Gottschall, and the Westbury study (Andrews 1990) all present are much greater than Kusmer's study (Kusmer 1990:633). Therefore, geographic factors are

indicated (as above) in the derivation of the taphonomic signature of owl pellet assemblages. The F-test results in the comparison of the various studies shows that the



Graph 4: Relative Frequency of Skeletal Elements for the Westbury Study

	Entire Roost	Sm. Mam.	Gottschall	Kusmer 1	Kusmer 2	Westbury
Variance	4.222	10.336	9.943	1.82	1.2	5.536
Std. Dev.	6.497	10.167	9.971	1.43	1.2	7.441

Table 3: Standard Deviation and Variances for Relative Frequency of Elements

variances of the compared studies are significantly similar for the Kusmer Study vs. Westbury study test ($p=0.00000006$) and owl/raptor roost vs. Kusmer Study test ($p=0.0000000458$). However, the results of the comparison of the Gottschall site vs. the Westbury Study test ($p=0.21$) and the Owl/raptor roost vs. the Gottschall site test ($p=0.48$) indicate that the assemblage variances were not significant. Therefore, the Gottschall assemblage signature does not match the taphonomic signature of an owl pellet depositional site.

Environmental Reconstruction

Descriptions of Preferred Habitat by Species

Blarnia brevicauda

The short-tailed shrew has a relatively unrestricted habitat as long as sufficient surface litter is present. This species inhabits various woodlands, marshes, swamps, and the borders of fields, prairies, and other grassland habitats but generally avoids open water (Jackson 1961:42-55, Hazard 1982:25-27). Short-tailed shrew populations fluctuate significantly with the availability of sufficient prey species (mostly insects but also mice). A study has shown that this species fluctuates from 0.8 to 2.2 shrews per acre (Blair 1940:287-288). Of significance, the short-tailed shrew is a good measure of the local moisture content since it requires a moist environment in order to produce a viable population (Jackson 1961:44-45, Hazard 1982:26, Blair 1940). The restriction of their home range to 0.8 acres for females and up to 4.43 acres for males allows for an interpretation of the relative moisture content of the habitat within which they were found (Blair 1940:287)

Geomys bursarius

The plains pocket gopher is found in tall and short grass prairie environments as well as open woodland habitats. It prefers loose sandy or soft loam soils in which it produces extensive burrows (Jackson 1961:185-190, Hazard 1982:76-78, Stoner 1918:108-122). Archaeologists have extensive experience with the disturbance that these species can produce at archaeological sites. The Gottschall site shows evidence of this burrowing disturbance (Salzer 2001:9) and therefore only elements recovered within a solid provenience were utilized in this study.

Glaucomys volans

The southern flying squirrel is associated with woodlands of deciduous trees or mixed hardwood and conifer if the hardwood trees are dominant. They require a density of canopy sufficient to allow them to glide from tree to tree. Therefore, they are more closely associated with a closed canopy habitat. Of particular interest to this study, the southern flying squirrel is an exclusively nocturnal species. They are rarely glimpsed due to this predilection and their presence on the Gottschall assemblage, therefore, may be linked to owl predation (Dolan and Carter 1977, Hazard 1982:71-73, Jackson 1961:175-180, Stoner 1918:17-19).

Microtus ochrogaster

The prairie vole is a species exclusive to open grassland /prairie habitats. It inhabits treeless and dry environment that are mostly undisturbed in nature. The prairie vole has been reported to avoid the sharing of habitat with the meadow vole (Microtus pennsylvanicus) (Hazard 1982:95-96, Jackson 1961:236-239, Stoner 1918:87-91)

However, an ecological study by David Lewis found that sympatric populations, when

present, are formulated upon soil moisture. The prairie vole will inhabit drier soils of an inhabited area while moister soils are allocated to the meadow vole (Lewin 1968).

Microtus pennsylvanicus

The meadow vole, as noted above, is associated mostly with moist grasslands and meadows. They are also generally found along the grassy edges of permanent water such as lakes, ponds, bogs, and marches. Meadow voles are also found within open woodlands as long as sufficient ground cover is present (Hazard 1982:92-94, Jackson 1961:229-235, Reich 1981, Stoner 1918:78-87)

Peromyscus leucopus

The white-footed or wood mouse is associated with deciduous woodlands and their brushy grassland borders especially log strewn woodlands near rivers or streams. While the white-footed mouse may be associated with grassland habitats, it is never without close association with wooded habitats. The white-footed mouse is also associated with rocky outcrops where many cracks and cavities are present. It is more tolerant of open woodland habitats than other species and its populations will thrive to a greater extent (hazard 1982:86-88, Jackson 1961:216-219, Stoner 1918:69-73).

Peromyscus maniculatus

The prairie deer mouse is associated with open and dry meadows, grasslands, and prairies. Deer mouse populations are highest in areas of little or no ground cover, although it is sometimes found in areas of light brush. It is seldom found in woodland habitats (Hazard 1982:85-86, Jackson 1961:213-215, Stoner 1918:73-76).

Scalopus aquaticus

The eastern mole is found in prairies, grassland, meadows, and woodlands with loose sandy soil. Their range is closely associated with the moisture of the soil. The eastern mole prefers areas with moist soil but will avoid soils that are too waterlogged (Hazard 1982:28-29, Jackson 1961:61-67).

Sciurus carolinensis, Sciurus niger

The gray squirrel (Sciurus carolinensis) is associated with hardwood forests particularly near river bottoms, watercourses, and rocky outcrops. The fox squirrel (Sciurus niger) is also associated with woodlands but prefer more open wooded areas with little brush. When these species are sympatric, they will tend to avoid the other. The gray squirrel will inhabit the denser, brushy, closed canopy woodlands while the fox squirrel will remain in the open woodland areas (Hazard 1982:63-69, Jackson 1961:155-169, Stoner 1918:19-24)

Spermophilus tridecemlineatus

The thirteen-lined ground squirrel is a primarily found in prairies, grasslands, and meadows. However, it is also occasionally found in open woodlands when there is sufficient grassy cover. It is rarely if ever found in dense woodlands. The thirteen-lined ground squirrel will also avoid wet, swampy ground (Hazard 1982:60-62, Jackson 1961:130-138, Stoner 1918:29-36).

Tamias striatus

The eastern chipmunk is associated with open hardwood woodland habitats. It is the most terrestrial of the squirrels and will rarely spend any length of time in the trees of their home range. The eastern chipmunk has a typical home range of 1-2 acres but may occasionally extend this range to three acres (Hazard 1982:52-54, Jackson 1961:142-148, Stoner 1918:27-29).

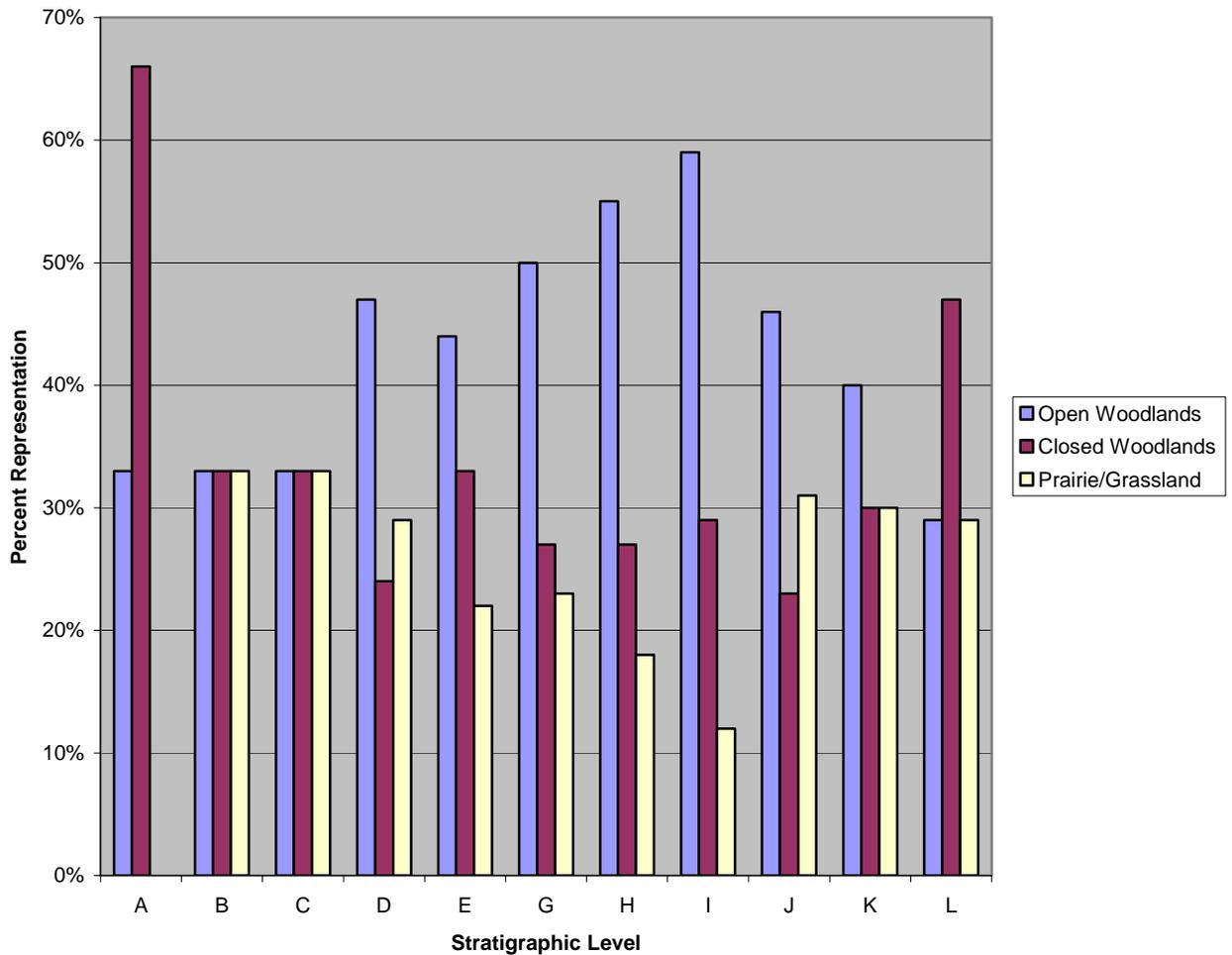
Results and Discussion

Table 4 shows the MNI of the species utilized in this study. Of particular interest are the shifts in number of individuals for the fox and gray squirrel, thirteen-lined ground squirrel, and the eastern chipmunk. The rise in population of the fox squirrel while a population of gray squirrels was present suggests more open canopy woodland was present. This is also suggested the rise in population of the thirteen-lined ground squirrel and eastern chipmunk. This suggests that a shift in the habitats represented at the site

Taxon	Level											Total
	A	B	C	D	E	G	H	I	J	K	L	
<i>Blarina brevicauda</i>	-	-	-	2	1	-	-	1	-	-	-	4
<i>Geomys bursarius</i>	-	-	-	1	-	1	-	-	-	-	-	2
<i>Glaucomys volans</i>	-	-	1	1	1	1	1	1	1	-	1	8
<i>Microtus ochrogaster</i>	-	1	1	-	1	1	1	-	1	1	1	8
<i>Microtus pennsylvanicus</i>	-	-	-	1	-	1	-	-	1	1	-	4
<i>Peromyscus leucopus</i>	-	-	-	1	1	1	1	-	2	1	1	8
<i>Peromyscus maniculatus</i>	-	-	-	-	-	1	-	-	1	-	-	2
<i>Scalopus aquaticus</i>	-	-	-	-	1	-	-	-	-	1	-	2
<i>Sciurus carolinensis</i>	2	1	1	1	2	3	1	3	1	1	1	17
<i>Sciurus niger</i>	-	-	-	1	1	2	3	1	1	1	1	11
<i>Spermophilus tridecemlineatus</i>	-	-	1	1	2	1	1	1	1	-	-	8
<i>Tamias striatus</i>	1	1	1	2	3	5	1	7	2	3	-	26
Total												100

Table 4: Identified Species MNI by Stratigraphic Level

occurred during the site's occupation. Graph 5 demonstrates the results from the tabulation of preferred habitats for the identified individuals. The shift from a closed canopy woodland to an open canopy suggests that a change in the climate may have occurred. A shift in the annual precipitation and/or annual temperature may be suggested for this shift. However, the presence of moist soil species such as B. brevicauda, S. aquaticus, and M. pennsylvanicus suggests that significant moisture loss to the habitats did not occur. Similarly, the number of dry grassland species such as M. ochrogaster and P. maniculatus do not increase significantly in their representation at the site. Finally, the overall species



Graph5: Relative Representation of Habitats for the Gottschall Site

composition does not change significantly over the site's occupation. This suggests that climatic changes have not significantly altered the habitat and thereby the species represented at the site.

There are some indications, however, that permanent water may have been present at the site's location. The presence of M. pennsylvanicus in levels D, G, J, and K point to the presence of a grassy verge along standing water which is one of their favored habitats. The lack of other examples of this species presence at the site may illustrate that such favorable habitat was not present during these other occupational periods. However, the presence of two identified specimens of B. brevicauda in level D argues against this possibility since the short-tailed shrew generally avoids areas of open water. The presence of two identified specimens of P. leucopus in level J argues that the presence of standing water since this species especially likes wooded areas near rivers and streams. Salzer reports that a ridge was built in level L that was interpreted as a flood control measure which was later breached in level I (Salzer 2001:13). Salzer also reports that the stream bed is prone to flooding during heavy rains and could be described as "a raging torrent of water" (Salzer 1987:424). Therefore, the presence of standing water is most likely during the occupational periods represented by levels G, J, and K but more research needs to be done concerning the past hydrological history of the site.

The rise in representation of open woodlands begins at level J and K. These levels represent the end of the Middle Woodland Period and the beginning of the Effigy Mound Culture during the Late Woodland Period (Salzer 2001:5). Similarly, the shift from these open woodlands back to a closed woodland habitat is observed after level D. This period represents the ending of the Late Woodland Effigy Mound Culture and the beginning of the

Oneota Culture (Salzer 2001:5). It should also be noted that Salzer reports that the lowest portions of level D through level L are the richest in cultural deposits (Salzer 1987:433-435).

In their 2006 article, Dr. James Theler and Robert Boszhardt promoted a model concerning the shift from the Effigy Mound Culture to Oneota. They argued that the packing of the Western Wisconsin landscape during the Late Woodland Period led to a restriction of traditional annual rounds (Theler and Boszhardt 2006:443-447). This restriction of annual rounds produced an increased demand upon localized resources and resulted in game sinks (Theler and Boszhardt 2006:451-452). In addition, this restriction of territory would have placed a higher demand upon the local woodlands for firewood. When the supply of fallen wood was insufficient, the local populations began to girdle trees to meet their demands. This girdling in the reduction, along with the annual burning of prairie and grasslands, led to the significant reduction in woodlands (Theler and Boszhardt 2006:442, 452-455).

This model of the Woodland to Oneota transition matches the data recovered from the Gottschall assemblage. As the packing of the landscape progressed, the demand upon the localized woodlands for firewood increased. This would have led to the girdling of trees to meet this demand and, by consequence, the reduction of the density of the woodlands. This produced an increase in the open woodland habitat illustrated by the increase in certain local species. When the shift to Oneota occurred, the demand on the woodland decreased and thereby led to the regeneration of a climax forest. The halting of annual burning by Euro-American settlers would have significantly increased this spread of climax forest as

shown in the spike of closed canopy woodland habitats in level A (Theler and Boszhardt 2006:443).

Conclusions

The taphonomic analysis produced two major conclusions. The first is that geographic location is critical for an analysis of owl/raptor pellet assemblages. The variation of the modern owl/raptor pellet assemblages (The excavated owl/raptor roost and the Kusmer Study) have been illustrated in many instances. The first is the PP values derived from each assemblage. While the Kusmer study shows a high incident of paired elements (0.61-1.00), the excavated owl/raptor roost shows a more variable incident of these paired elements (0.01-0.97). Similarly, the Kusmer study argued for a high percent of skeletal element completeness (67%-100%). The excavated owl/raptor roost, however, produced more variable levels of element completeness (0%-95%) Finally, the Kusmer study stated that the relative frequency of skeletal elements were relatively equal (8%-13%). However, these figures differed for the excavated owl/raptor roost (2%--23%). Therefore, the geographic region from which an owl/raptor pellet assemblage is derived determines its signature. This leads to the conclusion that studies are necessary to elucidate the many variables for habitats from which such assemblages may be derived.

The second conclusion of the taphonomic analysis is that the Gottschall small mammal assemblage was not subject to significant or any owl/raptor pellet deposition. The variation of the PP values for the Gottschall site (0-0.85) and the Westbury study (0.06-0.30), which reflected similar long-term burial and overburden pressures, demonstrate differing taphonomic processes. The Westbury study also showed a much lower level of skeletal element completeness than the Gottschall assemblage. Similarly, the relative frequency of

skeletal elements differed significantly for each study. Finally, the f-tests performed showed no significance in the assemblages. The lack of significant owl/raptor pellet depositional processes at the Gottschall site, therefore, allows for a valid environmental reconstruction since no refugium species may have been deposited at the site.

The environmental reconstruction, while it does not illustrate significant climatic changes, does illustrate the impact extended human occupation may have upon the local habitats. As discussed above, the shift in the representation of closed versus open woodlands illustrates a more intensive harvesting of wood from the surrounding area. This supports the 2006 model proposed by Theler and Boszhardt for the shift from the Late Woodland Effigy Mound Culture to the Oneota. The packing of the area led to a restriction of resource access and the increased demand upon local available resources which led to the above mentioned more intensive wood harvesting (Theler and Boszhardt 2006).

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Appendix 1: Identified Remains from the Excavated Owl/Raptor Roost

Short-tailed Shrew: Blarnia brevicauda

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Femur	1	Complete	No
Left	Femur	1	Distal epiphysis abs. third trochanter abs.	Yes
Right	Humerus	1	Complete. Puncture on prominent tuberosity	Yes
Left	Humerus	1	Complete	No
Right	Humerus	1	Head absent. Damage deltoid tuberosity	No
Left	Humerus	1	Prox. End absent. Deltoid tuberosity partially abs	Yes
Right	Mandible	1	Complete. I, M1, M2, M3 pres.	Yes
Right	Mandible	1	M1 pres. Ant. Break M1. Angle abs.	Yes
Left	Mandible	1	Complete. I, M1 pres.	Yes
Left	Mandible	1	Complete. I, M1, M2, M3 present.	Yes
Left	Mandible	1	I, M1 pres. H. ramus only break post. M3	Yes
Left	Mandible	1	I, M1, M3 pres. Angle abs.	Yes
Left	Mandible	1	M1 pres. Ant. Break M1. Angle, Condyle abs.	Yes
-----	Skull	1	Ant. Portion only. Parietal/occipital absent. Puncture above left infraorbital foramen. L&R P3, M1, M2 pres.	Yes
-----	Skull	1	Occipital, partial parietal abs. Left I2, I3, P3, M1, M2 pres. Right I2, P3, M1, M2, M3 pres. L frontal crushing damage.	Yes
Left	Innominate	1	Ant. End ilium, post. Sect. pubis, ischium abs.	Yes
Right	Innominate	1	Pubis abs.	Yes
Left	Humerus	1	Complete	Yes

Opossum: Didelphis virginiana

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Humerus	1	Prox. End abs. Deltoid tuberosity partially abs.	Yes

Big Brown Bat: Eptesicus fuscus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Mandible	1	Complete. M3 pres.	Yes
Left	Mandible	1	No dentition. Coronoid process, angle, condyle abs.	Yes
Left	Femur	1	Complete. Distal epiphysis abs.	Yes
Left	Femur	1	Distal end absent	Yes

Striped Skunk: Mephitis mephitis

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Mandible	1	M1 pres. Ant. Break M1. Coronoid process, condyle, angle partially absent.	Yes
Right	Maxilla	1	Fragment. P4 pres. Ant break P2, Post break M1	Yes
Left	Lower M1	1	Enamel cracked	No
Left	Upper M1	1	Fragment	No
Right	Upper M1	1	Fragment	No
-----	Lower Canine	1	Complete	No
-----	Upper Canine	1	Complete	No
Right	Lower P4	1	Complete	No
Left	Lower P4	1	Complete	No
Left	Lower P3	1	Complete	No
Left	Premaxilla	1	Fragment. I1, I3 present	No
Right	Premaxilla	1	Fragment I3 present	No

Prairie Vole: Microtus ochrogaster

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
-----	Skull	1	Parietal/occipital absent. Crushing damage along breaks. Right: M1, M2 pres. Left all dentition present.	No
-----	Skull	1	Parietal/occipital absent. I, M1, M2 present for both Left and Right	Yes
-----	Skull	1	Parietal/occipital absent. Significant crushing damage. All dentition present except left incisor	No
-----	Skull	1	Parietal, occipital, frontal absent. Fragments premaxilla. Left M3 absent.	Yes
-----	Skull	1	Parietal, occipital, frontal abs. Maxilla, fragments premaxilla pres. Left and right M1, m2 pres.	Yes
Left	Femur	1	Distal end abs.	No
Left	Femur	1	Complete. Distal epiphysis abs.	Yes
Left	Femur	1	Complete. Distal epiphysis abs.	Yes
Left	Femur	1	Complete. Distal epiphysis abs.	Yes
Left	Femur	1	Complete. Distal epiphysis abs.	Yes
Right	Femur	1	Distal end abs.	Yes
Right	Femur	1	Complete. Distal epiphysis abs.	No
Right	Femur	1	Complete. Distal epiphysis abs.	No
Right	Humerus	1	Complete. Proximal epiphysis abs.	No
Right	Humerus	1	Complete. Proximal Epiphysis abs.	No
Left	Humerus	1	Complete. Proximal Epiphysis abs. Deltoid tuberosity, distal end damaged.	Yes
Left	Humerus	1	Complete. Proximal epiphysis abs.	Yes

Prairie Vole: Microtus ochrogaster

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Mandible	1	Coronoid process, condyle, angle absent. I, M1, M2 present.	Yes
Left	Mandible	1	Coronoid process, angle abs. All dentition present	Yes
Left	Mandible	1	Coronoid process, angle abs. Break along tooth row and ventral edge. I, M1, m2 pres.	Yes
Left	Mandible	1	Coronoid process, angle, and condyle abs. Fragment asc. Ramus pres. I, M1, M2, M3 pres.	Yes
Left	Mandible	1	H. ramus only. I, M1, M2, M3 pres.	Yes
Left	Mandible	1	Coronoid process abs. M1, M2, m3 pres.	Yes
Right	Mandible	1	All dentition pres. Coronoid process abs.	Yes
Right	Mandible	1	H. ramus and angle only. M1, M2 pres.	Yes
Right	Mandible	1	Coronoid process abs. I, M1, M2 pres.	Yes
Right	Mandible	1	H. ramus only. I, M1, M2 pres.	Yes
Left	Mandible	1	Fragment H. ramus. I, M1, M2 present I broken	Yes
Right	Mandible	1	Fragment H. ramus. M1 present.	Yes
Left	Mandible	1	Fragment H. ramus. I, M1, m2 pres.	Yes
Left	Mandible	1	Fragment H. ramus. M1 pres.	Yes
Left	Innominate	1	Complete.	Yes
Left	Innominate	1	Break at ischium/pubis connection.	No
Left	Innominate	1	Break at ischium/pubis connection	No
Right	Innominate	1	Complete	No
Right	Innominate	1	Break at ischium/pubis connection	No
Right	Innominate	1	Ilium only	No
Right	Femur	1	Complete	Yes
Right	Femur	1	Complete	Yes
Left	Femur	1	Complete	Yes
Right	Humerus	1	Proximal end abs.	Yes
Right	Humerus	1	Complete	Yes
Right	Humerus	1	Complete	Yes
Left	Humerus	1	Complete	Yes

Meadow Vole: Microtus pennsylvanicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
-----	Skull	1	Parietal/occipital abs. All dentition pres. Except for incisor	Yes
-----	Skull	1	Parietal/occipital abs. Right: I, M1 pres. Left I, M1, M2 pres.	No
-----	Skull	1	Parietal, occipital, frontal abs. Fragments premaxilla. Left and Right M1 and m2 present	Yes

Meadow Vole: Microtus pennsylvanicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Femur	1	Complete. Distal epiphysis absent	Yes
Right	Femur	1	Complete. Distal epiphysis absent. Greater trochanter broken. Juvenile.	Yes
Right	Femur	1	Complete. Distal epiphysis absent. Greater trochanter absent	Yes
-----	Atlas	1	Complete	No
Right	Humerus	1	Complete. Prox. epiphysis absent. Deltoid tuberosity, distal end damaged.	Yes
Left	Humerus	1	Proximal end absent. Distal end worn.	Yes
Left	Humerus	1	Complete. Proximal epiphysis absent.	No
Left	Humerus	1	Prox. epiphysis, deltoid tuberosity abs. lateral supracondyloid ridge damaged.	Yes
Left	Mandible	1	H. ramus only. I, M1, M2 pres.	Yes
Left	Mandible	1	H. ramus only. I, M1, M2 pres. Break along ventral edge.	Yes
Right	Mandible	1	H. ramus only. I, M1, M2, M3 pres.	Yes
Right	mandible	1	Angle present but broken. Coronoid process, condyle abs. I, M1, M2 present.	Yes
Right	Mandible	1	H. ramus and condyle present. I, M1, M2 pres.	Yes
Left	Mandible	1	Coronoid process pres. All dentition pres. M3 broken.	Yes
Right	Mandible	1	Coronoid process pres. All dentition pres.	Yes
Left	Mandible	1	Coronoid process pres. All dentition pres.	Yes
Left	Mandible	1	H. ramus only. I, M1, M2 present.	Yes
Right	Mandible	1	H. ramus only. I, m1, M2 pres. Break along ventral edge	Yes
Left	Mandible	1	H. ramus only. I, M1, M2 pres.	Yes
Right	Mandible	1	H. ramus only. I, M1, m2 pres.	Yes
Right	Mandible	1	Fragment H. ramus. I, M1 present	Yes
Left	Mandible	1	Fragment H. ramus. M1 present.	Yes
Left	Maxilla	1	Fragment. M1 only	Yes
Left	Mandible	1	H. ramus fragment only. M1 pres.	Yes
Left	Maxilla	1	Fragment. M1, M2 present	Yes
Right	Maxilla	1	Fragment. M2 present	Yes
Right	Mandible	1	Fragment H. ramus only. M1 pres.	Yes
Left	Innominate	1	Ischium, fragment ilium present	Yes
Left	Humerus	1	Proximal end absent	Yes
Left	Humerus	1	Proximal end absent	Yes
Left	Humerus	1	Proximal end absent	Yes
Right	Humerus	1	Complete	Yes
Right	Humerus	1	Complete	Yes

Short-tailed Weasel: Mustela erminea

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Maxilla	1	I, canine, all molars abs. P2, P3, present	Yes
Right	Maxilla	1	I, canine, all molars abs. P2, P3, P4 present	Yes
Left	Humerus	1	Complete.	Yes

Muskrat: Ondatra zibethicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Mandible	1	All dentition pres. Coronoid process, angle abs.	No
Right	Mandible	1	Coronoid process, angle, condyle abs. I, M1, M2 pres. I fractured	No
Right	Mandible	1	H. ramus only. Post. Break M2. Break along ventral edge. I, M1, M2 pres.	No
-----	Skull	1	Premaxilla, maxilla. Only right M1, M2 pres.	No
-----	Skull	1	Premaxilla, maxilla. Right M1, M2 Left M1 pres.	No
Left	Lower M1	1	Complete	No
Right	Humerus	1	Complete. Proximal epiphysis absent.	No
Right	Femur	1	Complete. Distal epiphysis absent. Chip out of third trochanter.	No
Left	Femur	1	Complete. Distal epiphysis absent.	No
Right	Femur	1	Complete. Distal epiphysis absent.	No
Right	Femur	1	Complete. Distal epiphysis absent. Chip from third trochanter.	No
Right	Femur	1	Head, greater trochanter abs. Distal epiphysis abs.	No
Right	Femur	1	Distal epiphysis abs. Greater trochanter abs. Damage distal end, head.	No
Left	Femur	1	Complete	No
Left	Femur	1	Distal epiphysis abs. Damage to head, distal end. Chip from lesser trochanter.	No
Left	Femur	1	Distal epiphysis abs. weathering head, greater trochanter. Chip from third trochanter.	No
Left	Femur	1	Complete. Distal epiphysis abs.	No
Left	Femur	1	Complete. Distal epiphysis abs.	No
Left	Femur	1	Distal epiphysis abs. Gr. Trochanter abs. Distal end weathered.	No
Right	Tibia	1	Fibula abs. Prox. epiphysis abs. Distal end abs. Break along dorsal medial crest and transverse process.	No
Left	Tibia/fibula	1	Prox. end abs. Frag. Fibula pres.	No
Left	Tibia	1	Fibula abs. Prox. epiphysis abs. Break along transverse process, dorsal medial crest.	No
Right	Tibia/fibula	1	Prox. end abs. Frag. Fibula pres. Distal weathering	No
Right	Tibia	1	Fibula, prox. end abs. Distal weathering	No
Right	Tibia	1	Fibula, prox. end abs.	No

Muskrat: Ondatra zibethicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Tibia	1	Fibula, prox. end abs.	No
Right	Tibia	1	Fibula, prox. half abs. tibia/fibula fusion pres.	No
Left	Tibia	1	Fibula, prox. end abs. Stained	No
-----	Axis	1	Complete	No
Left	Scapula	1	Head with coronoid process only.	No
Left	Innominate	1	Ant. end ilium, post. Sect. pubis, ischium, tuber ischii abs.	No
Left	Innominate	1	Ant. end ilium, ischium, post. pubis abs.	Yes
Left	Innominate	1	Acetabulum and fragments ilium, ischium, pubis only	No
Left	Innominate	1	Ischium abs. Partial ilium, pubis pres.	No
Right	Innominate	1	Ant. end ilium, ischium abs. Partial pubis pres.	No
Right	Innominate	1	Ilium, pubis pres. Ischium abs. Cracks on pubis.	No
Right	Innominate	1	Partial ilium, ischium, pubis pres.	No
-----	Atlas	1	Complete	No
Left	Calcaneus	1	Complete	No
-----	Axis	1	Complete	No
Right	Radius	1	Complete	Yes
Left	Radius	1	Complete	No
Left	Radius	1	Complete	No
Right	Tibia	1	Fibula, distal end abs.	Yes
Right	Tibia	1	Fibula abs. Prox. epiphysis abs.	Yes
Left	Tibia	1	Fibula, prox. epiphysis abs.	Yes
Left	Tibia	1	Fibula, prox. epiphysis abs.	No
-----	Vertebrae	1	Thoracic. Complete.	Yes
Left	Astragalus	1	Complete	Yes
Left	Astragalus	1	Complete	Yes
Left	Astragalus	1	Complete	No
Left	Astragalus	1	Complete	No
Right	Astragalus	1	Complete	Yes
Right	Astragalus	1	Complete	No
Left	Calcaneus	1	Complete	Yes
Left	Humerus	1	Proximal epiphysis.	Yes
Right	Humerus	1	Proximal epiphysis.	Yes
Right	Squamosal	1	Frag. Zygo pres.	No
-----	Frontal	1	Fragment	No
Right	Calcaneus	1	Complete	Yes
Left	Astragalus	1	Complete	No
Right	Astragalus	1	Complete	Yes
Right	Ulna	1	Complete	No
Right	Ulna	1	Complete	No
Right	Ulna	1	Complete	No

Muskrat: Ondatra zibethicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Femur	1	Distal epiphysis	Yes
Left	Femur	1	Distal epiphysis	Yes
Left	Femur	1	Distal epiphysis	No
Right	Femur	1	Distal epiphysis	Yes

White-footed Mouse: Peromyscus leucopus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Humerus	1	Proximal end absent.	Yes
Right	Femur	1	Complete. Distal epiphysis absent. Head worn.	Yes
-----	Sacrum	1	Edges broken.	Yes
Left	Maxilla	1	M3 present.	Yes
Left	Mandible	1	Only I pres. Angle abs. break on diastema. Puncture on asc. Ramus-lateral side.	Yes
Left	Mandible	1	Only I pres. H. ramus only.	No
Right	mandible	1	Only I pres. H. ramus only.	Yes
Left	Mandible	1	Only I pres. H. ramus and fragments asc. Ramus. Coronoid process, angle, condyle abs.	Yes
Left	Femur	1	Complete.	Yes

Deer Mouse: Peromyscus maniculatus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Humerus	1	Complete. Proximal epiphysis abs.	Yes
Left	Humerus	1	Prox. epiphysis absent. Entepicondylar foramen, medial epicondyle, lateral supracondyloid ridge broken—partially absent.	Yes
Left	Femur	1	Complete. Distal epiphysis absent.	Yes
Right	Femur	1	Distal end absent. Damage gr. And lesser trochanter and head.	Yes
Left	Humerus	1	Complete. Prox. epiphysis absent.	Yes
Right	Maxilla	1	M1, M2, M3 present.	Yes
Left	Mandible	1	I, M3 present. H. ramus only. Medial surface abs.	Yes
Left	Mandible	1	M1 pres. Fragment H. ramus.	Yes
Left	Femur	1	Complete. Damage to head.	Yes

Norway Rat: Rattus norvegicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Femur	1	Complete. Distal epiphysis absent. Juvenile.	Yes

Norway Rat: Rattus norvegicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Femur	1	Distal end, gr. trochanter abs. Damage head, lesser trochanter. Juvenile.	Yes
Right	Femur	1	Complete. Distal epiphysis abs. Juvenile.	Yes
Right	Femur	1	Prox. end only. Third trochanter abs. Juvenile.	No
Right	Femur	1	Complete. Distal epiphysis absent.	Yes
Left	Femur	1	Distal epiphysis abs. Prox. end absent.	Yes
Left	Femur	1	Distal epiphysis abs. Damage head, gr., lesser trochanter. Juvenile	Yes
Right	Humerus	1	Prox. epiphysis abs. Juvenile.	No
Right	Humerus	1	Proximal end abs. Juvenile.	Yes
Right	Humerus	1	Proximal end absent. Juvenile.	No
Right	Humerus	1	Proximal end absent. Deltoid tuberosity absent. Juvenile.	Yes
Left	Humerus	1	Proximal epiphysis absent. Juvenile.	No
Left	Humerus	1	Prox. epiphysis abs. Damage prox. and distal ends. Juvenile.	No
Left	Humerus	1	Proximal epiphysis absent.	Yes
Left	Humerus	1	Proximal epiphysis absent. Juvenile.	Yes
Left	Humerus	1	Proximal epiphysis absent. Juvenile.	Yes
Right	Tibia	1	Fibula present. Complete. Prox. epiphysis absent. Juvenile.	Yes
Right	Tibia	1	Fibula absent. Distal, prox. epiphysis abs.	No
Left	Tibia	1	Fibula absent. Complete. Prox., distal end absent. Juvenile.	No
Left	Tibia	1	Fibula absent. Complete. Prox. epiphysis absent. Juvenile.	Yes
Right	Tibia	1	Frag. Fibula pres. Proximal half. Juvenile.	No
Left	Tibia	1	Frag. Fibula pres. Complete. Distal, prox. epiphysis abs. Juvenile.	Yes
Left	Tibia	1	Fibula abs. Prox. end abs. Juvenile.	Yes
Right	Tibia	1	Fibula abs. Complete. Distal, prox. epiphysis abs. Juvenile.	Yes
Right	Tibia	1	Frag. Fibula. Complete. Distal, prox. epiphysis abs. Juvenile	Yes
Left	Scapula	1	Head and coracoid process only. Impact point	No
Right	Scapula	1	Head and coracoid process only.	No
Right	Skull	1	Premaxilla/ maxilla/ jugal. All dentition pres. Crushing damage.	No
Left	Skull	1	Premaxilla/ maxilla. All dentition pres.	No
Left	Skull	1	Premaxilla, maxilla, jugal. Only I absent.	No
Right	Skull	1	Premaxilla, maxilla, jugal. Only I abs.	No

Norway Rat: Rattus norvegicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	No
Right	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	No
Left	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	No
Right	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	No
Left	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	Yes
Left	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	No
Right	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	Yes
Right	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	No
Left	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	Yes
Left	Skull	1	Premaxilla, maxilla, jugal. I abs. All molars present.	Yes
Right	Skull	1	Premaxilla, maxilla, jugal. Only M1 pres.	Yes
Right	Mandible	1	All dentition pres. Angle broken.	No
Right	Mandible	1	All dentition pres. H. ramus only.	Yes
Right	Mandible	1	All dentition pres. Coronoid process abs. Condyle, angle broken. Impact puncture mark asc. ramus.	Yes
Right	Mandible	1	Complete. All dentition present.	No
Right	Mandible	1	All dentition present. Angle broken.	No
Left	Mandible	1	All dentition present. Angle broken.	No
Left	Mandible	1	Complete. All dentition present.	No
Left	Mandible	1	Complete. All dentition present.	Yes
Left	Mandible	1	All dentition pres. Angle, condyle abs.	No
Left	Mandible	1	Complete. All dentition present.	Yes
Left	Mandible	1	All dentition present. Angle broken.	No
Left	Mandible	1	All dentition present. Angle, condyle broken.	Yes
Left	Mandible	1	All dentition present. Angle abs. impact point asc. ramus.	Yes
Left	Innominate	1	Ischium and acetabulum only. Juvenile.	Yes
Left	Innominate	1	Ischium, pubis, frag. Ilium pres.	Yes
Left	Innominate	1	Ischium, ilium, frag. Pubis pres.	Yes
Right	Innominate	1	Ischium, pubis abs. Juvenile.	Yes
Right	Innominate	1	Acetabulum only.	No
Left	mandible	1	Angle, condyle only.	No
-----	Atlas	1	Complete	Yes
-----	Atlas	1	Complete	Yes
-----	Atlas	1	Complete	No
-----	Axis	1	Spinous process broken.	Yes
-----	Axis	1	Spinous process broken. Post. transverse process abs.	Yes
Right	Maxilla	1	Fragment. M3 present.	Yes
Left	Astragalus	1	Complete.	No
Left	Astragalus	1	Complete	No
Right	Astragalus	1	Complete	No
Right	Astragalus	1	Complete	No

Norway Rat: Rattus norvegicus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Astragalus	1	Complete	No
Left	Calcaneus	1	Complete	Yes
Right	Calcaneus	1	Complete	Yes
Left	Humerus	1	Proximal epiphysis.	Yes
Left	Humerus	1	Proximal epiphysis.	Yes
Left	Humerus	1	Proximal epiphysis	Yes
Right	Humerus	1	Proximal epiphysis.	Yes
Right	Humerus	1	Proximal epiphysis.	Yes
Right	Humerus	1	Proximal epiphysis.	Yes
Right	Humerus	1	Proximal epiphysis.	Yes
-----	Axis	1	Spinous process broken.	No
Left	Tibia	1	Distal end.	Yes
Left	Tibia	1	Distal end.	Yes
Right	Innominate	1	Ilium only.	Yes
Left	Innominate	1	Ilium only.	Yes
Left	Innominate	1	Ilium only.	Yes
Left	Scapula	1	Head, neck, blade (feathered).	Yes
Left	Ulna	1	Complete	Yes
Left	Ulna	1	Complete	Yes
Left	Ulna	1	Complete	Yes
Right	Ulna	1	Complete	Yes
Right	Ulna	1	Complete	Yes
Right	Ulna	1	Complete	Yes
Right	Ulna	1	Complete	Yes
Left	Innominate	1	Ischium, acetabulum only.	Yes
Right	Innominate	1	Ischium, acetabulum only.	Yes

Fox Squirrel: Sciurus niger

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Skull	1	Premaxilla, maxilla, frontal. I, m2 present	No
Right	Skull	1	Premaxilla, maxilla, frontal. I only.	No
Right	Mandible	1	H. ramus only. Break post. M3. UI, M2 pres. Impact point medial surface.	No
Left	Femur	1	Proximal half.	No
Left	Femur	1	Proximal half. Impact point between third and greater trochanter.	No
Right	Femur	1	Proximal end only. Damage greater, third trochanter. Greenbone fracture.	No
Right	Femur	1	Proximal end only. Impact point and radial cracks third trochanter.	No
Right	Femur	1	Proximal end. Third trochanter absent.	No

Fox squirrel: Sciurus niger

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Femur	1	Proximal end only. Lesser and third trochanter absent. Damage to head.	No
Right	Humerus	1	Complete. Impact points on prox. end.	Yes
Right	Humerus	1	Distal end only. Greenbone fracture.	No
Right	Scapula	1	Head with coracoid process. Fragment acromion process, caudal boarder.	Yes
Right	Scapula	1	Head with coracoid process. Frag. Caudal boarder.	Yes
Left	Scapula	1	Head with coracoid process. Frag. Acromion process.	No
Left	Innominate	1	Pubis abs. Partial ilium, ischium.	Yes
Right	Innominate	1	Ischium pres. Frag. Ilium, pubis. Impact medial surface.	Yes
Right	Innominate	1	Partial ischium, ilium pres. Pubis abs.	Yes
Left	Tibia	1	Proximal end only.	No
Left	Femur	1	Distal end only.	Yes
Right	Femur	1	Distal end only	Yes
Left	Radius	1	Complete	No
Left	Radius	1	Distal end absent.	No

Eastern Cottontail Rabbit: Sylvilagus floridanus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Maxilla	1	Fragment zygomatic arch presP2, P3, P4, P4, M1, M2 present.	No
Right	Premaxilla	1	I present. Fragment.	No
Right	Premaxilla	1	I present. Fragment.	No
-----	Skull	1	Fragment L & R premaxilla. Upper I absent. Lower incisors present	No
-----	Skull	1	Fragment L&R premaxilla. Left upper, lower incisors pres.	No
Left	Maxilla	1	P2, P3, P4, M1, M2, M3 present	No
Right	Maxilla	1	P2, p2, P4, M1, M2 present	No
-----	Mandible	1	Fragment. No dentition present	No
Right	Mandible	1	H. ramus only. P4, M1 present.	No
Left	Mandible	1	Ant. H. ramus only. I, P3, P4 only.	No
Left	Mandible	1	Anterior H. ramus. I and diastema only.	No
Right	Mandible	1	Coronoid process, condyle, angle abs. P4, m1, M2 pres.	No
Right	Mandible	1	Ant. H. ramus only. I, P3, P4 pres.	No
Right	Mandible	1	Ant. H. ramus only. I, P3, P4 pres.	No
Right	Mandible	1	Incisor and diastema only.	No
Right	Mandible	1	Ant. H. ramus. I, P3, P4 pres.	No
Right	Femur	1	Proximal end. Greenbone fracture.	No

Eastern Cottontail Rabbit: Sylvilagus floridanus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Femur	1	Proximal end only. Greenbone fracture.	No
Left	Femur	1	Proximal end only. Greenbone fracture.	No
Left	Femur	1	Proximal end only. Impact mark at break.	No
Left	Femur	1	Proximal end only.	No
Left	Femur	1	Proximal end. Greenbone fracture.	No
Left	Femur	1	Proximal end only. Greater trochanter abs.	No
Left	Femur	1	Proximal end only. Greenbone fracture.	No
Left	Femur	1	Proximal end only. Greater trochanter abs. Damage head, third trochanter.	No
:Left	Femur	1	Proximal end only. Greenbone fracture. Greater and third trochanter abs.	Yes
Right	Humerus	1	Distal end only	No
Right	Humerus	1	Proximal end abs. Greenbone fracture.	No
Right	Humerus	1	Distal end only. Greenbone fracture.	No
Right	Humerus	1	Distal end only. Greenbone fracture.	No
Right	Tibia	1	Distal end only. Greenbone fracture.	No
Right	Tibia	1	Distal half. Break at distal tibia/fibula fusion. Greenbone fracture.	No
-----	Sacrum	1	Three impact marks dorsal surface	No
-----	Atlas	1	Complete	No
Left	Scapula	1	Head, neck, coracoid process pres.	Yes
Right	Scapula	1	Head, neck, coracoid process pres.	No
Right	Scapula	1	Head, neck, coracoid, fragment blade and acromion pres	No
Left	Scapula	1	Head, neck, fragment acromion and caudal border pres.	Yes
Right	Scapula	1	Head, neck, coracoid process present.	No
Right	Scapula	1	Head, neck, fragments acromion and coracoid	Yes
Left	Scapula	1	Head, neck, coracoid process present.	No
Left	Scapula	1	Head and neck only.	No
Right	Scapula	1	Head, neck, coracoid process present.	No
Right	Scapula	1	Head, neck, coracoid process present.	No
Right	Scapula	1	Head, coracoid process pres.	No
Right	Scapula	1	Head and neck only	Yes
Left	Innominate	1	Ischium, half ilium present.	Yes
Right	Innominate	1	Ilium, fragment pubis abs. Impact point ischium	No
Right	Innominate	1	Half ilium, ischium, fragment pubis present.	Yes
Right	Innominate	1	Pubis, ischium absent.	Yes
Right	Innominate	1	Pubis, ilium absent.	No
Right	Innominate	1	Acetabulum only	Yes
Right	Innominate	1	Acetabulum only	No
Right	Innominate	1	Acetabulum only	Yes

Eastern Cottontail Rabbit: Sylvilagus floridanus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Innominate	1	Acetabulum only.	Yes
Left	Innominate	1	Ischium, partial ilium, pubis present	No
Left	Innominate	1	Ilium absent.	No
Right	Innominate	1	Ilium, pubis absent.	Yes
Right	Innominate	1	Acetabulum only.	No
Right	Innominate	1	Acetabulum only.	No
Right	Premaxilla	1	Fragment. I2 pres only	No
Left	Premaxilla	1	Fragment. I1, I2 present	Yes
Left	Premaxilla	1	Fragment. I1 only	No
Left	Premaxilla	1	Fragment. I2 only	No
Left	Mandible	1	Fragment H. ramus. P4,M1 pres.	Yes
-----	Atlas	2	Wings fractured	No
-----	Atlas	1	Complete	No
Left	Calcaneus	5	Complete	Yes
Left	Calcaneus	2	Complete	No
Right	Calcaneus	2	Complete	Yes
Right	Calcaneus	1	Complete	No
-----	Axis	3	Complete	No
Left	Radius	1	Distal end absent	No
-----	Sacrum	2	Anterior portion. Wings abs.	No
-----	Incisor	2	Upper I1	No
Left	Lower P3	1	Complete	Yes
Right	Lower P3	1	Complete	Yes
Left	Lower M2	1	Complete	No
Left	Upper M1	1	Complete	No
Right	Lower M1	1	Complete	No
Right	Lower P3	1	Complete	No
Right	Upper P3	1	Complete	No
Left	Lower M2	1	Complete	Yes
Left	Upper P2	1	Complete	Yes
-----	Incisor	1	Upper I1. Fractured	No
Right	Lower M1	1	Enamel cracked	No
Left	Upper M2	1	Enamel cracked	No
-----	Cheek teeth	6	Fragments	5-Y
Left	Upper P3	1	Enamel cracked	No
Right	Upper M2	1	Enamel cracked	Yes
Right	Upper M1	1	Enamel cracked	No
Right	Upper M2	1	Complete	No
Left	Lower M1	1	Complete	Yes
Left	Lower P4	1	Complete	No
Left	Lower M2	1	Enamel fractured	Yes
Right	Lower P4	1	Enamel fractured	No

Eastern Cottontail Rabbit: Sylvilagus floridanus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
-----	Incisor	1	Fragment- Upper I1	No
-----	Incisor	1	Fragment-Lower	No
Left	Innominate	1	Ilium abs.	No
Right	Innominate	1	Ilium abs.	No
Left	Femur	1	Diaphysis fragment only	Yes
Right	Ulna	2	Proximal end only	Yes
Right	Humerus	2	Distal end only	No
-----	Axis	2	Complete	No
Left	Astragalus	3	Complete	1-Y
Right	Astragalus	4	Complete	1-Y
Right	Tibia	2	Proximal end only	No
Left	Tibia	5	Proximal end only	4-Y
Left	Femur	6	Distal end only	4-Y
Right	Femur	8	Distal end only	6-Y
Left	Humerus	4	Proximal end only	1-Y
Right	Humerus	3	Proximal end only	Yes
-----	Skull	1	Left and Right frontal bones	No
Left	Tibia	2	Distal end only	1-Y
Right	Tibia	3	Distal end only	1-Y
Left	Skull	5	Fragment squamosal with zygomatic arch	No
Right	Skull	3	Fragment squamosal with zygomatic arch	No
-----	Skull	1	Occipital.	No

Northern Leopard Frog: Rana pipiens

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Innominate	1	80% Complete	No
Left	Innominate	1	90% Complete	No
Left	Humerus	1	Complete	No
Right	Humerus	1	Complete	No
-----	Tibio-fibula	1	Proximal and Distal ends absent	No

Devil crayfish: Cambarus Diogenes

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
-----	Dactyl	1	Complete	Yes

Northern Hog Sucker: Hypentelium nigricans

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Maxilla	1	Slight Breakage	No
-----	Pharyngeal	1	90% complete.	No
Left	Quadrate	1	Spine absent	No

White Sucker: Catostomus commersoni

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Maxilla	1	Complete	Yes
Right	Maxilla	1	Complete	Yes
Left	Articular	1	Ant. end absent.	Yes
Right	Articular	1	Complete	Yes
Left	Dentary	1	Complete	No
Right	Dentary	1	Complete	No
Right	Pharyngeal	1	Complete	3-Y
Right	Operculum	1	2-Complete. 1-articular process abs.	No

Family Catostomidae: Suckers

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Cleithrum	1	30% Complete	No
Left	Cleithrum	2	50% Complete	Yes
Left	Cleithrum	1	Fragment	No
Right	Cleithrum	1	40% Complete	No
Right	Cleithrum	1	30% Complete	No

Red-winged Blackbird: Agelaius phoeniceus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Humerus	1	Proximal end and shaft (70%)	Yes
Left	Humerus	1	Distal end only	No
Left	Humerus	1	Distal end only	Yes
L&R	Innominate	1	Portions shield abs. Sacrum broken. R pubis abs.	Yes
Right	Carpometacarpus	1	Distal metacarpal symphysis, digit II & III facet, metacarpal III tuberosity absent.	No
Right	Carpometacarpus	1	Distal metacarpal symphysis , digit II & III facet, metacarpal III tuberosity abs.	No
Left	Femur	1	Complete	Yes
Left	Femur	1	Proximal half.	Yes

Red-winged Blackbird: Agelaius phoeniceus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Femur	1	Proximal half. Impact posterior surface.	No
Left	Tarsometatarsus	1	Complete	No
Right	Mandible	1	Int., post. articular ; coronoid process, mandibular foramen pres.	No
Left	Ulna	1	Proximal half present.	Yes
Right	Ulna	1	Proximal half present	No
Right	Ulna	1	Distal third Impact point mid diaphysis	No
Right	Quadrate	1	Processes broken	Yes
Left	Tibiotarsus	1	Proximal half.	Yes

Ruffed Grouse: Bonasa umbellus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Carpometacarpus	1	Complete	No
Left	Carpometacarpus	1	Complete	Yes
Left	Carpometacarpus	1	Metacarpal III absent.	No
Left	Tarsometatarsus	1	Complete	Yes
Right	Tarsometatarsus	1	Proximal end absent	Yes
Left	Humerus	1	Proximal end.	No
Right	Innominate	1	Acetabulum, ilio-ischiatic fenestra, segments shield, ilium, pubis present. Impact on shield	No
Left	1 st Phalanx, 2 nd digit	1	Complete	No
Left	Sternum	1	Sternal plate only	No
L&R	Mandible	1	Nasal absent. Left anterior vomer pres.	Yes
-----	Sternum	2	Fit together. Manubrium, coracoid groove, fragments spine & sternal plate pres.	No
Right	Coracoid	1	Sternal end only	No
Left	Ulna	1	Proximal end only.	Yes
Left	Ulna	1	Distal end only	No
Right	Femur	1	Proximal end only	No
Right	Femur	2	Proximal end only.	Yes
Left	Femur	4	Proximal end only	Yes
Left	Coracoid	1	Head, neck, procoracoid present.	No
Right	Coracoid	3	Head, neck, procoracoid present.	1-Y
Right	Tibiotarsus	2	Proximal end only	No
Left	Tibiotarsus	6	Proximal end only	2-Y
Left	Tibiotarsus	1	Distal end only	Yes
Left	Tarsometatarsus	1	Complete	No
Left	Tarsometatarsus	1	Proximal end only	No
Left	Tarsometatarsus	2	Distal half.	1-Y

Ruffed Grouse: Bonasa umbellus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Tarsometatarsus	1	Proximal end absent.	Yes
Right	Tarsometatarsus	4	Complete	Yes
Right	Scapula	1	Apex and acromion process absent.	No
Left	Cuneiform	2	Complete	1-Y
Right	Cuneiform	2	Complete	No
-----	Scapholunar	1	Complete	No
Left	Radius	1	Distal half.	No
Right	Radius	1	Distal third.	No
Right	Radius	1	Proximal $\frac{3}{4}$	No

Northern Flicker: Colaptes auratus

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
-----	Sternum	1	Manubrium, coracoid groove, fragments spine & sternal plate pres.	No
Right	Carpometacarpus	1	Distal metacarpus symphysis, Digit II & III facets absent.	No
Right	Femur	1	Proximal end only.	No
Right	Tibiotarsus	1	Proximal end only.	No
Left	Quadrates	1	Fragment	No
Right	Scapula	1	Head, blade. Apex absent.	No
Left	Scapula	1	Head only	No
Left	Ulna	1	Distal end only.	No

Pigeon (Rock Dove): Columba livia

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Femur	1	Proximal end.	Yes
Right	Femur	1	Proximal end.	Yes
Left	Tibiotarsus	1	Proximal end.	No
Left	Tibiotarsus	1	Distal half.	No
Right	Tibiotarsus	1	Distal end.	No
Left	Tarsometatarsus	1	Complete	No
Right	Tarsometatarsus	1	Complete	No
Right	Scapula	1	Head only.	No

Crow: Corvus brachyrhynchos

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Femur	1	Proximal end only.	Yes

Crow: Corvus brachyrhynchos

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Femur	1	Proximal end only.	No
Left	Tibiotarsus	1	Distal end only.	Yes
Right	Tibiotarsus	1	Proximal end only	Yes
Left	Mandible	1	Posterior segment. Articular & coronoid process present.	Yes
Left	Quadrate	1	Processes fractured.	No

Blue Jay: Cyanocitta cristata

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Femur	1	Complete	No
Right	Femur	1	Complete.	Yes
Left	Ulna	1	Distal half.	No

Common Grackle: Quiscalus quiscula

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Carpometacarpus	1	Breaks along edge metacarpal II & III	No
Left	Humerus	1	Complete. Deltoid crest, pneumatic fossa, distal end severely eroded.	Yes
Left	Humerus	1	Distal end.	Yes
Left	Femur	1	Distal end absent	Yes
Right	Tarsometatarsus	1	Complete	No
Right	Tarsometatarsus	1	Complete	No
Right	Ulna	1	Complete	Yes
Left	Quadrate	1	Complete	No
Left	Quadrate	1	50% complete	Yes
Right	Cuneiform	1	Complete	No

American Robin: Turdus migratorius

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
-----	Maxilla	1	Vomer, left post. maxilla, abs.	No
-----	Skull	1	Anterior break frontal. Parietal, ant. frontal absent.	Yes
Left	Femur	1	Proximal half.	Yes
Right	Femur	1	Proximal half.	Yes
Right	Tibiotarsus	1	Distal end absent.	Yes
Right	Tarsometatarsus	1	Complete	Yes
Right	Tarsometatarsus	1	Distal end absent.	Yes

America Robin: Turdus migratorius

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Tarsometatarsus	1	Complete	Yes
Left	Tarsometatarsus	1	Complete	No
Left	Mandible	1	Complete	No
Right	Scapula	1	50% present.	No
Left	Ulna	1	Distal third.	No
Right	Ulna	1	Distal third.	Yes
Left	Quadrate	1	Complete	No
Right	Quadrate	1	Complete	No

Mourning Dove: Zenaida macroura

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Right	Carpometacarpus	1	Complete	No

Falcons: Falco

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Tarsometatarsus	1	Complete	Yes

Family Icteridae:

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Carpometacarpus	1	Metacarpal III absent.	Yes

Family Fringillidae:

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
L&R	Maxilla	1	Break ant. to vomer. Nasal bridge broken.	No
Left	Quadrate	1	Complete	Yes

Family Picidae:

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Ulna	1	Proximal quarter	No
Left	Ulna	1	Distal end	Yes
Right	Coracoid	1	Head only.	Yes

Family Strigidae:

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Innominate	1	Ilium, ischium, fragments shield present.	No
Right	Innominate	1	Ilium, ischium, fragments pubis, shield present.	No
Right	Femur	1	Proximal end only	Yes
Left	Femur	1	Proximal end only	Yes
Right	Quadrato	1	Processes broken	No

Family Tetraonidae:

<u>Side</u>	<u>Element</u>	<u>NISP</u>	<u>Description</u>	<u>Ingest.</u>
Left	Humerus	1	Distal end only	No
Right	Humerus	2	Distal end only	No

Appendix 2: Identified mammal remains by provenience and element for the Gottschall site (47Ia80)

Short-tailed Shrew: Blarina brevicauda

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22 W26 D1	1	Right	Maxilla. C, M1, M3 pres.	NB
S18 W10 D2	1	-----	Skull. Parietal/occipital absent. Right: M1, M2. Left: M1, M2, M3 present.	NB
S18 W14 E1	1	Right	Mandible. Complete.	NB
S20 W11 I 13/32	1	Right	Mandible. Complete.	NB
S20 W11 I 20/18	1	Left	Femur. Complete.	NB
S19 W11 NVC	1	-----	Skull Parietal/occipital pres.	NB
S22 W11 NVC	1	Left	Mandible. Complete.	NB
S22 W11 NVC	1	Right	Mandible. M1, M2 pres. Break ant. M1	B
S18 W10 E2	1	Left	Mandible Complete.	NB

Domestic Dog: Canis familiaris

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W12 A1	1	Right	Femur. Weathered.	NB
S18 W12 D2	1	Left	Lower P4. Roots absent.	NB
S18 W14 D2	1	Right	Lower M1. Fragment.	NB
S18 W12 E1	1	Left	Mandible. Angle, Coronoid process absent. All dentition present.	NB
S18 W8 E1	1	-----	Canine. Complete.	NB
S18 W8 E1	1	Left	Upper I2. Complete.	NB
S18 W8 E1	1	Left	Upper I1. Complete.	NB
S18 W8 E1	1	Left	Upper M1. Roots absent.	NB
S18 W8 E1	1	Left	Maxilla. Ant. break P1. Post break P3. Cut marks.	NB
S18 W10 E2	1	Right	Lower P3. Fragmentation on cusps.	NB
S18 W10 F 46-A	7	Right	4-Frag. Complete: 1-M2, 1-M3, 1-P3.	B
S18 W10 F46-A	11	6-R 5-L	Rib. Complete	NB
S18 W12 F8	1	Left	Scapula. Complete. Canid impact marks/ crushing damage.	NB
S18 W12 F8	1	-----	Axis. Complete.	NB
S18 W12 F8	1	Right	Radius. Complete.	NB
S18 W12 F8	1	Left	Tibia. Proximal half.	B
S18 W12 F8	1	Right	Tibia. Complete	NB
S18 W12 F8	1	Right	Humerus. Complete.	NB
S18 W12 F8	1	R	Rib. Fragment.	NB
S24 W16 H1	1	Left	Humerus. Prox. 1/2 .Cut marks. Grnbne.	NB

Domestic Dog: Canis familiaris

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 H1	1	Right	Humerus. Prox.1/2	NB
S24 W16 H1	1	Left	Upper M1. Roots fractured.	NB
S24 W16 H3	1	Left	Maxilla. Only canine pres. Canine cracked and worn. P4 root pres.	NB
S24 W16 H4	1	Left	Tibia. Proximal end.	NB
S24 W16 H4	1	Right	Maxilla. C, I3 pres. C worn. Break post. canine.	NB
S21 W9 IA4	1	Left	Lower M1. Cusps broken.	NB
S21 W9 ICB 1/3	1	Left	Upper P4.	NB
S19 W10 JX1	1	Right	Upper M2. Cusps worn flat.	NB
S18 W12 L1	1	Left	Humerus. Complete. Cut marks head.	NB
17N 1 E L4	1	Left	Ulna. Proximal half. Cut marks shaft.	NB
S18 W10 NVC	1	Left	Femur. Proximal head weathered.	NB
S18 W12 NVC	1	Right	Scapula. Acromion process abs. Impact marks.	NB
S19 W9 NVC	1	Right	Scapula. Acromion process absent.	NB
S19 W9 NVC	1	Right	Maxilla. No dentition present.	NB
S20 W13 NVC	1	Left	Mandible. C, P2 present.	NB
S22 W12 NVC	1	Right	Lower M1. Complete.	NB
S23 W13 NVC	1	Right	Maxilla. P3, P4, M1 present.	NB
S24 W16 NVC	1	Left	Lower M2. Complete.	NB
S18 W10 O81	1	Left	Femur. Complete.	NB
S20 W8 NVC	1	-----	Metacarpal. Prox. end only. Ingestion.	NB
S21 W14 D 1/4	1	Right	Humerus. Distal end.	NB
S18 W12 I1	1	Left	Tibia. Prox. end absent.	B
S20 W16 G1	1	Right	Mandible. Condyle only.	C

Coyote: Canis latrans

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 D1	1	Right	Fibula. Distal end abs.	NB
S19 W11 F60/21	1	Left	Maxilla. I1, I2, I3, Canine pres.	NB
S24 W16 I1	1	Left	Fibula. Distal end absent.	NB
S18 W12 NVC	1	-----	Sacrum.	NB

Beaver: Castor canadensis

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 D1	1	-----	Molar fragment.	NB
S24 W16 G1	1	-----	Molar fragment	NB

Beaver: Castor Canadensis

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W10 D4	1	Right	Mandible. H. ramus only. All molars pres. I removed. Rodent gnawing.	NB
S22 W18 GJA3/9	1	-----	Lower incisor. Fragment	NB
S24 W16 H3	1	-----	Molar fragment	NB
S24 W16 H4	1	-----	Lower incisor.	NB
S24 W16 H6	1	-----	Molar fragment	NB
S23 W13 JB7/17	1	-----	Upper incisor. Crushing along length.	NB
S22 W11 NVC	1	-----	Lower incisor. Split in half.	NB
S18 W14 X	1	-----	Incisor fragment.	NB
S19 W12 I 10/22	1	-----	Lower incisor.	NB
S21/22 W10 NVC	1	-----	Lower incisor. Striations long surface.	B
S23 W11 NVC	1	-----	Lower incisor fragment.	NB

Opossum: Didelphis virginiana

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W14 E1	1	Left	Upper M3	NB

Big Brown Bat: Eptesicus fuscus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22 W10 C1	1	-----	Skull. Anterior portion absent	NB

Domestic Cat: Felis catus C.f.

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W10 C	1	Right	Innominate. Ischium, pubis abs.	NB
S18 W10 C	1	Left	Lower M1	NB
S18 W10 C	1	Left	Innominate. Ischium, pubis abs.	NB
S18 W10 C	1	Right	Humerus. Proximal end abs.	NB
S18 W10 C	1	Left	Humerus. Proximal end abs.	NB
S18 W10 C	1	Right	Femur. Distal end, trochanters, head absent	NB

Plains Pocket Gopher: Geomys bursarius

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 G1	1	-----	Upper incisor fragment.	NB
S20 W16 D1	4	-----	Upper incisor fragments.	NB

Southern Flying Squirrel: Glaucomys volans

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S20 W16 C1	1	Right	Mandible. H ramus. Mi, M2 abs.	NB
S20 W16 C1	1	Left	Tibia. Diaphysis only.	NB
S22 W16 D1	1	Left	Femur. Distal end absent.	NB
S22 W16 D2	1	Right	Femur Distal epiphysis absent.	NB
S24 W16 D2	1	Right	Mandible. H. ramus. Only I absent.	NB
S12 W14 E1	1	Right	Tibia. Complete.	NB
S18 W10 E1	1	Right	Mandible. P4, M1, M2, M3, coronoid process abs.	NB
S24 W16 E1	1	Left	Femur. Complete.	NB
S18 W12 G1	1	Right	Femur. Distal end only	NB
S18 W12 G1	1	Right	Tibia. Proximal end absent.	NB
S24 W16 G1	1	Left	Femur. Proximal half.	NB
S18 W16 E1	1	Left	Mandible. I, diastema, P4 only	NB
S19 W11 17/32	1	Left	Innominate. Frag. ischium, pubis abs.	NB
S18 W14 NVC	1	Left	Humerus. Proximal end absent.	NB
S18 W12 E1	1	Left	Premaxilla. I absent.	NB
S20 W16 G1	1	Right	Mandible. Angle, coronoid process abs. I present only.	NB
S18 W14 NVC	1	Right	Mandible. H.ramus Only I present.	NB
S18 W10 NVC	1	Left	Mandible. H. ramus. Only I present.	NB
S24 W16 E1	1	Right	Humerus. Distal half	NB
S24 W16 H6	1	Right	Humerus. Complete. Impact prox. end	NB
S24 W16 H6	2	1-R, 1-L	Femurs. L-complete. R-Prox. end abs.	NB
S24 W16 H6	1	Left	Innominate. Pubis abs.	B
S21 W14 I1	1	Left	Mandible. Damage asc. ramus. All dentition present.	NB
S22 W13 IE2	1	Right	Mandible. P4, M2, M3 abs. Break along ventral edge.	NB
S22 W12 J1	1	Left	Humerus. Complete.	NB
S22 W11 JB1/31	1	Right	Femur. Distal epiphysis abs.	NB
S20 W9 JX5	1	Left	Radius. Distal end absent.	NB
S18 W14 L1	1	Left	Humerus. Complete.	NB
S18 W14 L1	1	Left	Tibia. Proximal end absent	NB
S18 W14 L2	1	Left	Mandible. H.ramus. I, M2 pres.	NB
S18 W10 NVC	1	Right	Mandible. H.ramus Only I pres.	NB

Southern Flying Squirrel: Glaucomys volans

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22 W11 NVC	1	Left	Femur. Complete.	NB
S22 W19 NVC	1	Right	Femur. 3 rd trochanter, head damaged	NB
S18 W12 P1	1	Left	Mandible. M2, M3, Coronoid process absent.	NB

Otter: Lutra canadensis

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22 W11 S1/33	1	Left	Innominate. Pubis absent. Canid impact point on ilium.	NB

Bobcat: Lynx rufus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W12 D2	1	-----	Atlas. Wings broken.	NB

Genus Lynx

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W14 1	1	Right	Lower M1.	NB

Woodchuck: Marmota monax

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W10 D1	1	Right	Femur. Proximal head only.	NB
S18 W10 G1	1	Left	Innominate. Pubis absent.	NB
S20 W16 G2	1	-----	Upper incisor. Complete.	NB
S22 W11 JC1	1	Right	Mandible. H. ramus. P1, M3 absent.	NB

Fischer: Martes pennanti

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W10 G1	1	Left	Maxilla. P2, P3, P4 present.	NB
S21 W9 IEA 2/7	1	Left	Maxilla. P3, P4 present. Cut Marks.	NB
S22 W11 JB1/35	1	Right	Mandible. H.ramus. Cut marks	NB
S22 W11 JB2	1	Right	Skull. Glenoid fossa W/ zygo arch	NB
S18 W12 I1	1	Right	Radius. Proximal third. Ingestion	NB
S24 W16 NVC	1	Right	Radius. Distal end. Rodent gnawing	NB

Fischer: Martes pennanti

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22/23 W14 NVC	1	Left	Upper I3. Complete	NB
S18 W14 L1	1	-----	Canine. Complete. Hole drilled in root for use as ornamentation.	NB
S20 W9 NVC	1	Left	Lower M1	NB
S21 W10 NVC	1	Left	Mandible. H.ramus. P2, P3, P4 pres.	NB
S22 W11 NVC	1	Left	Mandible. H.ramus. M1, M2 abs.	NB

Striped Skunk: Mephitis mephitis

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S21 W10 J2/20	1	Left	Femur. Head, greater trochanter, distal end absent.	NB
S18 W12 I1	1	Right	Ulna. Proximal half.	NB

Prairie Vole: Microtus ochrogaster

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W16 B1	2	Right	Mandibles. Complete.	NB
S21 W10 C1	1	-----	Skull. Posterior absent. All dentition pres.	NB
S22 W19 EG2	1	Left	Innominate. Fragment ilium absent.	NB
S22 W19 EG2	1	Left	Femur. Distal epiphysis absent.	NB
S18 W12 H1	1	Left	Mandible. H. ramus. I, M3 absent.	NB
S18 W12 J1	1	Right	Mandible. H. ramus. I, M1, M2 pres.	NB
S22 12 JDA1	1	Right	Femur. Prox. end absent.	NB
S22 W10 KC2	1	Right	Ulna. Complete.	NB
S22 W10 KC2	1	Right	Femur. Proximal half.	NB
S19 W13 NVC	1	Right	Mandible. H. ramus. All dentition pres	NB
S21 W13 K7	2	L & R	Lower M1. Complete.	NB
S18 W14 G1	1	Left	Mandible. H.ramus. I, M1 pres.	NB
S18 W14 L3	1	Left	Mandible. H. ramus. M1, M2 pres.	B
S21 W12 NVC	1	Right	Innominate. Frag. ilium, pubis abs.	NB
S22 W11 NVC	1	Right	Tibia. Fibula absent.	NB

Meadow Vole: Microtus pennsylvanicus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 G2	1	Right	Mandible. H. ramus. I, M3 absent.	NB

Meadow Vole: Microtus pennsylvanicus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S20 W11 JDA 3/5	1	Right	Innominate. Ilium abs. Fragments ischium, pubis abs.	NB
S118 W10 D4	1	Right	Mandible. H. ramus. M1, M3 pres.	NB
S21 W13 K7	1	-----	Skull. Break post. frontal bone. All dentition present.	NB
S20 W10 NLS?	1	Right	Mandible. Angle, coronoid process absent. Partial condyle pres. Only I	NB
S18 W12 NVC	1	Left	Mandible. H. ramus. I, M2 pres.	NB
S18 W12 S	1	Left	Mandible. H. ramus. I, M1, M2 pres.	NB

House Mouse: Mus musculus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S21 W11 NVC	1	Right	Mandible. Coronoid proc, condyle absent	NB

Long-tailed Weasel: Mustela frenata

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S23 W11 ECX	1	Left	Innominate. Complete.	NB
S24 W16 H1	1	Left	Mandible. H.ramus. No dentition.	B
S21 W12 JDA 2/7	1	Right	Femur. Complete.	NB
S21 W12 K1	1	Left	Scapula. Complete.	NB
S21 W13 K2	1	Left	Femur. Complete.	NB
S21 W13 K2	1	Right	Humerus. Complete.	NB
S20 W13 NVC	1	Right	Innominate. Complete.	NB
S22 W12 NVC	1	Right	Mandible. Complete. P4, M1 pres.	NB

Mink: Mustela vison

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22 W16 E1	1	Right	Ulna. Proximal half.	NB
S24 W16 H6	1	Left	Innominate. Ilium absent.	NB
S21 W19 ICC3/2	1	Right	Mandible. Fragment H. ramus. I, canine, P2 absent.	NB
S22 W11 ICE 1/56	1	-----	Fibula. Complete.	NB
S22 W10 KC2	1	Right	Femur. Complete. Cutmarks.	NB
S24 W16 NVC	1	Left	Femur. Distal end absent.	NB

Little Brown Bat: Myotis lucifugus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22 W12 JDA 4/20	1	Left	Femur. Complete.	NB

White-tailed Deer: Odocoileus virginianus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W12 H1	1	Right	Buccal fragment molar	NB
S24 W16 H6	1	-----	Skull-Occipital. Foramen magnum, occipital condyles absent	B
S24 W16 H6	1	Left	Skull-squamosal	NB
S24 W16 H1	6	-----	Enamel fragments.	NB

Muskrat: Ondatra zibethicus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 H1	1	Left	Upper M3	NB
S24 W16 NVC	1	Left	Upper M3	NB

White-footed Mouse: Peromyscus leucopus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W10 D2	1	Left	Femur. Distal epiphysis absent	NB
S24 W16 E1	1	Right	Mandible. Complete. M1, M2 absent	NB
S24 W16 E2	1	Left	Mandible. Complete. Only I pres.	NB
S22 W12 E3	1	Right	Femur. Distal epiphysis absent.	NB
S22 W14 G1	1	Left	Femur. Distal epiphysis absent.	NB
S18 W14 G1	1	Right	Mandible.M1, M2, M3 abs. Coronoid process broken.	NB
S24 W16 H7	1	Right	Mandible. M3 abs. Coronoid process broken.	NB
S18 W12 J1	1	Right	Mandible. I, M1, M2 pres. Coronoid process, condyle absent.	B
S21 W12 JB4	1	Right	Mandible. Only I present.	NB
S22 W11 JD!	1	Right	Humerus. Prox. epiphysis absent.	NB
S22 W11 JK2	1	Right	Femur. Distal epiphysis absent.	NB
S22 W11 K2	1	Left	Femur. Complete.	NB
S14 W11 NVC	1	Right	Mandible. Only I pres.	NB
S21 W10 NVC	1	Left	Femur. Distal epiphysis absent.	NB
S21 W10 NVC	1	-----	Skull. Occipital absent.	NB

White-footed Mouse: Peromyscus leucopus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S21 W11 NVC	1	Right	Femur. Distal epiphysis absent.	NB
S21 W11 NVC	1	Left	Mandible. Only I pres.	NB
S22 W11 NVC	1	Right	Femur. Distal epiphysis absent.	NB
S23 W13 NVC	1	Left	Mandible. Only I pres. Coronoid process, angle broken.	NB
S21 W12 L9	1	Left	Femur. Proximal end only.	B
S24 W16 H4	1	Left	Innominate. Ilium absent.	NB

Deer Mouse: Peromyscus maniculatus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 G2	1	Left	Femur. Distal end absent.	NB
S22/23 W14 NVC	2	Left	Humerus. 1-Complete. 1-Proximal epiphysis absent	NB
S21 W10 J 3/8	1	Left	Femur. Distal epiphysis absent.	NB
S22 W13 JB3	1	Right	Mandible. Only I. angle absent.	NB
S22 W11 JD1	1	Left	Humerus. Prox. epiphysis absent.	NB
S20 W9 JXD1	1	Right	Femur. Distal end absent.	NB

Raccoon: Procyon lotor

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S21 W10 NVC	1	Left	Upper M2.	NB
S22 W19 NVC	1	Left	Scapula. Complete.	NB
S18 W14 G1	1	Right	Humerus. Distal end only.	NB
S18 W10 F 37-B	1	Right	Radius. Prox. end only.	B
S18 W10 C	1	Right	Ulna. Distal end absent.	NB
S19 W12 I 1/48	1	Left	Ulna. Distal end absent.	NB
S22 W11 E 3/29	1	Right	Tibia. Prox. epiphysis only.	NB
S22 W12 NVC	1	Left	Humerus. Prox. epiphysis abs.	NB
S24 W16 E1	1	Right	Skull. Parietal and squamosal	NB
S21 W11 K 9/10	1	Right	Upper M2.	NB
S22/23 W14 ?	1	Right	Lower M1	NB
S22/23 W14 ?	1	Right	Lower P4	NB
S18 W12 A1	1	-----	Baculum. Complete.	NB
S18 W12 A1	1	Right	Humerus. Prox. head abs.	NB
S18 W12 A1	1	-----	Skull. Occipital only.	NB
S18 W12 A1	1	Right	Ulna. Complete.	NB
S18 W12 A1	1	Left	Ulna. Complete.	NB
S18 W12 A1	1	-----	Skull. Occipital abs.	NB

Raccoon: Procyon lotor

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W14 A1	1	Left	Humerus. Prox. head abs.	NB
S21 W11 A 3/1	1	Right	Upper M1	NB
S12 W12 B1	1	Left	Lower M2	NB
S18 W12 B1	1	-----	Axis. Post. processes abs.	NB
S18 W12 B1	1	Right	Lower M1	NB
S18 W10 C1	1	Left	Femur. Distal epiphysis absent. Impact points head and distal end.	NB
S18 W12 D1	1	Left	Lower M2	B
S18 W12 D1	1	Right	Mandible. Fragment H. ramus. No dentition.	B
S20 W16 D1	1	Right	Scapula. Head, neck only. Canid gnawing.	NB
S24 W16 D1	1	Right	Lower M1	NB
S18 W10 D2	1	Left	Mandible. H. ramus. I, P2, P3 pres.	NB
S18 W12 D2	1	Left	Ulna. Proximal end only.	NB
S22 W16 D2	1	Right	Lower M2	NB
S22 W16 D2	1	Right	Lower P4	NB
S22 W16 D2	1	Right	Lower M2	NB
S20 W9 D3	1	Right	Upper M2	NB
S19 W12 DE 12	1	-----	Distal phalanx. Complete.	NB
S18 W10 E1	1	Left	Fibula. Distal end abs.	NB
S19 W12 E1/101	1	Right	Scapula. Acromion, fragments blade absent.	NB
S20 W12 F25/65	1	Right	Humerus. Complete.	NB
S24 W16 G1	1	-----	Skull. Occipital. Partial parietal, left squamosal.	NB
S20 W16 G2	1	Right	Mandible. H. ramus only. I, P2, P3 pres.	NB
S24 W16 G2	2	Right	Lower P4. Rear cusps sheared off.	NB
S20 W12 H1	1	Left	Humerus. Distal end only.	B
S20 W11 H9/2	1	Left	Femur.prox. $\frac{3}{4}$. Cut marks. Grnbone	NB
S19 W12 I12/10	1	Left	Femur. Proximal end. Rodent gnawing.	NB
S19 W12 I 4/34	1	Right	Innominate. Pubis absent.	NB
20 W9 IA 1/5	1	Right	Upper M1	NB
S22 W12 IC 3/26	1	Right	Skull. Maxilla and palate. M1, M2 pres.	NB
S22 W13 IF 1/33	1	Left	Radius. Proximal end absent	NB
S22 W10 IFA 4/23	1	Right	Ulna. Complete.	NB
S22 W12 J 1/V3	1	Left	Innominate. Pubis absent. Canid impact marks.	NB

Raccoon: Procyon lotor

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22 W13 K 10/28	1	Right	Mandible. H. ramus. P1 absent	B
S22 W10 KZ 1/2	1	Left	Mandible. I, canine, P1 absent. Condyle broken. Canid impact pts.	NB
S18 W14 L2	1	Right	Upper M2	B
S18 W14 L2	1	Right	Lower M1	B
17N 1E L4	1	Right	Mandible. H. ramus. No dentition	B
S19 W12 NVC	1	Right	Humerus. Distal end.	NB
S21 W10 NVC	1	Right	Innominate. Partial pubis abs.	NB
S22 W10 NVC	1	-----	Atlas. Complete.	NB
S22 W11 NVC	1	Left	Upper P4	NB
S22 W12 NVC	1	Right	Upper P2	NB
S22 W13 NVC	1	Right	Mandible. H. ramus. P2, P3, P4, M1 pres.	NB
S22 W13 NVC	1	Right	Skull. Maxilla, palate, zygo arch. M1, M2 pres.	B
S22 W16 E1	1	-----	Rib. Complete.	NB

Eastern Mole: Scalopus aquaticus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W12 E2	1	Left	Humerus. Complete.	NB
S18 W10 K2	1	Right	Humerus. Complete.	NB
S18 W10 M1	1	Left	Femur. Complete.	NB
S18 W12 M1	1	Left	Mandible. Complete. M1, M2 pres.	NB
S18 W10 NVC	1	Left	Tibia/fibula. Complete.	NB
S19 W10 NVC	1	Right	Femur. Complete.	NB
S19 W9 NVC	1	-----	Skull. Ant. portion only. Break post nasal. I, P3, M3.	NB
S19 W9 NVC	1	Right	Pelvis. Complete.	NB

Gray Squirrel: Sciurus carolinensis

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S19 W9 NVC	1	Right	Femur. Prox. end only.	B
S18 W14 G1	1	Right	Lower M3	NB
S23 W11 IB 1/3	1	Left	Premaxilla, Complete. I pres.	NB
S21 W12 NVC	1	Right	Ulna. Distal end absent.	NB
S20 W9 NVC	1	Left	Femur. Prox. end only.	NB
S20 W10 NVC	1	Right	Tibia. Proximal third	NB

Gray Squirrel: Sciurus carolinensis

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W12 NVC	1	Left	Femur. Prox. end	NB
S20 W13 NVC	1	Left	Ulna. Complete.	NB
S18 W10 NVC	1	Right	Ulna. Complete.	NB
S22 W10 IA4	1	Left	Scapula. Head, neck, frag. blade	NB
S22 W11 NVC	1	Left	Upper M2	NB
S20 W9 IA 2/4	1	Left	Premaxilla. I pres.	NB
S20 W10 NVC	2	L & R	Mandibles. L-H. ramus I only. R- diastema only. I pres.	NB
S22 W10 NVC	1	Left	Premaxilla. I pres.	NB
S22 W11 NVC	1	Left	Premaxilla. No dentition present.	NB
NHC NVC	1	Left	Maxilla. No dentition present.	NB
S22 W11 NVC	1	Left	Lower P4	NB
S22 W10 IC 1/52	1	Left	Premaxilla. I present.	NB
S22 W10 IC 1/52	1	Right	Maxilla. No dentition present.	NB
S20 W9 JXL1/9	1	Left	Ulna. Olecranon absent.	NB
S21 W9 IEA 3/10	1	Right	Ulna. Olecranon, distal end absent.	NB
S19 W10 A12	1	Right	Mandible. Coronoid proc abs.	NB
S20- W9 A 2/20	1	Left	Mandible. Angle broken.	NB
S20 W9 A 2/33	1	Right	Mandible. H.ramus. I, P4 Present	NB
S20 W11 B1	1	Left	Radius. Complete.	NB
S18 W14 C1	1	Left	Innominate. Acetabulum, fragments ilium, ischium, pubis pres.	NB
S20 W10 C1	1	Left	Humerus. Deltoid tuberosity broken.	NB
S18 W14 D2	1	-----	Atlas. Complete.	NB
S18 W14 E1	1	Left	Femur. Prox. end absent.	B
S24 W16 E1	1	Left	Femur. Diaphysis only.	NB
S22 W16 E2	1	Right	Maxilla. P4, M1, M2 pres.	NB
S23 W17 F 15	1	Right	Astragalus. Complete. Puncture mark.	NB
S20 W9 F 16/A1	1	Left	Scapula. Head, neck only	NB
S18 W12 G1	1	Right	Radius. Distal end absent.	NB
S24 W16 G2	1	Left	Innominate. Ilium only.	NB
S24 W16 G2	1	Left	Humerus. Distal end only.	NB
S24 W16 G2	1	Right	Radius. Proximal head only.	NB
S24 W16 G2	1	Right	Radius. Complete.	NB
S24 W16 G2	1	Right	Humerus. Proximal end only.	B
S24 W16 G3	1	-----	Skull. Occipital	NB
S24 W16 G3	1	-----	Skull. Occipital	B
S24 W16 H1	1	Right	Femur. Diaphysis only. Rodent gnawing.	NB
S24 W16 H1	1	Left	Innominate. Ilium, frag. pubis	NB

Gray Squirrel: Sciurus carolinensis

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 H4	1	Left	Premaxilla. I pres.	NB
S24 W16 H4	1	Left	Ulna. Proximal end abs.	NB
S24 W16 H4	1	Right	Ulna. Proximal half.	B
S24 W16 H4	1	Left	Tibia. Proximal end absent.	NB
S24 W16 H6	1	Left	Femur. Diaphysis only.	NB
S20 W12 H 8/3	1	Left	Mandible. Condyle absent. All molars absent.	NB
S21 W14 I 1/21	1	Left	Radius. Distal end absent.	NB
S24 W16 I2	1	Right	Scapula. Head, neck only	NB
S24 W16 I3	1	Right	Scapula. Head, neck, frag blade.	NB
S22 W10 IB1	1	Right	Scapula. Head, neck, frag. blade	NB
S22 W10 IC 1/18	1	Right	Mandible. Coronoid process, condyle absent.	NB
S23 W11 IC2	1	Left	Premaxilla. M1, M2, M3 present.	NB
S23 W11 IC 2/8	1	Right	Innominate. Pubis abs.	NB
S21 W9 ICA 5/4	1	Right	Humerus. Prox. end absent.	NB
S21 W13 J2	1	Right	Humerus. Distal end only	NB
S22 W10 JA	1	Right	Scapula. Head, neck, blade frag.	NB
2/29				
S20 W9 JX 2/39	1	Right	Mandible. H.ramus M1, M2, M3 present.	NB
S22 W11 K 3/31	1	Left	Radius. Complete.	NB
S21 W13 K4	1	Left	Premaxilla. No dentition.	NB
S22 W12 L 3/5	1	Left	Humerus. Proximal end only.	NB
NHC NVC	1	Right	Innominate. Ischium, pubis absent.	NB
S18 W12 NVC	1	Right	Astragalus. Complete	NB
S19 W10 NVC	1	-----	Lower incisor	NB
S19 W12 NVC	1	Left	Premaxilla. I pres.	NB
S20 W10 NVC	1	Left	Radius. Complete.	NB
S20 W10 NVC	3	-----	Upper incisors	NB
S20 W11 NVC	1	Left	Maxilla. Only M3 pres.	NB
S20 W11 NVC	1	Left	Humerus. Proximal end absent.	NB
S20 W9 NVC	1	-----	Atlas. Wings absent.	NB
S21 W14 NVC	1	Right	Tibia. Proximal end only	NB
S22 W13 NVC	1	Right	Maxilla. No dentition.	NB
S22/23 W14	1	Right	Radius. Distal end absent.	NB
NVC				
S23 W13 NVC	1	Right	Mandible. Only I present. Lower post. asc. ramus abs.	NB
S24 W16 NVC	1	Left	Maxilla. Only P4 present	NB
S20 W10 R118	1	Right	Femur. Greater and third trochanter damaged	NB
A7				

Fox Squirrel: Sciurus niger

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S20 W16 D1	1	Left	Ulna. Complete.	NB
S24 W16 D2	1	Right	Mandible. H.ramus. No dentition.	NB
S18 W10 E1	1	Left	Scapula. Head, neck, blade frag.	NB
S22 W19 EH 3/3	1	Right	Radius. Distal end absent.	NB
S20 W16 F 12	1	Left	Tibia. Distal end only.	B
S18 W8 F 62	1	Right	Mandible. H.ramus. Only P4	NB
S24 W16 G1	1	Left	Radius. Distal end absent.	NB
S24 W16 G1	1	Right	Premaxilla. I pres.	NB
S24 W16 G2	1	Left	Scapula. Head, neck, blade frag.	B
S24 W16 G2	1	Left	Scapula. Head, Neck, blade frag.	NB
S24 W16 H3	1	Left	Tibia. Proximal end absent.	NB
S24 W16 H3	1	Right	Humerus. Diaphysis only. Rodent gnawing.	NB
S24 W16 H3	1	Right	Tibia. Distal end absent.	NB
S24 W16 H4	1	Right	Humerus. Proximal end absent.	NB
S24 W16 H4	1	Right	Scapula. Head, neck, frag blade.	NB
S24 W16 H6	1	Right	Humerus. Prox. end absent.	NB
S22 W12 I 1/60	1	Left	Radius. Distal end absent	NB
S22 W12 I 2/12	1	-----	Sacrum. Complete	NB
S23 W11 IC 1/76	1	Left	Mandible. H. ramus. I, P4 Present	NB
S22 W13 LC 1	1	Right	Humerus. Complete.	NB
S19 W11 NVC	1	Right	Ulna. Distal end absent.	NB
S24 W16 G1	1	Left	Maxilla. No dentition.	NB
S20 W10 JEA3	1	Right	Skull-parietal and squamosal.	NB
S22 W11 KG 1/35	1	Left	Premaxilla. I pres.	NB
S19 W9 NVC	1	Right	Premaxilla.. I pres.	NB
S23 W11 ECX	1	Right	Premaxilla. I pres.	NB
S20 W9 NVC	1	Left	Maxilla. P4, M1 present.	NB
Surface	1	Left	Femur. Prox end absent.	NB
S22 W11 K 1/20	1	-----	Skull-frontal	NB
S19 W11 NV 1	1	Left	Mandible. No dentition. Frag. asc ramus, condyle pres.	NB
S19 W10 NVC	1	Right	Mandible. Complete. I, P4 only. Puncture asc. ramus	NB
S20 W10 NVC	1	Left	Maxilla. No dentition.	NB
S20 W10 NVC	1	Right	Tibia. Diaphysis only.	NB
S20 W11 NVC	1	Left	Mandible. M1, M2 absent.	NB
S20 W11 NVC	1	Right	Femur. Distal end absent.	NB
S21 W13 NVC	1	Left	Femur. Proximal head only.	NB
S21 W13 NVC	1	Left	Humerus. Complete	NB
S22 W11 NVC	1	Right	Mandible. Premolars/molars abs.	NB

Fox Squirrel: Sciurus niger

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S23 W11 NVC	1	Left	Mandible. I, Angle broken. P4 only.	NB
S23 W13 NVC	1	Left	Premaxilla. I pres.	NB
S23 W13 NVC	1	Right	Radius. Distal end absent.	NB

Thirteen-lined Ground Squirrel: Spermophilus tridecemlineatus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W12 G1	1	-----	Sacrum. First sacral vert. absent.	NB
S18 W16 D1	1	Left	Scapula. Head, neck, blade frag.	NB
S18 W14 E1	1	-----	Skull. Left frontal, squamosal, parietal.	NB
S24 W16 I4	1	Right	Femur. Proximal end only.	NB
S22 W18 C5	1	Right	Innominate. Ilium, pubis abs.	NB
S20 W16 D1	1	Left	Femur. Complete.	NB
S18 W14 E1	1	-----	Axis. Complete.	NB
S18 W16 E1	1	-----	Skull-Occipital	NB
S22 W16 E1	1	Right	Tibia. Proximal head absent.	NB
S18 W10 E2	1	-----	Skull-Occipital	NB
S20 W16 G1	1	Right	Scapula. Coracoid process and frag acromion broken.	NB
S24 W16 H6	1	Right	Maxilla. Only P4 present.	NB
S20 W9 JX4	1	Left	Femur. Distal end absent.	NB
S20 W13 NVC	1	Right	Innominate. Ilium, pubis absent.	NB

Eastern Cottontail Rabbit: Sylvilagus floridanus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W16 B1	1	Right	Premaxilla.. I1, I2 pres.	NB
S24 W16 G1	1	Right	Upper Incisor	NB
S12 W14 NVC	1	Left	Femur. Distal end only.	NB
S22 W10 IA4	1	Left	Scapula. Neck, frag caudal border	NB
S19 W9 NVC	1	Left	Premaxilla. I1, I2 present.	NB
S18 W10 A 2/1	1	Right	Mandible. H ramus M1, M2 present.	NB
S18 W16 B1	1	-----	Skull-Maxilla w/ frag zygo. arch	NB
S18 W16 B1	1	Left	Mandible. H.ramus M3 absent.	NB
S20 W16 C1	1	Left	Scapula. head, neck, coracoid proc.	NB
S12 W27 D1	1	Right	Scapula. Head, neck, frag blade.	NB
S18 W10 D2	1	-----	Lower incisor.	NB
S22 W16 D2	1	-----	Lower Incisor.	NB

Eastern Chipmunk: Tamias striatus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S20 W11 NVC	1	Right	Tibia. Proximal end.	NB
S22 W11 KC	1	Right	Maxilla. P4, M1, M2, M3 present.	NB
1/10				
S22 W23 K1	1	Left	Premaxilla. I pres.	NB
S18 W12 G1	1	Left	Premaxilla. I Absent.	NB
S24 W16 E1	1	Left	Femur. Proximal end only.	NB
S18 W12 I1	1	Right	Mandible. Complete All dentition present.	NB
S23 W11 A 3/12	1	Right	Mandible. H. ramus. M3 pres.	NB
S18 W16 B3	1	Left	Innominate. Frag. pubis absent.	NB
S18 W10 C10	1	Right	Mandible. H. ramus. All Dentition	NB
S18 W10 C10	1	Left	Mandible. Complete. All Dentition.	NB
S18 W16 D1	1	Right	Mandible. H. ramus. P4, M3 only.	NB
S18 W16 D1	1	Left	Maxilla. P4, M1, M2, M3 present.	NB
S18 W12 D2	1	Right	Maxilla. P4, M1, M2 present.	NB
S18 W14 D2	1	Left	Mandible. I broken. Angle broken	NB
S18 W10 D5	1	Right	Mandible. H. ramus only. All dentition.	NB
S18 W16 E1	1	Right	Femur. Complete.	NB
S18 W16 E1	1	Left	Humerus. Complete.	NB
S18 W16 E1	1	Left	Mandible. M2, M3 absent.	NB
S21 W13 E2	1	Left	Mandible. I broken. P4, M1, M2, M3 present. Break along asc. ramus.	NB
S18 W12 E2	1	Right	Mandible. Condyle, angle absent..	NB
S22 W11 E2	1	Left	Mandible. P4, M1 present. I, M2 pres. But fractured.	NB
S22 W19 EE1	1	-----	Atlas. Complete.	NB
S18 W12 F8	1	Left	Mandible. Only I pres.	NB
S18 W12 F8	1	Right	Mandible. I, M2, M3 absent.	NB
S18 W12 F8	1	Right	Mandible. N2, M3 absent.	NB
S18 W12 F8	1	Right	Mandible. Complete. P4, M3 absent.	NB
S18 W12 G1	1	Left	Mandible. Complete. All dentition.	NB
S24 W16 G1	1	Left	Mandible. Break along ventral edge.	NB
S24 W16 G1	1	Left	Mandible. Break ventral edge/asc ramus	NB
S24 W16 G1	1	-----	Sacrum. Complete.	NB
S18 W14 G2	1	Right	Maxilla. P4, M1, M2, M3 present.	NB
S24 W16 G2	1	Right	Mandible. I fractured.	NB
S24 W16 G2	1	Right	Mandible. Complete. I absent.	NB
S24 W16 G2	1	Right	Mandible. Coronoid process, angle absent.	NB
S24 W16 G2	1	Left	Mandible. H. ramus. I absent.	NB

Eastern Chipmunk: Tamias striatus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Ingest.</u>
S24 W16 G2	1	Left	Mandible. Complete.	NB
S18 W12 H1	1	Left	Maxilla. M2 absent.	NB
S24 W16 H1	1	Left	Mandible. M1, M2 present. Break at asc. ramus.	NB
S24 W16 H6	1	Right	Only molars present.	NB
S18 W12 I1	1	Right	Mandible. Complete	NB
S18 W12 I1	1	Right	Mandible. Coronoid process broken. All dentition pres.	NB
S18 W12 I1	1	Left	Mandible. Complete.	NB
S20 W11 I1	1	Right	Mandible. H.ramus. m2, M3 absent.	NB
S20 W11 I 10/12	1	Left	Mandible. Coronoid process absent.	NB
S18 W10 I2	1	Right	Mandible. H.ramus M2, m3 absent.	NB
S18 W10 I2	1	Right	Mandible. Coronoid process, angle broken.	NB
S24 W16 i2	1	Right	Tibia. Distal end absent.	NB
S22 W13 If3	1	Left	Maxilla. P4, M1 absent.	NB
S18 W10 IX	1	Right	Mandible. M2, M3 absent.	NB
S18 W12 J1	1	Right	Mandible. Coronoid process, angle absent.	NB
S18 W14 J1	1	Right	Mandible. Only I pres.	NB
S22 W13 JA1	1	Right	Maxilla. Fragment. Only P4 pres.	NB
S19 W10 JX1	1	Left	Mandible. All dentition present.	NB
S18 W10 K2	1	Left	Mandible. I absent. Break along ventral edge.	NB
S22 W13 K6	1	Right	Femur. Complete.	NB
S22 W13 K8	1	Right	Mandible. Coronoid process absent.	NB
S22 W13 K9	1	Left	Mandible. M2 absent.	NB
S22 W10 KC 2	1	Left	Mandible. H. ramus. M1, M2, M3 pres.	NB
S18 W10 NVC	1	Right	Mandible. H. ramus. P4, M1 absent.	NB
S18 W10 NVC	1	Right	Mandible. I absent.	NB
S18 W12 NVC	1	Right	Mandible. Complete	NB
S18 W19 NVC	1	Left	Distal end absent.	NB
S21 W10 NVC	1	Left	Femur. Complete.	NB
S21 W11 NVC	1	Right	Mandible. H. ramus. All dentition.	NB
S21 W14 NVC	1	Right	Humerus. Complete.	NB
S22/23 W14 NVC	1	Left	Mandible. H.ramus. all dentition.	NB
S24 W16 NVC	1	Left	Mandible. H. ramus. All dentition	NB
S24 W16 NVC	1	Left	Mandible. Complete. I broken	NB

Badger: Taxidea taxus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S24 W16 D1	1	Left	Upper P4	NB

Gray Fox: Urocyon cinereoargenteus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S18 W12 F8	1	Right	Ulna. Complete.	NB

Black Bear: Ursus americanus

<u>Provenience</u>	<u>NISP</u>	<u>Side</u>	<u>Description</u>	<u>Burned</u>
S22 W16 D2	1	-----	Second Palanx. Complete.	B
S19 W10 D5/3	1	-----	Distal Phalanx. Complete.	NB