Recovering History by the Manatee Mineral Spring, Bradenton, Florida: Excavations and Laboratory Analysis

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Prepared by
Uzi Baram
New College of Florida

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Chapter 8 Faunal Analysis

Diane Wallman
University of South Florida

Methods: Zooarchaeology

The methods used in this analysis include standard zooarchaeological techniques (Lyman 1994; O'Connor 2000; Reitz and Wing 2008). Each specimen was identified to skeletal part and side. The remains were identified to the lowest taxonomic category possible, using the comparative collection at the University of South Florida Zooarchaeology Laboratory. Mammals without diagnostic features were assigned to size class categories (adapted from Thomas 1969) based on bone size and thickness. Due to Covid-19 restrictions, I am unable to access the zooarchaeology laboratory at the Florida Museum of Natural History, which houses a comprehensive comparative collection of fish species. Without this resource, fish identifications remain tentative, thus all fish are identified to the level of Class. When possible, I assessed the relative age for mammals by epiphyseal fusion (Silver 1963).

For each specimen, frequency (NISP) and weight (g) were recorded. To ensure reliable interpretations, I assessed the cultural and non-cultural taphonomic processes affecting the deposits following Lyman (1994). Attributes evaluated for each specimen include: weathering stage and other natural taphonomic processes (i.e. staining, mineralization), presence of carnivore or rodent gnawing, presence and intensity of burning, and any evidence of butchery, including cutting, chopping, sawing and any signs of breaking for marrow extraction (i.e. spiral fracturing, impact points).

Results

The assemblage includes a total of 4988 specimens (9053.51g). Mammals and fish dominate the assemblage in both NISP and Weight (Table 1). Domestic cattle (*Bos taurus*) is the most abundant food species for both NISP and Weight (Table 2). Pig (Sus scrofa) is also common in the assemblage, followed by deer (*Odocoileus virgnianus*) and sheep/goat (*Ovis*/*Aries).* Supplemental food species include grey and fox squirrel (*Sciurus niger* and *Sciurus carolinensis*) and raccoon (*Procyon lotor*). Commensal species identified include Old world rat (*Rattus sp.),* mouse (*Mus sp.)* and the hispid cotton rat (*Sigmodon hispidus*). Excavations recovered a complete opossum (*Didelphius virginianus*) from unit 33.2. The opossum is an adult, and was fully articulated when it was buried. This could have been an intentional burial, or a natural death.

Sample of the Faunal Remains. Photograph by Uzi Baram

Domestic chicken (*Gallus gallus*) is the most common bird species represented. The only wild bird species identified includes turkey (*Meleagris gallopavo*), but there are other wild taxa present with identifications pending. A single alligator (*Alligator mississippiensis*) tooth was identified. Aquatic turtle carapace has also been identified in the assemblage

Table 1. Class Representation

Class	**NISP**	**%NISP**	**Weight (g)**	**%Weight**
Amphibian	4	0.08	1.5	0.02
Aves	72	1.47	84.5	0.87
Fish	2152	44.06	1097.01	11.23
Mammal	2651	54.28	8547.69	87.52
Reptile	5	0.10	11	0.11
Grand Total	4884		9766.7	

Table 2. Identified Species

Taxon	**Common Name**	**NISP**	**Weight**	**MNI**
Fish	Fish	2152	1097	
Gallus gallus	Domestic Chicken	32	64.5	4
Meleagris gallopavo	Turkey	1	3.5	1

Aves	Bird	39	16.5	
Alligator mississippiensis	Alligator	1	1.5	1
Testudines	Turtle	4	9.5	1
Amphibian	Amphibian	4	1.5	
Didelphis virginianus	Oppossum	100	310	1
Mus sp.	Old World Mouse	1	0.01	1
Rattus sp.	Old World Rat	5	1.9	1
Sigmodon hispidus	Hispid Cotton Rat	1	0.1	1
Sciurus niger	Fox Squirrel	1	1	
Sciurus carolinensis	Grey Squirrel	1	1	1
Procyon lotor	Raccoon	7	3.5	1
Canis familiaris	Domestic Dog	250	250	3
Felis catus	Domestic Cat	116	61	2
Bos taurus	Domestic Cattle	341	4215	7
Ovis/Aries	Domestic Sheep/Goat	4	11.5	1
Odocoileus virgnianus	White-tailed Deer	9	84.5	2
Sus scrofa	Domestic Pig	117	658	4
medium artiodactyl	medium artiodactyl	1	1	
large mammal	cattle-sized	786	1597	
medium mammal	pig sized	548	366	
medium/large mammal	deer-sized	75	68	
small/medium mammal	dog-sized	46	19.5	
small mammal	rabbit-sized	23	7	
mammal	mammal	318	178	
Grand Total		**4983**	**9028.01**	

Preliminary fish identifications (which are incomplete, due to the reasons described above) suggest a diverse assemblage, including a variety of freshwater, brackish and saltwater species (Table 3). I have identified 11 fish Families in the assemblage. All of the fish can be found in the Manatee River, or nearby estuarian and coastal waters on the Gulf. They include common game fish o the Manatee River and Estuary, such as grouper, jack, drum, sheepshead, mullet, bass, mackerel, cobia and flounder.

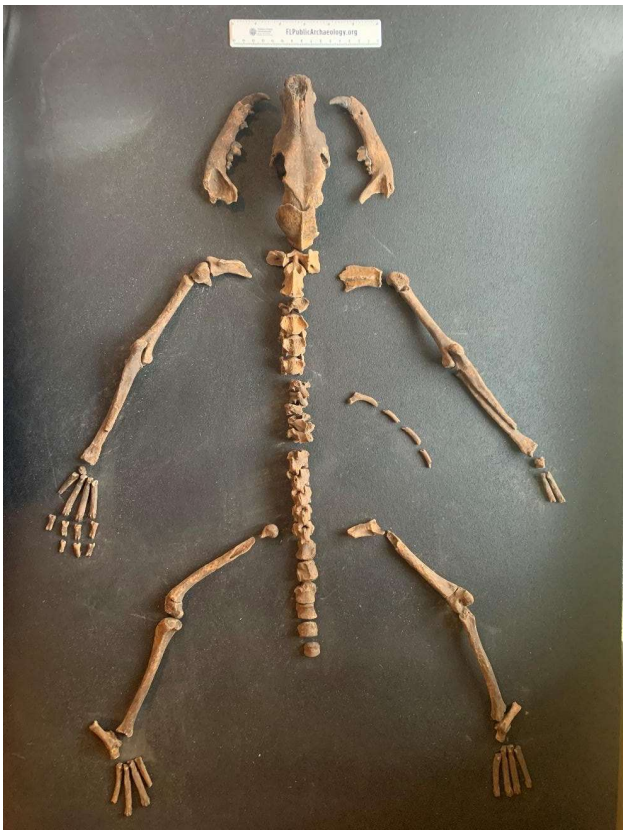
Table 3. Preliminary Fish Identifications

Latin Name	Common Name
Fish	
Ictaluridae	Catfish

Centropomidae	Snooks
Serranidae	Grouper/sea bass
Centrarchidae	Blackbass, Crappies
Carangidae	Jacks
Sciaenidae	Drums, croakers
Sparidae	Sheepshead
Mugilidae	Mullet
Rachycentridae	Cobia
Bothidae	Flounder
Scombridae	Mackerel

Pet or Utilitarian Animals

Excavations recovered an in-situ dog burial in the Optimism Locus (unit 17.5). Inspection of the specimen indicates that it is an adult dog. The elements identified suggest the animal was buried as a complete carcass. The lack of a baculum suggests that this was a female. Using calculations from Onar and Belli (2005), and Harcourt (1974), shoulder height and weight were calculated for this specimen. The shoulder height is between 16-18 inches (41-46cm), and the weight is 44 to 48 lbs (20 to 22 kg).



Articulated Dog. Courtesy of Diane Wallman

Within unit 27.4/27.5, there is an additional dog specimen. The elements recovered suggest that the dog was deposited as an articulated carcass. These remains are among food remains, suggesting it was not a formal burial. Additional dog remains were identified in units 25.4 and 25.5, representing one individual. All of these were adult specimens, and the elements represented suggest they were deposited as complete carcasses. None of these remains showed signs of butchery. These were among the remains of what seems to be a complete domestic cat (*Cattus domesticus*) skeleton. Similar to the dogs and opossum, the cat appeared to be deposited as a complete skeleton, and not representative of something consumed. These remains were found among food remains, as opposed to a distinct burial context.

Taphonomy

Overall, the remains are well-preserved with little observable weathering. Fragmentation is variable among the different contexts. Butchery marks observed include saw marks, chop marks, and cut marks, more commonly on the mammalian specimens. Of the 7% of remains with butchery marks, saw marks are the most abundant, representing 92% of the butchery marks. Only 8% of the assemblage showed signs of burning, and is concentrated in a few specific contexts within the Celebration and Optimism loci.

References

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