A ZOOARCHAEOLOGICAL ANALYSIS OF COMMINGLED DEPOSITS AT CAVES BRANCH AND SAPODILLA ROCKSHELTERS IN CENTRAL BELIZE

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A Thesis

Submitted in Partial Fulfillment

of the Requirements for the Degree of Master of Arts

in Anthropology

Northern Arizona University

May 2019

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ABSTRACT

A ZOOARCHAEOLOGICAL ANALYSIS OF COMMINGLED DEPOSITS AT CAVES BRANCH AND SAPODILLA ROCKSHELTERS IN CENTRAL BELIZE

GAVIN B WISNER

This project is an analysis of faunal materials from two rockshelters in Central Belize, Caves Branch Rockshelter (CBR) and Sapodilla Rockshelter (SDR). The research goal is to identify the composition of fauna from both rockshelters, analyze similarities and differences between the zooarchaeological material of the two sites, and articulate the behavioral practices that led to the deposition of faunal remains. Analysis of materials follows methods used at the Northern Arizona University, Department of Anthropology, Faunal Analysis Laboratory (NAUDAFAL) using standard procedures for identifying elements, taxonomic categories, and the taphonomic history of the assemblages. The theoretical underpinnings of this project include Schiffer's behavioral archaeology and Bourdieu's theory of practice as a way to articulate cultural and naturally occurring fauna based on specific behaviors and practices. The use of fauna from the Protoclassic to Terminal Classic temporal periods at the two rockshelters show insight into Maya ritual and mortuary behavior and potentially elucidate change in human interactions with the environment through the remains of animals deposited culturally.

ACKNOWLEDGEMENTS

I would first like to extend my gratitude to my committee members for their immense help in this thesis project. My chair, Dr. Chrissina Burke, has been an outstanding mentor and her guidance through undergraduate and into this project sent me down this path of staring at animal bones for hours at a time. Thank you for allowing me to participate in your research and continue to develop the skills needed to get through this project and the numerous amounts of your own time you have spent assisting me with edits and just criticisms. I am grateful that you have stuck with me to the end of this project. I am also grateful to Dr. Shawn Morton for his guidance and also for allowing me to hop on in the Montero during the summer of 2017 to travel down to Belize to work with the CBAS Project. Thank you for your keen taste in music and for almost always being able to chat about this research. My appreciation also goes out to Dr. Clinton Humphrey for his comments and help with the theoretical sections of this thesis. Dr. Jaime Awe provided me many opportunities to work with BVAR and his assistance, guidance, and his knowledge of the region is greatly appreciated.

This present work would not have happened without the assistance of the many members of the NAUDAFAL who have all kept me sane in one way or another. I am especially grateful to Katie Tappan, Aimee Alvarado, Dylan Wilson, Kelsey Gruntorad, Brea Cappello, and Tucker Austin for putting up with my madness these last few years in the lab. I owe many thanks to the undergraduate researchers that have helped me sort through the bones including Gabriel Lucius, Ellen Nagaoka, Mitchell Cleveland, and Eric Gilmore. Other past and present members of the NAUDAFAL that I am thankful to have worked with or been around include Wyatt Benson, Megan Laurich, Natalie Patton, Leighanna Thomas, Rylee Gappmayer, Samantha Lewis, Bárbara Arriaga, Whitney Yarbrough, Josh Nowakowski, Francesca Neri, Dan Martinez, Victoria Izzo, Courtney Mackay, Caity Bishop, and Sean Flynn.

I am grateful to the Ray Madden Scholarship Foundation which has provided funding for this thesis and to the faculty of the Department of Anthropology at NAU. Having had the last six years to learn from the anthropology faculty at NAU, I cannot express how grateful I am for the everything that I have learned from you all. I am also extremely thankful for Myka Schwanke for putting up with my near habitation of Bilby Research Center over the last two years. Thank you as well to Cristen Crujido for always being immensely helpful when I spaced out and forgot to fill out of a form or needed a signature. I would also like to mention how helpful Denise Stippick was during my earlier years at NAU and send a special thanks for all of her support and help.

I extend many thanks to Dr. Gabriel Wrobel, Dr. Jillian Jordon, Dr. Amy Michael, Dr. Cristopher Andres, and Jack Biggs who were pivotal in helping me find the faunal remains used in this analysis from the CBAS storage in Belize. I appreciate every moment of my time with the fantastic CBAS project students and crew over the 2017 field season, even the goma. Thank you all for putting up with my strange habit of collecting dead animals for comparative purposes and my overprotectiveness of a coatimundi baculum. Along with the members of CBAS, I extend my gratitude and appreciation to the Mr. David Hayles and the staff of Sleeping Giant for their generous support of CBAS, especially during the summer of 2017. I owe many thanks the staff of the Institute of Archaeology for permission and help with exporting the faunal remains to Arizona including Dr. John Morris, Dr. Allan Moore, Brian Woodeye, George Thompson, Antonio Beardall, Josue Ramos, Jorge Can, and Sylvia Batty.

During the summer of 2016, I had the opportunity to hop on a plane to Belize and begin my first field season as an archaeologist under the Belize Valley Archaeological Reconnaissance project. My thanks are due to the plethora of BVAR project members past and present. I have had the pleasure of working with and learning from many from this community of archaeologists including, Dr. Julie Hoggarth, Dr. Claire Ebert, Norbert Stanchly, Tony Beardall, Britt Davis, Dr.

Lisa DeLance, Diane Lynn, Cameron Griffith, Mike Biggie, Hannah Zanotto, Kelsey Sullivan, Shawn Dennehy, Matt Wanda, Adam Fernandez, Sasha Romih, Samuel Hemsley, Amy Gillespie, Rosamund Fitzmaurice, Erin Ray, Jack McGee, Rafael Guerra, Mark Porter, Tia Watkins, Doug Tilden, Frank Tzib, Edlin de Santiago, Ian Roa, Caroline Watson, Qui Yijia, Emma Messinger, Renee Collins, Steve Fox, and John Walden with his Lower Dover vagabonds. You all have been amazing and special thanks are due to each and every one of you. I would also like to mention and thank Keith Solmo for his friendship which is sorely missed.

My family and close friends have been fantastic in supporting me through this endeavor. Thank you to Logan, Rachel, Tanner, Austin, Dwight, and Brandi for being there throughout the years. Furthermore, my friends at Sunrise, WME, and the rest of the White mountains, of which there are too many to list, are all appreciated. Further thanks are due to my manic siblings Katelynn, Frank, Courtney, Steven, Jada, Dustin, Nicole, Derek, and Melissa and to the many members of my family. Finally, thank you to my parents, Wendy and Jon Wisner, for always encouraging me to pursue my interests and find happiness in my chosen path. I would not be where I am today without you both and I cannot thank you enough for your ceaseless support.

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CHAPTER 1

INTRODUCTION

People in the Maya Lowlands have used caves for mundane and spiritual purposes for several thousand years, and the spiritual use of caves were a particular focus during the time periods covered by this thesis. Ritual activities within these caves link to an ideological association with the underworld, often called Xibalba. Some of these practices include using the caves as sources of water, sources of other resources, as cemeteries, as ritual locations, as art galleries, and as places of refuge (Thompson 1959, 1975; Morton 2015, 2018:72). A major component of the Central Belize Archaeological Survey (CBAS) Project, from which the data in this thesis is derived, is to answer questions on the ancient Maya use of rockshelters and caves in central Belize. CBAS is one of several archaeological projects researching the ideological significance of caves and rockshelters in the Maya lowlands since the increase in Mesoamerican cave studies in the 1980's and 1990's (Awe 1998; Brady and Ashmore 1999; Wrobel 2008; Wrobel et al. 2013). This research contributes to this subject through the analysis of several thousand animal specimens associated with layers of mixed mortuary and cultural deposits.

In this thesis, zooarchaeological materials from two rockshelters located in the Cayo District of western Belize, used by the ancient Maya from the Preclassic to the Terminal Classic periods, are used to infer ritual behavior and animal use in the Central Belize River Valley. The Caves Branch and Sapodilla Rockshelters are part of a karst landscape dotted with caves and rockshelters in Central Belize (Thomas 1996). These two rockshelters are unique in having similar patterns of artifact assemblages, suggesting their use as cemeteries by the ancient Maya throughout the Preclassic and increasing by the Terminal Classic (Michael and Burbank 2013; Stemp et al. 2013; Wrobel 2008; Wrobel and Tyler 2006).

Analysis of faunal remains recovered from these shelters includes several standard zooarchaeological processes. First, identification of the taphonomic processes impacting the remains clarifies any articulation between ancient Maya ritual practices, such as burning of food offerings to natural processes like burning from forest fires. Given equifinality is problematic zooarchaeologically, the burned specimens must be analyzed to consider if natural or cultural processes occurred. By identifying what taphonomic effects are natural or human caused, this research can reveal if the animal remains were ritual offerings or other activities, perhaps linked to bereavement or remembrance of family members.

The impacts that taphonomic processes, both natural and cultural, have on the zooarchaeological record have been further explored through the analysis of three West Indian Conch Shell fragments identified at the site of Deep Valley Rockshelter 1. One body whorl fragment and an outer lip fragment were found in operation 1A, EU 2, Level 3, while a larger fragment of the same shell was found in op 1A EU 6, Level 2, significantly apart from one another. Explanations for the deposition of these different fragments are variable, including human agency through digging and redepositing the remains, fluvial systems redepositing certain fragments, or even the highly intrusive hispid pocket gophers and iguanas burrowing into the ground leading to bioturbation of archaeological contexts. My argument is that the archaeology of mixed deposits such as those found in frequently used rockshelters is difficult to interpret but should be explored through zooarchaeological and taphonomic research to ascertain aspects of human agency leading to their composition.

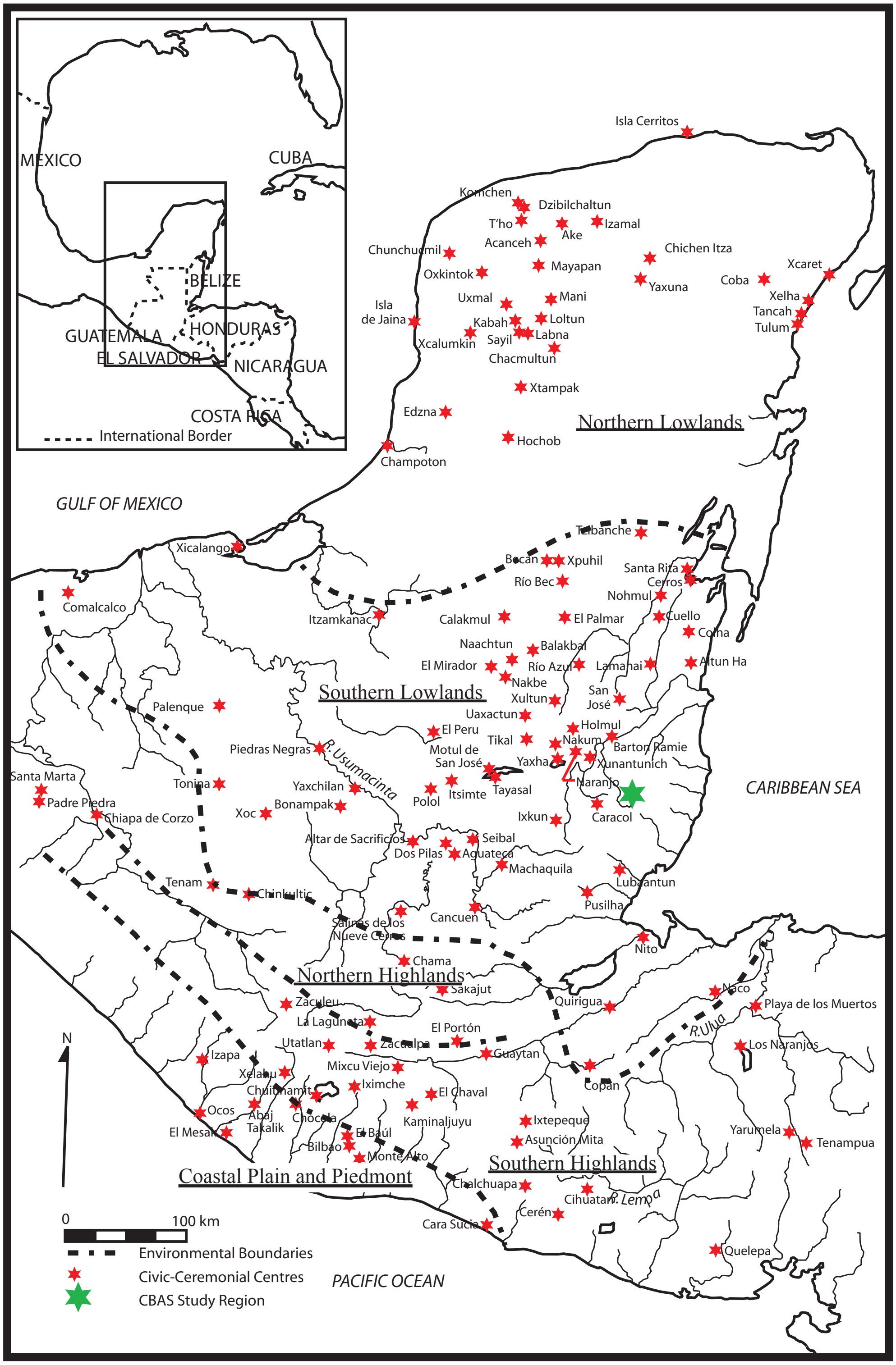

Figure 1. Map of the Maya region showing major sites, the CBAS study areas, and environmental zones (Map courtesy of S. G. Morton).

Over half a century, archaeologists have focused intensive research on the importance of caves to the Pre-Hispanic Maya, specifically through architectural representations of caves through pyramid complexes throughout the Maya world and through intensive excavation and survey of caves scattered in the Maya Lowlands and Highlands (Bassie-Sweet 1996; Vogt and Stuart 2005).

The Central Belize Archaeological Survey (CBAS) Project developed out of the Belize Valley Archaeological Reconnaissance (BVAR) Project under the direction of Wrobel in 2009. Caves Branch Rockshelter (CBR) and Sapodilla Rockshelter (SDR), two rockshelters excavated by CBAS, are located in a landscape that has a unique history in archaeological research, being one of the first areas to integrate cave and rockshelter use with settlement studies (Bonor Villarejo 2002; Wrobel 2006). CBR and SDR are located along the Hummingbird Highway near the contemporary village of Armenia in the Caves Branch Valley of central Belize. Excavations at CBR and SDR (Figures 4 and 5) have provided insight into ritual and mortuary activities of the ancient Maya. Both sites were utilized from about 300 BC to AD 900, or the Protoclassic to the Terminal Classic periods based on diagnostic ceramic dating, AMS dates, and fluorine dates (Hardy 2009; Isaacs 2016; Michael 2016; Wrobel 2008).

The rockshelters have been particularly useful in identifying the Preclassic and Early Classic ceramics that many settlements in the area lack (Hardy 2009). In addition, the shelters have been linked to small agricultural communities that developed during the Classic Maya period (300-900 AD). Much of the archaeological integrity of the rockshelters has been compromised due to looting, however, the artifactual material from these rockshelters can nonetheless serve as an important foundation for evaluating the use of these types of landscape features by populations in the region (Hardy 2009; Michael 2016; Stemp et al. 2013; Wrobel et al. 2010). The two sites are easily accessible and likely served different functions for the ancient

Maya communities nearby than elite caves such as Naj Tunich or Actun Tunichil Muknal, known for restricted access across the caves (Awe et al. 1998; 2005; Brady 1989; Griffith 1998). This easy accessibility, however, has led to a significant amount of looting in the region which was served as the impetus for salvage work at both sites beginning with CBR in 1994 and SDR in 2010.

In the summer of 2017, I had the opportunity to work with members of the Central Belize Archaeological Survey project, gaining access to the zooarchaeological remains from CBAS and previous Belize Valley Archaeological Research (BVAR) Project research in Central Belize. With approval from the Institute of Archaeology, faunal remains from CBR and SDR were exported to the Northern Arizona University, Department of Anthropology, Faunal Analysis Laboratory (NAUDAFAL).

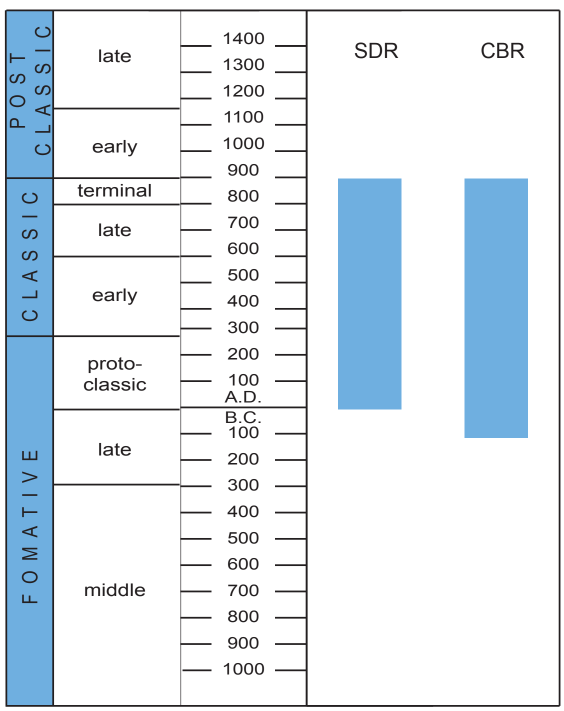

Figure 2. Cultural sequence, based on radiocarbon and ceramic dates for CBR and SDR in the Caves Branch River Valley, Belize. (Adapted from Hardy 2009; Morton 2018).

Research Questions

The questions addressed in this thesis includes the following:

1. What is the composition of fauna, including species variety, skeletal element representation, and taphonomic history (what remains were naturally and culturally deposited), recovered from Caves Branch and Sapodilla Rockshelters?
2. In consideration of what we know about fauna in caves – how do these faunal data from Caves Branch and Sapodilla Rockshelters compare, given the limited contextual information? Further, are there significant differences in the faunal assemblages from these two shelters?
3. Finally, can we attribute every culturally deposited animal element from these two rockshelters to mortuary rituals or do they represent other rituals or non-ritual activities? What zooarchaeological correlates for mortuary rituals can be identified based on the analysis of the faunal remains in these two shelters?

To explore the above questions several zooarchaeological conventions must be employed. The most fundamental unit of analysis, number of identified specimens (NISP), is used to quantify the taxon and elements present in the assemblages, where specimens are established as any complete or fragment of a skeletal element (Lyman 2008). Patterns observed in the taxa present, natural or cultural taphonomic effects, and the importance of animals to the ancient Maya form the key components of this research.

Organized into several chapters, this thesis develops, explores, and addresses the above questions. Chapter 2 provides a brief review of Maya archaeology and zooarchaeology, emphasizing research in and near Central Belize. The background discussion also includes a review of cave taphonomy and the actualistic research in which taphonomy, the transition of animal remains from the biosphere to the lithosphere, is based (Efremov 1940). Actualistic research refers to the study of the actions that produce or effect the archaeological record, both past and present. Archaeologists often use actualism in experimental archaeology and taphonomy to reproduce certain behaviors that are left behind on archaeological materials. At its core, taphonomic agents such as carnivores or rodents cause effects on skeletal elements identifiable through thorough zooarchaeological analysis.

Chapter 3 discusses the theoretical framework from both behavioral archaeology and practice theory. Behavioral archaeology contextualizes this research in actualistic archaeology and taphonomy. The practice component of this theoretical approach focuses on identifying cultural use of the animals and linking them to either ritual or non-ritual activities. In this thesis, ritual is defined as the act of completing a task or activity in which meaning is established over and over again (Bell 1992, 1996). Ritual is essentially a patterned and symbolically charged series of acts, often using prescribed materials, locations, and actors, in which there is no direct cause-and effect relationship between the act, and it's intended outcome. To be more specific, ritual is a strategic way of acting in the world through social activities that vary across cultures and social boundaries, which is performative and constitutes a meaningful and patterned social world.

Next, Chapter 4 presents the methods used to analyze and infer human behaviors from animal remains recovered in CBR and SDR excavations. For instance, examining the taphonomic impacts and agents allow for identification of varying pre- and post-depositional processes to the skeletal elements. As an example, heating alters chemical and physical properties of bones influencing damage caused by other post-depositional factors (Apllin et al. 2016:712).

Chapter 5 details the results of excavation activities and faunal analysis. First, discussing the excavation results to clarify the stratigraphic or behavioral contexts helps develop the interpretation of the faunal materials. Second, identifying natural modifications, such as burning, digestive damage from predation from cultural modifications such as cut marks is addressed. Finally, basic zooarchaeological data including taxon, total number of individual specimens identified at each site is included.

Chapter 6 closes by answering the above questions and discussing potential avenues of further research on animal remains from rockshelters and caves in the Maya region. Finally, this chapter ends with a discussion of the anthropological importance of this research to developing an understanding of the human relationship with animals in the past.

CHAPTER 2

THE MAYA REGION, CAVES, TAPHONOMY AND ZOOARCHAEOLGY

This chapter provides a background to Maya Archaeology with a focus on the Maya Lowlands, a history of cave archaeology in the region, and a description of the different ways zooarchaeology has been used to interpret ancient Maya interactions with the diverse animal species in the region. Archaeology and zooarchaeology of the Maya region often explores caves and rockshelters as well as faunal remains for subsistence and ritual purposes. As such a brief overview of archaeological interpretations in the region with a focus on the underworld and ritual animal use is necessary to structure arguments related to this research. Beginning with a general understanding of the Maya region, this chapter then discusses the history of archaeological research and exploration in Maya caves and rockshelters, followed by a discussion on the influence and importance of zooarchaeological research for investigating ritual cave use.

The Maya Region

The ancient Maya civilization encompassed an area of over 324,000 km2 spanning from southeastern Mexico to the northern sections of Honduras and El Salvador (Sharer and Traxler 2006:23). The Maya cultural area represents a mixture of diverse environments divided into geographical zones including the Pacific Coastal Plain, the Maya Highlands, and the Maya Lowlands. The environments within these zones vary across the region and include ecosystems of dry and moist forests, coastal valleys, brush swamps, savannahs, and some deserts. The fauna and flora in this region are some of the most diverse in the world.

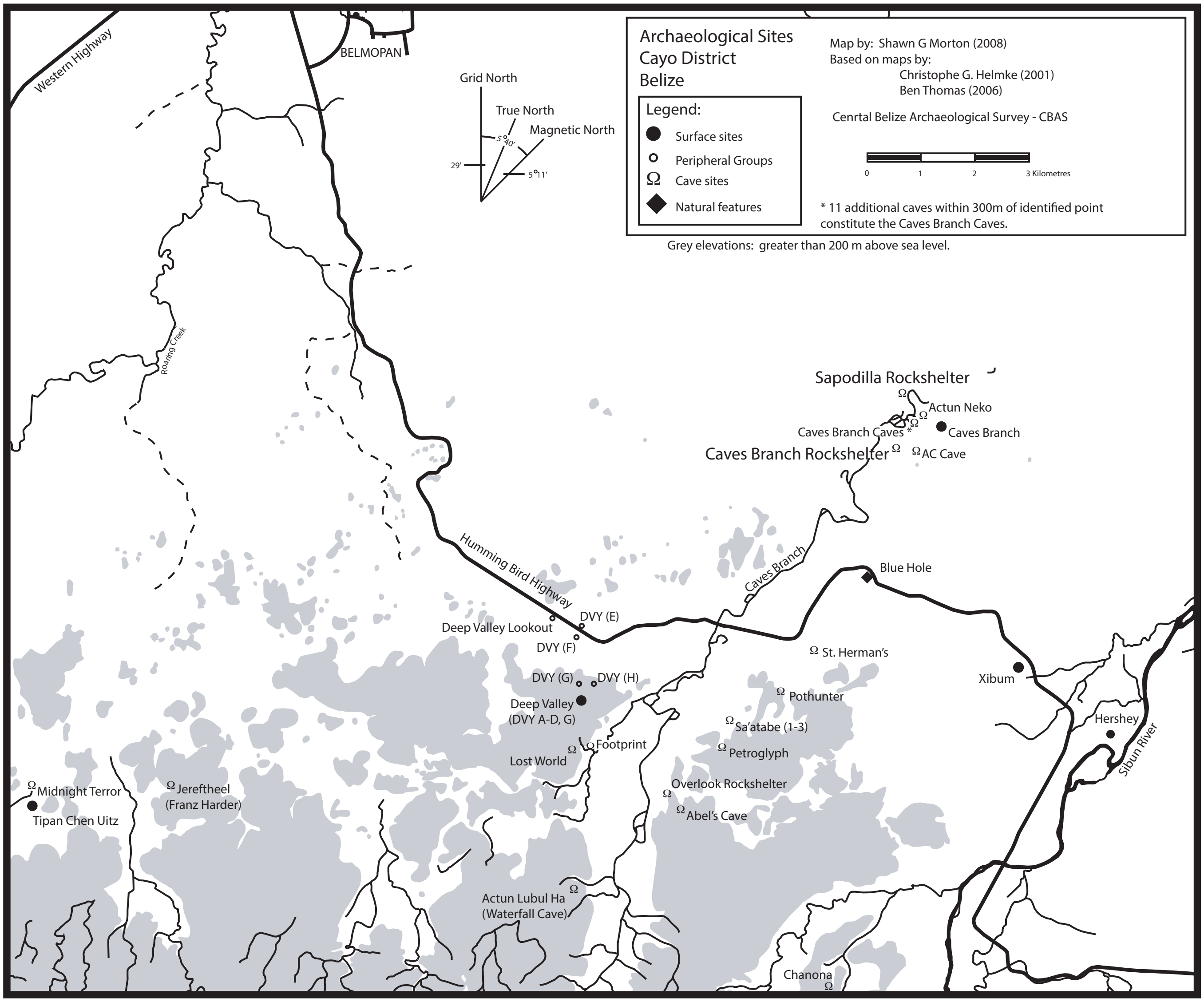

Figure 3. Map of major surface and cave sites in the Caves Branch River Valley (Adapted from Morton 2015).

CBR and SDR are two of many sites located in the Maya Lowlands and utilized by the Maya for more than a millennium. The earliest villages in the region date back to the Archaic period, some of which are precursors for the Mesoamerican cultures that developed extensive agriculture, monumental architecture, and eventually large-scale conflicting polities similar to the city-states of ancient Greece. The karst landscape of Belize and Guatemala contain numerous caves and rockshelters that greatly influenced the ideology of the Maya people and provided spaces for ritual activities spanning well over a millennium of religious and cultural practices.

Archaeological interest in this area of the world can be traced to the early explorations of Stephens and Catherwood (1963), through earlier accounts by missionaries, conquistadores and colonial administrators (e.g. Bishop Diego de Landa) which serve to extend our direct, outsider observations of Maya culture back to the mid-16th century (Tozzer 1941). Most of our understanding of the ancient Maya derives from several sources including ethnohistoric, ethnographic, epigraphic, and archaeological research. With the expansion of ethnoarchaeology in the field, archaeologists have often combined ethnographic research with archaeologically based questions to expand upon the behaviors that create and influence the material record (Schiffer 2010:89)

The *Popul Vuh*, provides one of the most important indigenous texts for anthropologists studying Maya belief systems and key symbols such as caves. While many of the written works of Maya scribes and specialists were lost with the Spanish colonial inquisition across the Americas. The *Popul Vuh* describes the myth of the Hero Twins and the Quiche Maya creations story. The story was transcribed by the Spanish priest Francisco in the 16th century and connects the agricultural cycle of maize into a cosmology that explains the formations of the Mesoamerican World. At its core, the *Popul Vuh* is a story of the death and rebirth of the maize god in the underworld, known as Xibalba. Recently, Maya archaeologists have associated several elements of this story to ritual activities in prehistoric cave use throughout the region (Awe et al. 2005; Brady 1989; Pohl 1983:99; Tedlock 1996).

Along with the *Popul Vuh*, access to the *Books of Chilam* have provided additional insight into colonial Yucatec Maya world views including stories of the Maize god and human sacrifice. The *Annals of the Cakchiquels* and the *Historia de los Xpantzay* are other indigenous historic records along with the pre-Colombian codices that provide contexts for articulating the role of caves within the context of Maya cosmology and ideology. The colonial work of Landa detailed aspects of Mayan language, Maya religion, and other accounts of Maya culture and practices (Tozzer 1941). Landa is particularly known for his *auto de fe* under the Catholic church, where he burnt idols and codices discovered in a cave near Mani in 1562 (Tozzer 1941)

Comparing postcolonial Maya with ancient Maya practices requires historical contextualization and is strewn with difficulties. Historical context is key and requires acknowledging the lens in which a transmitter and the translator is viewing the cultural material. In turn, this leads to difficulty in attempting to articulate the emic viewpoints of the past and can lead to problematic misrepresentations of various belief systems and practices.

Anthropologists researching Maya people in both the highlands and lowlands have provided varied accounts of different ritual practices involving caves (Palka 2014; Thompson 1959; 1975). Vogt (1981) described ethnographic accounts of caves as sacred and serving as boundary markers delineating natural and supernatural areas. Accounts of cave rituals and rites throughout Mesoamerica connect caves with mythology and as sacred landscapes where the living can venerate and petition ancestors (Bassie-Sweet 1991:79; McGee 1990; Nash 1970; Redfield and Villa Roja 1934; Thompson 1950; Vogt 1969:302). Bassie-Sweet (1991:80) describes specific acts that occur in modern cave use including offerings of food and other objects, prayers dedicated to ancestors and cave deities, burning of incense, and the use of musical instruments for dancing and other ritual activities. Musical instruments made from faunal remains such as shell tinklers, rasps, and drums made from the shell of the various turtles of the region could potentially be used to identify these types of rituals in the archaeological record.

In western Belize, archaeological work began at the end of 19th century. This was followed by the pioneering efforts of Eric Thompson (1959) and later Gordon Willey who was the first to institute a formal archaeological program researching the settlement patterns of the Belize Valley, bringing settlement pattern archaeology to the Maya area (Willey et al. 1965). At Barton Ramie, Willey and colleagues found that the ceramic sequence of the area did not fit perfectly into the sequence laid out in the Petén, instead showing at least 2,000 thousand years of diverse cultural interactions in the region (Gifford 1976). In the years following Willey's investigations at Barton Ramie, the Belize Valley has become one of the most intensively studied sub-regions of the Maya lowlands, with more than half a dozen ongoing research projects conducting investigations annually. This is in stark contrast with Central Belize, which has received only sporadic archaeological attention since the 1970s focused on both surface and cave sites and efforts by the BVAR Process, CBAS, and WBRCP, plus other more limited and minor studies (Awe 1998; Awe and Helmke 1998; Bonor Villarejo 1995; Bonor Villarejo and Martínez Klemm 1995; Davis 1980; Goldstein 1995; Jordon 2008; Macleod and Reents-Budet 1995; Michael 2016; Michael 1996; Moyes 2001;Wrobel 2008a, 2008b; Wrobel and Tyler 2006; Wrobel et al. 2007, 2010). Caves are one aspect of the Maya landscape that served as key symbols to many of the ritual activities that span from Preclassic to contemporary times.

Archaeological Investigations of Maya Cave Use

The ancient Maya considered caves as one of their most sacred landscapes and these subterranean sites served as focal points for both private and communal rituals. The Maya Lowlands are covered in hills, mountains, and karstic limestone terrains with thousands of caves and rockshelters. Vogt (1964) noted that Maya temple complexes were symbolic replicas of sacred mountains. This has been supported by textual and iconographic evidence from the Classic period, which identified ritual architecture as *witzob,* meaning mountains (Stuart 1997).

Within the mountainous karstic terrain of the Maya lowlands are expansive cave systems, the result of fluvial systems impacting the soluble limestone. Much of the architecture of the Maya peoples echo the belief that natural openings into the earth were portals to the underworld, known as Xibalba. Articulating cave use in the Maya region is further complicated by the fact that beliefs and usage varies significantly across the Maya highlands and Northern and Southern Lowlands (Morton 2018;50). Archaeological investigations of caves in the Maya area span over 150 years with early investigations that often perceived the caves as habitation sites and followed irregular methods of survey and extensive excavations of caves.

Many of the first archaeological cave explorations began in the 19th century and focused on the Northern Yucatecan Lowlands sprouting towards the end of the 19th century (Mercer 1896, 1975; Thompson 1897) During this time, Mercer examined a total of 29 caves and collected artifactual materials along with some faunal remains (Mercer 1896; Hatt et al. 1953). He interpreted these caves as habitation sites for the ancient Maya that also served as key sources of water since underground streams provided the main source of water for the region (Thompson 1975:ix) Faunal material recovered from these excavations were examined by E. D. Cope prior to Mercer's 1896 publication, however, these materials have been lost and were never reexamined (Hatt et al. 1953:6). The Maya in the Yucatan relied heavily on caves as sources of water unlike caves in other regions since the topography of the area made the caves the only major sources of water (Hatt et al. 1953; Mercer 1896; Thompson 1897). The general concern of this early research was to identify evidence of antiquity throughout caves in the Yucatan, with excavations (Mercer 1896:175). Mercer concluded that there was no evidence for earlier habitation of the region prior to the Maya that built the extensive monumental sites scattered throughout the region. Recent work by Prufer and colleagues (2017), has proven Mercer to be wrong and shown preceramic occupations in southern Belize, with some of the oldest materials of human culture in the region found at Tzib Te Yux Rockshelter.

E. H. Thompson (1897), working for the Peabody Museum, explored the Yucatan cave of Loltun and excavated several vertical trenches into sections of the cave. Thompson identified cave carvings and painting on the walls of the cave which were attributed as similar in behavior to, if stylistically distinct from, the stone carvings from surface sites. Several marine shell and fauna artifacts were identified including a few carved ornaments, several Olive shell tinklers, and multiple bone needles. An apt description of early archaeological research is shown in the statement that "Almost all the articles, with the exception of potsherds and animal bones, are of a character that, while they might be lost, they would hardly be thrown aside as useless (Thompson 1897:20)." His research provides some of the earliest drawings of worked shell and bone in the caves of the Yucatan.

Thompson followed this research by dredging the Cenote of Sacrifice at Chichen Itza in 1904 attempting to provide empirical support of the ethnohistoric records of ancient Maya cave use (Thompson 1932). During the initial dredge, Thompson (1932:272) found the bones of a jaguar and deer that he argued were evidence of a forest tragedy. Dredging the cenote for several more years, Thompson recovered an abundance of archaeological materials, which he attributed to the rituals described by Landa (Tozzer 1941). Thompson's early work in the Yucatan provided useful site and artifact descriptions along with maps that set the tone for future cave research in the region. The artifacts from the Cenote were further analyzed by Willey (1972) containing jade, shell, copal, ceramics, chipped-stone tools, gold objects, copper bells, mosaic masks, rubber, cloths, and even wooden artifacts such as a wooden handle sheathed in gold. Many of these artifacts had signs of intentional damage attributed to the termination of the artifacts and were often made of exotic materials that derived from outside the lowland Maya subregion (Willey 1972).

Working for the Peabody Museum, Gordon (1898) investigated five caves in the Copán Valley of Honduras providing some of the earliest evidence of caves for mortuary use in the Maya region. He argued that the artifacts found in the caves from the Copan Valley were culturally different from the artifacts of the ancient Maya found in surface sites throughout the valley (Gordon 1898:145). His analysis is primarily speculative given the lack of ceramic vessels associated with the ceramics of Copan at the time, though Brady (1995) did a more recent study, confirming many of Gordon's assertions. Gordon Cave 3 included a mortuary chamber which Gordon speculated was possibly from an extensive "cave cult" possibly from the same time period as the occupation of Copan. Brady (1995:36) provided further analysis of the cave showing evidence of multifunctional use including use as an ossuary and possible small animal sacrifices. Brady suggests, that while the Gordon Cave 3 was used as an ossuary but assigning all of the artifacts to ancestor worship is problematic. He suggests that the cave was multifunctional and used for ancestral veneration in combination with practices involving the agricultural cycle.

In the Guatemalan Highlands, Eduard Seler (1902) undertook an investigation of many sites and several caves in the region, providing extensive detail of structures and drawings of artifacts. Seler provides several ethnographic depictions of bone rasps made from a metapodial and scapula by a Huichol artisan (Seler 1901:157). Initially published in German, this research covered historical and cultural contexts of the caves of Los Págaros, El Cimarrón, Piedra Redonda, and Quen Santo along with settlements in the surrounding area. His overall research goal was similar in scope to that of Mercer and Thompson with a focus on artifact depictions and the antiquity of the region.

Hatt and colleagues (1953) surveyed 14 caves in the Yucatan and placed several trenches in nine of the caves along with surface collections. This research provides one of the earliest major explorations of faunal remains from cave sites in the Maya area with extensive taxonomic identification of amphibians, bird, mammals, and reptiles. Their goal was to identify a sequential change in the vertebrate fauna of the Yucatan Peninsula using archaeological collections, including ceramics collected by Mercer, to attempt to date the remains (Hatt et al. 1953:109). They suggest that the archaeological records of caves used by the Maya over extensive periods of time would provide a reliable proxy of human occupation in the vicinity. While this study is one of the first major faunal analyses regarding Maya cave use, Savage (1971) provides one of the first comprehensive studies of fauna from cave contexts. His analysis focused on

In 1959, Sir J. Eric Thompson (1975) provided the first interpretive model of cave use in the Maya area incorporating data from ethnohistory, ethnography, and archaeology (Brady and Prufer 2005). Thompson suggested that caves were used as (1) sources of drinking water; (2) sources for "virgin" water; (3) places for religious rites; (4) areas for burials, ossuaries, and cremations; (5) art galleries; (6) depositories for ceremonially discarded utensils; (7) places of refuge; (8) and places of other use such as the hunting of birds (Thompson 1975:XIV). While these uses vary across the Maya area, the core argument revolves around caves being used primarily for ritual and religious purposes. Furthermore, Thompson acknowledges the ephemeral nature and lack of evidence behind the assumptions that caves were used as habitation sites stated by some of the earlier researchers (Thompson 1975:xli). Brady and Prufer (2005) critique some of the shortcoming of these classifications for overemphasizing some behavioral aspects of cave rituals like the deposition of ceremonial artifacts. Morton (2015, 2018:72) expanded on the list of cave use and updated some of the categories with archaeological correlates. Since 1959, an abundance of research has been undertaken in Mesoamerican caves to articulate these types of cave function ranging in approaches including interpretive (Bassie-Sweet 1991; Brown 2004; Pohl 1983), case studies (Brady 1989; Pendergast 1969, 1970, 1971, 1984; Reents-Budet and Macleod 1997), landscape (Brady and Ashmore 1999), regional (Bonor Villarejo 1989; Prufer 2002; Rissolo 2001), and behavioral (Moyes 2006:16).

Cave Reconnaissance in the Maya Lowlands

The Mason-Blodgett Expedition in 1928 is one of the first explorations of caves in Belize and Guatemala, with members examining archaeological, ethnological, and zoological materials (Mason 1928). In Belize, Mason explored several caves primarily in the Rio Frio group and described the ceramic assemblages at the sites found. In Rio Frio Cave C, Mason identified "quantities" of freshwater shell intermixed with ceramic sherds on a steep slope. While Mason mentions the collection of zoological materials from the caves he visited, no detail is given on the taxa present. Instead, he focused on the ceramic and lithic materials found. In total he examined four caves in the Cayo district of Belize, Rio Frios Caves A, B, C and Chikin Ac Tun, with the intention of gathering archaeological materials for British museum collections. In Guatemala, he examined a cave in the Izabal district describing some of the looting that occurred and a ceramic vase that was collected.

In 1928 several caves were investigated near the sites of Pusilha and Xunantunich by members of a British Museum expedition (Joyce et al. 1928). A subsequent report briefly described the discovery of fragmented human remains, an obsidian cache, chipped-stone tools and debitage, several sandstones likely used for artifact manufacture, and a mix of ceramics including incense burners in the first cave excavated. This is also one of the earliest examples of looting of caves in the region where a machete fragment was found intermixed in the surface deposits, possibly from a Mahogany logger (Joyce et al. 1928:344). Another two caves were surveyed with human remains found in both, however, no formal excavations were undertaken.

Gruning explored several more caves near the town of Benque Viejo close to the site of Xunantunich, primarily focused on survey (Joyce et al. 1928:348). Overall this report was mainly descriptive and provides early accounts of the settlement, stelae, artifacts, and cave surveys in Belize.

Extensive archaeological investigations of caves and rockshelters in Belize developed alongside the establishment of the Department of Archaeology in 1955 (Graham et al. 1980). A. H. Anderson, the first Archaeological Commissioner of British Honduras, began surveying and excavating multiple caves throughout the country. Most of this work remained unpublished after his death in 1967, however, his notes and personal papers were archived by his family in England (Austin 2000). Anderson excavated Rio Frio Cave E in 1959 which was published on posthumously by David Pendergast 1970 of the Royal Ontario Museum. The general goal of this research was to identify the history of cave use in Rio Frio Cave E. In 1957, under the auspices of the British Museum, Adrian Digby undertook excavations at the site of Las Cuevas and the cave complex previously known as Awe Cave, now Las Cuevas Cave (Digby 1958a, 1958b; Moyes et al. 2011).

In the 1960's, Pendergast (1962, 1968, 1969, 1971, 1974) explored multiple caves throughout Belize including Actun Balam, Eduardo Quiroz Cave, Cubeta Caves following this trend of extensive archaeological investigations. At Actun Balam, Pendergast suggests that most of the faunal assemblage was culturally deposited, based on association with a deposit of jute without apices removed. Savage's (1971) analysis of the Eduardo Quiroz faunal assemblage provided detailed descriptions of shell and bone artifacts which have been useful for developing a terminology regarding zooarchaeological artifacts found throughout the region. Elizabeth Luther's analysis of the Actun Polbilche assemblage provides another early faunal analysis of caves, with a large portion of the faunal assemblage likely occurring from natural predation(Pendergast 1971:63) exploration and excavation of Eduardo Quiroz Cave in west central Belize, documented what he perceived as virgin water collecting vessels and provided one of the first accounts of a zooarchaeological cave assemblage. Pendergast's work helped to establish trade route connections across the Chiquibul and emphasized important ritual activities linked to the deposits of archaeological materials in the caves.

MacLeod and Puleston (1978) excavated two caves, one of which was Petroglyph Cave in the Caves Branch area of Belize identifying similarities of ceramic assemblages between Barton Ramie and the caves suggesting Preclassic to Postclassic chronologies. Their investigations identified clay mining in areas of the caves along with footprints that they suggest are ancient based on the archaeological materials of the site. They also found several manos and metates associated with bloodletting utensils and chambers filled with human remains containing caches of oliva shells, tusk shells, snake skeletons, bone and shell beads, ceramics, and obsidian blades. The associated snake skeletons and shells may tie into practices associated with rain rituals linked to the Maya rain god. They also suggest that the presence of post holes at the entrance of one cave was indicative of a ceremony to rain deities where maize, balche, and fowl are sacrificed, however, no avian remains are mentioned in the excavations and survey of the two caves (MacLeod and Puleston 1978:2).

Archaeological explorations of caves in the Maya Lowlands have been a focus of much thesis and dissertation work over the last several decades (Brady 1989; Brady and Villagrán de Brady 1989; Gibbs 2002; Halperin 2002; Mirro 2007; Morehart 2002; Morton 2015; Moyes 2006; Peterson 2006; Prufer 2002; Spenard 2014) Furthermore, major archaeological projects emphasizing the need to research surface and subterranean sites across the region have developed since the 1980's including the Petexbatun Regional Archaeological Project, BVAR, CBAS, and the Western Belize Regional Cave Project (WBRCP). Under the auspices of these research projects, collaborative research has detected characteristics of Maya ritual life that identify patterns in which rural populations used the landscape in similar ways to the elite with areas for public and private rituals.

Several analyses have focused on identifying differential use between rockshelters and caves in the Maya Lowlands, particularly emphasizing the diversity of ritual activities and a lack of dichotomies between the two (Hardy 2009; Morton 2015; Peterson 2006; Tiesler 2007; Wrobel 2008). Tiesler (2007) articulates that the Maya used rockshelters for purposeful burials, whereas burials in caves were often placed in alcoves or on natural features. Research undertaken by CBAS has shown that the Maya used individual rockshelters for different behaviors depending on the area (Hardy 2009:9; Michael 2016; Morton 2015)

In the Sibun Valley, caves were a fundamental component of the social lives of the Maya people, based on the spatial and contextual distributions of archaeological materials in caves and rockshelters, such as ceramic vessels, faunal remains, and ritual deposits with mixtures of sherds, ground stone, and chipped-stone artifact and debitage (Peterson 2006; Stanchly 2003; Leonard 2003; Betzenhauser 2003). The Xibun Archaeological Research Project (XARP) identified many patterns of Maya cave use including the appropriation of large caves by Maya elite while smaller caves were used by rural communities with less restrictive access (Peterson 2006). Studies between 1997 and 2001 in the Sibun valley earlier identified ritual utilization of caves and two rockshelters spanning from about 1000 BC to the late 18th century.

The Western Belize Regional Cave Project (WBRCP) investigated multiple cave and rockshelter sites throughout western Belize (Awe 1998; Awe and Helmke 1998; 2015; Awe et al. 1998, 2005; Gibbs 2000; Gibbs et al. 1999; Gibbs and Owen 1999; Helmke et al. 1999; Mirro and Awe 1999; Moyes 2001, 2006). Research by WBRCP encountered many different contexts in the archaeology of Western Belize caves including megalithic monuments used as repositories for bloodletting rituals (Awe et al. 2005); evidence of human sacrifice in Actun Tunichil Muknal (ATM) (Gibbs 1998, 2000) and ritually deposited jaguar remains in ATM and Actun Uayazba Kab (Griffith 1999). Cave survey and excavations utilized by WBRCP and the BVAR project set in place many methods still in use today.

Caves Branch Rockshelter

Caves Branch Rockshelter is a 35-meter-long, 15.20-meter-high rockshelter with a depth of 10 meters (Figure 4). Small settlement mounds are found nearby. CBR was initially excavated in 1994 by the BVAR, identifying the site as a cemetery for the ancient Maya living nearby (Bonor Villarejo 1995, 2002). Ease of access resulted in heavy looting and prompted salvage archaeological work with the goal of developing a chronology based on the burials recovered. The matrix of the site consisted of chipped stone, ceramic sherds, freshwater gastropods, and often commingled human and faunal remains. Thirty-two primary burials and an assemblage of ceramics, lithics, and faunal remains were revealed during the early excavations (Bonor Villarejo 2002; Glassman and Bonor Villarejo 2005).

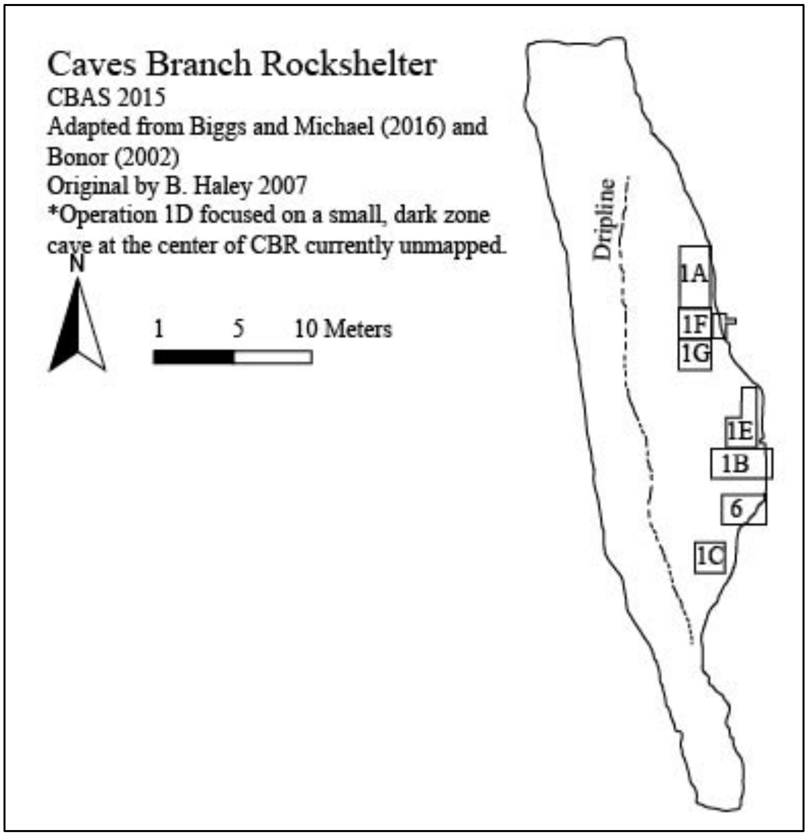

Figure 4. Site map of Caves Branch Rockshelter showing mapped operations from CBAS and a unit excavated by Bonor Villarejo in 1994.

In 2005, operations under BVAR continued on Bonor Villarejo's previous work at CBR by opening operations 1A, 1B, and 1C, with 2x2 meter excavation units in the northern, central, and southern sections of CBR, eventually expanded to follow burials (Wrobel et al. 2009). These operations revealed over 150 primary burials in the rockshelter with a burial population indicative of a cemetery. Operation 1A contained multiple burials and Operation 1B targeted the deepest portion of the rockshelter based on the dripline, near a cave like recess (Wrobel and Tyler 2005). Operation 1B had the densest accumulations of cultural materials and burial remains, however, it was impacted by minor looting and made defining original excavations in the area difficult.

Operation 1C focused on the southernmost area and contained the lowest concentration of cultural materials and burials (Wrobel and Tyler 2005). Operation 1D was located in the central region of the rockshelter in the dark zone. Operations 1A, 1B, 1C, and 1D had faunal remains analyzed by Kavountzis (2009) and were further compared by Anderson (2009) to identify if the remains were similar to contemporary hunting ceremonialism in the Guatemalan Highlands.

Operation 1E is located directly north of operation 1B and connects with the dark zone excavations of operation 1D. Operation 1F extends to the south of operation 1A (Isaacs 2016, 21). Operation 1G is an expanded unit adjacent to operation 1F during the 2015 field season. One bag of faunal remains came from operation 1O supervised by Tyler in 2006 from lot 132 level 4. My research focuses on faunal remains from operations 1A, 1B, 1D, 1E, 1F, 1G, and 1O.

Multiple theses and dissertations have expanded on the use of the rockshelter, with focuses ranging from dental defects in children to a synthesis of samples of the faunal remains from the 2005 and 2006 CBAS excavations (Anderson 2009; Hardy 2009; Kavountzis 2009; Michael 2016). Kavountzis (2009) analyzed a total of 1276 identifiable faunal specimens and illustrated spatial patterning of faunal remains within the shelter. Perhaps, the most important contextual information for the site is that CBR was used for mortuary purposes and had intensive mixing of grave fill and sediments with culturally and naturally deposited materials over nearly a thousand years (Kavountzis 2009:158).

Other research at CBR has focused on chipped obsidian and chert tools and debitage from the various mixed deposits throughout the rockshelter (Stemp et al. 2013). Stemp et al. (2013) found that lithic reduction at the site showed variation by raw material type and evidence of tool repair and expedient tool production; however, some of the materials were likely deposited after production in another area. The results suggest chipped stone artifacts may have been used for ritual activities and grave goods, offerings, or as mortuary covers (Stemp et al. 2013:152).

Table 1. List of Caves Branch Rockshelter Operations and number of identified specimens.

CBR Operations	NISP
1994	59
1A	325
1B	190
1C	0
1D	423
1E	10
1F	46
1G	187
Total	1240

Sapodilla Rockshelter

Sapodilla Rockshelter, located in the northern section of the Caves Branch Valley and approximately 1 km from CBR, was impacted by looting as well. Salvage work at SDR began in 2010, focusing on mapping and screening looter's trenches into multiple burials in the light and liminal zones (Andres et al. 2011; Michael and Burbank 2013; Wrobel and Shelton 2011). SDR is similar contextually to CBR, with extensive deposits containing primary burials, mixed human and faunal bones, lithics, and ceramics (Andres et al. 2011; Michael 2016; Wrobel and Shelton 2011). A small cave associated with SDR contains a dark zone that lacked human remains and likely served a different functional use than the associated light and liminal zones.

During the 2011 CBAS field season a series of systematic excavations were undertaken at SDR in light and dark zone contexts (Michael and Burbank 2013). Discrete excavation foci were defined during the 2011 excavations opening operations 1A through 1I. The size of each operation varied depending on the objective of the area, however, each unit in the operation was divided by 1 x 1 m units to retain some form of horizontal control (Michael and Burbank 2013, 22). In 2017 excavations continued under Michael and Biggs where operations J and K were unopened, currently unmapped (Figure 5).

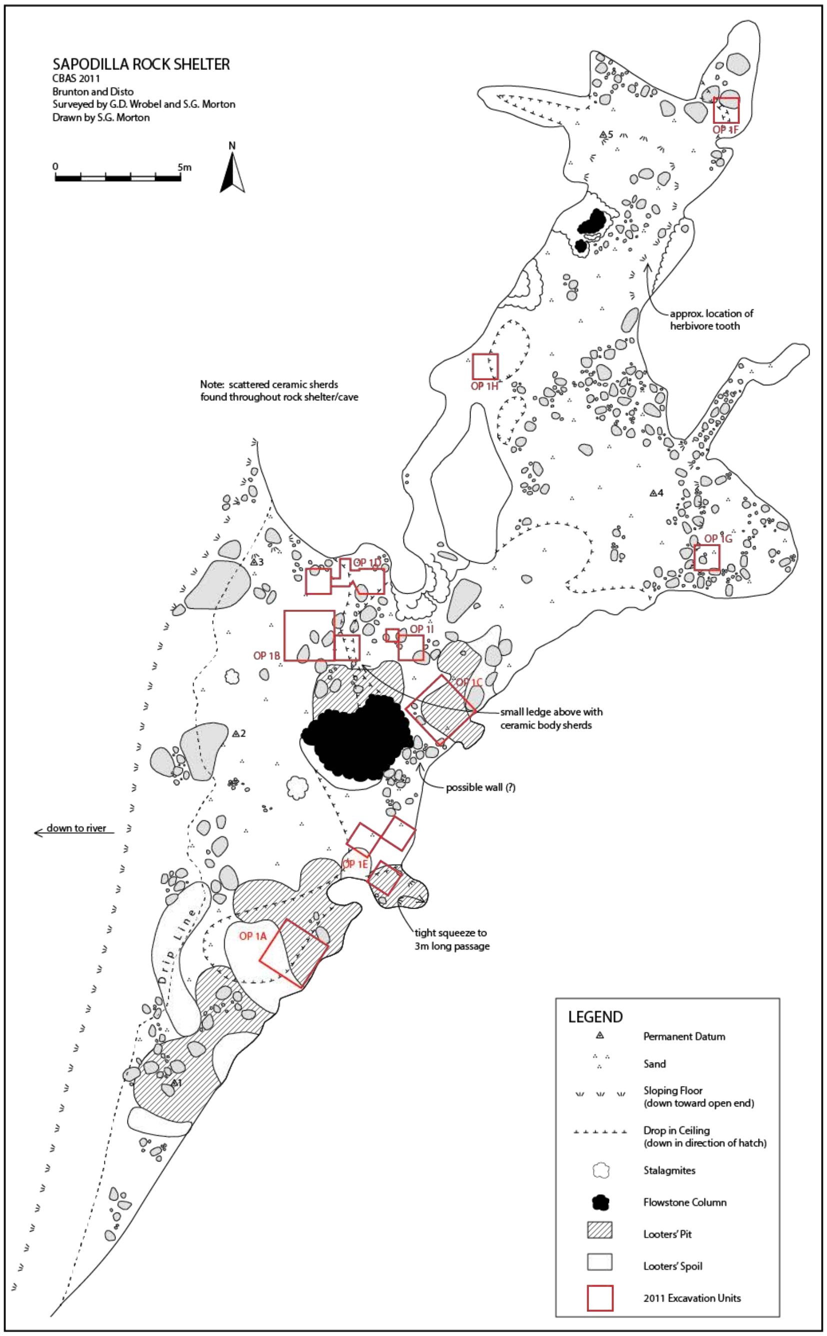

Figure 5. Map of Sapodilla Rockshelter showing 2011 operations (Map courtesy of S. G. Morton).

Operation 1A focused on a looter's pit within the light zone area of SDR and excavated in four adjacent 1x1m units until sterile levels. This operation was primarily composed of commingled human and faunal remains, ceramics, and lithics removed of primary by extensive looting. Levels 6, 7, and 8 were the only levels with primary context identified through a distinct change of color on the adjacent rock face. Primary interments were present in this area, however, the abundance of looting made it difficult to identify articulated burials. This operation had dense accumulations of animal remains that are likely a combination of naturally and culturally deposited remains intermixed with human burials, chipped stone artifacts and debitage, and multiple ceramic sherds (Michael and Burbank 2013).

Operation 1B was 2 x 2 m excavation, with an additional 1 x 1 m extension added later, placed in the light zone entrance to the cave. Some cultural materials were scattered on the surface and this area remained undisturbed by looters. The highest density of human remains was found in this area and a small amount of faunal remains were found in these excavations of which 146 specimens were analyzed in this thesis. Operation 1A and 1C were placed originally to explore the potential for lithic production activity areas. Operation 1C explored the liminal zone of the cave through a 2 x 2 m unit. Operation 1C was further expanded to follow a burial. A total of 266 faunal specimens were excavated from initial looters back dirt along with levels three and four.

Operation 1D was placed in the entrance to the SDR cave closer to the liminal zone with one 1x1 m unit, expanded multiple times due to the occurrence of primary burials. Operation 1D was opened to the northeast of Operation 1B as a response to the density of complete burials and cultural materials. The area was selected because it borders the cave entrance.

Operations 1F, 1G, and 1H were focused on the dark zone cave of SDR placed in geologically distinct and bounded areas (Michael and Burbank 2013). My analysis focuses on all faunal material recovered from these operations during the 2010, 2011, and 2017 field seasons.

Table 2. List of Sapodilla Rockshelter operations and number of identified specimens.

SDR Operations	NISP
1A	1156
1B	147
1C	266
1D	29
1E	131
1F	0
1G	9
1H	225
1I	31
1J	77
1K	18
1L	1
1P	4
Dark Zone	56
Light Zone	20
South Area	33
Surface	14
Total	2217

Cave Taphonomy in the Neotropics

Taphonomic research covers many fields including archaeology, paleontology, botany, and paleoanthropology (Behrensmeyer and Kidwell 1985; Marshall 1989). Taphonomic research was initiated with the definition proposed by Efremov (1940:93), in which taphonomy was the "science of the laws of embedding." In Latin, *taphos* is defined as burial and *nomos* is law (Shipman 1981). Olson (1980:5) and Shipman (1981:6) suggest that taphonomy encompasses all factors included in the transition of organisms from the biosphere to the lithosphere. Lawrence (1968) built on Efremov's definition by focusing on the recognition and evaluation of biases in faunal assemblages. Behrensmeyer and Kidwell (1985) refined the definition of taphonomy by adding preservation processes and biases as forces that influence the recoverable information in a faunal assemblage.

This field, within the scientific study of paleontology, provides a method to explore impacts to the archaeological record through the interpretation of processes impacting preservation. The primary goal of taphonomy is to study the natural factors influencing how an animal or other organic material enter the ground and the events by which preservation occurs. Overall, this allows archaeologists a greater ability to identify agency and causation throughout the field (Binford 1981, 1984a, 1984b; Gifford-Gonzalez 1991; Lyman 1994) Natural and cultural taphonomic agents in the neotropics can greatly impact the preservation of bone depending on if bone is left exposed to the elements (Stanchly 2004). While, the field of taphonomy is relatively new, Grayson (1986) has noted that research similar to taphonomy spans much of archaeological history, including attempts to identify agents that left marks on bones found in prehistoric contexts dating back to the 18th century.

Andrews (1990) focuses on how remains came to be preserved and formed in multiple cave contexts. Small mammals, particularly rodents, can be used to describe and understand a past ecology through analogical comparisons with contemporary populations. He focused on the stages that occur after a small mammal has died, building into the need for a thorough examination of the processes and traces that impact small mammal remains through predation. Andrews describes numerous post-mortem processes that can lead to modifications after death with a focus on the damage done to small mammal remains from these processes. These include digestive damage from predation of different sized mammals and birds detailed through SEM imagery linking the damage of avian predators to many small vertebrates recovered from cave assemblages (Andrews 1990; Lyman 1984:199). Three kinds of modification occur on bones from avian predation including bone loss or skeletal part frequencies, bone breakage, and digestive corrosion (Andrews 1990:29).

Mammalian carnivores are a central focus to experimental research focused on identifying a major type of bone-accumulating agents across the world (Burke 2008, 2013; Stallibras 1984). Smaller sized mammals often deposit bones which intermix into archaeological assemblages that can be identified if corrosive damage and breakage patterns are taken into account (Lyman 1994:206; Stallibras 1984). Larger animals often leave chewing and scraping damage typically classified as crenulations, punctures, scoring, scooping, and furrowing (Binford 1981; Lyman 1994:209-212). The corrosive damage left on bones is a major indicator if certain remains were naturally deposited in cave and rockshelter assemblages.

Figure 6. Carnivore gnawing marks on a tibia and long bone fragment showing scoring.

The observable changes wrought to bone through exposure to fire have been shown to vary based on temperature, duration, bone position, bone composition, and bone size (Applin 2014; Lyman 1994; Shipman et al. 1984; Stiner et al. 1995). Kiszely (1973) suggests three major stages where bone changes occur when heated including (1 the loss of water between 137 °C and 220 °C; (2) leading into the loss of organic material peaking at 330°C to 380°C; and (3) the complete burning of all organic butter at 600°C. Using a kiln, Shipman *et al.* (1984:314) argue that bone color is not a precise indicator of temperature change, however, color can be used to indicate the range of temperatures the bones were exposed to. Color changes include yellowish under 300°C; red-brown to dark brown and black between 300°C to 800°C; and calcined or intensively heated bones heated past 600°C with purplish-blue and white coloration (Lyman 1994:386).

Taphonomic agents leading to the burning of bone include human burned bone through cooking, disposal of food waste, fuel for anthropogenic fires, or cremations and naturally burned bone through nearness to anthropogenic fires, brush fires, or in situ burning of the organic matrix (Buikstra and Swegle 1989; David 1990; James 1989; Lyman 1994:388). Unravelling the taphonomic histories of burned bones in archaeological assemblages requires extensive analysis of faunal remains that require determining if the bones were fleshed before exposure and determining skeletal body portions (Grayson 1988; Lyman 1994). Burnt bone is distinguished from diagenetic blackening of bone by manganese and iron oxides, which can leave a similar discoloration of bones, based on the presence of carbonization and calcification on the bone (Kendall et al. 2018; Lyman 1994). Studies of the soil composition of caves and rockshelters can assist taphonomic identifications between diagenetic discoloration and burning on bones, however, both may have occurred which dampens some interpretation. At CBR, the soils are described as compact silty grey indicating fewer organic materials might otherwise discolor the bones through diagenetic blackening at CBR (Kendall et al. 2018; Hardy 2009:109)

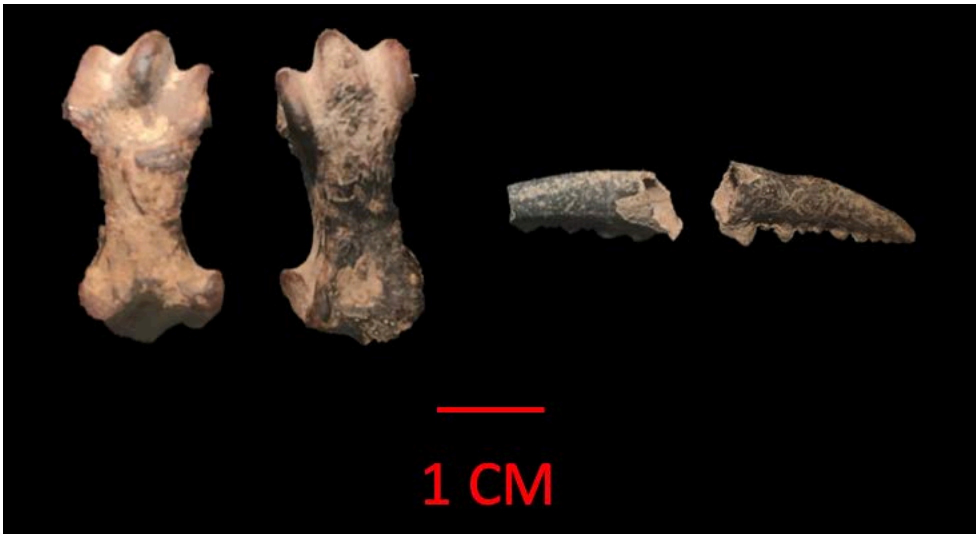

Figure 7. Image of different types of burning showing carbonization on a tamandua metapodial and two crab claws from Sapodilla Rockshelter.

Gifford-Gonzalez (1991) focused on the analogical inference, analytical qualities, and the expectations derived in taphonomic research. In her study of the field of zooarchaeology, she identified two issues impacting zooarchaeologists using taphonomy, equifinality and overconfidence in agent identification. The solution to these two issues, one of which is intrinsic to the field, is to advance analogical inferences through in depth actualistic research, for identifying natural and cultural modifications to animal remains found in archaeological assemblages. Actualistic research can range from analyzing the species and taphonomic effects present in remains from pellets collected from known avian predators (Andrews 1990; Wisner et al. 2019) to using ethnographic research with contemporary populations to articulate multifunctional use of animal products based on different species (González-Bocanegra et al. 2011). For example, in the Bluefish Caves of the Northern Yukon, archaeologists have used mortality profiles at three caves to ascertain that *Equus lambei* died accidental or natural deaths along with predation based on the taphonomic effects left on the extinct horse remains (Burke and Cinq-Mars 1997).

Maya Zooarchaeology

An increasing number of research projects are incorporating zooarchaeological analysis today. Earlier Maya archaeology did not explore animal bones, a general pattern around the world. The few reports that did discuss fauna typically appended a species list at the back of different site reports (Kidder 1947; Pollock and Ray 1957) Hatt et al. (1953) is one of the few reports that focused on prehistoric fauna across caves in the Maya region.

In the 1970s and 1970's zooarchaeological research gained traction as archaeologists learned of the importance of these materials to their interpretations (Davis 1987; Klein and Cruz-Uribe 1984; Reitz and Wing 2008). This research draws from biological and geological sciences with significant methodological shifts since the turn of the 19th century. This includes the Maya region where archaeologists began to employ new methods in retrieving and analyzing faunal remains, emphasizing new primary and secondary methods focused on quantifying remains instead of lists of taxa present (Emery 2004; Hamblin 1984; Moholy-Nagy 1978, 2004; Wing and Steadman 1980). Since then, zooarchaeological research across the world has been on a trajectory towards more socially driven studies (Hamblin 1984; Wing 1981; Pohl 1983; Wharton and Stanchly 1998), as well as smaller scale interest in the benefits of taphonomic research (Stanchly 2004).

Zooarchaeology in Maya Caves

Faunal materials are one artifact category present in various primary, secondary, and tertiary contexts in rockshelters and have the potential to elaborate on past Maya ritual, domestic, and mortuary practices (Hardy 2009; Peterson 2006; Stemp et al. 2013; Wrobel et al. 2009). Correlates based on the fauna can then be used to compare with previous research on the differential use of sacred spaces in the Maya area, particularly focused on access based on status and the ritualized activities evident in archaeological materials.

The zooarchaeology of Maya cave use is limited to a few studies focusing on topics ranging from the spatial distribution of fauna across sites to the roles of animals in ritual activities within elite caves, and species presence with little contextual analysis (Anderson 2009; Brady 1989; Emery 2004; Kavountzis 2009; Peterson 2006; Pendergast 1969; Pohl 1983). The use of caves in the Maya area had significant variability with diverse use of sacred spaces throughout the landscape, which has been shown to impact differential use of animals within caves (Hardy 2009).

Several of the early sporadic explorations of caves at the turn of the 19th century collected and identified to taxon faunal specimens from different caves primarily in the Yucatan. Hatt (1953:6) provides detailed description of some of these earlier collections, however, many specimens such as the entire vertebrate assemblage from the Mercer (1896) expeditions went missing. Hatt undertook two cave explorations in 1929 and 1947 that recovered materials from 14 caves, nine of which were excavated, focusing on faunal remains and associated archaeological materials. The underpinning research goal was to identify continuity between mammals, reptiles, amphibians, and birds across prehistory based on taxa with an underlying goal of identifying Pleistocene remains with cultural materials.

Additional early cave research in Mesoamerica focused on fish and other fauna in caves, particularly covered cenotes in the Yucatan (Hatt 1953; Pearse 1945). Pearse (1945) also identified features where the ancient Maya created blinds near the openings of cenotes and caves to hunt birds for food and harvesting of feathers. Their research provided insight into the troglophile animals that naturally occur in areas of archaeological importance, in this case caves, which can be used to identify species used for cultural purposes. While these early investigations of animal remains found in the region are useful, they lacked research on how the Maya were using animals and never considered taphonomic processes.

Pendergast analyzed several faunal assemblages with the help of collaborators during his cave research in the 1960s and 1970s. At Actun Balam, Savage identified shell, reptile, crab, deer, rabbit, large cat, and Black-throated Bobwhite (bird) remains argued to be from Maya ritual activities (Pendergast 1969). Another 18 shell artifacts and 25 modified bone artifacts were analyzed comprised of fragmented tools and adornments such as awls, tubes, needles, pendants, beads, unperforated shaped-shell adornments. Pendergast (1969:58) argued that the unmodified fauna was likely ceremonially deposited since the thousands of jutes (*Pachychilus* sp.) showed no evidence of meat extraction through the removal of apices and that jaguars were likely not eaten by the Maya.

Under the Royal Ontario Museum, Savage analyzed faunal remains from Eduardo Quiroz Cave with a total of 349 total specimens identified with methods similar to those used at Actun Balam (Pendergast 1971). Specimens were identified to lowest taxonomic group and were primarily mammalian with 12% of the assemblage coming from avian, reptilian, and amphibian species. The focus of this analysis was to identify if the remains were used for food or ceremonial activities based on the taxonomic representations as well as sidedness preferences. Pendergast (1971:82) attempted to identify seasonality of occupational use of the cave through deer remains. Pendergast also detailed the impact of predation on the faunal assemblage, arguing that the presence of subadult rodent remains were the result of barn owl predation. This example shows the need to establish actualistic research on the taphonomic agents creating deposits in caves outside of human agency long before the adoption of taphonomy into the archaeological studies of Maya caves. Pendergast provides in depth descriptions of the modified shell and bone tools with offering an intersite comparison with artifacts from surface sites and the cave of Actun Balam.

Later, Pohl (1983) was one of the first to attempt to detect patterns of ritual activities through faunal correlates in the Maya area from multiple sites. Pohl provided an in-depth analysis of zooarchaeological materials in Maya caves through the investigation of Maya ceremonial deposits in caves, cenotes, and caches. She explored how cave faunal remains are similar in context to offerings in caches and burials discovering that contextualizing these remains are difficult since animals that die naturally in caves hamper the ability to distinguish human agency. Furthermore, dates are difficult to assign to animal remains due to a significant lack of stratigraphy across many cave deposits (Pohl 1983:87). Her focus on symbolism helped bring zooarchaeological analysis of caves in the region to more than simply acknowledging presence or absence. Pohl hypothesized several patterns in cave and caching behaviors regarding the use of animals including a preference for left sided elements, a preference for sub-adult animals, as well as an increased presence of snakes, toads, birds, and fish in ceremonial assemblages that differ from remains found in middens (Pohl 1983:62, 89,102). A possible preference for left-sided elements was also noted by Savage (1971) in the bird remains from Eduardo Quiroz Cave.

Shortly after Pohl's ethnozoology of the Maya region, Brady (1989) developed further methods for differentiating non-dietary use of fauna by the ancient Maya. These included looking at the taphonomic effects found on remains for instance, a lack of butchery marks indicates that the animals may not have been consumed. Brady (1989:371) also identified how the use of fauna in Cueva Naj Tunich was not consistent with many of the patterns argued by Pohl including sidedness arguing that the data based on avian and deer remains was not conclusive enough to denote a pattern. Instead, Brady (1989:377) argues at least at Naj Tunich that faunal assemblages were similar in taxonomic distribution to the two nearest studied surface sites, Altar de Sacrificios and Barton Ramie, rather than other cave faunal assemblages.

After arguing against most of Pohl's suggested patterns in faunal assemblages, Brady suggests that at Naj Tunich complete or nearly complete elements may be a pattern in ceremonial activity. Another pattern pointed out is the lack of butchery marks that may reflect offertory use of animals at both Eduardo Quiroz Cave and Naj Tunich. Only 60 of the 336 showed evidence of burning, which Brady argues is minimal evidence of cooking suggesting ritual behavior behind the depositions of the bones. Overall, Brady (1989) demonstrated some patterns identified by Pohl (1983) but argued a need to evaluate patterns regionally to substantiate claims such as ritual sidedness preferences, relative intactness of the remains, along with analysis of butchery and burning indicators on bones.

Emery (2002) follows these by articulating the types of rituals at sites through analysis of rare or inaccessible faunal remains at Cueva de los Quetzales, which are argued to be predominantly public exclusionary rituals. These rituals are defined as public inclusionary, which promotes wide scale solidarity within a community, exclusionary, which sanctifies divisions of groups, and private individual or household rituals (Emery 2004:104). She proposed zooarchaeological characteristics of Maya ritual deposits that reflect private, public, and exclusionary rituals arguing that these rituals may be reflected through comparison with ethnographic analogies, Maya iconography, and ethnohistory. In sum, private rituals would have sacred and rare animals, sacrificed individual animals, and ritual paraphernalia; public exclusionary rituals would have used species associated with royal elite, exotic goods, and controlled species sacrifices; and public inclusionary rituals which would have feasting and sacrifices emphasizing quantity with other performances (Emery 2004:104).

Stanchly (2003) conducted a preliminary analysis 3,022 total shell and bone specimens in the Sibun Valley coming from surface and cave sites. He found that unlike the surface sites, invertebrate remains dominated the cave faunal assemblages with *jute* specimens comprising the largest numbers (Stanchly 2003:324). An abundance of jute has been documented across multiple cave sites in the region and nearby Caves Branch River Valley and has led to problems with storage and collecting of these specimens (e.g. Ferguson and Gibbs 1999; Halperin et al. 2003; Michael and Burbank 2012; Prufer 2002). Peterson (2006) offers further interpretation on the cave fauna analyzed by Stanchly, emphasizing some of the major patterns found in several of the caves including the identification of several jaguar bones and teeth ceremonially placed in Actun Ik, Arch Cave, and Pakal Na. She also details troglophiles in the vicinity of the caves noting the occurrence of tracks as well as scat in dark zones of several caves from large and small cat species (Peterson 2006:208). Further, Peterson suggests that the data from the Sibun Valley supports a pattern of preference for deer haunches based on the remains from Actun Ik and Actun Chanona (Peterson 2006:215).

Anderson (2009) finished the remaining 75% of the faunal assemblage from Cueva de Quetzales and compared the different zooarchaeological patterns offered by Pohl (1983), Brady (1989), and Emery (2002) to assemblages from the sites of Cueva de los Quetzales, Cueva de Rio Murcielagos, Aguateca Grieta, Naj Tunich, CBR, Stela Cave, Eduardo Quiroz Cave, Actun Balam, and Actun Polbilche. At CBR, she suggests that the artifacts and faunal remains were surface offerings associated with mortuary behaviors that were continuously bioturbated (Anderson 2009; Wrobel 2008). Anderson suggests that deposition of non-mammalian remains have changed over time when comparing taxonomic diversity between archaeological cave deposits and modern Atitlan cache deposits tied to hunting ceremonialism (Anderson 2009:96). Specific mammals associated with sacred or ritually important behaviors identified in this analysis include dogs, felines, deer, and opossums all of which are frequent throughout the ten sites analyzed. Burning rates were differential across the sites ranging slightly over 40% to as low as 1% at Aguateca (Anderson 2009:104). Overall, her goal to identify connections between contemporary hunting ceremonialism and ancient Maya cave rites found clear differences between the practices including taxonomic and taphonomic.

To decipher the archaeological cave record of the Maya area requires a combination of methods that utilize multiple fields and approaches. This chapter has focused on the major approaches used in the Maya lowlands for cave archaeology along with taphonomic and zooarchaeological backgrounds. Continued analysis of archaeological materials such as faunal remains identify regional and smaller scale patterns in animal use varying across the dynamic geography of the region, yet also ties into a diverse array of religious and ritual behaviors. In the following chapter, the results of the faunal analysis of CBR and SDR are laid out based on the materials found.

CHAPTER 3

BEHAVIOR AND PRACTICE: THEORETICAL PERSPECTIVES

Theoretical perspectives shaping this research include behavioral archaeology and practice theory. Behavioral archaeology encompasses the reconstruction of the past through inferences concerning human behavior as it relates to formation processes in the archaeological record (Lamotta and Schiffer 2001; Reid et al. 1975; Schiffer 1975, 1983, 1996, 2010). Practice theory provides a framework to elucidate explanations of how and why cultural patterns are reproduced, made meaningful, and change over time through explicit human actions and tacit embodied practical knowledge shaped by the sociocultural environment in which people are immersed (Bourdieu 1977, 1990; Evans 1998; Giddens 1979, 1984; Inomata 2015; Moyes 2006; Ortner 1972, 2006; Palka 1998, 2014). These two theoretical perspectives are employed to build a framework for interpreting the natural agents impacting rockshelter faunal assemblages and identify archaeological correlates for human use of fauna. Behavioral archaeology further provides the basis for zooarchaeological and taphonomic methods, while practice theory allows for the investigation of patterns tied to cave use in the Maya region (Moyes 2006).

Behavioral Archeology

Behavioral archaeology provides a framework for identifying the processes influencing the artifacts analyzed and inferred upon by archaeologists. Once natural modifications to materials have been identified and accounted for, understanding of human behavior can be inferred. Prior to identifying the behavior behind the deposition of faunal remains, a general overview of the life history, including explaining human behaviors, this is the core of behavioral archaeology (Apllin 2015; Hollenback 2010; Lamotta 2001; Lyman 1994; Rathje 1974; Schiffer 2010: 45; Seymour and Schiffer 1987; Stiner 1994; Walker 1995, 1996, 1998). The rejection of a singular high-level cultural theory explaining all aspects of archaeology is an important component to behavioral archaeology and allows for rigorous testing through different methodological frameworks.

Behavioral archaeology builds upon Middle-Range theory and emphasizes the need for systematic approaches to interpret how the archaeological record is produced, biased, and altered (Binford 1964: 425, 1981). Site formation is an important aspect and used to link both human and naturally caused factors (Lamota and Schiffer 2001; Schiffer 1987, 2010:30-52; Schiffer and Lamotta 2001). Schiffer (1972, 1976) argues C-transforms and N-transforms both serve as similar linkages to explain systems that transform and shape the archaeological record. C-transforms are the cultural formation processes that are either intentional or accidental that influence the deposition of archaeological materials. N-transforms are the natural or non-cultural formation processes that also play a role in the creation of the archaeological record. This theoretical approach emphasizes the need for relational analogies that link multiple lines of evidence based on present behavior with the past with static materials (Binford 1967; Gifford-Gonzalez 1991; Wylie 1985). Through extensive models, experimental laws, and case studies archaeologists are able to evaluate and increase awareness of the formation processes that shape the sites and materials that form a core part of archaeological research.

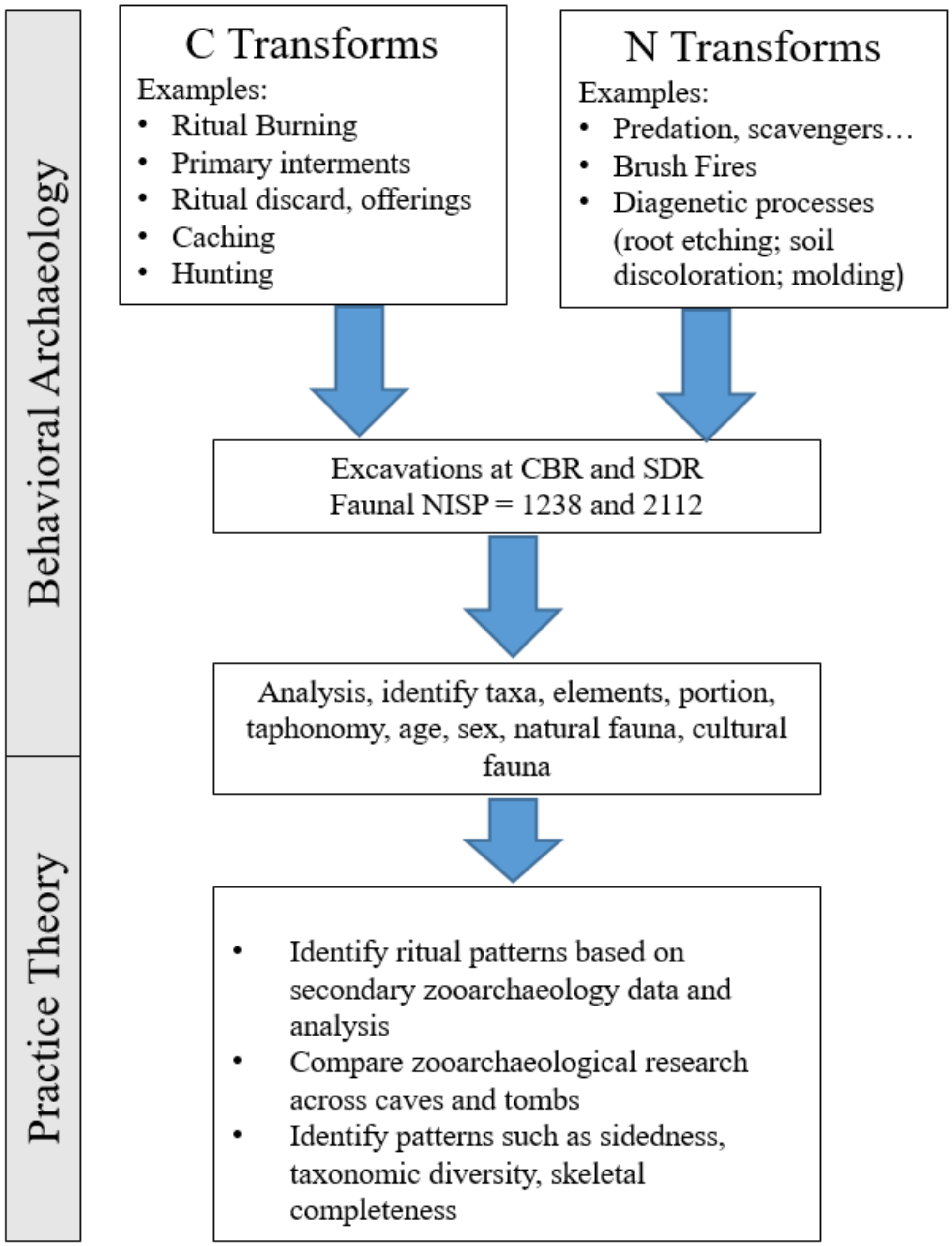

Figure 8. Flow Chart of N and C Transforms using cave taphonomy as a proxy to develop broader social patterns.

Uniformitarianism

A major assumption underpinning the behavioral approach is a reliance on uniformitarianism. Uniformitarianism features heavily in most scientific fields including paleoecology, geology, paleontology, taphonomy, and much of archaeology (Gifford-Gonzalez

1981; Lyman 1994). The scientific concept of uniformitarianism follows the hypotheses that change has been uniform throughout time with large results being the accumulation of small changes, referred to as gradualism, and that earth is in a dynamic steady-state with cyclical and ceaseless change (Gould 1965; Lyman 1994: 47) Archaeologists often follow a methodological uniformitarian approach in that natural laws are spatially and temporally invariant, known as actualism, underpinning different types of theory such as behavioral archaeology. Behavioral archaeologists often focused on performance characteristics, referring to the acts of creating a specific artifact or tool, considered with the material properties of specific artifacts (Schiffer 2010:89).

Case Studies in Behavioral Archaeology

Zooarchaeological research by Emery (2005, 2008, 2009), particularly in the Highlands and Lowlands of Guatemala and parts of Belize, offers a useful example of how Behavioral archaeology and zooarchaeology are employed for deciphering animal importance to the ancient Maya. Emery (2005) uses ethnoarchaeological approaches that provide community-based identifications of species present within ritual contexts. Emery (2005) worked with local fisherman within communities along the Copán River, Guatemala, to identify fishing techniques and the general species caught in order to create a regional comparative of the freshwater fish that inhabit the area. Many of the fish identified were utilized as a comparative for identification of aquatic faunal remains found within a cached vessel in the Margarita Tomb from the site of Copan. This study is similar to the earlier research of Pohl (1981, 1983), which used a combination of ethnographic, ethnohistoric, and archaeological literature to articulate ritual use and symbolism of fauna in different prehistoric Maya social contexts, however, it also integrated archaeology with the experience of nearby communities.

This example serves as a useful way to branch both archaeological research and contemporary practices together and remedy issues in zooarchaeological species identifications. By working with local communities, Emery was able to assign taxa to aquatic species found in a ritual assemblage. This example shows the necessity of collaboration and the aid it can bring to building zooarchaeological comparative collections that lack specific animals utilized across a region.

Cuychen Case Study

In 2017 a detailed analysis of faunal materials recovered from Cuychen, a small and hard to reach cave located in the Macal River Valley of East Central Belize demonstrated the importance of Behavioral Archaeology to removing natural processes from human behavioral activities (Helmke et al. 2012, Wisner et al. 2019). Through this research, Wisner and colleagues (2019) identified how natural taphonomic processes commingled with unassociated human activity. The faunal assemblage in Cuychen was the result of birds of prey, utilizing the cave as a roost. Many of the taxa represented are those of small mammals, with most belonging to the Rodentia Family: Cricetidae, or New World voles, rats, and mice. Other Families present include mammals from Soricidae, or shrews, and anoles of Family Iguanidae. These remains are highly fragmented and are the result of predatory bird pellets. Of the faunal remains only two shells have been culturally modified - both worked shells have been drilled to create beads, possibly tinklers. One of these marine shells is an extremely small Genus: Marginella sea snail and the other is a somewhat larger olive snail from Genus: Oliva. The Cuychen faunal assemblage had a total NISP of 1969 and was shown to be comprised nearly entirely of bones from pellet remains showing the usefulness of a behavioral approach to archaeological questions.

Practice Theory

Practice theory seeks to identify how societies reproduce social behavior and change spatially and temporally. Agency, important to Practice theory, establishes humans as the active creators of their lives. Habitus, another core concept, entails the embodiment of deeply ingrained habit, skills, attitudes, and unconscious courses of actions are acquired through growing up in a certain place and time (Bourdieu 1977). In a sense, it relies on the notion that materials go beyond use for various tasks and are active components for exploring processes that constrain and enable the capacity to act and/or create durable changes in sociocultural patterns. Archaeologically, practices will be identified based on the results of activities represented through the materials left behind.

Practice theory is useful in cave and rockshelter archaeology because it articulates how ritual activities can be distinguished from mundane actions (Russell 2012). The theory can be used to identify variations across sociocultural classes and identify performed ritual activities in subtle ways that embody ideological values (Bell 1997). The advantage to taking a practice-based approach to ritual is it acknowledges ritual is structure, durable, and reproduced, but also has a fluid nature that varies between time and space as human agency adapts to social and environmental changes. This approach also focuses on social meaning and values, which is arguably lacking in behavioral archaeology (Schiffer 2010:13). Previous researchers have used a practice-based approach to ascertain changes in Maya ritual cave use over time such as responses during climatic stress or major sociocultural changes (Moyes 2006; Anderson 2009). In the case of CBR and SDR, identifying ritual activity based on faunal remains associated with mortuary practices can potentially inform on the habitus surrounding death and grief in the communities using these shelters. Together, practice theory and behavioral archaeology can be used to furnish answers through artifact-based inferences.

Four Features of Practice

Bell (1992:81) identifies four features of practice to articulate acts involved with ritual activity. The first views practice as situational, meaning the specific context in which the practice occurs needs to be identified, like a cave or rockshelter. The second argues practice is strategic with an underlying logic that the practice remains implicit and rudimentary. The third characteristic is that practice misrepresents what it is meant to do, which is to say it is filled with indeterminacy, ambiguities, and equivocations (Bell 1992:83). The fourth characteristic of practice is it reproduces and sometimes reshapes the order of power in the world, which Bell (1992:85) names "redemptive hegemony." This ties into ancient Maya ritual use of rockshelters by providing a frame of features that can be used to look at ritual acts and interpret how the acts are generated.

The purpose of practice theory is to understand the larger forces, formations, and transformations of social life (Ortner 2006). Ortner articulates this well in her statement "just as all humans have the capacity for language but must learn to speak a particular language, so all humans have a capacity for agency, but the specific forms it takes will vary in different times and places (Ortner 2006:136)." These concepts can be articulated at multiple scales and require different research lenses depending on the scope of the research project. In this case, identifying the behavioral forces influencing the deposition of animal remains in a ritual context.

Cave Case Studies

Caves and rockshelters were considered sacred landscapes are also well known for being liminal spaces in which communities accessed ancestors and deities such as Hun Ahau, the Earth Lord (Palka 2014:155). Many of the spirits or deities associated with these places serve as focal points for communicating with the dead or other forms of social memory (Fowler 2010; Joyce

2003; Stanton and Magnoni 2008). Key symbols such as the entrance of a cave or light and dark zones can be employed to infer similarities in past and present practices (Ortner 1973:345).

Vogt's (1969) research with Tzotzil Maya of Zinacanteco is a unique ethnographic example of the way some Maya populations explain the world. In his research, Vogt debated with his Tzotzil informants regarding their belief that lightning originates from caves (Vogt 1969:387). After watching the formation of clouds during a storm in highland Chiapas, Vogt conceded their explanation was logical given the observations of clouds and lightning that appear to originate from caves dotting the landscape. While the scientific explanation is factual, his informant's explanation provides insight into how contemporary Maya explain weather formation systems. The Tzotzil identified caves, cenotes, and other breaches in earth's surface to the gods associated with the underworld, from which clouds, rain, and lightning are produced. This provides a way for analogies to be made with past practices regarding ritual activities in the caves and rockshelters scattered across the region, delving briefly into the phenomenology behind ritual cave use and the pilgrimages to the caves.

In Mesoamerican cave use, practice theory can be used to understand the larger forces, formations, and transformations of sacred space and social life by looking at the active production of ritual journeys. Each of the ethnographic examples on Mesoamerican pilgrimage have varying degrees of liminality involved and are actively produced by the meaning of each cave through the groups of people interacting with the caves. It also connects with how ritual landscapes provide fundamental resources to the communities of worship by linking them to protection from conflict, illness, and overall community survival.

For example, Petryshyn wrote an ethnographic account of a cave pilgrimage in the Lacandon area in 1968, however, it remained untranslated from German into English until 2005 (Petryshyn 2005). After gaining the trust of the community, Petryshyn was given the opportunity to observe a cave pilgrimage undertaken by a small group of men to perform rituals to three different gods; Mensäbäk, Tsibaná, and K'ak'. In sum, Petryshyn identified that the Lacandon were carefully selecting caves fitting a selection of ritual criteria and the caves were then kept secret to avoid looting and destruction. Petryshyn also articulated that the caves were viewed as residents for the gods of the Lacandon Maya, used as areas of sacrifice, and used as burial places or bone houses.

McGee (1990:57) briefly discusses his opportunity to visit a cave shrine in his work with the Lacandon Maya on sacrificial symbolism. The shrine he visited was dedicated to three gods; Mensäbäk, Itsanokuh, and Känänkax, which are the Lacandon gods of rain, hail and lakes, and forests respectively. At the shrine, McGee observed a large incense burner, mounds of burnt copal, ceramic bowls and god pots, and the remains of several individuals. The remains are ascribed as the remains of gods that were once human, some of which had cranial deformations most likely from precolonial periods. This example connects back to pilgrimage in the area, not because it focuses on the ritual acts in motion, but by providing the materiality behind cave practices and a continuance between contemporary and ancient Maya cave ritual use.

Behavioral archaeology and practice theory provide frameworks for theorizing the past through actualistic and contextual analysis. Combining actualistic, ethnohistoric, ethnographic, and ethnoarchaeological research with archaeological materials contributes to insight on the formation processes that led to the assemblages at CBR and SDR. In order to understand how the Maya used fauna in ritual and mortuary contexts a theoretical framework focused on behavioral archaeology and practice theory is combined to articulate cultural and natural modifications to the remains excavated from CBR and SDR. An overview of Maya archaeology, Maya cave explorations, zooarchaeology, and taphonomy is pursued in the following chapter.

CHAPTER 4

ZOOARCHAEOLOGICAL DATA COLLECTION AND ANALYSIS

Zooarchaeological methods required to investigate the questions for this research include a discussion of the selection of sample materials, the exportation process, and the repository system in place for the materials analyzed. This is followed with a brief discussion of the excavation methods used by CBAS and BVAR and the cleaning methods employed for removal sediments from the skeletal elements. Next, a thorough description of the data collection procedures used at the NAUDAFAL and the quantification measures used to identify behavioral patterns in the sample assemblages. When analyzing mixed deposits, it is important to remove the taphonomic biases that can lead to misinterpretation of cultural significance, therefore, this chapter concludes with a discussion of the methods used to separate cultural and natural effects left by taphonomic agents.

A previous analysis of the Caves Branch Rockshelter faunal assemblages from 2005 and 2006 field seasons, which had a total NISP of 1276 from dark and light zones followed standard zooarchaeological methods (Kavountzis 2009; Reitz and Wing 2008). He identified each specimen to the lowest taxonomic order. His analysis identified element, portion, completeness of element by a percent, side, age, sex, burning (labeled blackened or calcined), and artifactual and natural modification (Kavountzis 2009, 69). The methods presented here expand upon the prior investigation in zooarchaeological methods, such as identifying browning of bones when identifying burning modifications to each specimen and increasing the sample size to explore the results with greater statistical significance as well as comparing these data to those recovered in SDR.

Faunal Materials Analyzed

This research analyzed a sample of faunal remains from the total faunal assemblages at CBR and SDR. Materials from CBR includes four bags from 1994, 34 bags from looted contexts in 2005, 22 bags from the 2006 excavations, and 36 bags from the most recent 2015 excavations. At SDR there are a total of 27 bags from 2010, 78 bags from 2011, one bag from 2013, and 12 bags from the 2017 field season. The amount of fauna varies significantly in each bag ranging from one specimen in a bag to over 300 specimens.

Faunal assemblages from CBR and SDR were examined at the NAUDAFAL. Each element was dry brushed, identified conservatively to specific element and taxon if possible, and catalogued in a spreadsheet. NAUDAFAL laboratory volunteers assisted with the dry-brushing technique used for cleaning faunal remains. Comparative osteological guides were one technique used to identify element and taxon in the assemblages. Comparative collections housed at the NAUDAFAL, the Museum of Northern Arizona Charles L. Douglass Comparative Collection, and the Stanley J. Olsen Zooarchaeological Collection at Arizona State Museum were also used for identification. Identification and classification of Actinopterygii (bony fish) followed suggested methods used by Wheeler and Jones (1989), along with several fish comparative collections housed at the NAUDAFAL, and the pictorial skeletal atlas of fishes offered by Florida Museum of Natural History website. Amphibian and reptile remains were identified using NAUDAFAL comparative collections, the Florida Museum of Natural History's environmental archaeology image search, and a comparative guide (Olsen 1968) Freshwater and marine shells were identified using a comparative of specimens collected by WBRCP in the 90's as well as reference from, several field guides (Abbott and Morris 1995; Andrews IV 1969; Claassen 1998). Avian specimens were identified using several different methods including comparative collections housed at the NAUDAFAL and osteological guides (Gilbert et al.1996, Olsen 1979). Mammalian specimens were primarily identified using comparative collections housed at the NAUDAFAL, however, digital and field books were also utilized (Olsen 1964, 1982) Modified faunal remains were compared to several different guides and associated with NAUDAFAL codes shown in Appendix A (Garber 1989; Pendergast 1971).

Outside of comparative collections, storage space, different sized bags, basic writing utensils (sharpies, pens, pencils), and time are the pivotal resources needed for this analysis. The NAUDAFAL housed at the Bilby Research Center provides the repository for all CBAS and BVAR faunal materials exported since 2016. Stable isotopes, DNA, and laboratory dating techniques will also be necessary for a complete analysis of this assemblage, however, most of these modes of analysis are outside the scope of this research and will be completed by institutions working with CBAS and BVAR at a later date.

The code closely following (cf.) was used when a specimen was reasonably believed to belong to a certain taxonomic order (Hamblin 1984). A common problem in zooarchaeological research is a lack of thorough comparative collections for identifying remains. One way to remedy this used by the NAUDAFAL is to designate a currently indeterminate to a given taxa specimen with the code of identifiable with comparative collection (IDWCC). This designation provides a quick way to go back and further identify specimens once a more thorough collection is at hand.

Excavation

Excavation methods in the two rockshelters followed arbitrary 20 cm level designation typical of rockshelters excavated in Belize (Bonor Villarejo 1999; Prufer 2002; Wrobel 2008; Michael and Burbank 2013). While vertical level identification was an early goal in 2005 for the CBAS excavations, from 2006 and on excavation methods followed arbitrary 20 cm levels until sterile. Matrices from excavations were screened through ¼ and ⅛ inch mesh as is standard in

CBAS and BVAR methods. Rockshelter excavations were explored based on light, liminal, and dark zone designations, with most artifacts identified in the light and liminal zones (Wrobel 2008).

Cleaning Methods

CBAS procedures until the 2017 field season were to wash and dry any faunal remains excavated during the field season. Specimens were then placed back in airtight plastic bags and set aside for further analysis. All faunal specimens were dry-brushed in Belize before export and again at the NAUDAFAL. Dry-brushing minimizes damage to remains, as opposed to wet or water-washing, and exposes natural and cultural taphonomic effects when possible. Wet or water-washing can lead to shrinkage and thus breakage of the elements impacting thorough interpretation of taphonomic effects.

Specimens unable to be cleaned by dry brushing or washing were frequent due to rockshelter sediment concretions leaving layers of sediment across the bone surface. The most productive way of getting around this issue involved the use of small wooden or metal picks to chip at portions of the sediment layer on the bone, allowing for exposure of the bone surface. Many specimens were only partially cleaned using this method due to time constraints and focused on areas of the bone where important taphonomic features are more likely to occur. The features focused on include areas where butchery marks are more likely to be evident, areas to fully identify the degree of burning occurring on the bone surface and interior, and edges where rodent gnawing may have been present.

All specimens were also re-bagged and organized according to site. Bag numbers were assigned to assist with relocating materials during and after analysis. Bag numbers begin with the initials of the supervising zooarchaeologist for the faunal analysis, followed by the year of analysis and bag number in sequence, e.g. GBW2018-01. Each identified specimen was also assigned a catalog number, beginning with the letter F and followed by a number in sequence, e.g. F017. These protocols have been employed by zooarchaeologists on the BVAR project since 2016 and allow for standardized investigation of remains across the region (Burke et al. 2017)

Data Collection Methods

Specimens were identified to different elements or body portions based on identifiable attributes. Standard zooarchaeological identification procedures follow established by previous zooarchaeological research in the Americas (Emery et al. 2013; Grayson 1984; Klein and Cruz-Uribe 1984; Rachkam 1994; Reitz and Wing 1999). Sorting each bag of fauna began by separating specimens based on taxonomic class, followed by body portions such as appendicular or axial, and then element. This strategy is agglomerative and assists with the identification of refits and patterns in the bones.

Date entry followed previously mentioned BVAR zooarchaeological standards beginning with entering provenience information with slight modification for differences in artifact cards used by CBAS (Appendix A.). Provenience information includes the bag number (e.g. GBW2018-18), the site acronym (SDR), structure, area, lot number, operation number, excavation unit, level, lot description, sealed context or on floor designation, the supervisor, the year excavated, the CBAS CAT number, and the NAUDAFAL CAT number. Area and operation numbers are particularly helpful for identifying the context of the excavations, while structure is generally left blank unless the operation filling in for different card categories such as operation number. The NAUDAFAL catalog number or CAT # is a running catalog number for each line of data and helps to serve as a reference point for locating and referring to certain specimens present.

Taphonomic Histories

Finally, analyzing patterns observed in natural or cultural taphonomic features or modifications, and the importance of animals to the ancient Maya is further considered (Wisner et al. 2019). This research identified as many taphonomic modifications to specimens as possible if present, including abrasion, burning, carnivore gnawing, rodent gnawing, digestive damage, mold damage, root etching, and weathering. Abrasion refers to any taphonomic agent that erodes a bone surface through applied physical force (Lyman 1994:391-384). Burned bone passes through a spectrum of appearances as the specimen is modified including unburnt, non-incinerated or smoked with blackened edges or browned, incompletely incinerated or calcined, and completely incinerated or calcined (Buikstra and Goldstein 1973; Stewart 1979; Ubelaker 1978). Bone can be burned from multiple processes including cooking and wildfires, which can be identified based on the levels of burning present on the bone (Lyman 1994).

Carnivore modification refers marking left behind by carnivore teeth actively gnawing on animal remains for subsistence (Burke 2008, 2013; Fisher 1995; Lyman 1994). Carnivores are taphonomic agents that leave identifiable effects including chipping back, crenellations, furrowing, pitting, punctures, and tooth scoring (Fisher 1995; Lyman 1994). Rodent gnawing occurs for one of two reasons, one is osteophagia, eating bone to acquire minerals (Fisher 1995; Lyman 1994). The second reason is that rodents have ever-growing growing incisors leading to behavioral adaptations where rodents gnaw on bones and other organic material to wear down their teeth.

Figure 9. Rodent gnawing showinw striations on a cranium.

Digestion of remains can lead to corrosive damage, such as pitting, on prey bones and teeth. These modifications can vary between predators, but digestive damage can be used as an indicator of a specific bird of prey, when other natural processes are accounted for and limited (Andrews 1990:64; Wisner et al. 2019). Digestion damage can be observed on molars and incisors of rodents as well, and used to identify different predators, especially with larger birds of prey creating more significant damage to the enamel. As for postcranial damage, there are two general types. Intrusive digestion occurs mainly along the articular ends of long bones. The second type results in damage to the bones similar to climatic weathering and also leads to the rounding of skeletal edges (Andrews 1990:79). These can be identified using scanning electron microscopes (SEM), which offers a closeup of the damage caused to the elements.

Cultural modifications to bones range from butchery marks left behind by lithic tools during processing to the highly refined reduction techniques for bone tools. Since most bone and shell modified artifacts were designated special finds, under CBAS policy, these artifacts remained in Belize and were analyzed in the field.

Bone artifacts are manufactured with the removal of the proximal and/or distal epiphyses from long bones as the first step (Emery 2008, 2009). This removal can be done through a number of methods including the use of string, lithics, abrasion, or other cutting technologies. Once the proximal and distal ends are removed the bone can be modified to form a variety of artifacts including awls, rasps, tubes, needles, and hairpins. Human modifications to bone often leave defining marks on the bone that can help infer its purpose. For instance, bone needles and awls often have use-wear on the tips that can indicate the intended purpose behind the artifact (Gates St-Pierre 2018).

Quantification

The first quantitative unit used in this analysis is number of identified specimens (NISP), which is defined as the total count of specimens (Lyman 1994, 2008). Here, identified means to skeletal element, body portion, and taxon while specimen means each fragment or complete bone. Further, zooarchaeological quantitative analysis will identify the minimum number of individuals (MNI), the minimum number of elements (MNE), and patterns observed in cultural and natural modifications, as well as taxa present (Lyman 1994, 2008; Montero López 2013; Reitz and Wing 2008). Minimum number of elements (MNE) is used to assess the number of specimens for each specific element examined and is used to identify patterns in skeletal element completeness (Wisner et al. 2019).

Another quantitative measure used for these collections is minimum number of animal units (MAU), which accounts for the elements in a collection (Lyman 1994:104-105). The formula for MAU is MNE_1 / number of times $_1$ occurs in one skeleton (Binford 1981:51; Lyman 1994:104-105). Additionally, %MAU will be assessed for the collection using the entire collection and then MNE portion values. %MAU is found by taking MAU x 100 and dividing it by the maximum MAU value (Binford 1981:51; Lyman 1994:104-105). Standardizing the MAU allows researchers to identify the most represented skeletal element, and in this analysis portion of said element, in the assemblage to further discover taphonomic patterns.

This approach is necessary for zooarchaeological data analysis because it follows a systemized trajectory that enables empirical identifications as well as detailed exploratory analysis of human behavioral patterns. Many of these methods have been used to answer questions regarding ancient Maya use of fauna throughout the region for ritual and domestic purposes (Emery 2008, 2009; Montero López 2013). These standardized zooarchaeological procedures have been informed by behavioral archaeology, as it supports investigating differences between natural and cultural processes in site formation. Seeking patterns from those data allows archaeologists to identify ritual components from each assemblage supported by the inclusion of practice theory.

CHAPTER 5

RESULTS OF ANALYSIS

Analysis of the zooarchaeological assemblages from CBR and SDR began in the May of 2018, however, processing the remains occurred after the remains were exported from Belize in the fall of 2017. Below are the detailed results of zooarchaeological analysis of the rockshelters beginning with a breakdown of the taxon at each site as a whole, along with the markers for natural and cultural effects found on the remains.

Caves Branch Rockshelter Results of Analysis

CBR has a total NISP of 1240 of which 236 of the specimens were identified to species or closely following species (Table 3). A complete taxonomic breakdown and total NISP of the specimens analyzed at CBR beginning with taxonomic class, alphabetized, followed by order, family, genus, and species if identified is provided below (Table 3). Many zooarchaeologists do not typically quantify and include long bone or axial fragments indeterminate past taxonomic class, however, the remains in the rockshelter were highly fragmented and analysis of these fragments are necessary for ascertain taphonomic histories (Lyman 2008:250-251).

Table 3. Total NISP of the CBR assemblage organized alphabetically by taxonomic class

Taxonomic Category	Common Name	NISP	% NISP
cf. Perciformes	Perch-like fish	1	0.08%
Scarus sp.	Parrotfish	3	0.24%
Anura	Frogs or toads	3	0.24%
Aves Small	Small birds	3	0.24%
Aves Small-medium	Small-medium birds	1	0.08%
Aves Medium	Medium birds	9	0.73%
Aves Medium-large	Medium-large birds	19	1.53%
Aves Large	Large birds	36	2.90%
cf. *Meleagris* sp.	Turkey	1	0.08%
cf. Galliformes	Landfowl	1	0.08%
Artiodactyla	Cloven-hooved mammals	12	0.97%

Taxonomic Category	Common Name	NISP	% NISP
Cervidae	Deer	5	0.40%
cf. Cervidae	Deer	16	1.29%
cf. *Odocoileus virginianus*	White-tailed deer	5	0.40%
Tayassuidae	Peccary	21	1.69%
cf. Tayassuidae	Peccary	35	2.82%
cf. Carnivora Medium	Medium Carnivores	1	0.08%
Canis lupus familiaris	Dog	1	0.08%
Mephitidae	Skunk	1	0.08%
cf. *Panthera onca*	Jaguar	1	0.08%
Pternonotus davyi	Davy's naked backed bat	1	0.08%
Dasypus novemcinctus	Nine-banded armadillo	148	11.94%
Didelphidae	Opossum	8	0.65%
cf. Didelphidae	Opossum	4	0.32%
Sylvilagus sp.	Rabbits	1	0.08%
cf. *Tapirus bairdii*	Tapir	8	0.65%
cf. *Bradypus* sp.	Sloth	1	0.08%
cf. *Tamandua mexicana*	Northern tamandua	1	0.08%
Rodentia small	Small rodents	8	0.65%
cf. Rodentia Small	Small rodents	7	0.56%
Rodentia Medium	Medium rodents	5	0.40%
cf. Rodentia Medium	Medium rodents	5	0.40%
Cricetidae	Cricetids	2	0.16%
cf. Cricetidae	Cricetids	7	0.56%
Cuniculus paca	Paca, gibnut	19	1.53%
Orthogeomys hispidus	Hispid pocket gopher	17	1.37%
cf. Orthogeomys hispidus	Hispid pocket gopher	1	0.08%
Mammalia Small	Small mammals	1	0.08%
Mammalia Small-medium	Small-medium mammals	11	0.89%
Mammalia Medium	Medium mammals	178	14.35%
Mammalia Medium-large	Medium-large mammals	29	2.34%
Mammalia Large	Large mammals	408	32.90%
cf. Crocodilia	Caiman or Crocodile	1	0.08%
Squamata Small	Small snakes or lizards	1	0.08%
Squamata Small-medium	Small-medium snakes or lizards	5	0.40%
Squamata Medium	Medium snakes or lizards	11	0.89%
Iguanidae	Iguanids	5	0.40%
Sauria	Lizards	4	0.32%
Testudines Small-medium	Small-medium turtles	5	0.40%
Testudines Medium	Medium turtles	2	0.16%
cf. Kinosternidae	Mud or Musk turtles	38	3.06%

Taxonomic Category	Common Name	NISP	% NISP
Brachyura	Crabs	51	4.11%
Anadara notabilis	Eared ark clam	1	0.08%
Nephronaias sp.	River clam	52	4.19%
cf. *Cassis* sp.	Helmet shells	1	0.08%
cf. *Lobatus gigas*	Queen conch	1	0.08%
cf. *Lobatus raninus*	Hawkwing conch	1	0.08%
cf. Strombidae	True conchs	4	0.32%
Pomacea flagellata	Apple snail	8	0.65%
Pachychilus glaphyrus	Jute	3	0.24%
Pachychilus sp.	Jute	1	0.08%
Total		1240	100.00%

MNI was minimal for all species identified at CBR with the highest MNI attributed to 9 river clam specimens, which likely do not total the entirety of river clam freshwater shell excavated. The highest vertebrate MNI was two for frogs or toads, peccary, opossum, mice or rats, and paca. These numbers might increase slightly if compared with previously researched zooarchaeological materials from CBR (Kovountzis 2009; Stanchly and Song 1995), but is outside the scope of this research.

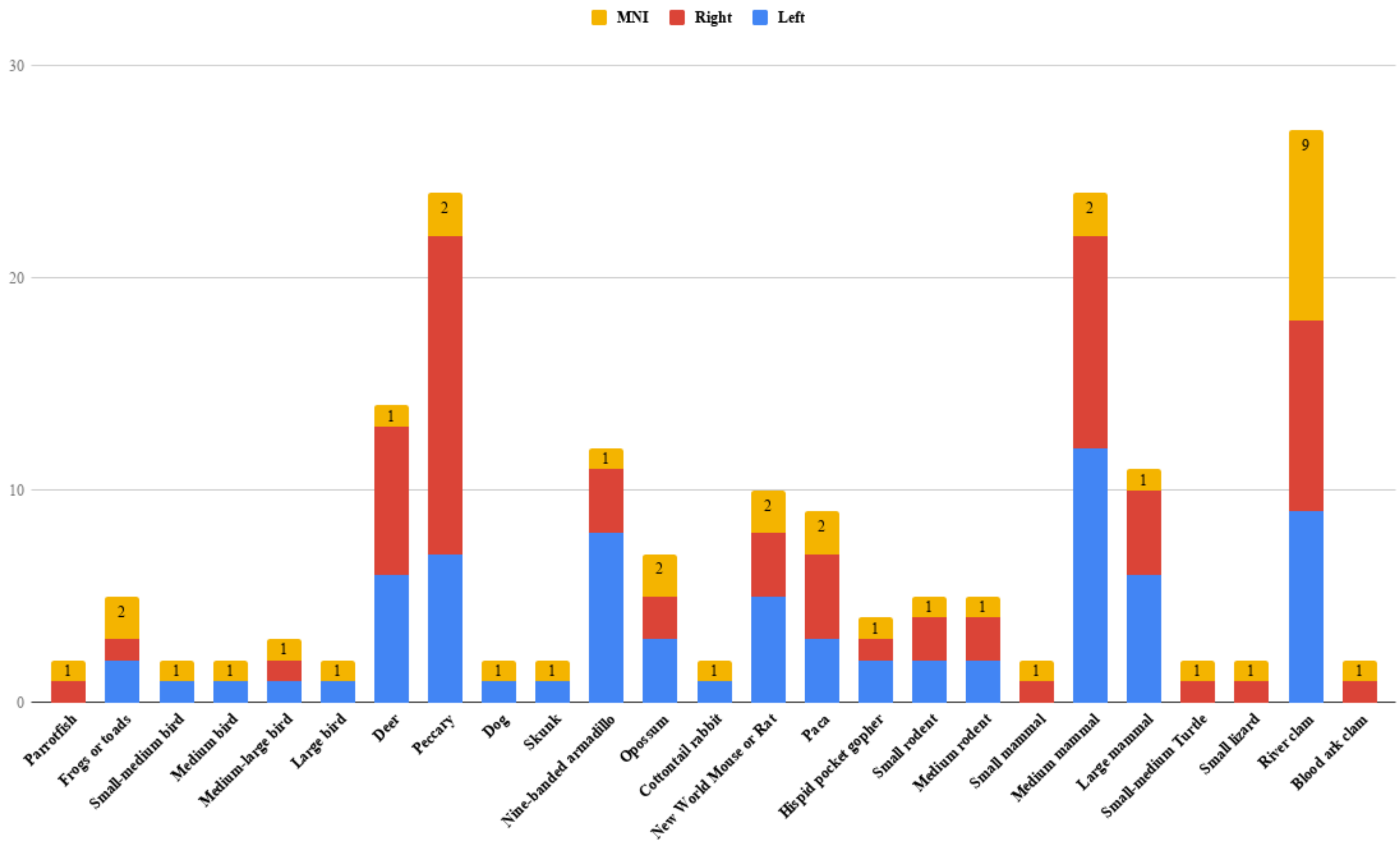

Figure 10. Stacked histogram of sided elements at Caves Branch Rockshelter with MNI at the top, left-sided elements in blue, and right-sided elements in red.

CBR Results by Operation

Operation 1A

Faunal specimens from Operation 1A total 325 with many mammals and some non-mammal remains including frog, bird, freshwater and marine shell, lizard, iguana, snake, and turtle. Excavated remains came from units 10F, 12F, 13F 10G, 12G, 13G, B38 and were found in levels 1 through 4. A total of 57% of the remains were burnt with body portions of 58% appendicular specimens, 20% axial specimens, 5% cranial specimens, and 17% exoskeleton. Green breakage fractures were present on a little under 6% of the assemblage. No other indicators of cultural modification were found such as manufacturing modifications.

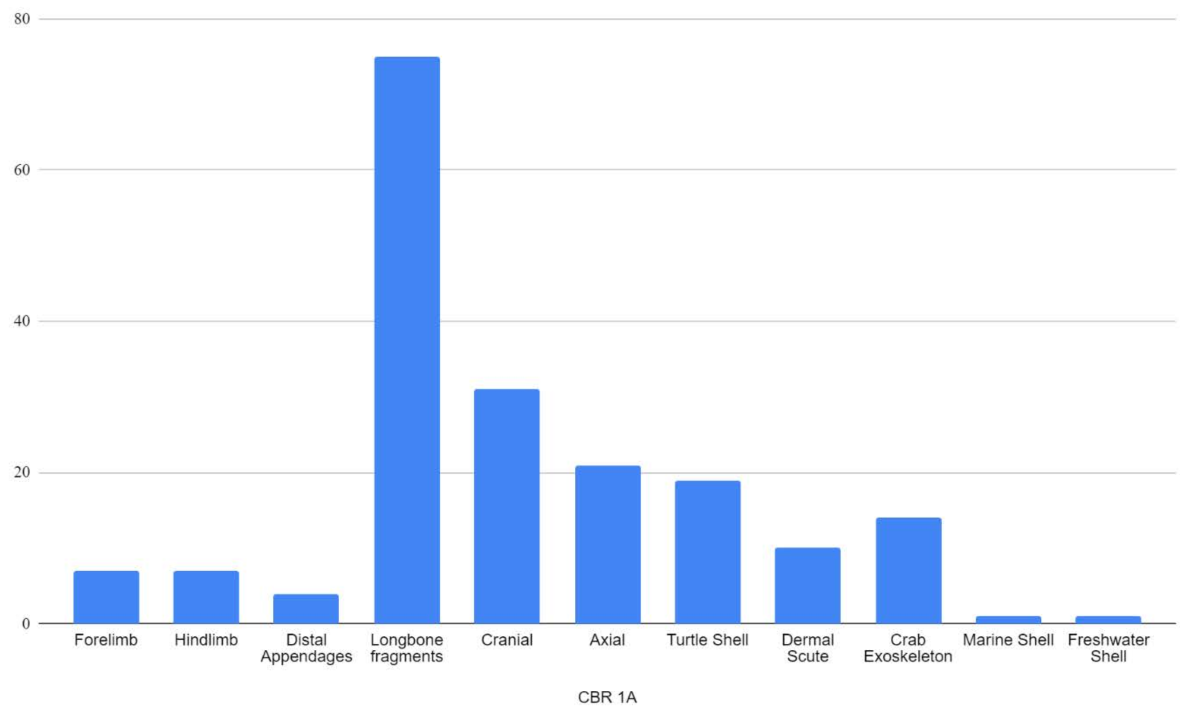

Figure 11. Body Portions for Caves Branch Rockshelter Operation 1A.

Natural taphonomy was present in the form of digestive corrosion damage which was found on 14 specimens from medium to large sized vertebrates likely from medium to large mammal predation. Less than one percent of the assemblage showed evidence of root etching and polishing. The most prominent natural taphonomic effect on the assemblage was exfoliation damage, likely from diagenetic processes found on 59 specimens from all size classes.

Table 4. CBR Operation 1A Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Aves Medium-large	2	100.00%	0.00%	0.00%	0.00%
Aves Large	20	90.00%	5.00%	5.00%	0.00%
Cervidae	4	50'%	50.00%	0.00%	0.00%
cf. *Odocoileus virginianus*	3	66.66%	0.00%	33.33%	0.00%
cf. Cervidae	7	28.57%	71.43%	0.00%	0.00%
cf. Tayassuidae	2	100.00%	0.00%	0.00%	0.00%
cf. Carnivora Medium	1	0.00%	0.00%	100.00%	0.00%
Dasypus novemcinctus	20	15.00%	0.00%	0.00%	85.00%
Didelphidae	4	0.00%	25.00%	75.00%	0.00%
cf. *Tapirus bairdii*	1	0.00%	0.00%	100.00%	0.00%
Rodentia Small	3	100.00%	0.00%	0.00%	0.00%
Rodentia Medium	1	100.00%	0.00%	0.00%	0.00%
Cuniculus paca	8	75.00%	0.00%	25.00%	0.00%
Mammalia Small	1	100.00%	0.00%	0.00%	0.00%
Mammalia Medium	57	43.86%	49.12%	7.02%	0.00%
Mammalia Medium-large	10	50.00%	30.00%	20.00%	0.00%
Mammalia Large	154	66.23%	29.87%	3.90%	0.00%
Squamata	1	0.00%	100.00%	0.00%	0.00%
cf. Kinosternidae	11	0.00%	0.00%	0.00%	100.00%
Brachyura	12	0.00%	0.00%	0.00%	100.00%
Pomacea flagellata	2	0.00%	0.00%	0.00%	100.00%
Strombidae	1	0.00%	0.00%	0.00%	100.00%
Total	325	53.54%	26.77%	6.46%	13.23%

Operation 1B

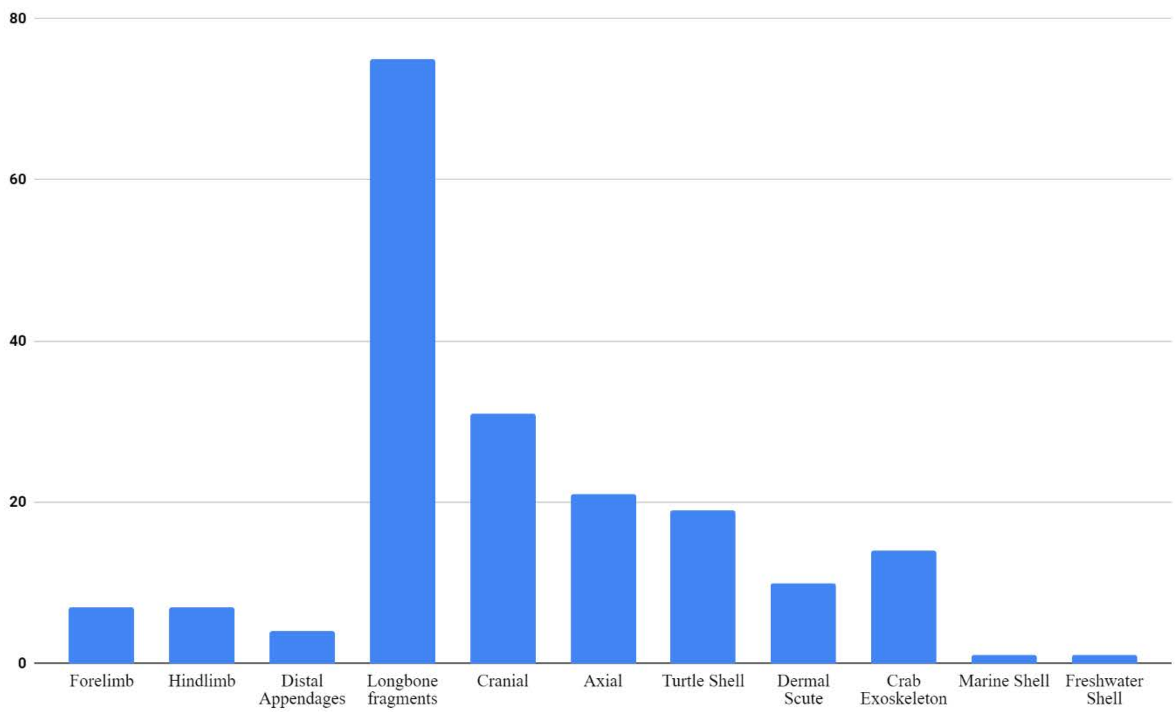

Figure 12. Body Portions for Caves Branch Rockshelter Operation 1B.

Faunal specimens from Operation 1B included many mammals and some non-mammal remains from levels 1 through 4 of units 23H, 24H, 23I, 22K, 23K, and 24K. A single large cat first phalanx was identified as closely following jaguar without any natural or cultural modifications. Another interesting specimen identified in this assemblage was a crocodilian, either caiman or Morelet's crocodile, maxilla fragment that may have broken off of a personal adornment since no other crocodilian remains were found. About 73% of the specimens were burnt and only one specimen, a needle fragment, had manufacturing modification. Natural modifications to the assemblage include exfoliation, polishing, and root-etching present on less than 7% of the specimens. Small vertebrate remains in this assemblage are likely the result of predation, either from a small mammal or predatory bird, however, the sample is not large enough to greatly influence the assemblage or the predator involved based on taxonomic preference. The turtle carapace remains are possibly fragments from personal adornments or musical instruments, however, they were exposed to fire and do not have polishing indicative of either.

Table 5. CBR Operation 1B Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Anura Small-medium	1	100.00%	0.00%	0.00%	0.00%
Aves Small-medium	1	100.00%	0.00%	0.00%	0.00%
Aves Medium	3	0.00%	33.33%	66.66%	0.00%
Aves Medium-large	1	100.00%	0.00%	0.00%	0.00%
Aves Large	1	100.00%	0.00%	0.00%	0.00%
cf. Artiodactyla	2	50.00%	0.00%	50.00%	0.00%
cf. *Odocoileus virginianus*	1	0.00%	0.00%	100.00%	0.00%
Tayassuidae	1	0.00%	0.00%	100.00%	0.00%
Mephitidae	1	0.00%	0.00%	100.00%	0.00%
cf. Panthera once	1	100.00%	0.00%	0.00%	0.00%
Dasypus novemcinctus	10	0.00%	0.00%	0.00%	100.00%
cf. *Tapirus bairdii*	2	100.00%	0.00%	0.00%	0.00%
Rodentia small	2	100.00%	0.00%	0.00%	0.00%
cf. Rodentia Medium	2	100.00%	0.00%	0.00%	0.00%
cf. Cricetidae	3	100.00%	0.00%	0.00%	0.00%
Orthogeomys hispidus	15	6.67%	0.00%	93.33%	0.00%
Mammalia Small	2	0.00%	100.00%	0.00%	0.00%
Mammalia Medium	10	80.00%	20.00%	0.00%	0.00%
Mammaia Medium-large	14	78.57%	21.43%	0.00%	0.00%
Mammalia Large	67	80.60%	10.45%	8.96%	0.00%
cf. Crocodilia	1	0.00%	0.00%	100.00%	0.00%
Sauria	3	100.00%	0.00%	0.00%	0.00%
Iguanidae	4	25.00%	0.00%	75.00%	0.00%
Serpentes Medium	4	0.00%	100.00%	0.00%	0.00%
Testudines Small-medium	3	33.33%	33.33%	0.00%	33.33%
Testudines Medium	1	100.00%	0.00%	0.00%	0.00%
cf. Kinosternidae	18	0.00%	0.00%	0.00%	100.00%
Brachyura	14	0.00%	0.00%	0.00%	100.00%
Nephronaias sp.	1	0.00%	0.00%	0.00%	100.00%
cf. Strombidae	1	0.00%	0.00%	0.00%	100.00%
Total:	190	48.95%	11.05%	16.32%	23.68%

Operation 1C

During the summer of 2017, CBAS exported all non-special find and freshwater shell remains to the NAUDAFAL with the help of Dr. Hoggarth. Previous researchers have analyzed material from CBR (Kavountzis 2009) including material from this operation. It is likely that all Operation 1C faunal material recovered by CBAS was exported for this previous research.

Operation 1D

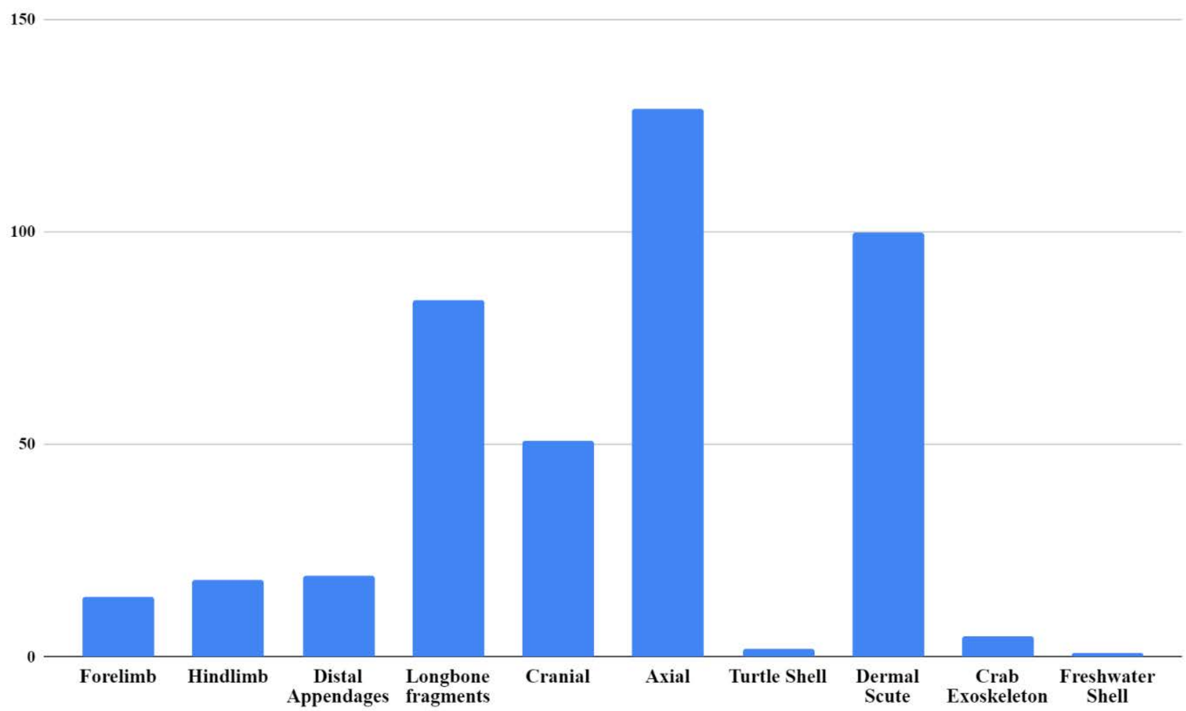

Figure 13. Body portions for CBR Operation 1D

Operation 1D has the most specimens analyzed from CBR in this analysis with all specimens coming from levels 1 through 6 of 21O. Nearly a quarter of these remains are dermal scutes from one or more-nine banded armadillo, which bias the NISP totals in this operation. An unique find in this assemblage is almost an entire maxilla from a peccary that had been heavily burnt and calcined, along with the 26 specimens from hindlimb, forelimb, and axial elements possibly indicative of a peccary sacrifice brought to the rockshelter.. Four of the peccary specimens showed evidence of carnivore gnawing marks, which may indicate the remains were brought to the rockshelter by a predatory mammal before being burnt. A large mammal fibula distal shaft was identified to closely following sloth (*Bradypus* sp.) with the only evidence of insect damage and weathering in the assemblage.

Table 6. CBR Operation 1D Taxa, NISP, and % Body Portion

Taxa	NISP Totals	% Appendicular	% Axial	% Cranial	% Other
Aves Medium	1	100.00%	0.00%	0.00%	0.00%
Aves Large	1	100.00%	0.00%	0.00%	0.00%
Nephronaias sp.	1	0.00%	0.00%	0.00%	100.00%
Brachyura	5	0.00%	0.00%	0.00%	100.00%
cf. Artiodactyla	5	20.00%	80.00%	0.00%	0.00%
cf. Cervidae	6	100.00%	0.00%	0.00%	0.00%
Tayassuidae	14	64.29%	0.00%	35.71%	0.00%
cf. Tayassuidae	33	18.18%	33.33%	48.48%	0.00%
cf. *Canis lupus familiaris*	1	0.00%	0.00%	100.00%	0.00%
Dasypus novemcinctus	108	6.48%	0.00%	0.93%	92.59%
Didelphidae	2	0.00%	100.00%	0.00%	0.00%
cf. Didelphidae	3	33.33%	66.66%	0.00%	0.00%
cf. *Tapirus bairdii*	5	100.00%	0.00%	0.00%	0.00%
Bradypus sp.	1	100.00%	0.00%	0.00%	0.00%
Cricetidae	1	0.00%	0.00%	100.00%	0.00%
cf. Cricetidae	3	100.00%	0.00%	0.00%	0.00%
Cuniculus paca	11	18.18%	18.18%	63.64%	0.00%
Orthogeomys hispidus	2	0.00%	0.00%	100.00%	0.00%
cf. *Orthogeomy hispidus*	1	100.00%	0.00%	0.00%	0.00%
Rodentia Small	2	100.00%	0.00%	0.00%	0.00%
Rodentia Medium	6	16.67%	0.00%	83.33%	0.00%
Mammalia Small-medium	9	11.11%	88.89%	0.00%	0.00%
Mammalia Medium	91	16.48%	70.33%	13.19%	0.00%
Mammalia Large	99	72.73%	27.27%	0.00%	0.00%
Squamata	8	0.00%	100.00%	0.00%	0.00%
Iguanidae	1	0.00%	0.00%	100.00%	0.00%
cf. Kinosternidae	3	0.00%	33.33%	0.00%	66.66%
Total:	423	31.91%	30.50%	12.06%	25.53%

Operation 1E

A single bag of faunal remains from the 2015 operation 1E had materials from level 3 of unit 15I. All specimens were mammalian consisting of six large mammal fragments, three small rodent long bones, and a single dermal scute. Two of the specimens, a dermal scute and a large mammal long bone fragment were burnt. The remaining specimens showed no clear taphonomic influence and likely are miscellaneous fragments from bioturbation throughout the shelter.

Operation 1F

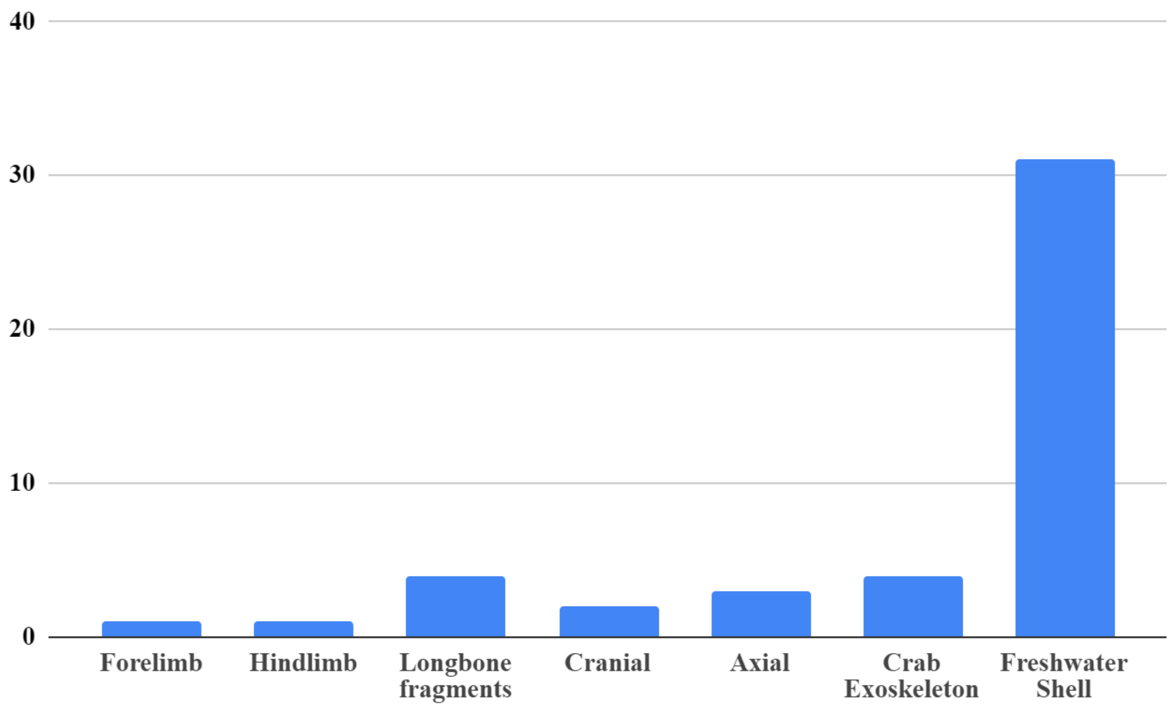

Figure 14. Body portions through total NISP for CBR Operation 1D

Several bags of faunal material were recovered from levels 1, 2, 3, and 5 in units 15F, 14H, 15H, 15I, and 15G containing a mix of vertebrate, crab, and freshwater shell specimens. A little over a third of the assemblage, 36%, were burnt including seven freshwater shell specimens of river clam, jute, and apple snail. A complete lumbar vertebra from an adult deer was found charring and carbonization indicating that the bone was either dry or fleshy at the time of burning. Rodent gnawing marks were also found on five of the specimens including four long bone fragments and the tooth row of a burnt opossum dentary. The only other natural modification in these specimens was exfoliation damage on two of the jute, either from post-depositional processes or an unaccounted variable that happened during the heating of the two shells.

Table 7. CBR Operation 1F Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Aves Medium	1	100.00%	0.00%	0.00%	0.00%
Cervidae	1	0.00%	100.00%	0.00%	0.00%
Didelphidae	1	0.00%	0.00%	100.00%	0.00%
Rodentia Medium	1	0.00%	0.00%	100.00%	0.00%
cf. Cricetidae	1	100.00%	0.00%	0.00%	0.00%
Mammalia Medium	1	0.00%	100.00%	0.00%	0.00%
Mammalia Large	4	100.00%	0.00%	0.00%	0.00%
Squamata Small	1	0.00%	100.00%	0.00%	0.00%
Brachyura	4	0.00%	0.00%	0.00%	100.00%
Nephronaias sp.	25	0.00%	0.00%	0.00%	100.00%
Pachychilus glaphyrus	2	0.00%	0.00%	0.00%	100.00%
Pomacea flagellata	4	0.00%	0.00%	0.00%	100.00%
Total	46	13.04%	6.52%	4.35%	76.09%

Operation 1G

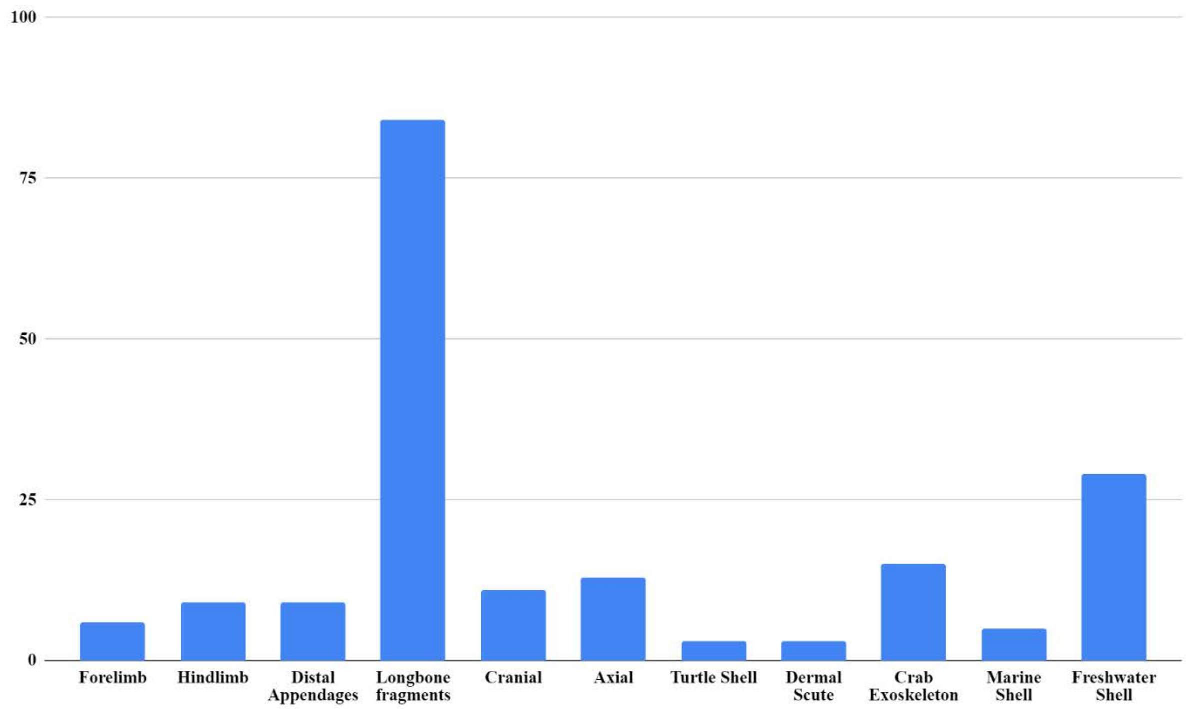

Figure 15. Body portions for CBR Operation 1G

Operation 1G contained a diverse mix of faunal remains from levels 1 through 6 in units 16F, 17F, 16G, and 17G. A little over 54% of the specimens were burnt with evidence of calcined bone across these specimens. Multiple turtle and parrotfish remains were identified from carapace and cranial portions respectively. A complete hawkwing conch shell was found along with a blood ark clam and multiple whole and fragmented river clams were found, all of which are attributed to human agency along. Twelve complete crab claw fragments were also found intermixed in this operation and are likely culturally deposited. Water specific fauna in this assemblage is high, indicating that this area may have been focused on rain rituals. Many of the vertebrate remains were naturally modified from exfoliation, insect damage, rodent gnawing, and several long bone fragments showed evidence of digestion damage and carnivore gnawing.

Table 8. CBR Operation 1G Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Scarus sp.	1	0.00%	0.00%	100.00%	0.00%
cf. Scarus sp.	2	0.00%	0.00%	100.00%	0.00%
Anura Small-medium	1	100.00%	0.00%	0.00%	0.00%
Aves Medium	4	0.00%	25.00%	75.00%	0.00%
Aves Medium-large	4	100.00%	0.00%	0.00%	0.00%
Aves Large	15	100.00%	0.00%	0.00%	0.00%
cf. Meleagris sp.	1	100.00%	0.00%	0.00%	0.00%
cf. Galliformes	1	100.00%	0.00%	0.00%	0.00%
cf. Artiodactyla	5	80.00%	20.00%	0.00%	0.00%
cf. Cervidae	2	100.00%	0.00%	0.00%	0.00%
cf. Odocoileus virginianus	1	100.00%	0.00%	0.00%	0.00%
Tayassuidae	6	0.00%	66.66%	33.33%	0.00%
Dasypus novemcinctus	6	50.00%	0.00%	0.00%	50.00%
Didelphidae	1	0.00%	0.00%	100.00%	0.00%
Sylvilagus sp.	1	100.00%	0.00%	0.00%	0.00%
cf. Rodentia small	2	100.00%	0.00%	0.00%	0.00%
Cricetidae	1	100.00%	0.00%	0.00%	0.00%
cf. Orthogeomys hispidus	1	0.00%	0.00%	100.00%	0.00%
Mammalia Medium	9	77.78%	22.22%	0.00%	0.00%
Mammalia Medium-Large	4	50.00%	50.00%	0.00%	0.00%
Mammalia Large	63	98.41%	1.59%	0.00%	0.00%
Squamata	1	0.00%	100.00%	0.00%	0.00%
Sauria Small	1	100.00%	0.00%	0.00%	0.00%
Testudines Small-medium	1	100.00%	0.00%	0.00%	0.00%
Testudines Medium	1	0.00%	0.00%	0.00%	100.00%
cf. Kinosternidae	3	0.00%	33.33%	0.00%	66.66%
Brachyura	15	0.00%	0.00%	0.00%	100.00%
cf. Cassis sp.	1	0.00%	0.00%	0.00%	100.00%
cf. Lobatus raninus	1	0.00%	0.00%	0.00%	100.00%
Lunarca ovalis	1	0.00%	0.00%	0.00%	100.00%
Nephronaias sp.	25	0.00%	0.00%	0.00%	100.00%
Pachychilus sp.	1	0.00%	0.00%	0.00%	100.00%
Pachychilus glaphyrus	1	0.00%	0.00%	0.00%	100.00%
Pomacea flagellata	2	0.00%	0.00%	0.00%	100.00%
cf. Strombidae	2	0.00%	0.00%	0.00%	100.00%
Total	187	58.29%	6.95%	5.35%	29.41%

Operation 1994

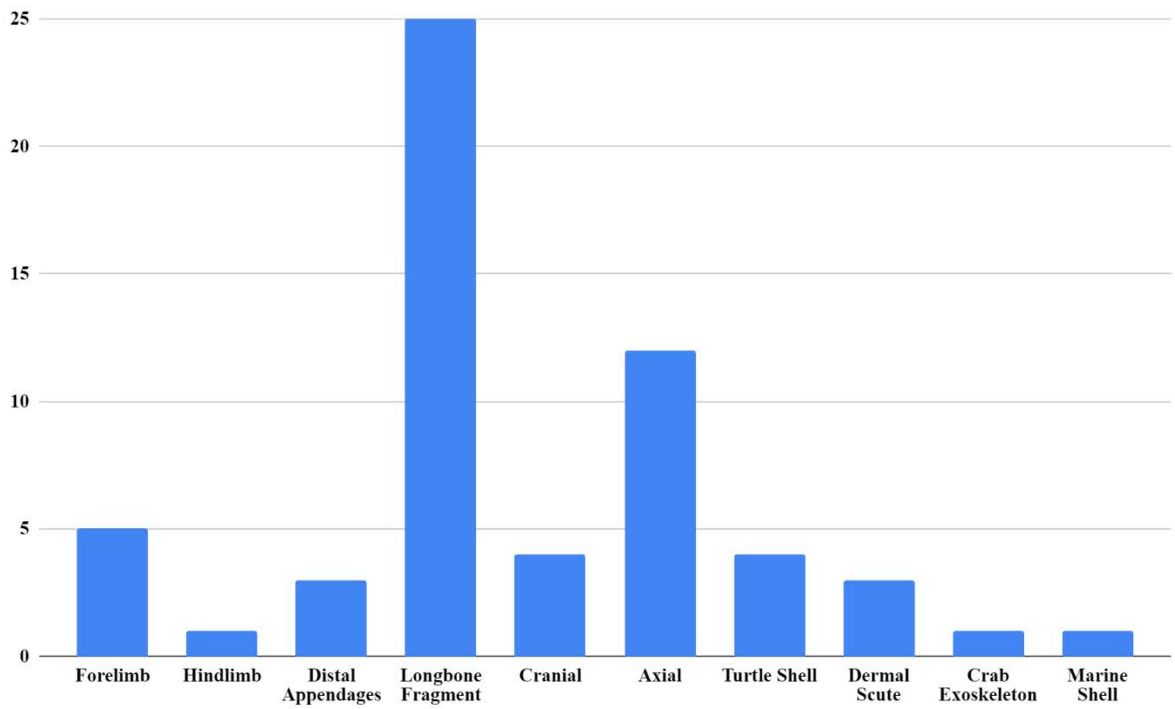

Figure 16. Body Portions representing remains from 1994 Units 6 and 8

Several bags were found with the CBAS collection from Bonor Villarejo's early salvage excavations from units 6 and 8. The specimens here likely make up only a small portion of the faunal material recovered in 1994, however, the specimens should be discussed all the same. A total of 59 specimens were analyzed containing the only bat remain identified in the total assemblage. While the sample from these excavations is small it still shows similar patterning from later excavations at the site including heavy amounts of burning present on 71% of the specimens analyzed. One artifact was identified of a queen conch shell bead from a spiral fragment, similar to shell beads made at Cahal Pech during the Preclassic period.

Table 9. CBR 1994 Excavations Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
cf. Perciformes	1	0.00%	0.00%	100.00%	0.00%
Anura Small-medium	1	100.00%	0.00%	0.00%	0.00%
Aves Small	3	0.00%	100.00%	0.00%	0.00%
Aves Medium-large	12	83.33%	16.67%	0.00%	0.00%
cf. Cervidae	2	100.00%	0.00%	0.00%	0.00%
Pteronotus davyi	1	0.00%	0.00%	100.00%	0.00%
Dasypus novemcinctus	3	0.00%	0.00%	0.00%	100.00%
Didelphidae	1	0.00%	100.00%	0.00%	0.00%
cf. Cricetidae	1	100.00%	0.00%	0.00%	0.00%
cf. Rodentia Medium	1	100.00%	0.00%	0.00%	0.00%
Mammalia Medium	10	80.00%	20.00%	0.00%	0.00%
Mammalia Medium-Large	1	0.00%	100.00%	0.00%	0.00%
Mammalia Large	14	78.57%	7.14%	14.29%	0.00%
Squamata	2	0.00%	100.00%	0.00%	0.00%
cf. Kinosternidae	4	0.00%	0.00%	0.00%	100.00%
Brachyura	1	0.00%	0.00%	0.00%	100.00%
cf. *Lobatus gigas*	1	0.00%	0.00%	0.00%	100.00%
Total	59	57.63%	20.34%	6.78%	15.25%

Sapodilla Rockshelter Results

A total of 17 operations were undertaken at Sapodilla Rockshelter, with a total of 16 1x1 meter units with faunal remains during the 2010, 2011 and 2017 field seasons. I analyzed 2111 specimens comprised of amphibians, birds, bony fishes, bivalves, crabs, gastropods, mammals, and reptiles. Similar to CBR, burning was the most evident taphonomic effect affecting the fauna assemblage at SDR on 1395 specimens. Separating the burnt remains further, 146 of the remains were calcined and 720 were carbonized with some overlap depending on the specimens. Burning was present on all surfaces of many of the bones. Only sixteen of the specimens showed artifactual manufacturing through bone or shell working all of which were either shell or from a large size class.

Several of the specimens analyzed showed evidence of damage through predation including carnivore gnawing and digestive damage on 16 total specimens. Root etching was present on a little over one percent of the assemblage on total of 26 specimens, seven of which were crab claws that may have been dragged in by rodents or pocket gophers.

Table 10. Total NISP of the SDR faunal assemblage organized alphabetically by taxa.

Taxonomic Category	Common Name	NISP	% NISP
Actinopterygii Medium	Medium Bony Fish	12	0.54%
Scarus sp.	Parrotfish	2	0.09%
cf. *Centropomus* sp.	Common Snook	1	0.05%
Anura	Frogs or Toads	5	0.23%
cf. *Bufo marinus*	Cane toad	5	0.23%
Order: Caudata	Salamander	2	0.09%
Aves Small	Small Birds	5	0.23%
Aves Small-medium	Small-medium Birds	4	0.18%
Aves Medium	Medium Birds	14	0.63%
Aves Medium-large	Medium-Large Birds	26	1.17%
Aves Large	Large Birds	14	0.63%
Meleagris sp.	Turkey	2	0.09%
cf. *Meleagris* sp.	Turkey	1	0.05%
cf. Strigiformes	Owls	1	0.05%
Artiodactyla	Cloven-hooved mammals	29	1.31%
Cervidae	Deer	15	0.68%
cf. Cervidae	Deer	25	1.13%
Mazama sp.	Brocket Deer	9	0.41%
cf. *Mazama* sp.	Brocket Deer	16	0.72%
Odocoileus virginianus	White-tailed Deer	4	0.18%
cf. *Odocoileus virginianus*	White-tailed Deer	11	0.50%
Tayassuidae	Peccary	46	2.07%
cf. Tayassuidae	Peccary	5	0.23%
cf. Carnivora	Carnivore	4	0.18%
cf. *Urycyon cinereoargenteus*	Grey fox	1	0.05%
cf. *Leopardus wiedii*	Ocelot	3	0.14%
cf. *Panthera once*	Jaguar	1	0.05%
Nasua sp.	Coatimundi	18	0.81%
Chiroptera	Bats	3	0.14%
Dasypus novemcinctus	Nine-banded armadillo	178	8.03%
Didelphidae	Opossum	21	0.95%
cf. *Didelphis* sp.	Opossum	8	0.36%

Taxonomic Category	Common Name	NISP	% NISP
cf. *Marmosa* sp.	Opossum	2	0.09%
Sylvilagus sp.	Cottontail rabbits	3	0.14%
Tapirus bairdii	Baird's tapir	14	0.63%
cf. *Tapirus bairdii*	Baird's tapir	1	0.05%
cf. Rodentia Small	Small rodents	10	0.45%
cf. Rodentia Medium	Medium rodents	11	0.50%
Cricetidae	New world mice or rats	4	0.18%
cf. Cricetidae	New world mice or rats	22	0.99%
cf. *Oryzomys couesi*	Coue's rice rat	1	0.05%
Oryzomys couesi	Coue's rice rat	4	0.18%
Cuniculus paca	Lowland paca, gibnut	18	0.81%
cf. *Cuniculus paca*	Lowland paca, gibnut	41	1.85%
Dasyprocta punctata	Central American agouti	2	0.09%
cf. *Dasyprocta punctata*	Central American agouti	3	0.14%
Orthogeomys hispidus	Hispid pocket gopher	3	0.14%
cf. *Orthogeomys hispidus*	Hispid pocket gopher	2	0.09%
Heteromys sp.	Spiny pocket mouse	3	0.14%
cf. *Heteromys* sp.	Spiny pocket mouse	3	0.14%
Sciurus sp.	Squirrel	1	0.05%
Mammalia Small	Small mammal	3	0.14%
Mammalia Small-Medium	Small-medium mammal	7	0.32%
Mammalia Medium	Medium mammal	251	11.32%
Mammalia Medium-Large	Medium-large mammal	36	1.62%
Mammalia Large	Large mammal	1006	45.38%
Squamata Small	Small snakes or lizards	3	0.14%
Squamata Small-medium	Small-medium snakes or lizards	12	0.54%
Squamata Medium	Medium snakes or lizards	23	1.04%
Iguanidae	Iguanids	4	0.18%
cf. *Iguana iguana*	Green iguana	7	0.32%
Serpentes	Snakes	16	0.72%
Sauria	Lizards	6	0.27%
Testudines Small	Small turtles	2	0.09%
Testudines Small-medium	Small-medium turtles	17	0.77%
Testudines Medium	Medium turtles	31	1.40%
Testudines Medium-large	Medium-large turtles	4	0.18%
Testudines Large	Large turtles	1	0.05%
cf. Chelonioidea	Sea turtles	14	0.63%
cf. *Dermatemys mawii*	Hickatee, Central American river turtle	1	0.05%
Kinosternidae	Mud and musk turtles	14	0.63%
cf. Kinosternidae	Mud and musk turtles	44	1.98%

Taxonomic Category	Common Name	NISP	% NISP
Brachyura	Crabs	33	1.49%
Anadara notabilis	Eared ark clam	1	0.05%
Nephronaias sp.	River clam	14	0.63%
Lobatus gigas	Queen conch	1	0.05%
cf. *Lobatus gigas*	Queen conch	7	0.32%
Pachychilus glaphyrus	Jute	6	0.27%
Pomacea flagellata	Apple snail	6	0.27%
cf. *Oliva* sp.	Olive snails	3	0.14%
cf. Strombidae	True conchs	4	0.18%
Triplofusus papillosus	Florida horse conch	1	0.05%
Total		2217	100.00%

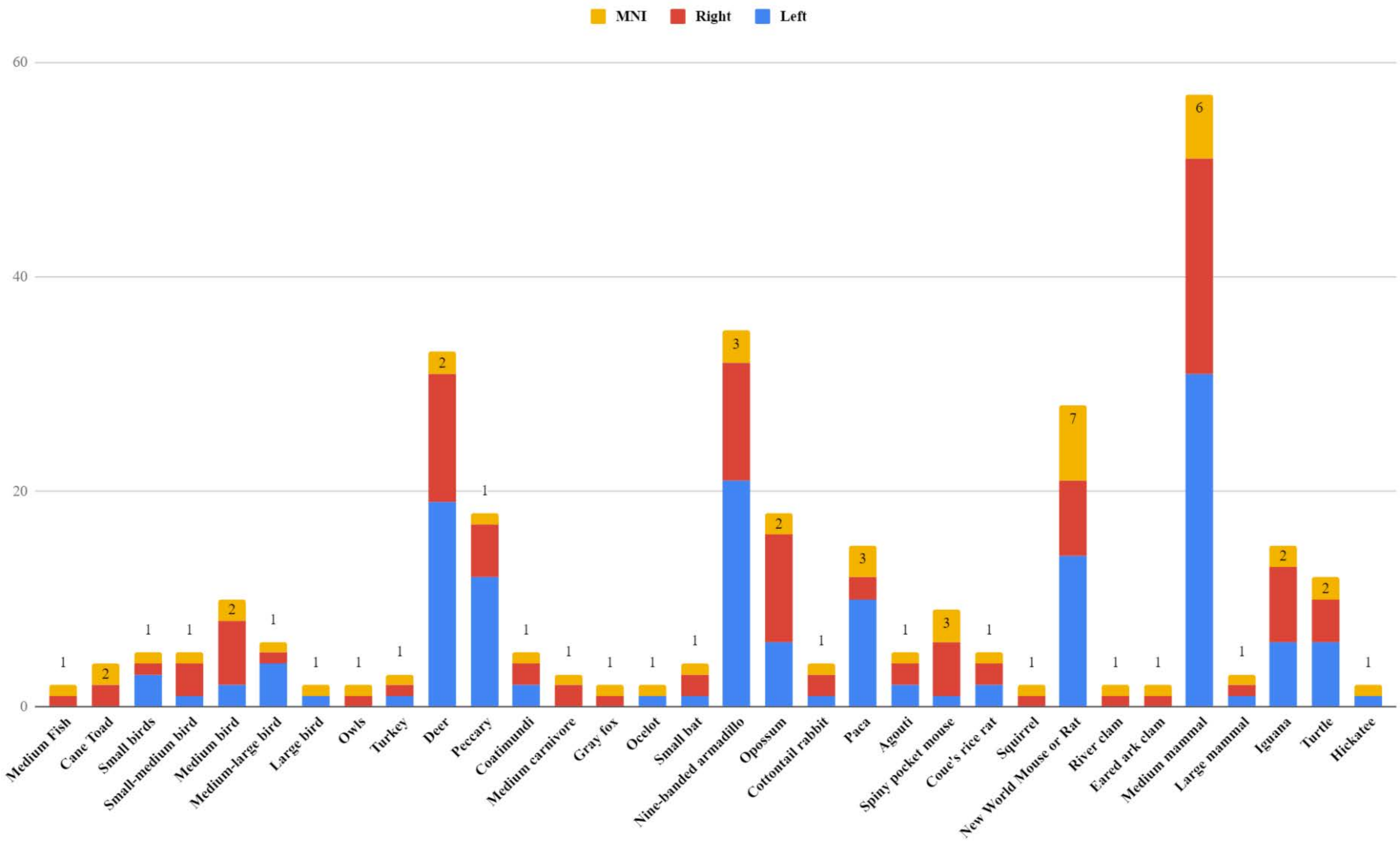

Figure 17 Stacked histogram of sided elements at Caves Branch Rockshelter with MNI at the top, left-sided elements in blue, and right-sided elements in red.

SDR Results by Operation

Operation 1A

Operation 1A has the densest accumulations of faunal remains across both rockshelters with a total of 1052 specimens analyzed in this analysis from levels 0, 6, 7, and 8 and units 1, 2, 3, 4 and. A few bags remain to be analyzed from commingled contexts from this operation that will be reported on in the CBAS field report in 2020. As such, this analysis is a large sample of the very large assemblage from operation 1A, with an estimate of over 2,000 more specimens from this operation. This operation was undertaken in the southern portion of the rockshelter close to the dripline beginning in heavily disturbed contexts from looters.

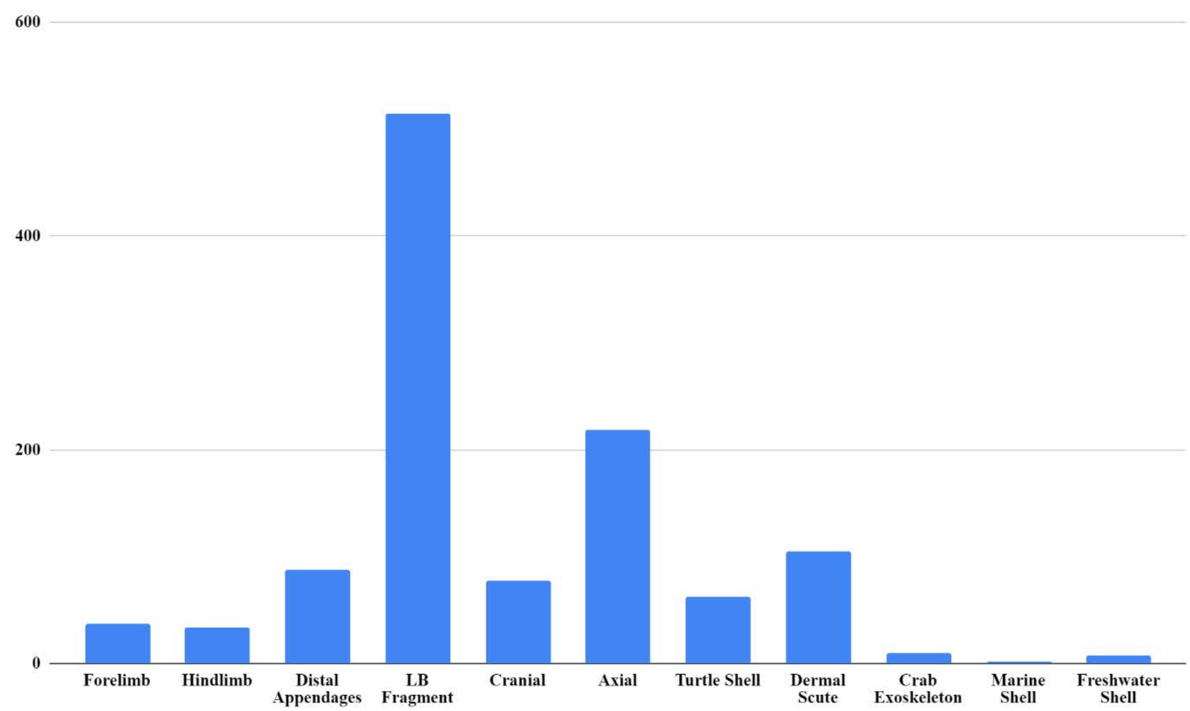

Figure 18. Body portions for SDR Operation 1A

Slightly over 88 percent of the assemblage analyzed was burnt in varying degrees ranging from charring to calcification. Artifactual remains include two bone awl fragments and a bone needle fragment, all of which were carbonized indicating that had been deposited and then burnt or burnt during deposition. Two remains, a large mammal long bone fragment and a medium mammal rib shaft, showed cut-marks from lithic tools indicative of either butchery or artifact manufacturing. Many of the long bone fragments identified only to taxonomic class were cemented in sediment to the point that parts of the articular surfaces are unobservable. This means that some of the cut-marks in the assemblage may have gone unaccounted for, however, based on the small number of bones with cut-marks present in all operations this bias is minimal. A single jute fragment had unusual polishing, which is likely a result of burning.

Natural modifications to the assemblage include exfoliation, rodent gnawing, root-etching, and discoloration possibly from mold or another diagenetic process. Rodent gnawing was minimal on the entire assemblage with only four specimens gnawed by rodents. Exfoliation was present on 21 specimens, diagenetic or mold discoloration on 98, and root etching on a single crab claw.

Table 11. SDR Operation 1A Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Anura Small-medium	1	100.00%	0.00%	0.00%	0.00%
Aves Small	1	100.00%	0.00%	0.00%	0.00%
Aves Medium	2	100.00%	0.00%	0.00%	0.00%
Aves Large	2	100.00%	0.00%	0.00%	0.00%
Meleagris sp.	1	100.00%	0.00%	0.00%	0.00%
Artiodactyla	1	100.00%	0.00%	0.00%	0.00%
cf. Artiodactyla	8	100.00%	0.00%	0.00%	0.00%
Cervidae	11	72.73%	0.00%	27.27%	0.00%
cf. Cervidae	8	62.50%	12.50%	25.00%	0.00%
cf *Mazama* sp.	9	88.89%	0.00%	11.11%	0.00%
Tayassuidae	31	83.87%	3.23%	12.90%	0.00%
cf. Tayassuidae	2	100.00%	0.00%	0.00%	0.00%
cf. Felidae Large	1	0.00%	0.00%	100.00%	0.00%
Dasypus novemcinctus	125	15.20%	0.80%	0.00%	84.00%
Didelphidae	6	50.00%	33.33%	16.67%	0.00%
Sylvilagus sp.	2	100.00%	0.00%	0.00%	0.00%
cf. Rodentia Small	6	100.00%	0.00%	0.00%	0.00%

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Rodentia Medium	1	0.00%	0.00%	100.00%	0.00%
cf. Rodentia Medium	7	0.00%	100.00%	0.00%	0.00%
Cricetidae	2	50.00%	0.00%	50.00%	0.00%
cf. Cricetidae	3	66.66%	0.00%	33.33%	0.00%
Cuniculus paca	10	40.00%	0.00%	60.00%	0.00%
cf. *Cuniculus paca*	33	36.36%	51.52%	12.12%	0.00%
Dasyprocta punctata	1	100.00%	0.00%	0.00%	0.00%
Orthogeomys hispidus	1	0.00%	0.00%	100.00%	0.00%
cf. *Orthogeomys hispidus*	1	100.00%	0.00%	0.00%	0.00%
Mammalia Small-medium	2	100.00%	0.00%	0.00%	0.00%
Mammalia Medium	128	57.03%	25.78%	17.19%	0.00%
Mammalia Medium-large	7	42.86%	57.14%	0.00%	0.00%
Mammalia Large	611	76.60%	18.82%	4.58%	0.00%
Squamata 1	3	0.00%	100.00%	0.00%	0.00%
Squamata 2	7	0.00%	100.00%	0.00%	0.00%
Squamata 3	12	0.00%	100.00%	0.00%	0.00%
cf. *Iguana iguana*	5	0.00%	100.00%	0.00%	0.00%
cf. Serpentes	15	0.00%	100.00%	0.00%	0.00%
Testudines Small	2	100.00%	0.00%	0.00%	0.00%
Testudines Small-Medium	2	50.00%	0.00%	0.00%	50.00%
Testudines Medium	20	5.00%	0.00%	0.00%	95.00%
Kinosternidae	4	50.00%	0.00%	0.00%	50.00%
cf. Kinosternidae	32	0.00%	0.00%	0.00%	100.00%
cf. *Kinosternon* sp.	10	0.00%	0.00%	0.00%	100.00%
Brachyura	10	0.00%	0.00%	0.00%	100.00%
Nephronaias sp.	1	0.00%	0.00%	0.00%	100.00%
Pachychilus glaphyrus	4	0.00%	0.00%	0.00%	100.00%
Pomacea flagellata	3	0.00%	0.00%	0.00%	100.00%
cf. Strombidae	2	0.00%	0.00%	0.00%	100.00%
Total	1156	58.22%	18.86%	6.66%	16.26%

Operation 1B

Faunal remains were excavated from levels 1 through 4 of units 2, 5, 6.5, 7, 7-ext, and 8. About 29% of the remains were burnt indicating similar taphonomic agents across the site, however, the decrease of burning across the specimens may be indicative of a decreased concentration of ritual burning in the area. A single peccary canine pendant (previously identified as an anteater phalanx) was found in primary matrix of level two, likely a grave good that had been commingled over time.

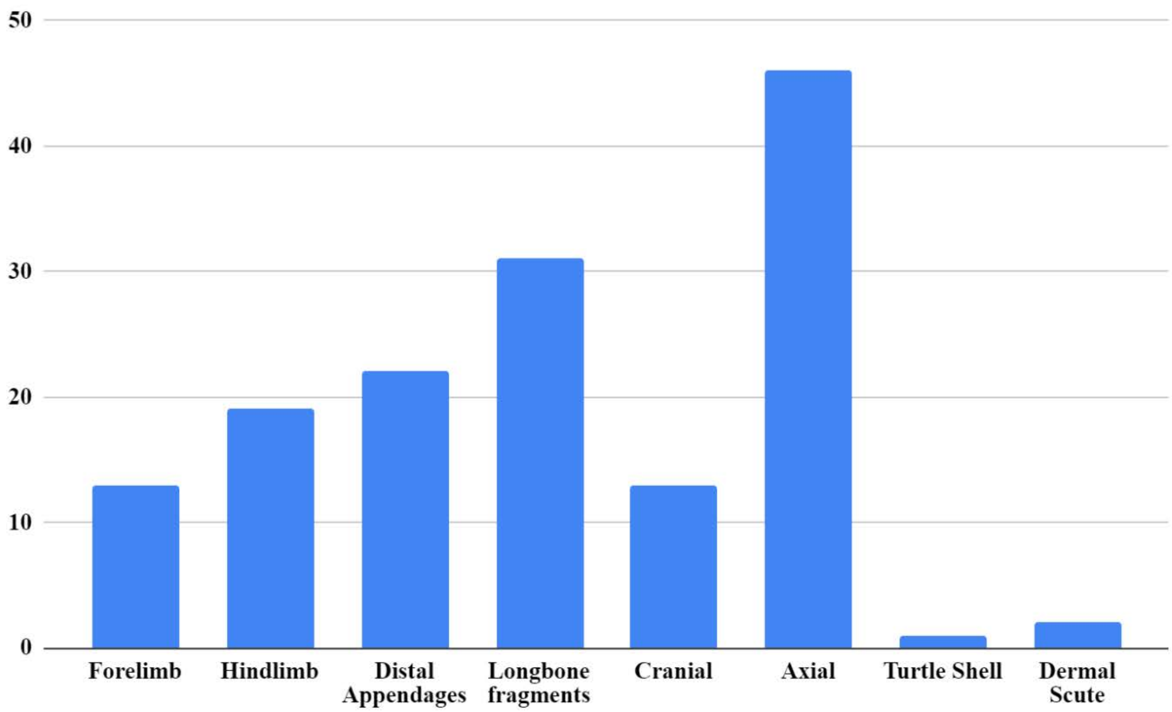

Figure 19. Body portions for SDR Operation 1B.

Several naturally accumulated remains were identified based on the presence of digestive damage. These include a subadult proximal epiphysis from an artiodactyl femur and a long bone fragment from a medium-sized lizard, possibly iguanid. Exfoliation damage was present on 41 of the specimens primarily medium and large chordates, along with two Coues' rice rat maxillae. Five bones showed evidence of root etching four of which are synsacrum fragments from a medium-large sized bird.

Table 12. SDR Operation 1B Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Actionopterygii Medium	2	0.00%	50.00%	50.00%	0.00%
Aves Small	1	100.00%	0.00%	0.00%	0.00%
Aves Small-medium	1	100.00%	0.00%	0.00%	0.00%
Aves Medium	2	100.00%	0.00%	0.00%	0.00%
Aves Medium-large	5	20.00%	80.00%	0.00%	0.00%
Aves Large	4	25.00%	75.00%	0.00%	0.00%
cf. Artiodactyla	5	40.00%	60.00%	0.00%	0.00%
cf. Cervidae	1	100.00%	0.00%	0.00%	0.00%
cf. *Mazama* sp.	1	100.00%	0.00%	0.00%	0.00%
cf. *Odocoileus virginianus*	1	100.00%	0.00%	0.00%	0.00%
Tayassuidae	2	50.00%	0.00%	50.00%	0.00%
Chiroptera Small	3	66.66%	0.00%	33.33%	0.00%
Dasypus novemcinctus	*9*	77.78%	0.00%	0.00%	22.22%
Didelphidae	4	25.00%	50.00%	25.00%	0.00%
Cricetidae	2	50.00%	50.00%	0.00%	0.00%
cf. Cricetidae	3	100.00%	0.00%	0.00%	0.00%
Oryzomys couesi	3	0.00%	0.00%	100.00%	0.00%
Cuniculus paca	1	0.00%	0.00%	100.00%	0.00%
Heteromys sp.	1	100.00%	0.00%	0.00%	0.00%
Sciurus sp.	1	0.00%	0.00%	100.00%	0.00%
Mammalia Small	2	0.00%	0.00%	100.00%	0.00%
Mammalia Small-medium	2	0.00%	100.00%	0.00%	0.00%
Mammalia Medium	33	66.67%	30.30%	3.03%	0.00%
Mammalia Medium-large	3	0.00%	100.00%	0.00%	0.00%
Mammalia Large	31	58.06%	41.94%	0.00%	0.00%
Sauria Medium	4	100.00%	0.00%	0.00%	0.00%
cf. Iguanidae	2	50.00%	50.00%	0.00%	0.00%
cf. Serpentes Medium	2	0.00%	100.00%	0.00%	0.00%
Testudines Small-medium	1	100.00%	0.00%	0.00%	0.00%
Testudines Medium	1	0.00%	0.00%	0.00%	100.00%
cf. Kinosternidae	1	0.00%	100.00%	0.00%	0.00%
cf. Chelonioidea	13	100.00%	0.00%	0.00%	0.00%
Total	147	57.82%	31.29%	8.84%	2.04%

Operation 1C

Remains from operation 1C were a mix of screened material from looter's back dirt and levels two and three from units 10, 11, and 12. Fish, amphibian, birds, shells, crabs, mammals and reptiles comprise the total 1C assemblage of which two-thirds, 66%, were burnt.

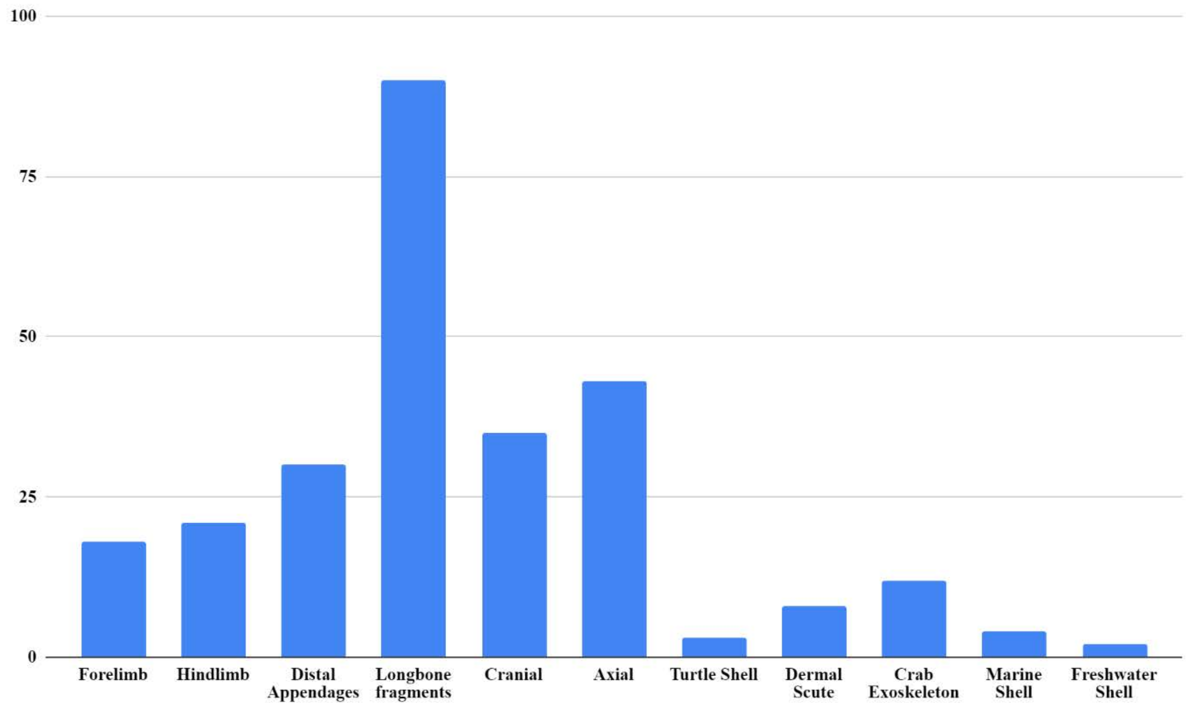

Figure 20. Body portions for SDR Operation 1C.

Several coatimundi teeth were associated with Burial 2, possibly included as grave goods, however, a coatimundi molar and dentary were found in commingled contexts indicating that these remains may have shifted down over time. One specimen in the assemblage had a cut-mark, which was a salamander vertebra from a subadult individual that was also burnt.

Table 13. SDR Operation 1C Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Actinopterygii Medium	1	0.00%	0.00%	100.00%	0.00%
Anura Small	2	100.00%	0.00%	0.00%	0.00%
Anura Medium	1	0.00%	100.00%	0.00%	0.00%
cf. Caudata	2	0.00%	100.00%	0.00%	0.00%
Aves Small	2	100.00%	0.00%	0.00%	0.00%
Aves Medium	3	100.00%	0.00%	0.00%	0.00%
Aves Medium-large	4	50.00%	50.00%	0.00%	0.00%
Aves Large	5	80.00%	0.00%	20.00%	0.00%
Meleagris sp.	1	100.00%	0.00%	0.00%	0.00%
Artiodactyla	1	100.00%	0.00%	0.00%	0.00%
cf. Artiodactyla	6	50.00%	50.00%	0.00%	0.00%
cf. Cervidae	2	100.00%	0.00%	0.00%	0.00%
Odocoileus virginianus	2	100.00%	0.00%	0.00%	0.00%
cf. *Odocoileus virginianus*	3	33.33%	66.66%	0.00%	0.00%
Mazama sp.	5	80.00%	0.00%	20.00%	0.00%
cf. *Mazama* sp.	1	100.00%	0.00%	0.00%	0.00%
Tayassuidae	3	33.33%	33.33%	33.33%	0.00%
cf. Tayassuidae	1	0.00%	100.00%	0.00%	0.00%
cf. Carnivora Medium	3	100.00%	0.00%	0.00%	0.00%
Nasua sp.	17	0.00%	0.00%	100.00%	0.00%
Dasypus novemcinctus	17	47.06%	5.88%	0.00%	47.06%
Sylvilagus sp.	1	100.00%	0.00%	0.00%	0.00%
Rodentia 1	1	100.00%	0.00%	0.00%	0.00%
cf. Cricetidae	1	100.00%	0.00%	0.00%	0.00%
Cuniculus paca	3	100.00%	0.00%	0.00%	0.00%
cf. *Dasyprocta punctata*	1	100.00%	0.00%	0.00%	0.00%
Orthogeomys hispidus	1	100.00%	0.00%	0.00%	0.00%
Heteromys sp.	2	100.00%	0.00%	0.00%	0.00%
cf. *Heteromys* sp.	3	100.00%	0.00%	0.00%	0.00%
Mammalia Small-medium	2	100.00%	0.00%	0.00%	0.00%
Mammalia Medium	20	40.00%	45.00%	15.00%	0.00%
Mammalia Medium-large	12	75.00%	25.00%	0.00%	0.00%
Mammalia Large	92	82.61%	6.52%	10.87%	0.00%
Squamata Small-medium	4	0.00%	100.00%	0.00%	0.00%
Squamata Medium	2	0.00%	100.00%	0.00%	0.00%
Testudines Small-medium	9	33.33%	33.33%	0.00%	33.33%
cf. Testudines Small-medium	4	50.00%	50.00%	0.00%	0.00%
Testudines Medium	7	85.71%	14.29%	0.00%	0.00%
cf. Chelonioidea	1	100.00%	0.00%	0.00%	0.00%

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Brachyura	12	0.00%	0.00%	0.00%	100.00%
Nephronaias sp.	2	0.00%	0.00%	0.00%	100.00%
cf. *Lobatus gigas*	2	0.00%	0.00%	0.00%	100.00%
cf. Strombidae	1	0.00%	0.00%	0.00%	100.00%
Triplofusus papillosus	1	0.00%	0.00%	0.00%	100.00%
Total	266	59.77%	16.17%	13.16%	10.90%

Operation 1D

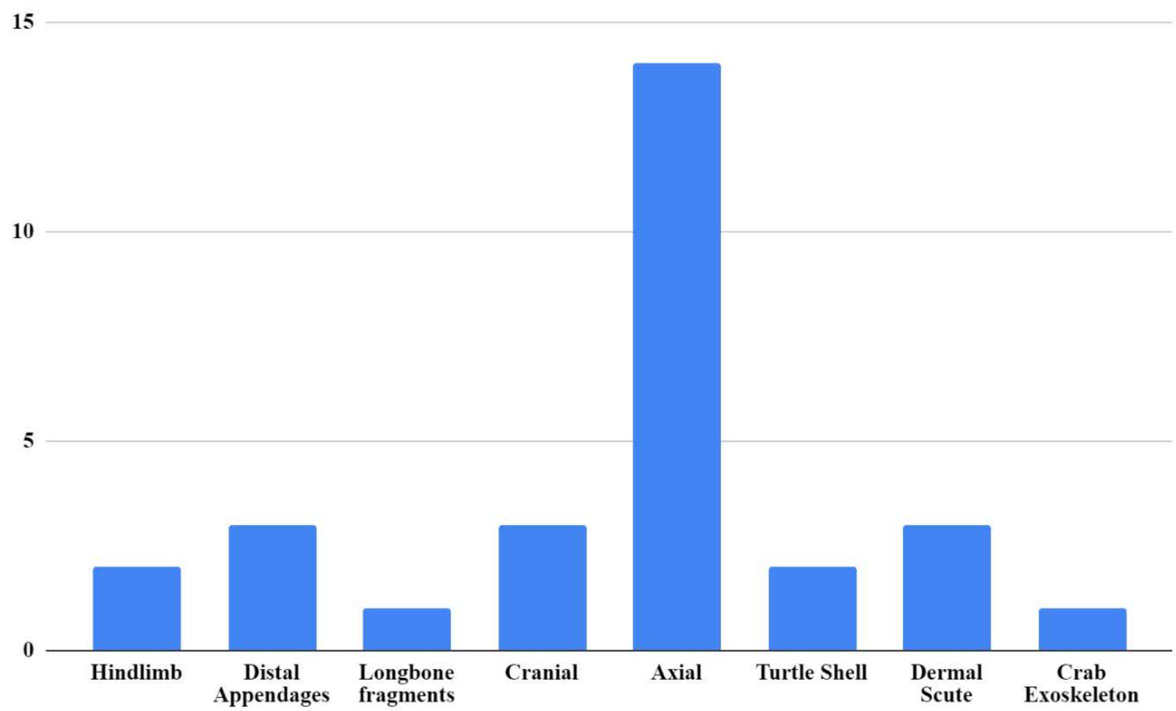

Figure 21. Body portions for SDR Operation 1D.

A total of 29 specimens were excavated from levels one and two of unit one containing a mix of reptile, crab and mammal remains. A single crab claw shaft was the only crab remain from these units with carbonization on part of the shaft. None of the 19 mammal specimens analyzed were burnt, however, 12 were exfoliated from post-depositional processes. An agouti lower incisor is one of the very few agouti remains found in the rockshelter with no natural or cultural modification. The reptile assemblage is particularly interesting, comprising a single lizard or snake vertebra, several small or medium turtle carapaces, a Central American river turtle tibia, and three appendicular remains identified as closely following a sub-adult sea turtle.

Table 14. SDR Operation 1D Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Dasypus novemcinctus	3	0.00%	0.00%	0.00%	100.00%
cf. Rodentia Small	1	0.00%	100.00%	0.00%	0.00%
Rodentia Medium	1	0.00%	0.00%	100.00%	0.00%
cf. *Dasyprocta punctata*	1	0.00%	0.00%	100.00%	0.00%
Orthogeomys hispidus	1	0.00%	0.00%	100.00%	0.00%
Mammalia Medium	2	50.00%	50.00%	0.00%	0.00%
Mammalia Large	10	0.00%	100.00%	0.00%	0.00%
Squamata Medium	1	0.00%	100.00%	0.00%	0.00%
Testudines Medium	1	100.00%	0.00%	0.00%	0.00%
Testudines Large	1	0.00%	100.00%	0.00%	0.00%
cf. Chelonioidea	3	100.00%	0.00%	0.00%	0.00%
cf. *Dermatemys mawii*	1	100.00%	0.00%	0.00%	0.00%
cf. Kinosternidae	2	0.00%	0.00%	0.00%	100.00%
Brachyura	1	0.00%	0.00%	0.00%	100.00%
Total	29	20.69%	48.28%	10.34%	20.69%

Operation 1E

Operation 1E contained a total of 131 specimens intermixed with 2057 ceramic sherds and two burials (Hardy 2011). 51 of the specimens exhibited burning, most of which were from medium or large mammals, along with five mud or musk turtle carapaces, a burnt snake trunk vertebra, and a dorsal fin likely from a snook.

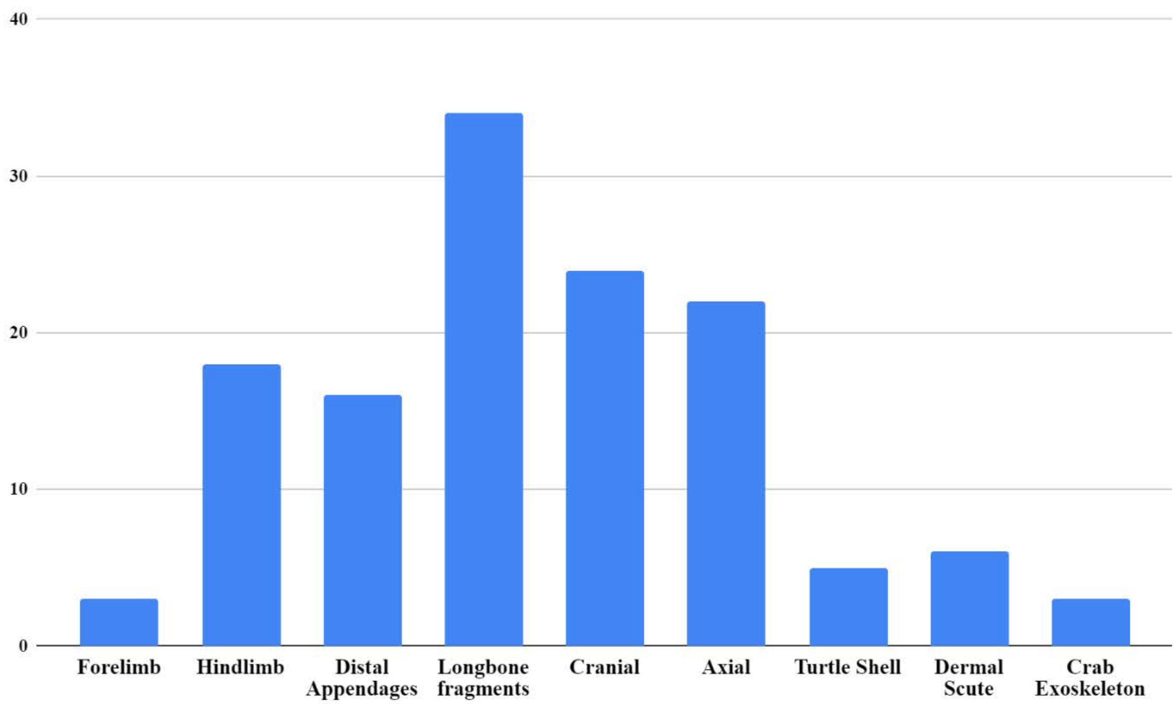

Figure 22. Body portions for SDR Operation 1E.

Appendicular specimens comprise over 50% of the assemblage followed by cranial at 18%, axial at 16%, and carapace, shell, and dermal scutes comprising about 10%. About a third of the specimens had mold or exfoliation damage indicating exposure to water, possibly from seasonal flooding. One bone needle fragment was identified that came from a large mammal diaphysis. A single distal tibiotarsus from a turkey was identified as detritus from bone artifact production.

Table 15. SDR Operation 1E Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
cf. *Centropomus* sp.	1	0.00%	100.00%	0.00%	0.00%
Anura	1	0.00%	100.00%	0.00%	0.00%
Bufo marinus	3	100.00%	0.00%	0.00%	0.00%
Aves Medium-large	3	66.66%	33.33%	0.00%	0.00%
Aves Large	2	100.00%	0.00%	0.00%	0.00%
Meleagris sp.	1	100.00%	0.00%	0.00%	0.00%
Artiodactyla	4	50.00%	0.00%	50.00%	0.00%
cf. Artiodactyla	2	100.00%	0.00%	0.00%	0.00%
Cervidae	1	100.00%	0.00%	0.00%	0.00%
cf. Cervidae	2	100.00%	0.00%	0.00%	0.00%
cf. *Mazama* sp.	1	100.00%	0.00%	0.00%	0.00%
cf. *Odocoileus virginianus*	2	100.00%	0.00%	0.00%	0.00%
cf. *Leopardus wiedii*	2	100.00%	0.00%	0.00%	0.00%
Dasypus novemcinctus	8	25.00%	0.00%	0.00%	75.00%
Didelphidae	2	50.00%	50.00%	0.00%	0.00%
cf. *Didelphis* sp.	4	50.00%	0.00%	50.00%	0.00%
cf. *Marmosa* sp.	2	100.00%	0.00%	0.00%	0.00%
cf. Rodentia Medium	1	0.00%	0.00%	100.00%	0.00%
cf. Cricetidae	3	100.00%	0.00%	0.00%	0.00%
Oryzomys couesi	1	0.00%	0.00%	100.00%	0.00%
cf. *Cuniculus paca*	3	100.00%	0.00%	0.00%	0.00%
Mammalia Small-medium	1	0.00%	100.00%	0.00%	0.00%
Mammalia Medium	24	45.83%	45.83%	8.33%	0.00%
Mammalia Medium-large	2	50.00%	50.00%	0.00%	0.00%
Mammalia Large	43	58.14%	6.98%	34.88%	0.00%
cf. Iguanidae	1	0.00%	0.00%	100.00%	0.00%
cf. Serpentes	2	0.00%	100.00%	0.00%	0.00%
Testudines Medium	1	100.00%	0.00%	0.00%	0.00%
cf. Kinosternidae	5	0.00%	0.00%	0.00%	100.00%
Brachyura	3	0.00%	0.00%	0.00%	100.00%
Total	131	54.20%	16.79%	18.32%	10.69%

Operation 1G

A single bag containing nine specimens was analyzed from level one of operation 1G, which focused on a low overhang in the liminal zone of SDR. Areas such as this are potential spots for birds to roost, however, the small number of faunal remains from this area does not indicate predatory birds roosting in this part of the shelter. All of the remains found were fragments of cranial, axial, and appendicular elements from large and medium mammals, with the exception of two dermal scutes from a nine-banded armadillo. Burning was present on five of the remains and mold damage was found on a single femur fragment from a medium mammal.

Table 16. SDR Operation 1G Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Aves Medium-large	1	0.00%	100.00%	0.00%	0.00%
Dasypus novemcinctus	2	0.00%	0.00%	0.00%	100.00%
cf. *Cuniculus paca*	1	0.00%	0.00%	100.00%	0.00%
Mammalia Medium	3	100.00%	0.00%	0.00%	0.00%
Mammalia Large	2	100.00%	0.00%	0.00%	0.00%
Total	9	55.56%	11.11%	11.11%	22.22%

Operation 1H

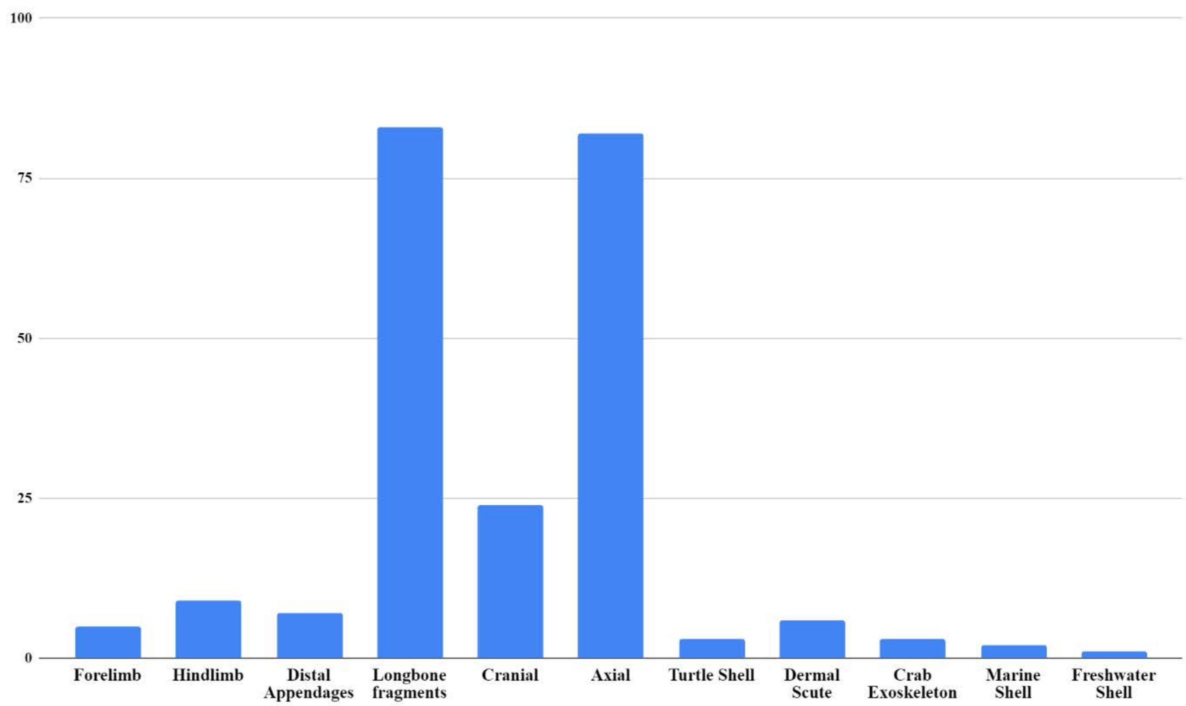

Figure 23. Body portions for SDR Operation 1H.

Faunal remains excavated from Operation 1H came from units one and three in levels one, two, and three containing a diverse accumulation of remains of birds, shell, crabs, mammals, and reptiles. A total of 24 percent of the remains were burnt comprised of medium and large mammals along with three squamate vertebrae, two crab claws, a turtle carapace fragment, and two *Oliva* shells. A small, less than 1cm in length, worn fragment from a bone awl or hairpin was identified. One other bone artifact was identified as a distal debitage from a right femur of a medium-sized bird, slightly smaller than a scarlet macaw. Two specimens showed evidence of digestive corrosion including a distal humerus and long bone fragment from one or more medium mammals.

Table 17. SDR Operation 1H Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Aves Medium	3	33.33%	66.66%	0.00%	0.00%
Aves Medium-large	1	100.00%	0.00%	0.00%	0.00%
Artiodactyla	3	33.33%	0.00%	66.66%	0.00%
cf. Cervidae	1	100.00%	0.00%	0.00%	0.00%
Tayassuidae	2	50.00%	0.00%	50.00%	0.00%
cf. Tayassuidae	1	100.00%	0.00%	0.00%	0.00%
cf. *Leopardus wiedii*	1	0.00%	0.00%	100.00%	0.00%
Dasypus novemcinctus	6	0.00%	0.00%	0.00%	100.00%
Didelphidae	7	0.00%	28.57%	71.43%	0.00%
cf. Didelphidae	1	0.00%	100.00%	0.00%	0.00%
Rodentia medium	1	0.00%	0.00%	100.00%	0.00%
cf. Cricetidae	3	100.00%	0.00%	0.00%	0.00%
Cuniculus paca	2	0.00%	0.00%	100.00%	0.00%
Mammalia Medium	20	65.00%	25.00%	10.00%	0.00%
Mammalia Medium-large	2	50.00%	50.00%	0.00%	0.00%
Mammalia Large	159	50.94%	42.77%	6.29%	0.00%
Squamata Medium	3	0.00%	100.00%	0.00%	0.00%
cf. Kinosternidae	3	0.00%	0.00%	0.00%	100.00%
Brachyura	3	0.00%	0.00%	0.00%	100.00%
cf. *Oliva* sp.	2	0.00%	0.00%	0.00%	100.00%
Pomacea flagellata	1	0.00%	0.00%	0.00%	100.00%
Total	225	46.22%	36.44%	10.67%	6.67%

Operation 1I

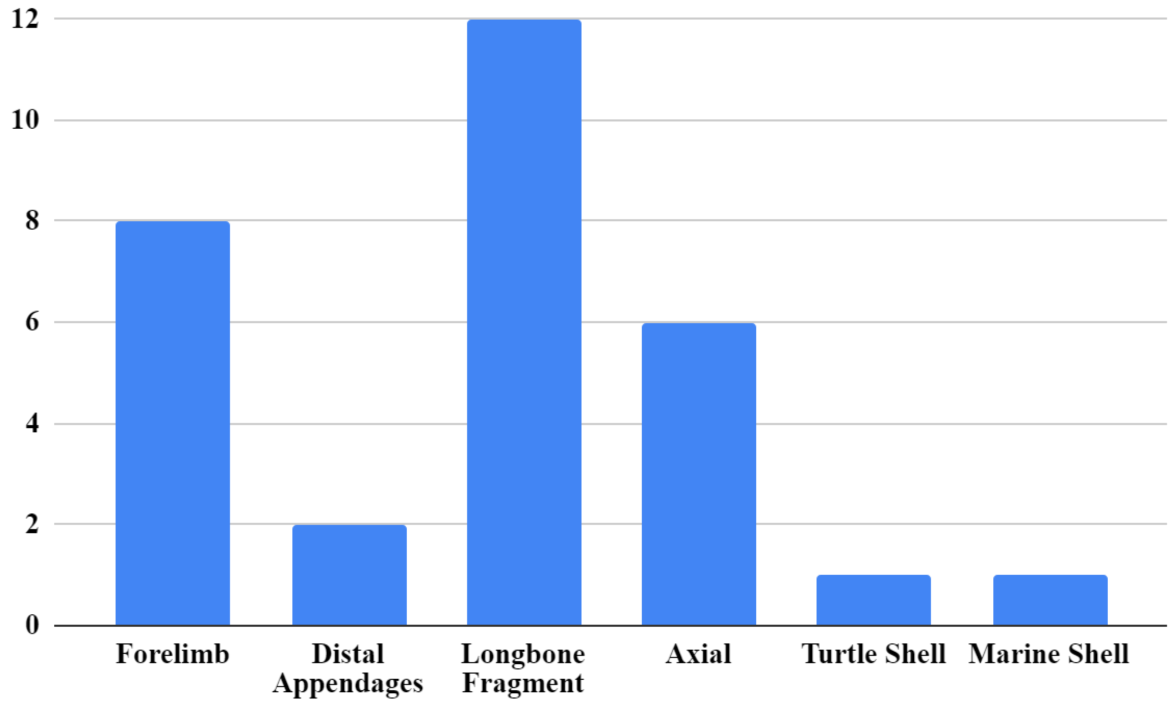

Figure 24. Body portions from SDR Operation 1I.

Fauna from operation 1I came from excavation unit 1 levels two and four comprising a mixture of birds, shell, mammal, and turtle remains. Only seven of the thirty remains showed evidence of burning, which may indicate that this region of the cave experienced less fires. A shaft of a humerus was identified as closely following size class four owls and needs further comparison to be properly identified. This humerus had been manufactured into a bone-tube with the distal and proximal epiphyses removed through the cut-working process (Emery 2008, 2009). A humerus from a small bird was identified as naturally deposited with digestive corrosion present near the epiphyses indicative of natural predation from either medium sized mammals or predatory birds. All of the remains, except a turtle carapace, showed evidence of either mold damage or exfoliation.

Table 18. SDR Operation 1I Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Aves Small	1	100.00%	0.00%	0.00%	0.00%
cf. Strigiformes	1	100.00%	0.00%	0.00%	0.00%
cf. Cervidae	2	0.00%	100.00%	0.00%	0.00%
Odocoileus virginianus	1	100.00%	0.00%	0.00%	0.00%
cf. *Mazama* sp.	5	100.00%	0.00%	0.00%	0.00%
Dasypus novemcinctus	2	100.00%	0.00%	0.00%	0.00%
cf. Rodentia Small	2	100.00%	0.00%	0.00%	0.00%
Mammalia Small	1	100.00%	0.00%	0.00%	0.00%
Mammalia Large	14	71.43%	28.57%	0.00%	0.00%
cf. Kinosternidae	1	0.00%	0.00%	0.00%	100.00%
cf. *Lobatus gigas*	1	0.00%	0.00%	0.00%	100.00%
Total	31	74.19%	19.35%	0.00%	6.45%

Operation 1J

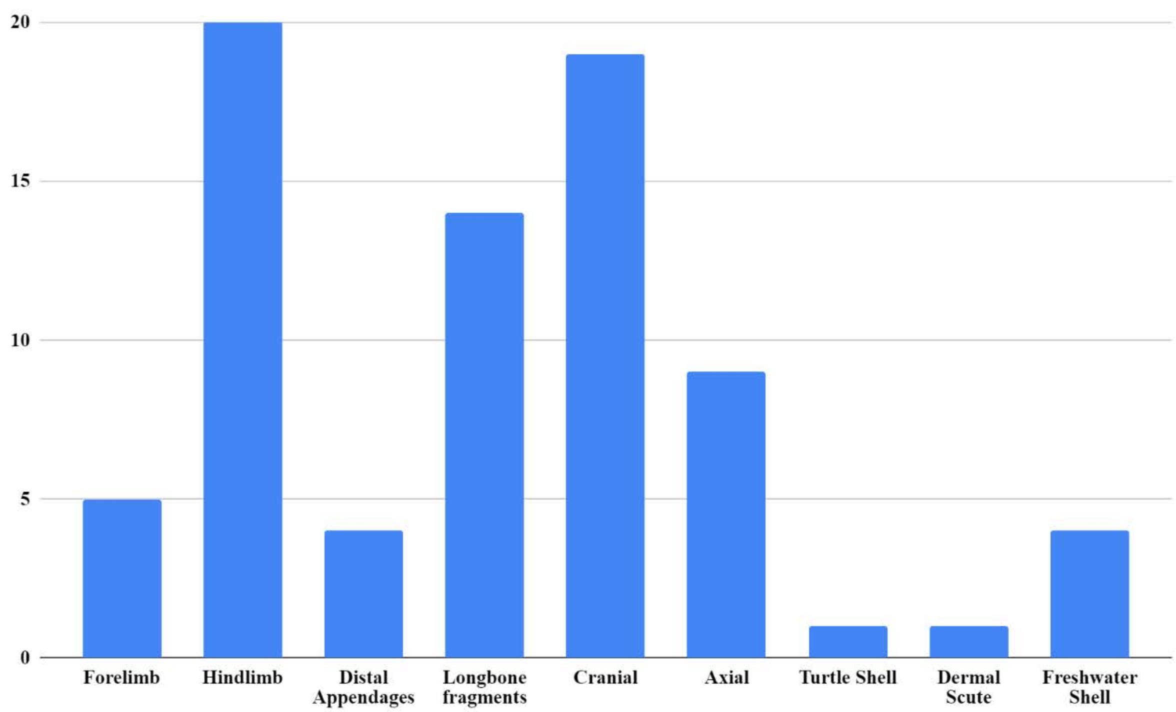

Figure 25. Body portions from SDR Operation 1J.

A total of 77 specimens were analyzed from Operation 1J units one, two, three, and 5five coming from levels four, five, and six. Burning was the most prominent taphonomic effect in the assemblage with 65% of the remains burnt from size classes 2, 3, 4, and 5. Two specimens showed evidence of cut-marks including a rib shaft from a medium mammal and a left coracoid from a medium bird. Ten of the specimens, nine large mammal and one armadillo long bone elements, showed green breakage fractures indicating perimortem deposition. Post depositional processes exfoliated eleven of the remains, all of which were appendicular specimens from medium and large mammals. Discoloration through mold damage was identified on five long bone fragments which shows that some of the remains were exposed to moisture before being buried.

Major indicators of human deposition include ten cranial fragments from medium-sized fish, two of which were identified as Parrotfish remains from the Pacific. Shell specimens include two river clam fragments, of which one was carbonized, and an apple snail fragment. A single amphibian tibiofibular was identified as closely following a cane toad, which could be either naturally or culturally deposited as no taphonomic traces were found. A single mud or musk turtle carapace was found and likely associated with human activity.

Table 19. SDR Operation 1J Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
Actinopterygii Medium	8	0.00%	0.00%	100.00%	0.00%
Scarus sp.	2	0.00%	0.00%	100.00%	0.00%
cf. *Bufo marinus*	2	100.00%	0.00%	0.00%	0.00%
Aves Small-medium	1	100.00%	0.00%	0.00%	0.00%
Aves Medium	2	100.00%	0.00%	0.00%	0.00%
Aves Large	1	100.00%	0.00%	0.00%	0.00%
Nephronaias sp.	2	0.00%	0.00%	0.00%	100.00%
Pomacea flagellata	2	0.00%	0.00%	0.00%	100.00%
cf. Artiodactyla	2	100.00%	0.00%	0.00%	0.00%
Cervidae	2	100.00%	0.00%	0.00%	0.00%
cf. Cervidae	5	60.00%	20.00%	20.00%	0.00%
cf. *Odocoileus virginianus*	3	100.00%	0.00%	0.00%	0.00%
Mazama sp.	1	100.00%	0.00%	0.00%	0.00%
Tayassuidae	5	40.00%	0.00%	60.00%	0.00%
cf. Carnivora Medium	1	0.00%	0.00%	100.00%	0.00%

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
cf. *Urycyon cinereoargenteus*	1	100.00%	0.00%	0.00%	0.00%
Dasypus novemcinctus	3	66.66%	0.00%	0.00%	33.33%
Didelphidae	3	100.00%	0.00%	0.00%	0.00%
cf. Cricetidae	2	100.00%	0.00%	0.00%	0.00%
Dasyprocta punctata	1	100.00%	0.00%	0.00%	0.00%
cf. *Dasyprocta punctata*	1	100.00%	0.00%	0.00%	0.00%
Mammalia Medium	7	14.29%	57.14%	28.57%	0.00%
Mammalia Medium-large	2	0.00%	100.00%	0.00%	0.00%
Mammalia Large	15	80.00%	13.33%	6.67%	0.00%
cf. *Iguana iguana*	1	0.00%	0.00%	100.00%	0.00%
cf. Iguanidae	1	100.00%	0.00%	0.00%	0.00%
cf. Kinosternidae	1	0.00%	0.00%	0.00%	100.00%
Total	77	57.14%	11.69%	24.68%	5.19%

Operation 1K

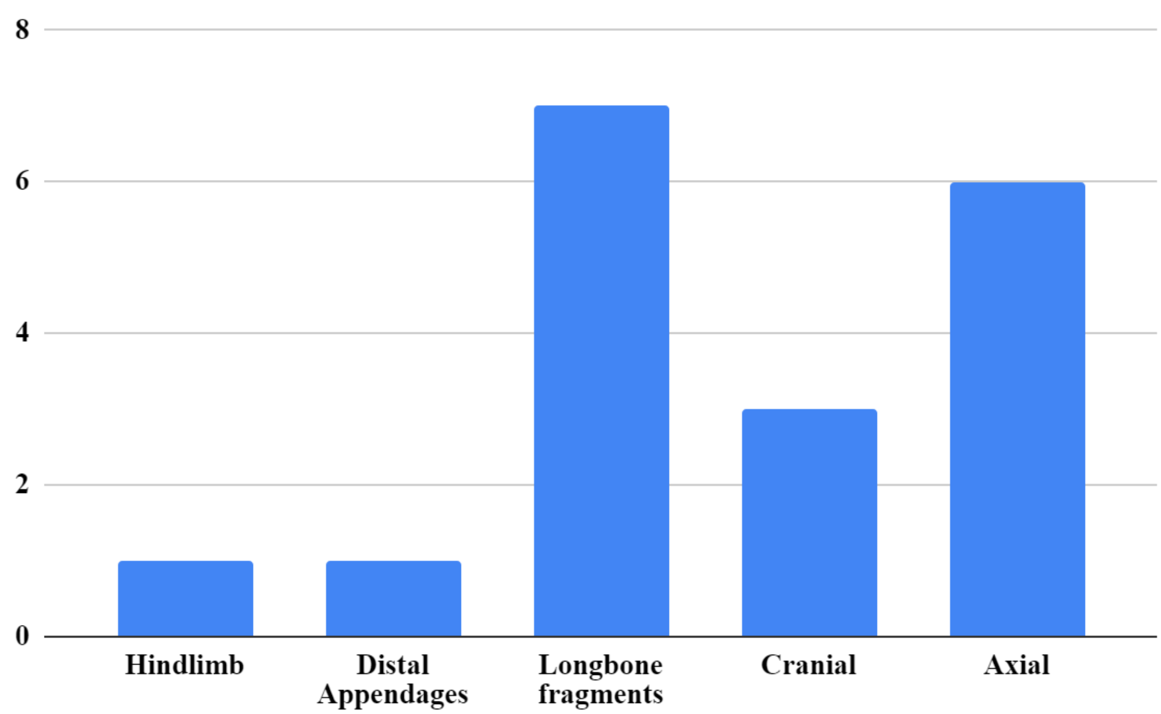

Figure 26. Body portions from SDR Operation 1K.

A total of 18 faunal specimens were excavated from unit 2 levels 5 and 6. Operation 1K is comprised entirely of mammalian specimens of which 72% were burnt. One subadult white-tailed deer lumbar vertebrae showed evidence of rodent gnawing, weathering, and exfoliation damage, possibly brought in through natural processes such as predation or rodent burrowing. A lower premolar from a coatimundi was identified without taphonomic modification such as drilling. The only other coatimundi remains are cranial from primary burial contexts in operation 1C, which may indicate an offering of a coatimundi skull that has since been commingled across the shelter. A single long bone fragment from a large mammal showed carnivore gnawing possibly from predation or a bone that was collected after being chewed on by a carnivore. A lower incisor from a hispid pocket gopher shows evidence of rodent burrowing common in rockshelters throughout the Americas.

Table 20. SDR Operation 1K Taxa, NISP, and % Body Portion

Taxa	NISP	% Appendicular	% Axial	% Cranial	% Other
cf. *Odocoileus virginianus*	1	0.00%	100.00%	0.00%	0.00%
Tayassuidae	1	100.00%	0.00%	0.00%	0.00%
Nasua sp.	1	0.00%	0.00%	100.00%	0.00%
cf. Didelphidae	1	0.00%	100.00%	0.00%	0.00%
cf. Orthogeomys hispidus	1	0.00%	0.00%	100.00%	0.00%
Mammalia Medium	7	28.57%	57.14%	14.29%	0.00%
Mammalia Large	6	100.00%	0.00%	0.00%	0.00%
Total	18	50.00%	33.33%	16.67%	0.00%

Operation 1L

A single specimen was analyzed from operation 1L consisting of a large mammal diaphysis fragment.

Operation 1P

A total of 4 specimens were analyzed from operation 1P from lot 45 of excavation unit 1. These specimens include a one complete crab claw, a sub-adult opossum caudal vertebra, an adult paca metacarpal, and one large mammal long bone fragment. The crab claw showed evidence of root etching indicating that it had been exposed to roots, possibly before it was dragged in by a burrowing animal. The opossum vertebra had rodent gnawing and exfoliation damage with no evidence of cultural or natural deposition. The paca metacarpal was carbonized and calcined indicating it was likely exposed to temperatures above 500 °C, possibly from a ritual fire. A single long bone fragment had cut-marks and was burnt showing clear evidence of human modification.

SDR 2010 Surface and Screening Results

The following four section cover materials from salvage operations undertaken in 2010. All of the remains were recovered through screening of looter's backdirt and surface collections representing general spatial areas of the rockshelter labelled as light zone, dark zone, surface, and south area.

Light zone

A total of 20 specimens from 2010 salvage operations in the light zone of SDR were analyzed, all of which were indicative of culturally deposited and modified remains. Only three of the specimens lacked evidence of burning which were all marine shells. The marine shell specimens include two queen conch outer lip fragments, likely shell detritus, and an eared ark clam (*Anadara notabilis*). The eared ark clam is interesting in that it may represent a mortuary offering, however, the context is looter's back dirt which decimates any connection with a specific context. A single jute (*Pachychilus glaphyrus*) fragment was intermixed with a bag of faunal bones that was heavily carbonized. The deer or peccary remains from this context are both fore-limb elements, a scapula diaphysis and a radius diaphysis fragment.

Dark zone

2010 salvage operations in the dark zone of SDR obtained 56 specimens of mixed cultural and naturally deposited remains from birds, crabs, mammals, and lizards. One marine shell was examined from this context consisting of a worked body whorl from a queen conch with red pigments, likely used as a paint vessel. Eight small rodent long bone elements were identified with five showing puncture marks and digestive erosion indicative of predation likely deposited through scat or pellets. Several paca remains were found with burning from all body portions with elements from a subadult and an adult showing at least two individuals burnt in the rockshelter or deposited after burning. It is possible that these remains were burnt after these paca had died in the rockshelter, since paca are known to frequent and die naturally in caves and rockshelters, from ritual activity in the dark zone.

South area

A total of 33 specimens came from screened looter's back dirt in the southern area of SDR. This material includes a mixture of natural and culturally deposited material of which 82% of the specimens were burnt. Two of the remains, a deer first phalanx and distal tibia, were exfoliated with the remaining elements showing no evidence of natural taphonomic effects to the bones. A single lizard humerus was identified that likely represents the only naturally accumulated remain from this context.

Surface

Several specimens from the 2010 salvage operation were labelled as surface finds without an operation. All of these remains were culturally deposited shell including freshwater and marine shell. The freshwater shell includes nine river clam fragments, possibly from a single shell. A single shell bead made from drilling into the interior outer lip of a conch shell (cf. *Lobatus gigas*) was analyzed. A queen conch spire fragment was identified with evidence of burning. One true conch (family Strombidae) outer lip fragment was identified that may be shell detritus from shell artifact production. A single *Oliva* sp. shell outer lip fragment was identified without any drilling possibly from a fragmented adornment, which did not refit with any other

Oliva shells in this analysis. The entirety of the CBAS shell materials have not been fully analyzed and likely will be sampled in the future.

In sum, this research identified an abundance of culturally deposited animal remains intermixed with some naturally deposited remains likely from predation in the area. Burning impacted 83% of the CBR assemblage and 66% of the SDR assemblage analyzed. Carnivore gnawing marks, a clear taphonomic effect of natural predation, were found on 16 CBR and 2 SDR specimens, indicating minor natural influences on the faunal assemblages from medium and large sized carnivores. Rodent gnawing is just as infrequent with only 13 specimens from CBR and six from SDR. Mold discoloration was present on some of the remains likely from exposure to the shade and humidity prior to being buried or further exposure after bioturbation from looting, new burials, or rodent burrowing (Dupras and Schultz 2014).

Both sites showed minimal amounts of culturally modified faunal artifacts such as rasps, tinklers, bone needles, turtle shells, and bone tubes, however, this does not mean that the unmodified remains are not the result of ritual behavior. The sample sizes are large enough to articulate the taxonomic richness of the two sites; however, %MAU remains uncalculated due to the small sample sizes across the taxa. In the preceding chapter, the interpretation of these results follows secondary analysis of the research questions. After which future research potential is addressed to connect these results with broader archaeological studies across surface sites in the Maya Lowlands.

CHAPTER 6

DISCUSSION AND CONCLUSION

The Maya people using Caves Branch Rockshelter and Sapodilla Rockshelter would have had a dynamic relationship with the fauna flourishing in the Caves Branch River Valley, both ideologically and ecologically. Given maintaining connections with past ancestors is of importance to the Maya, along with continuing mortuary traditions through continued interments, these shelters were used through time and reflect cultural behaviors, both, as they stayed the same or changed. This zooarchaeological study set out to explore ritual use of fauna in relation to caves and rockshelters in Central Belize through taxonomic and taphonomic identifications.

CBR and SDR both served as cemeteries by Maya peoples living in the Caves Branch River Valley and the faunal assemblages at both sites represent material representations of continued use and reuse of the sites along with a commingling of naturally deposited animal remains from predators and scavengers. The evidence suggests a pattern of ritualized burning on much of the assemblage that may be materials left behind during ritual events at the site, such as offerings or grave fill, or served as the location for disposal of ceremonial materials that occurred elsewhere. Practice Theory seeks to identify the larger forces, formations, and transformations of social life and the continued use and reuse of the two rockshelters show intentional practices that constituted the experience of social life (Ortner 2006:136).

Broadly, Caves Branch Rockshelter and Sapodilla rockshelter were areas set aside for specific human burial practices. The fauna supports these conclusions by demonstrating how they exploited multiple types of animals in the diverse ecosystem and had ties to the pacific coast through trading routes linked by the presence of marine shell and coastal fish remains. Ritually important remains are identified in the shelters, including the presence of non-mammalian species similar to those found in other caves (Emery 2004), as well as ritually significant species such as deer, dogs, large and small cats, and opossums. A near complete lack of butchery marks on both, less than .5% of the assemblages, indicates that the faunal remains were not used for food and may have had other significance such as dedicatory offerings for petitioning for rain or as a form of grave fill. Taphonomic signatures such as burning, allowed for a separation of fauna tied to ritual and those tied with natural predators of the land based on a distinct lack of carnivore and rodent gnawing and minimal evidence of digestive damage, 3% CBR (NISP:38) and less than 1% SDR (NISP:20).

The preceding sections first answer the questions of research, and then conclude with what Emery (2004:38) calls a realistic assessment of the impact of zooarchaeology research, provided as a discussion of future research and the need for more concrete identification of zooarchaeological specimens to taxon.

Research Questions and Expectations

Below each question is identified and followed by a discussion of the results and their interpretation following identification of the site formation processes, both natural and cultural, that led to the depositions of remains. It should be noted that some of the taphonomic effects on the remains could be from post-depositional processes such as burning of already dried bone from a ritual-fire through different matrices.

First, what is the composition of fauna, including species variety, skeletal element representation, and taphonomic history (what remains were naturally and culturally deposited), recovered from Caves and Sapodilla rockshelters?

Since both rockshelters were not completely excavated from northern to southern ends down to bedrock, the species variety of both rockshelters is a sample of the entire set of bones that could be recovered in the future (Grayson 1984:116). That said, a total of 1236 specimens were analyzed from Caves Branch Rockshelter and 2111 specimens were analyzed from

Sapodilla Rockshelter. They represent a diverse set of fauna with patterns of both natural and cultural modifications that indicate access by both humans and naturally occurring animals across both sites. As such, some of these remains were likely deposited naturally, while others are likely the result of human practices possibly associated with the use of the rockshelters as cemeteries.

Species Variety

There are at least 36 and 47 of different species represented in the CBR and SDR assemblages respectively, consisting of different mammals, reptiles, fish, birds, crabs, and a small portion of the excavated freshwater and marine gastropods and bivalves. While the samples analyzed from CBR and SDR represent great species variety, the significant fragmentation from anthropogenic and natural processes greatly decreased the total number of individuals identified at both sites, 39 at CBR and 55 at SDR. This was problematic because it made any statistical measurements ineffective, such as the minimum animal units (MAU). With the exception of freshwater shells, none of the species present in the specimens analyzed from CBR represents more than two individuals. The SDR assemblage is very similar with the nine-banded armadillo having the highest MNI of three, besides indeterminate medium mammals, which has an MNI of 6.

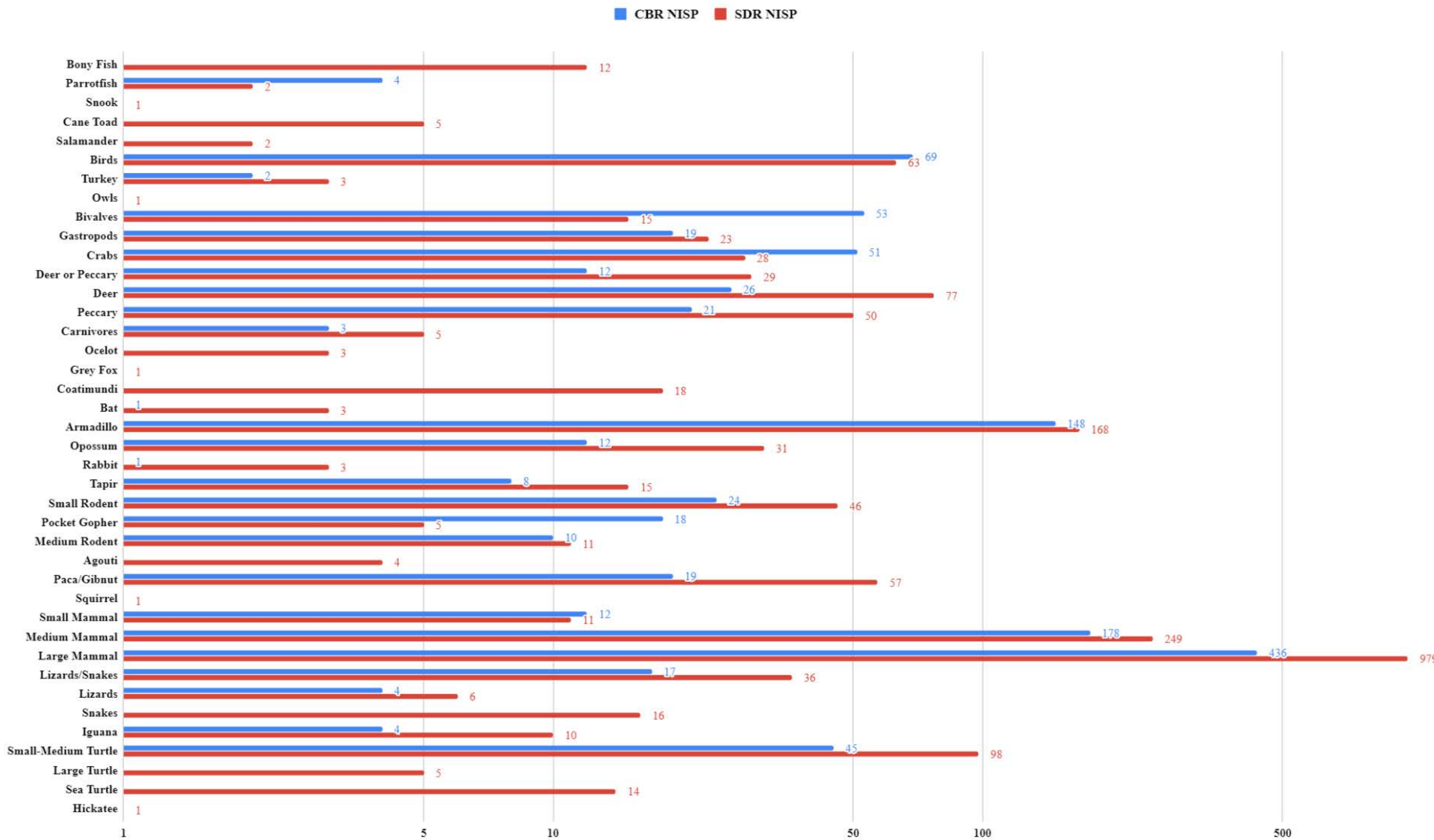

Figure 27. Species variety between CBR and SDR by NISP.

Skeletal Element Representation

The skeletal element representations at CBR and SDR are relatively similar, particularly in regard to long bone and axial fragmentation. SDR has more complete forelimb, hindlimb, and distal appendages, which might be a preservation bias between the two sites or simply show the variation in sample sizes (Figure 28). There does seem to be a trend of more crab remains at CBR than SDR even with a larger sample size.

Small vertebrate remains were infrequent at both sites (NISP=51 and 98) comprising mostly mammals along with several birds, amphibians, and reptiles. Small mammal remains identified to element, consist almost entirely of small rodents including New World mice and rats, pocket gophers, and spiny pocket mice along with a post-orbital process of a squirrel at SDR. A majority of the remains are larger elements such as humeri and tibiae, which may indicate a bias in the excavation techniques used as many small vertebrate elements are often lost depending on screen size. Several small lizard, bat, and bird remains were also recovered, mostly of larger elements from fore and hind limbs. I argue that most of these bones are the result of natural depositions. The burnt remains of squamates and the presence of small turtle carapaces on the other hand are likely the only culturally deposited small vertebrate remains in the SDR assemblage. This is in stark contrast with the CBR assemblage that lacks any small turtle remains indicative of either offerings or musical instruments.

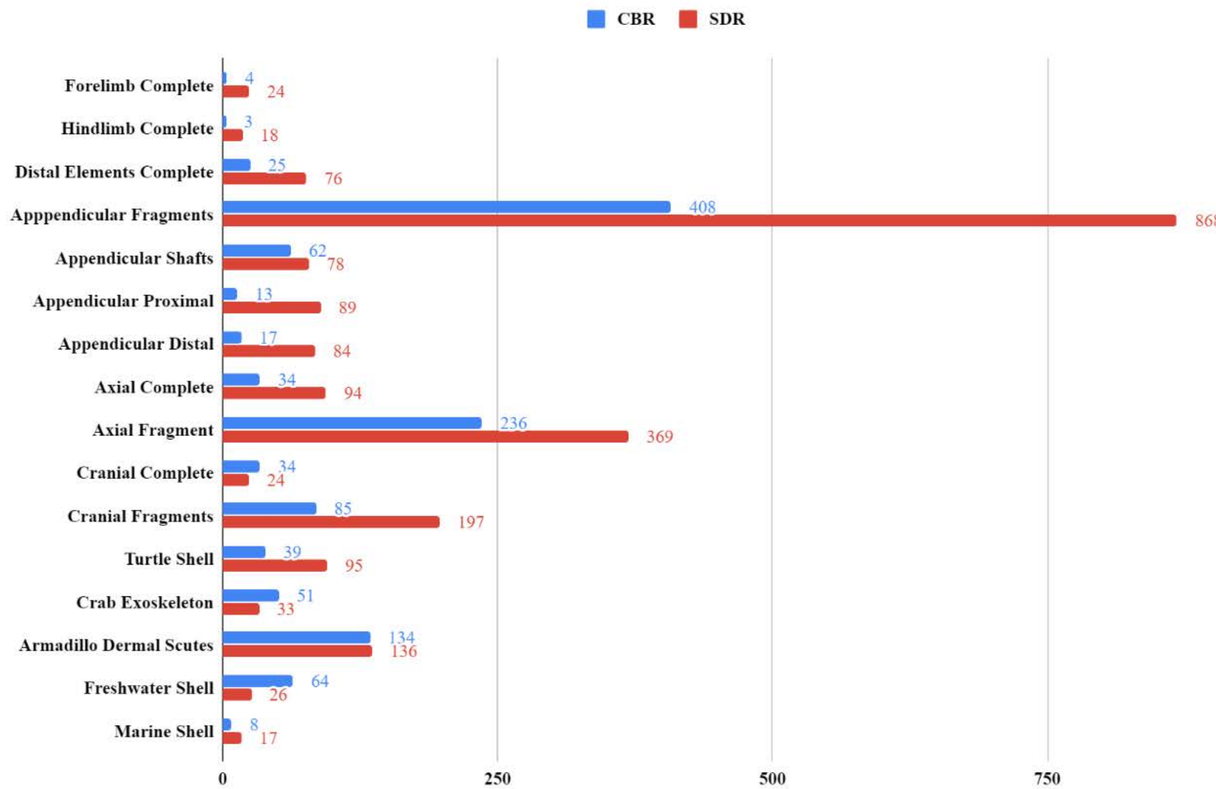

Figure 28. Element Representation at CBR and SDR by NISP

Large vertebrate specimens are dominated by long bone fragments, mostly diaphysis, from heavy fragmentation, that likely derive from deer or peccary, however, some may represent other large mammals such as dogs, anteaters, or a small proportion of tapir. Artiodactyls including peccary and deer families were the most prominent large mammal species, with the most intact elements. This could be due to preservation biases, as larger animals – with larger skeletal elements, will preserve better. Ideologically rich though, large mammals are often associated with wealthier elites and their subsistence strategies (Emery 2004; Pohl 1983). That being said, the specimens in this analysis suggest that the people in the Caves Branch River valley had access to peccary and deer that were prized for their meat, along with minimal amounts of jaguar or puma remains. Brady (1989) noticed a pattern of intact long bone elements identified to large mammals at Naj Tunich, which is not present at either of the rockshelters likely due to the fragmentation from anthropogenic and natural agents.

Medium sized vertebrates comprise about a third of the remains analyzed overall with 410 specimens at CBR and 686 specimens at SDR. Armadillos bias both samples due to the presence of dermal scutes, however, there were still 3 individuals identified as armadillos which was the highest mammalian MNI of SDR. Other specimens with higher frequencies per medium sized taxa in these assemblages include paca, opossums, and iguanids. Many medium vertebrates were represented by only a few specimens or less such as skunk, grey fox, cottontail, coatimundi, ocelot and dog. The small frequencies of these remains may indicate specific elements were selected from specific species for different purposes, however, some of these remains may have accumulated naturally.

The fragmentation of large mammal remains at both sites is indicative of multiple taphonomic processes impacting the bones. For instance, we know from analysis of some of the mammalian remains that burrowing mammals were present including hispid pocket gophers and armadillos that are one agent of fragmentation. The continuous reuse by the Maya for burial purposes is another process that can continuously fragment remains. Human taphonomic effects continue into modern use with multiple evidence of looters digging at both rockshelters, which can further fragment the bones present. The original deposition of the remains was also likely a contributor to the heavy fragmentation of large mammal remains. Burning is one process that fragments bones in identifiable ways, however, this becomes problematic when other taphonomic agents also influence the bones, such as carnivores or rodents. As such, this analysis did not look at specific fragmentation patterns that can occasionally be used to identify human activities such as marrow extraction (Outram 2000). The heavy amount of fragmentation further biases interpretation by making it difficult to ascertain important components such as comparison with known background scatters (Behrensmeyer and Dechant Boaz 1980).

Caves Branch Rockshelter is located near a river (Bonor Villarejo 1998, 2002; Glassman and Bonor Villarejo 2005) providing easy access to freshwater and terrestrial crabs in the region. Kovountzis (2009) identified a high proportion of crustacean remains, particularly complete and fragmented claw elements, indicating that the remains were deposited through cultural means. The body portion analysis of crustacean remains identified in this research corroborates this pattern and acknowledges that while crabs may have been brought in through predation, the lack of other elements, along with the presence of burning on 45% (CBR) and 32% (SDR) of the crab claws shows human use of crustaceans in the cave. Kovountzis (2009:200) suggests that other crab elements would have preserved and thereby attributes the 65 crab claws he identified to human agency. Crab remains are one of the few specimens that were higher at CBR, NISP 51, than at SDR, NISP 28, which may either be preservation bias or differential use.

Taphonomic Histories

The preservation history of a site is easily articulated through a careful analysis of natural and cultural modifications in zooarchaeological assemblages. Identifying variation across deposits can be shown through higher proportions of burnt remains instead of unburnt remains, which have more organic materials in the bone (Apllin et al. 2015). Burning was the most prominent taphonomic effect in the assemblage. Almost 83% of the CBR faunal assemblage was burnt and 66% of the SDR assemblage was burnt (Figure 29). Other taphonomic effects present on the assemblages include green breakage, which is an indicator that the bone was fresh, retaining moisture and bone marrow, at the time of breakage (Lyman 1994:316). Along with green breakage, butchery marks can provide inference on the human behaviors leading to the deposition of the remains, particularly in identifying if the bones were the result of feasting or if the remains are from dedicatory behaviors. Natural modifications including rodent gnawing, carnivore gnawing, digestive corrosion, root etching and exfoliation can all be used to infer patterns on the formation processes leading to some of the deposited remains. For instance, excessive amounts of carnivore gnaw marks such as crenellations, scoring, and chipping-back would indicate that many of the remains were deposited by predatory or scavenger mammals like jaguars and coyotes (Haynes 1980, 1982, 1983).

Root etching, typically frequent on faunal remains in Belize (Wisner et al. 2017), was present on less than 1% of both assemblages. This suggests the faunal remains deposited in the shelters were either collected by the Maya and deposited prior to post-depositional forces such as weathering, or root etching damage taking place or indicate that predatory animals brought certain remains back to the shelter for consumption. Mold damage on the specimens indicates that fungi and other microscopic organisms penetrated the cortical surfaces the bones after the remains were accumulated at the two shelters (Hanson and Buikstra 1987). The presence of mold damage on the remains may indicate that other diagenetic processes influenced the bones outside of burning which could potentially bias some of my identifications of darkened bones.

If remains resulting from typical predatory bird and mammal behaviors or burrowing rodents are separated out, one can elucidate specimens tied specifically to human agency and potentially ritual behaviors. To do this though, examination of those animal behaviors is needed

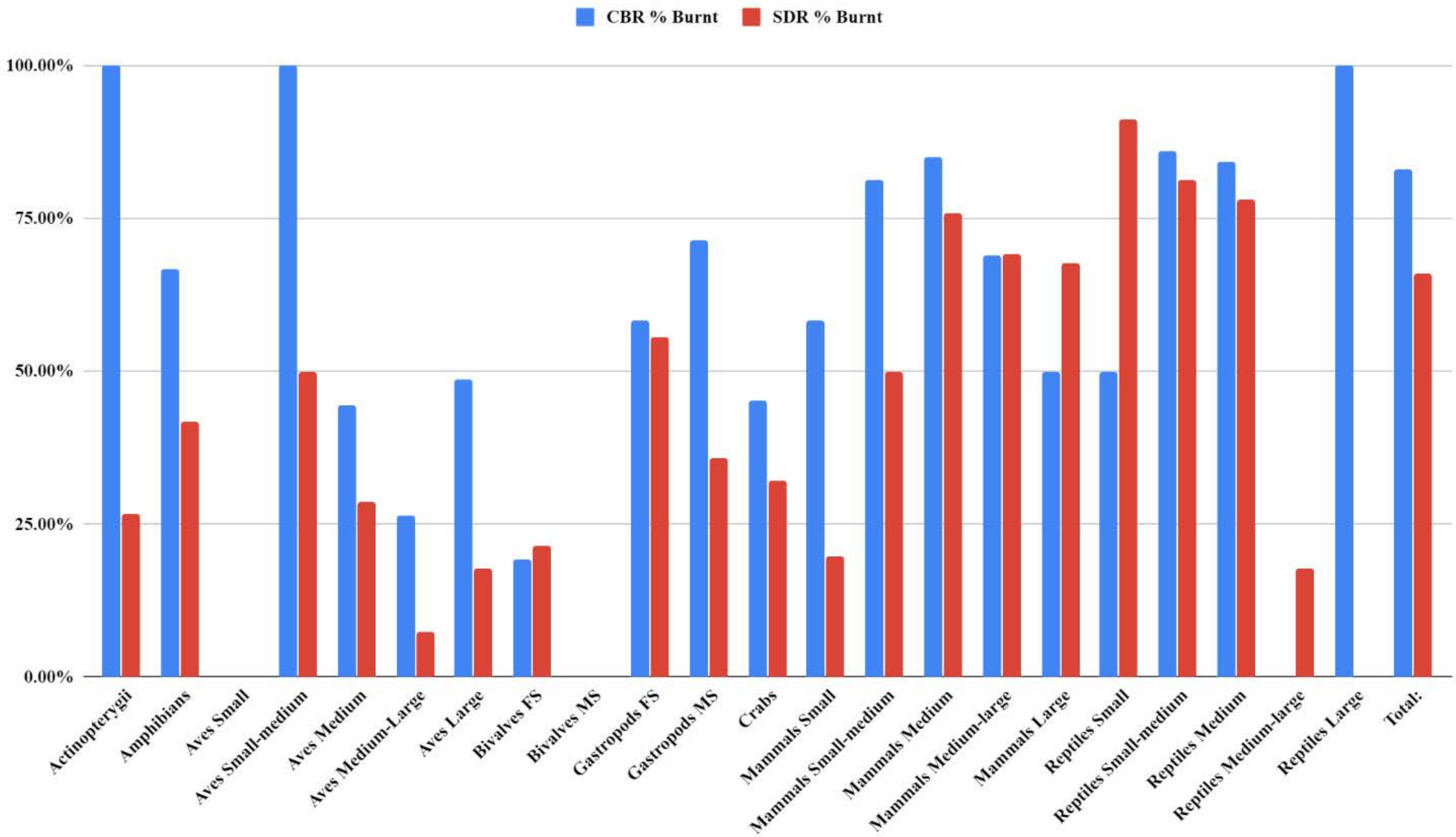

Figure 29. % Burnt of CBR and SDR specimens identified to size class.

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In consideration of what we know about fauna in caves and rockshelters – how do these faunal data from Caves Branch and Sapodilla Rockshelters compare, given the limited contextual information? Further, are there significant differences in the faunal assemblages from these two shelters?

The CBR and SDR faunal assemblages have very similar taphonomic histories, element representations, heavy fragmentation of large mammal elements, and similar distributions of taxa. SDR has a more diverse variety of taxa, however, this is likely due to having a larger sample of the faunal remains deposited at SDR than at CBR. Several patterns have looked at sidedness, age, and complete remains to argue for specific fauna preferences in rituals across the Maya lowlands (Anderson 2009; Brady 1989; Emery 2004; Pohl 1983). The artifactual faunal remains at both sites were minimal, primarily comprising worked shells that were worn as adornments along with several modified bone artifacts shaped into tubes and rasps. These were all likely used as grave goods or adornments deposited with the interred during the burial processes. The non-artifactual faunal assemblages, along with the ceramic and lithics, represent similar patterns of intensive burning at the site indicative of ritual assemblages that were possibly transformed through acts of burning, breaking, and smashing (Brown 2002:267; Peterson 2006:284) This correlates with past interpretations at both sites suggesting that the fauna deposited at CBR and SDR represents long term ceremonial depositions of materials that are otherwise utilitarian through intensive reuse by the Maya (Hardy 2009; Wrobel and Shelton 2010; Stemp et al. 2013).

Age Distribution

Zooarchaeological research in Maya caves have looked at if the Maya may have preferred mature animals over sub-adults for specific cave rites (Brady 1989; Anderson 2009:59)

Age was determined based on the fusion of epiphyses and tooth growth giving specimens the general designations of sub-adult and adult. As such, I analyzed age data to identify if there were any specific trends across the different size classes of the vertebrate remains analyzed. Figure 30, shows different distributions of ages based on size class between the two sites. Small vertebrates, in this case classes 1 and 2 (Figure 30), show more sub-adults at SDR than CBR, however, most of these were small rodent remains that were likely deposited by roosting birds or died naturally. There is a relatively even distribution of medium vertebrates by age at both sites (Figure 30). Large vertebrate remains show more adults at SDR than sub-adults, but more sub-adults at CBR than adults. Overall, there is no pattern indicative of age preference between the two sites and requires much larger sample sizes to really ascertain any major human behaviors based on age.

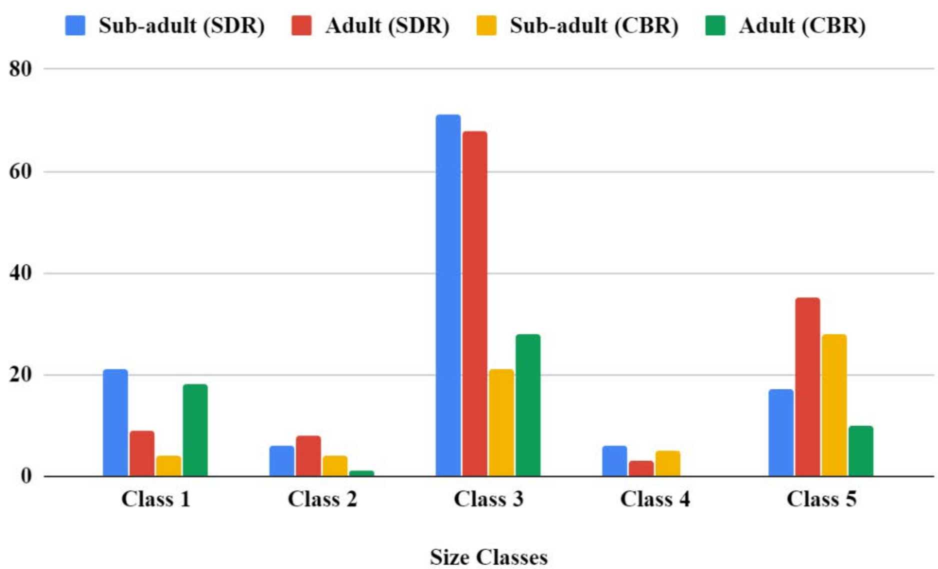

Figure 30. Ages at CBR and SDR per size class. Classes are separated numerically with smallest as size class 1 and largest as size class 5.

Sex

Depending on the sample size and species in question, some metric analyses can be undertaken on specific elements to identify the sex of specific animals in an assemblage. A single brocket deer attached to a fragmented portion of parietal and frontal bone is the only specimen identified to sex. As such, no patterns regarding selection of animals based on their sex could be ascertained. Collagen analysis of different specimens using recently developed methods known as Zooarchaeology by Mass Spectrometry (ZooMS) can provide a pathway forward for identifying sex of specimens that usually would not have that data provided (Buckley 2017). This analysis did not use either metric or ZooMS to identify sex and thereby lacks any patterning that might articulate practices regarding gender at the two rockshelters.

Sidedness

As mentioned previously, zooarchaeologists have looked at sidedness preferences across caves and taxa in the region to attempt to identify ritual meaning, with varied findings likely tied to the individual context of the caves being studied (Anderson 2009; Brady 1989; Emery 2004; Pohl 1983). Many of these determinations were focused on specific taxa primarily deer and avian remains, but often lack significant sample sizes to actually identify sidedness preferences. I identified 77 left and 74 right sided elements at CBR and 149 left and 116 right elements at SDR across a wide range of taxa, but the element distributions indicate most of the remains were the result of one or two individuals. For instance, 17 peccary elements were sided, however, they included a mix of different long bones and ribs that could all be from a single individual.

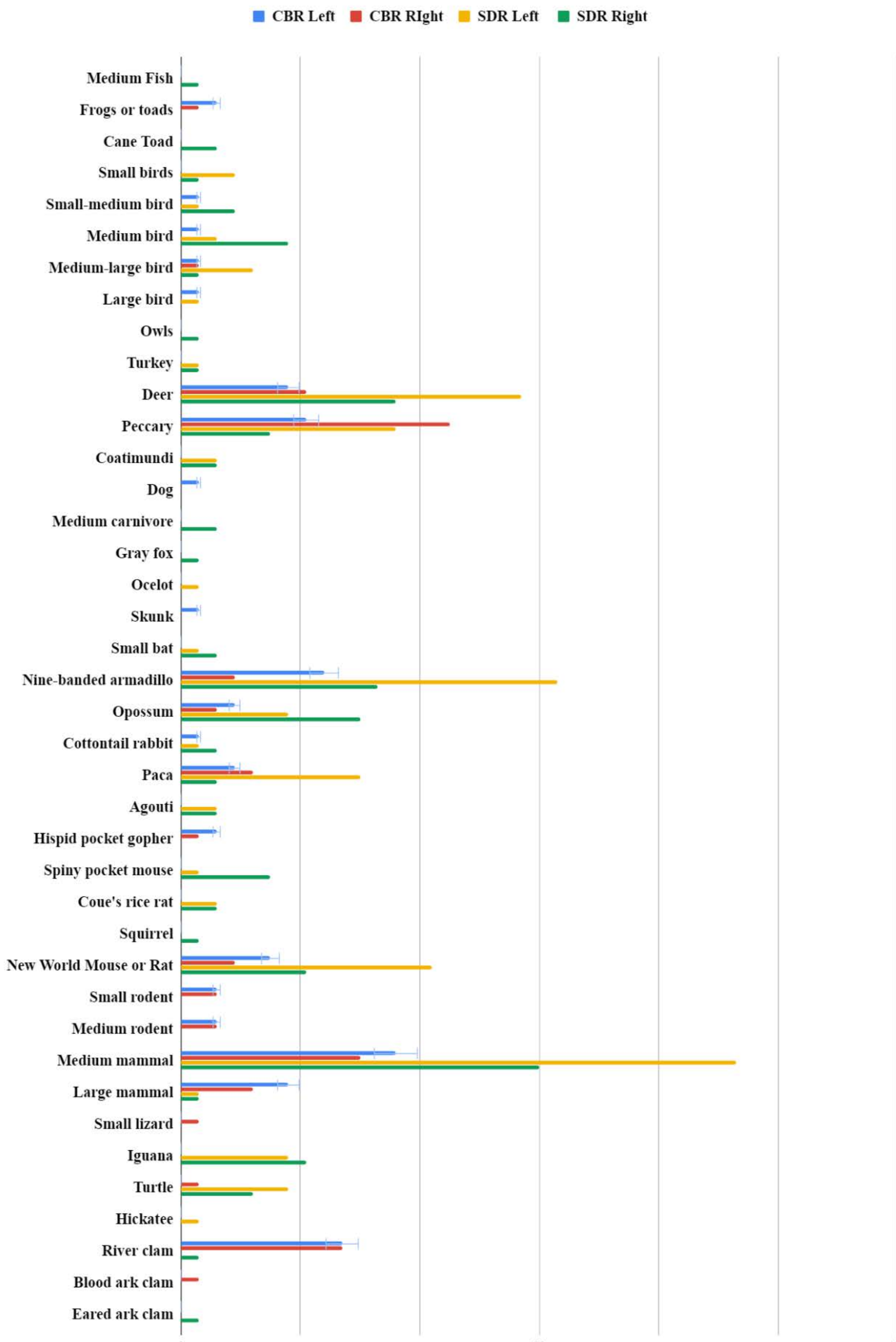

Figure 31. Sided elements by taxa from CBR and SDR

The ritual use of single-sided long bones should be considered when investigating faunal assemblages in the Maya lowlands (Brown 2004; Palka 2002; Pohl 1983), however, the results of this analysis show that sidedness was not a main component of anthropogenic faunal remains. While sidedness is shown to range across both sites (Figure 30), the MNI totals indicate that the elements were likely deposited as whole skeletons since both sites have an MNI of less than 3 for most large and medium mammals, however, there are some specimens that may have been specifically selected for depositon such as the jaguar phalanx.

Marine and freshwater specimens

There was also a small, but, significant portion of remains from the Caribbean ocean at both rockshelters. The marine shell specimens are common across the Maya Lowlands and occur as materials from bivalve and gastropod shells from multiple species. At both sites, conch, Oliva, and several unique bivalves were present. The presence of singular bivalves such as the eared ark clam may be tied to similar archaeological examples where the dead are buried with shells placed over the deceased, seen at the sites of Tikal, Altun Ha, Altar de Sacrificios, and San José (Welsh 1987:126). While most freshwater shell remain unanalyzed in Belize, it is common across caves and rockshelters to have dense deposits of jute with a few apple snail and river clam shells mixed in (Brady 1989:378; Ebersole 2002; Halperin et al. 2003; Wrobel and Shelton 2011).

Iconographic evidence including images of beings emerging from shells are arguably clear connections between Maya cosmology and the association of shells to the underworld and the Primordial Sea in the *Popul Vuh* (Thompson 1950; Tedlock 1985). Salvage operations in 2010 counted 2,779 freshwater shells from the light zone and 704 from the dark zone, which are clear indicators of major ideological influence to their deposition. Analysis of these shells, along with those recovered from 2011 and 2017 excavations has yet to occur, however, identification of removed apices or complete jute could be used to indicate patterns of feasting or other ritualized behavior. The presence of parrotfish further ties both rockshelters to connections with the coast since parrotfish were often salted and traded across the region, however, the parrotfish specimens were all cranium. Parrotfish remains have also been found scattered in the terminal burial chamber of the cave site of Actun Kabul. Much like jaguar remains, parrotfish remains are found in small proportions across caves and rockshelters and are possibly the result of votive offerings potentially to deities associated with the watery underworld.

Perhaps the most interesting, however, were sea turtle elements primarily metapodials and phalanges found in across Sapodilla Rockshelter. The specimens analyzed were unfused subadult elements likely harvested along the coast, however, we do not have a large enough sea turtle comparison at the NAUDAFAL and needs future comparison. The curation of some animal remains such as armadillo and paca feet in contemporary hunting shrines near Lake Atitlan, Guatemala may provide some evidence of why these distal elements were the only sea turtle remains found at the site (Brown 2005, 2006) explored hunting shrines and deposits with the skeletal remains of hunted animals being deposited in post-hunting rites, some of which include the curation of feet that are returned to the shrines (Brown 2006:28). It is possible that the sea turtle remains represent a decomposed hand or foot of a sea turtle that may have been worn as an adornment, the skin could be punctured, or offered for a variety of purposes.

Finally, was every culturally deposited animal element from these two rockshelters attributed to mortuary rituals or do they represent other rituals or non-ritualized activities? What zooarchaeological correlates for mortuary rituals can be identified based on the analysis of the faunal remains in these two shelters?

Bell (1992:81) recommends four features of practice involved with ritual activities including the context, the underlying logic, the indeterminate nature of practice, and the reproduction of socio-cultural world orders. The context of both of these rockshelters fits the mold of two cemeteries used by nearby Maya communities for burying their dead, but also shows evidence of ceremonial deposition of otherwise utilitarian artifacts such as ceramics and lithics (Biggs and Michael 2015; Stemp et al. 2013; Wrobel and Shelton 2011; Wrobel et al. 2013). Gann (1971:157) observed a ceremony where items were intentionally burnt to de-animate the items as an offering for rain. Peterson (2006) articulated similar patterns in the nearby Sibun River Valley caves, where burnt artifacts and stalagmites were found across a platform in Actun Chanona. She argues that the underlying intent of these burnings was to transform the objects into offerings and thereby end the use-history of the object through the ritual (Peterson 2006:286; Walker 1995). I believe that a similar pattern is shown through analysis of the faunal remains at CBR and SDR. For instance, the presence of at least 3 peccary crania with severe burning high enough to fracture the molars and premolars at SDR is a result of these ritual burnings.

Ascertaining animal elements attributed to mortuary versus other ritual activities is difficult, however, o. The presence of burning across over two-thirds of the assemblage indicates the remains were likely either part of a ritual or deposited prior to the burning of fires. This is supplemented with analysis of the lithic assemblage at CBR where many non-obsidian lithic artifacts were excessively burnt (Stemp et al. 2013:140). Extensive burning indicates ritual-fires possibly in association with incense burning and other offerings linked to the sacred landscapes (Awe and Helmke 2015; Brown 2002:267; Palka 2014:287; Peterson 2006:284-285). Ethnographically, Gann (1924:57-58) mentions a Cha Chac ceremony he observed in which food, drink, incense, and tobacco are offered to sanction deities and acquire a good rainfall for growing maize. Along with this more public ceremony, a ritual specialist was observed making small offerings to the deities on behalf of lost souls in liminal states at a small altar. At the end of this ceremony, Gann argues that it is essential that everything be completely destroyed through the use of fire. It is possible that some of the materials at CBR and SDR are a result of similar practices in which a ceremony took place to petition deities for different purposes, thus ensuring the end of the use-life of the materials placed at the two sites (Walker 1995).

As mentioned earlier, the indeterminate nature feature of practice where practice may misrepresent what it was intended to do (Bell 1992:83). In this case, the misdirection comes from the indeterminacy of ritual practices that took place at two different rockshelters hundreds of years ago. While it is safe to say that some of the remains were deposited in relation to mortuary practices, the likelihood that the Maya only used the rockshelters as cemeteries goes against the multifunctional use of caves and rockshelters shown in the archaeological record (Awe 1998; Brady and Prufer 2005; Morton 2015).

Ritual plays a major role in supporting society and communities through reinforcing beliefs and practices that maintain the social order and can be shown through careful analysis of different types of archaeological materials. Morton (2018:157) suggests that an overlooked aspect of cave ritual is fragmentation of ritual deposits across different caves and shelters that were likely associated with a variety of different acts that followed a circuit. An interesting approach to testing some of this would be to attempt to fine specific animal remains in caves, such as singular jaguar bones, and gather dates on the remains to see if specimens may have been ritually deposited across different rockshelter and caves in the area in the form of a ritual circuit.

This follows somewhat with the ethnographic examples shown in the Maya Pilgrimage approach (Palka 2014:299), which suggests that the Maya ritual landscapes serve as places for communicating with deities and ancestors contacted by people to maintain ceremonial obligations. These rituals have been shown to have a long history across the region such as the Lacandon lighting ceremonial fires during rites (Palka 2014:287). This ethnographic example involves the burning of incense typically as symbolic food offerings to different deities in god pots (McGee 1990:49). Houston et al. (2006:126) suggests that incense burners were likely used in combination with fragrances and music to “feed the gods”, thereby being received by them. The presence of several polished turtle shell, likely mud or musk turtle, suggests that musical instruments may also have played a role in some of the rituals that took place at SDR. While turtle shell fragments were also found at CBR, no evidence of polishing was found which may have been lost through exposure to burning or the shells may not have been modified. Going back to the fragmentation of different cave deposits, it is possible that turtle shells used as rattlers and drums may have been intentionally fragmented and dispersed across the landscape. On the other hand, these remains may also be a result of intentional offerings to deities for rain or as grave goods associated with the other artifacts burnt throughout the rockshelters.

The burning indicated on both assemblages is likely a result of long-term use at the shelters linked to a variety of ritual acts that may have similar material remains. These could for instance be the results of fire ceremonies associated with different Maya calendar dates that have been observed in the ethnographic record. The Maya New Year ceremony provides a direct expression of Maya ideology as it relates to cosmogony and cosmology, which are major public events occurring at the end of the new year during the five days of the Uayeb period (Taube 1988). Similar to the Aztec, the Maya New Year ceremony is tied to period ending rites that constitute destruction and recreation of the world (Taube 1982) The problem with comparing these archaeological instances of this ritual to these rockshelters is that the ritual “dumps” (Elson and Smith:165) typically include dense deposits of ceramics that can be refit, unlike most of the ceramics at CBR and SDR (Hardy 2009; Shelton 2011). This is further emphasized on the fact that this type of ritual is typically seen archaeologically in Postclassic Mesoamerica in domestic house mounds and sites, and not commonly in caves. Zooarchaeological correlates of the Aztec New Fire Ceremony would most likely be the remains of sacrificed quail or turkey observed in the Codices Nuttall and Dresden (Taube 1988:245). None of the avian remains analyzed at each rockshelter were quail and the small amount of turkey remains are not indicative of a sacrificed turkey.

At this time, the zooarchaeological record of both sites indicates heavy burning, either intentionally or secondary, likely from multiple ceremonies that involved fire. Whether, these are tied to Maya new year ceremonies shown by Taube (1988) in the Yucatan or other ceremonies tied to mortuary practices or ritual circuits is difficult to say given the small faunal sample sizes at these two rockshelters. The taxa present in both assemblages is diverse, however, turtles, deer, peccary, a variety of medium mammals, and small amounts of felid remains indicate multiple use. Furthermore, the high fragmentation of the larger vertebrate makes useful zooarchaeological indices for articulating natural and human behaviors difficult to ascertain given the sample sizes at both rockshelters.

Lack of taphonomic markers such as butchery marks indicates that the remains may have been offered and not primarily used in feasting or food procurement. This may of course be a preservation bias, since many of the remains were concreted in the surrounding sediment and required extensive cleaning to observe surfaces of the bones. Heavy presence of burning on all body portion from multiple species shows that rituals involving the use of fire at these sites was likely common, however, some of these specimens may have been collected burnt at other areas and then deposited afterwards as ceremonial detritus. Furthermore, lack of pre-depositional taphonomic signatures from natural forces outside the rockshelters such as weathering, predation damage, and overexposure to fluvial environments suggests that humans were the primary taphonomic agents contributing to the deposition of the remains at these sites.

Identifying if the remains were dry, green, or fleshy when deposited in the rockshelters is another indicator of ritual, however, difficult to ascertain given the ecology of the area. As an example, ants can strip the flesh off of a skeleton within several hours to a few days dependingits size. This assumes that ants were major parts of the ecology of the region a thousand years ago, however, ants have been around for millions of years, so the assumption is valid.

Animals associated with elite rituals such as monkeys, jaguars, pumas, and dogs; however, were almost completely missing from both sites, as only one jaguar phalanx, a large cat premolar, and a dog canine were identified. The presence of small numbers of jaguar remains in cave contexts have been associated with cultural depositions possibly linked to small-scale offertory rituals (Anderson 2009; Pendergast 1971; Peterson 2006). At CBR and SDR, two potential jaguar remains were identified, a first phalanx from CBR and a premolar from SDR both of which were unmodified. This is similar to many zooarchaeological assemblages and was a pattern articulated as far back as the 1950's in the analysis of faunal remains from the site of Mayapan in the Yucatan (Pollock and Ray 2009). They found that most jaguar and puma remains found were from either the feet or teeth, usually canines, that were occasionally modified (Pollock and Ray 2009:549).There are ways to use both of these items as adornments without drilling into the roots of the tooth or either end of the phalanx, however, identifying if they were adornments for the deceased or a form of ritual offering is likely impossible. It is unlikely that the large cat remains were naturally deposited since other large cat specimens were not identified at all across both assemblages. The degrees of weathering and exfoliation on the jaguar phalanx is different from many of the other remains analyzed and may indicate that the bone was collected elsewhere and brought to the site as a dedicatory offering.

Taxonomically, however, other animals in the rockshelter assemblages may show evidence of differential rituals. For example, there is iconographic and epigraphic evidence that Opossums were possibly linked with Maya New Year ceremonies (Emery 2004:105; Tozzer 1941:137-141; Taube 1982). The presence of opossums at different caves and rockshelters was noted for this significance by Anderson (2009). At CBR and SDR, opossum remains were found in multiple operation, almost all of which were from subadult individuals, 7 CBR and 14 SDR. Exfoliation and rodent gnawing on the CBR and SDR specimens indicate that these remains were possibly naturally deposited, however, some of the remains were also burnt. Well preserved centrum epiphyses indicate that the remains were likely naturally deposited, possibly recently, since these generally do not survive well over long periods of time, unlike denser bones such as tarsals or petrous portions.

It is also possible that the high amount of appendicular, cranial, and axial elements across both rockshelters, but low number of individual animals, may represent intentional offerings of specific species. These offerings could be associated with the interred as physical representations of the Maya *wayob*. *Way*, pronounced why, refer to supernatural companion spirits identified across Mesoamerican cultures that have been documented back into the Classic period (Houston and Stuart). Houston and Stuart (2001:1) describe these spirts as “co-essence”, which are animal or celestial phenomenon that are associated with an individual. While Stuart and Houston suggest that the Classic Maya elite likely dominated certain species, such as jaguars, it is possible that “non-elite” Maya used similar concepts of self that could potentially be identified in rockshelter cemeteries such as CBR and SDR. The nature of these two sites, however, has led to continued spatial disruption leading to commingling and fragmented animal remains, which makes this hypothesis difficult to follow through.

Overall, the faunal assemblages at these two rockshelters show clear indicators of continued ritual use over several centuries, however, this chronology could be improved by dating specific faunal remains. Generally, there is a patterning of ritualized burning which likely led to continued fragmentation of long bone, axial, and cranial elements across both rockshelters further hampered by the continued bioturbation of the site from humans and burrowing animals.

Identifying the use of fauna through taphonomic analysis indicated through ritual practices such as mortuary interments and offertory rites at the sites of CBR and SDR provide insight into the behaviors of the Maya people utilizing the landscape. Differences in ceremonial function across rockshelters and caves are indicated based on the presence or lack of culturally specific fauna as well as taphonomic markers that distinguish culturally deposited and naturally deposited animal remains.

People in the Caves Branch River Valley were actively engaged in ritual acts associated with the broader political landscape of the Maya lowlands. The animal remains represent only a fraction of the archaeological materials excavated at CBR and SDR, however, there is a general trend of severe fragmentation with the exception of primary burials across two sites. Rituals undertaken by Preclassic and Classic Maya in the area are likely the result of multiple acts linked to a larger regional ideology that viewed caves and rockshelters as sacred and ritually charged spaces in a diverse landscape.

Conclusions and Future Research

This research emphasized taphonomic and taxonomic details of ancient Maya rockshelter use over hundreds of years. New questions emerging include: Are there clear indicators for differential deposition of animal remains over different periods of time based on radiocarbon dating?; Are materials such as crab claws significant of ideological or social use or can an ecological study of terrestrial and other crabs be used to rule out the significance of crab remains?; Can surveillance, such as game cameras, be used to articulate patterns of natural deposition to help identify future taphonomic signatures in rockshelter site formation?; Are the faunal remains local or specimens exported from different region?; Are there other rockshelters with similar taphonomic patterns in the Maya Lowlands? These questions can further the interpretation ritual rockshelter use in the Central Belize River Valley regarding environmental conditions, taphonomic agents, differential preservation of elements, and the rituals practiced in these mortuary contexts.

A suggested future avenue of study for this project is to obtain faunal remains from different contexts across the sites of Deep Valley and Tipan Chen Uitz located southwest of CBR and SDR (Andres et al. 2010). Brady (1989) suggested that there were more correlations between cave fauna deposits and nearby sites than comparisons with other caves across the Maya area, indicating the need for comparison of zoological materials across sites within a given distance of each other. So far, only 45 faunal specimens have come from several years of excavations at TCU comprised primarily of a partial armadillo skeleton and several intrusive rodents near structure 11. At the site of Deep Valley, the NAUDAFAL has analyzed several parrot fish remains from Andres excavations in 2009 (Andres and Wrobel 2010, 2011). Many of these specimens are complete and could be used for dating or isotopic analysis to possibly link trade-routes in this area of the Caves Branch River Valley.

Additional data tied to the identification of bird and reptilian remains to specific taxa may be feasible with a more comprehensive comparative collection but was unfortunately outside the scope of this thesis research and time constraints. Freshwater shell from both sites are housed in Belize along with some special finds that did not get analyzed for this thesis research either. Potential future research would benefit from analyzing the taphonomy of jute and river clam shells excavated at CBR and SDR. Shell typically preserves better than chordate remains and has more potential to offer insight into symbolic use of the shelters. Given shell preservation, the spatial areas in which some of the burning occurred at the two rockshelters may also be identified from their analysis.

Non-human predators such as jaguars, coyotes, owls, and others leave differential taphonomic signatures depending on the area in questions (Andrews 1990; Healy 1983; Stallibrass 1990; Shipman 1981). Future research on scat and avian pellets of from modern predation in the Central Belize River Valley could be used to build a data set for identifying which animals were impacting different assemblages. While this research touches on literature concerning scat or pellets, an actualistic study to collect scat or pellets and create statistical identification of size compared to animal would increase the interpretive power to separate cultural from natural taphonomic analysis processes.

I have observed the use of the proximal end of a crab claw dactyl, the movable part of the claw, as skinning implements across bone-working groups in the Caribbean. So far, observations have articulated that the proximal end of a crab dactyl is used to skin reptiles, particularly snakes and iguanas. An interesting research undertaking would be to gain an experimental set of crab craws and use them as skinning implements in a controlled environment. This could be done by walking down streams near the Sibun or Macaw rivers and collecting several sets of crab claws from dead crabs that are frequent. After, comparison using SEM and other microscopic digital imaging might create an ethnoarchaeological correlate for identifying the potential use of crab claws for specific tasks in the archaeological record.

Stable isotopic analysis, specifically strontium, of species identified in the shelters has the potential to elucidate multiple patterns in mortuary and ritual usage of caves throughout Central Belize and the Maya Lowlands, specifically trade and origins of the animals in question. Stable isotopic analysis would help identify if patterns of ritual use of fauna were local fauna gathered from the communities nearby or if remains were deposited by people traveling through the region for ritual circuits.

Future research on the unexcavated or partially excavated rockshelter and cave sites throughout Belize have the potential to explore similar faunal assemblages from Maya animal use in a diverse landscape. In 2017, CBAS identified a rockshelter known as Sac Uitzil Bah which was briefly investigated during the latter part of the 2017 field season. Another rockshelter, Deep Valley Rockshelter 1, was excavated by CBAS in 2005 with a slightly smaller assemblage of faunal remains when compared with CBR and SDR. Future research at the NAUDAFAL by undergraduate and graduate students will follow similar methods used in this thesis to provide a thorough dataset on the materials from these two rockshelters. Overall, further testing at CBR and SDR along with other caves and rockshelters in the region have the potential to provide more research on ancient Maya animal use in ritual and non-ritual contexts along with status differentiation based on access to certain species.

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APPENDICES

Appendix A. NAUDAFAL Data Collection Methods and Recorded Attributes

CONTEXTUAL INFORMATION	CODE
Catalogue Number	CAT#
Operation Area	OP
Lot Number	LOT
Excavation Unit	EU
Level of EU	LVL
Year of excavation	YEAR
Quantity/NISP	QTY
Closest taxa identified	NEAREST TAXA
ELEMENT	**ELE**
ACETABULUM	AC
ALVEOLAR	AV
ANTLER	ANT
ARTICULAR	ART
ASTRAGALUS	AS
ATLAS	AT
AXIS	AX
BRACHIOSTEGAL RAYS	BCR
CALCANEUM-ASTRAGLUS	CAST
CALCANEUS	CAL
CANINE	CA
CANINE	CN
CARAPACE	CRP
CARPOMETACARPUS	CMC
CAUDAL	CD
CAUDAL VERTEBRAE	CD
CERVICAL	CV
CLEITHRUM	CLT
CORACOID	CCD
ELEMENT	**ELE**

CORACOID	CCD
CRANIUM	CRN
DECAPOD CLAW	CLAW
DENTARY	DT
DENTARY	DT
DERMAL SCUTE	DC
DISTAL SESAMOID	SED
DORSAL FIN	DFN
ECTOPTERYGOID	ECPG
ENTOPTERYGOID	ENPG
EYE ORBIT	EO
FEMUR	FM
FIBULA	FA
FIRST PHALANX	PHF
FISH FIN FRAGMENT	FFR
FRONTAL	FN
HUMERUS	HM
HYOMANDIBULAR	HYM
ILIUM	IL
INCISOR	IN/IC
INOMINATE	IM
INTEROPERCULAR	IOP
ISCHIUM	IS
LACRIMAL	LAC
LONG BONE	LB
LUMBAR	LM
MANDIBLE	MR
MAXILLA	MX
MAXILLA	MX
METACARPAL	MC
METAPODIAL	MP
METAPTERYGOID	MPG
METATARSAL	MT
ELEMENT	**ELE**

MOLAR	MO
NASAL	NSL
NASAL	NS
NEURAL CARAPACE	NCRP
NUEROCRANIUM	NCRM
OPERCULUM (OPERCULAR)	OP
OTOLITH	OT
PALATINE	PAL
PARASPHENOID	PSD
PATELLA	PA
PECTORAL FIN SPINE	PCTF
PELVIS	PV
PERIPHERAL CARAPACE	PCRP
PETROUS PORTION	PP
PHALANX	PH
POSTTEMPORAL	PTM
PRECAUDAL VERTEBRAE	PCD
PREMAXILLA	PMX
PREMOLAR	PM
PREOPERCULUM (PREOPERCULAR)	POP
PROCORACOID	PCCD
PROXIMAL SESAMOID	SEP
PUBIS	PB
QUADRATE	QD
RADIALS	RAS
RADIUS	RD
RADIUS/ULNA	RDU
RIB	RB
SACRUM/SACRAL	SAC
SCAPULA	SC
SECOND PHALANX	PHS
SQUAMOSAL	SQ
STERNAL ELEMENT	SN
ELEMENT	**ELE**

STINGRAY BARB	BARB
SUBOPERCULAR	SOP
SUBORBITAL SERIES	SOS
SUPRACLEITHRUM	SCLT
SUPRAOCCIPITAL	SOC
SYNSACRUM	SYN
TALON	TN
TARSOMETATARSUS	TM
TEETH	TE
THIRD PHALANX	PHT
THORACIC	TH
TIBIA	TA
TIBIA/FIBULA	TF
TIBIOTARSUS	TT
ULNA	UL
UNIDENTIFIED PHALANX	PH
UNIDENTIFIED SESAMOID	SE
UNKNOWN	UN
VERTEBRAE	VT
XIPHIPLASTRON	XPL
SIDE	**SD**
LEFT	L
RIGHT	R
NOT SIDED	N
PORTION	**POR**
COMPLETE	CO
PROXIMAL	PR
PROXIMAL +> HALF SHAFT	PSH
PROXIMAL +< HALF SHAFT	PRS
SHAFT	SH
DISTAL	DS
DISTAL +> HALF SHAFT	DSH
DISTAL +< HALF SHAFT	DSS
CONDYLE	CDL

PROXIMAL EPIPHYSIS	PRE
DISTAL EPIPHYSIS	DSE
UNIDENTIFIED EPIPHYSIS	EP
DIAPHYSIS	DF
HEAD	HE
FLAKE (<HALF CIRCUM OF SH)	FK
DEBITAGE (FRAGMENT FROM BONE WORKING)	DB
FRAGMENT	FR
BODY	BD
VT CENRTUM EPIPHYSIS	CEP
SHELL - LIP	LP
SHELL - SPIRE	SPR
CENTRUM	CN
PEDICLE (DEER)	PED
TINE (DEER)	TNE
AGE	**AGE**
Adult	A
Subadult	S
Unknown	N
SEX	**SEX**
Male	M
Female	F
Unknown	N
SIZE CLASSES	**SIZE**
Small	1
Small-medium	2
Medium	3
Medium-large	4
Large	5
Unknown	N

MODIFICATIONS	**N & C MOD**

BROWNED	BR
CARBONIZED	CR
CALCINED	CL
PUNCTURE	PC
PITTING	PT
FURROWING	FW
SCORING	SC
CHIPPING BACK	CB
RODENT GNAWING	RG
INSECT DAMAGE	ID
CARNIVORE GNAWING	CG
ROOT ETCHING	RE
LIMESTONE EXFOLIATION	LEX
DISCOLORED	COL
RED OCHER	RO
CUT MARKS	CM
POLISHED	PO
PATHOLOGY	PATH
BONE WORKING	BW
DEBITAGE	DB
WORKED	WR
CUT-WORKED	CW
WORKED BONE PREFORM	WBP
SHELL DEBITAGE	SDB
WORKED SHELL	SH
CUT WORKED HOLE	CWH
UNFINISHED DRILLED HOLE	UDH
BICONALLY PERFERATED	BCP
DRILLED HOLE	DH
WORKED ROD	WRD
CARVED	CRV
UNKNOWN ARTIFACTS	
TOOL	TL
PERSONAL ADORNMENT	PA

INSTRUMENT	IN
ARTIFACT	
BONE BEAD	BB
BONE NEEDLE	NED
BONE AWL	BA
BONE PENDANT	BP
SHELL BEAD	SB
TINKLER	TK
SHELL PENDANT	SPE
SHELL GORGET	SG
SHELL RING	SR
UNFINISHED SHELL BEAD	USB
HAIR PIN	HP
DRILLED TOOTH BEAD	TB
UTENSIL	UT
EAR FLARE	EF
BONE TUBE	BT
RASP	RSP
SHELL DISC	SDS
LABRET	LBT
DRUM	DM
Stable Isotope Samples?	**S/O**
YES	Y
MAYBE	Y?
NO	N

Appendix B. Condensed Data Collected for Faunal Analysis of Caves Branch Rockshelter

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F001	1B	135	23K	2	2006	1	CF. PANTHERA ONCA	APP	PHF	N	CO	N	N	5	N	N	Y
F002	1B	135	23K	2	2006	1	ANURA	APP	TBF	L	SH	N	N	2	N	N	N
F003	1B	135	23K	2	2006	2	BRACHYURA	EXO	CLW	N	FR	N	N	2	N	N	N
F004	1B	135	23K	2	2006	1	MAMMALIA	AX	CD	N	FR	N	N	3	N	N	N
F005	1B	135	23K	2	2006	1	IGUANIDAE	CRN	PAR	N	CO	N	N	3	N	BR?	Y
F006	1B	135	23K	2	2006	1	DAYSPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	N
F007	1B	135	23K	2	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	Y
F008	1B	135	23K	2	2006	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR	Y
F009	1B	135	23K	2	2006	1	AVES	APP	LB	N	FR	N	N	5	N	N	Y
F010	1B	135	23K	2	2006	1	IGUANIDAE	CRN	CRN	N	CO	N	N	3	N	N	Y
F011	1B	135	23K	2	2006	1	IGUANIDAE	CRN	CRN	N	CO	N	N	3	N	N	Y
F012	1B	135	23K	2	2006	1	SAURIA	APP	LB	N	FR	N	N	2	N	N	Y
F013	1B	135	23K	2	2006	2	AVES	CRN	CRN	N	FR	N	N	3	N	BR	N
F014	1B	135	23K	2	2006	1	MAMMALIA	AX	RB	N	PSS	N	N	5	N	BR	Y
F015	1A	74	13G	4	2005	1	CF. TAPIRUS BAIRDII	CRN	SQA	N	FR	N	N	5	N	BR	Y
F016	1A	74	13G	4	2005	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	Y
F017	1A	74	13G	4	2005	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F018	1G	626	16G	3	2015	1	CF. ODOCOILEUS VIRGINIANUS	APP	PHS	N	CO	N	N	5	N	BR	Y
F019	1G	626	16G	3	2015	1	MAMMALIA	APP	MC	N	CO	A	N	5	N	CB	Y
F020	1G	626	16G	3	2015	1	CF. TAMANDUA MEXICANA	APP	MP	N	CO	N	N	3	N	BR	Y

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F021	1G	626	16G	3	2015	1	PACHYCHILUS SP.	FS	FS	N	FR	N	N	N	N	BR	N
F022	1G	635	16G/17G	4	2015	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	N	N	EX	Y
F023	1B	149	23I	4	2006	1	TAYASSUIDAE	APP	MC	R	CO	A	N	5	N	BR, CB	Y
F024	1B	149	23I	4	2006	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	N
F025	1B	149	23I	4	2006	1	TESTUDINES	TRT	CRP	N	FR	N	N	2	N	CB	N
F026	1B	149	23I	4	2006	2	SERPENTES	AX	VT	N	CO	A	N	3	N	BR	Y
F027	1B	149	23I	4	2006	1	MAMMALIA	APP	IM	L	FR	A	N	3	N	BR	Y
F028	1B	149	23I	4	2006	1	MAMMALIA	APP	PB	N	FR	N	N	4	N	BR	Y
F029	1B	149	23I	4	2006	1	SAURIA	APP	RD	N	PSH	N	N	1	N	CB	N
F030	1B	149	23I	4	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, PO	N
F031	1B	149	23I	4	2006	1	MAMMALIA	APP	MP	N	FR	N	N	3	N	BR	Y
F032	1B	149	23I	4	2006	4	MAMMALIA	APP	LB	N	FR	N	N	4	N	CB	N
F033	1B	149	23I	4	2006	6	MAMMALIA	APP	LB	N	FR	N	N	4	N	BR	N
F034	1B	149	23I	4	2006	1	MAMMALIA	AX	RB	N	SH	N	N	1	N	BR	N
F035	1B	149	23I	4	2006	1	MAMMALIA	AX	RB	N	SH	N	N	1	N	CB	N
F036	1994	12	8	2	1994	1	SQUAMATA	AX	VT	N	CO	A	N	3	N	BR, CB	Y
F037	1994	12	8	2	1994	1	AVES	AX	TH	N	CNW	S	N	4	N	ED?	Y
F038	1994	12	8	2	1994	1	CF. LOBATUS GIGAS	MS	MS	N	SPF	N	N	NA	N	DH, WR	N
F039	1994	12	8	2	1994	1	SQUAMATA	AX	VT	N	CO	S	N	2	N	N	N
F040	1994	12	8	2	1994	1	BRACHYURA	EXO	CLW	N	FR	N	N	2	N	N	N
F041	1D	132	210	4	2006	2	ORTHOGEOMYS HISPIDUS	CRN	IN	L	CO	N	N	1	N	N	Y
F042	1D	132	210	4	2006	1	BRACHYURA	EXO	CLW	N	CO	N	N	2	N	N	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F043	1D	132	210	4	2006	1	MAMMALIA	AX	CD	N	CO	A	N	3	N	BR	Y
F044	1D	132	210	4	2006	1	CF. ORTHOGEOMYS HISPIDUS	APP	TA	L	SH	N	N	1	N	BR	N
F045	1D	132	210	4	2006	1	CF. CERVIDAE	APP	PH	N	SH	N	N	5	N	BR	Y
F046	1D	132	210	4	2006	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	Y
F047	1B	161	23K	3	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	Y
F048	1B	161	23K	3	2006	1	MAMMALIA	APP	IL	N	FR	N	N	5	N	CB	N
F049	1B	157	22K	2	2006	1	SERPENTES	AX	VT	N	CO	N	N	3	N	CB	N
F050	1B	157	22K	2	2006	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	CB	N
F051	1B	157	22K	2	2006	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	Y
F052	1B	157	22K	2	2006	1	MAMMALIA	AX	RB	N	FR	N	N	5	N	CB	N
F053	1B	157	22K	2	2006	1	AVES	AX	SRB	N	DSH	N	N	3	N	CB	N
F054	1B	139	24K	2	2006	2	BRACHYURA	EXO	CLW	N	CO	N	N	2	N	BR, CB?	N
F055	1B	139	24K	2	2006	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR	Y
F056	1B	139	24K	2	2006	1	RODENTIA	AX	RB	R	CO	N	N	1	N	BR	N
F057	1B	139	24K	2	2006	1	CF. RODENTIA	APP	LB	N	FR	N	N	3	N	BR, G?	N
F058	1B	139	24K	2	2006	1	SAURIA	APP	RD	N	SH	N	N	2	N	BR	N
F059	1994	11	6	3	1994	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	EX	BR	Y
F060	1994	11	6	3	1994	8	AVES	APP	LB	N	FR	N	N	4	N	N	Y
F061	1994	11	6	3	1994	1	DIDELPHIDAE	AX	CE	N	CO	S	N	3	N	N	Y
F062	1994	11	6	3	1994	2	CF. CERVIDAE	APP	MP	N	FR	N	N	5	N	CB	Y
F063	1994	11	6	3	1994	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	CB	N
F064	1994	11	6	3	1994	1	CF. RODENTIA	APP	IL	R	SH	N	N	3	N	BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F065	1994	11	6	3	1994	1	MAMMALIA	APP	RD	R	PSS	N	N	5	N	BR	Y
F066	1994	11	6	3	1994	1	AVES	APP	LB	N	SH	N	N	4	N	BR	Y
F067	1994	11	6	3	1994	1	AVES	AX	RB	L	SH	N	N	4	N	BR	Y
F068	1994	11	6	3	1994	1	MAMMALIA	APP	HM	N	SH	N	N	3	N	BR	Y
F069	1A	108	10G	2	2006	1	CF. KINOSTERNIDAE	TRT	CRP	N	SH	N	N	2	N	BR, CB	Y
F070	1A	108	10G	2	2006	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR, G?	Y
F071	1D	138	21O	4	2006	1	AVES	APP	PH	N	PSH	N	N	5	N	N	Y
F072	1D	122	21O	1	2006	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	EX	BR	Y
F073	1D	122	21O	1	2006	2	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR	N
F074	1D	122	21O	1	2006	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	Y
F075	1D	122	21O	1	2006	1	CF. CRICETIDAE	APP	LB	N	FR	N	N	1	N	BR, CB	Y
F076	1D	122	21O	1	2006	1	MAMMALIA	APP	MP	N	CO	S	N	3	N	BR, CB	Y
F077	1D	122	21O	1	2006	1	MAMMALIA	APP	MP	N	PSS	N	N	3	N	BR	Y
F078	1D	122	21O	1	2006	1	MAMMALIA	AX	RB	N	FR	N	N	3	N	BR	Y
F079	1D	127	21O	2	2006	2	BRACHYURA	EXO	CLW	N	SH	N	N	2	N	BR, CB	N
F080	1F	621	14H	3	2015	1	CERVIDAE	AX	LU	N	CO	A	N	5	N	BR, CB	Y
F081	1B	131	23H	3	2006	1	TESTUDINES	APP	LB	N	DSH	N	N	2	N	BR, CB	Y
F082	1B	131	23H	3	2006	1	CF. STROMBIDAE	MS	MS	N	FR	N	N	N	PO	BR, CB	Y?
F083	1B	131	23H	3	2006	2	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	3	N	BR	Y
F084	1B	131	23H	3	2006	3	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	3	N	CB	Y
F085	1A	143	10G	2	2006	1	BRACHYURA	EXO	CLW	N	SH	N	N	2	N	BR, CB	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F086	1A	143	10G	2	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F087	1A	143	10G	2	2006	1	AVES	APP	TN	N	CO	N	N	5	EX	BR?	N
F088	1A	143	10G	2	2006	3	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	EX	BR	Y
F089	1G	635	16G	4	2015	2	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	CB	Y
F090	1G	635	16G	4	2015	1	MAMMALIA	APP	FM	L	FR	N	N	3	N	BR, CB	Y
F091	1G	635	16G	4	2015	1	MAMMALIA	APP	LB	N	SH	N	N	3	N	BR, CB	Y
F092	1G	636	17F	4	2015	1	PACHYCHILUS GLAPHYRUS	FS	FS	N	FR	N	N	NA	N	CB	N
F093	1G	636	17F	4	2015	1	NEPHRONAIAS SP.	FS	FS	L	CO	N	N	NA	N	CB	N
F094	1G	636	17F	4	2015	1	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	N	CB	N
F095	1A	36	13G	2	2005	1	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	N	N	N
F096	1A	36	13G	2	2005	1	CF. STROMBIDAE	MS	MS	N	FR	N	N	NA	N	CB	N
F097	1A	3	13F	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	G	Y
F098	1A	3	13F	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N
F099	1A	3	13F	1	2005	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	EX	N	N
F100	1B	150	22K	1	2006	2	BRACHYURA	EXO	CLW	N	CO	N	N	NA	RE	N	Y
F101	1B	150	22K	1	2006	1	BRACHYURA	EXO	CLW	N	SH	N	N	NA	RE	CB	N
F102	1B	150	22K	1	2006	4	BRACHYURA	EXO	CLW	N	FR	N	N	NA	RE	N	N
F103	1B	150	22K	1	2006	1	CF. ODOCOILEUS VIRGINIANUS	CRN	MO	L	CO	A	N	5	N	N	Y
F104	1B	150	22K	1	2006	14	ORTHOGEOMYS HISPIDUS	CRN	CRN	N	CO	A	N	1	N	N	Y
F105	1B	150	22K	1	2006	4	MAMMALIA	CRN	CRN	N	FR	N	N	5	N	BR	N
F106	1B	150	22K	1	2006	1	CF. ARTIODACTYLA	CRN	CRN	N	FR	N	N	5	N	BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F107	1B	150	22K	1	2006	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	N
F108	1B	150	22K	1	2006	1	RODENTIA	APP	LB	N	SH	N	N	1	N	BR	N
F109	1B	150	22K	1	2006	1	CF. CROCODILIA	CRN	MX	N	FR	N	N	5	N	BR	N?
F110	1B	150	22K	1	2006	1	MAMMALIA	APP	TA	L	DSE	S	N	3	N	BR	N
F111	1B	150	22K	1	2006	1	IGUANIDAE	CRN	CCD	N	CO	N	N	3	N	BR	N
F112	1B	150	22K	1	2006	1	MAMMALIA	AX	RB	N	DSS	N	N	5	N	BR	N
F113	1B	150	22K	1	2006	1	CF. KINOSTERNIDAE	TRT	NCRP	N	FR	N	N	2	N	CB	N
F114	1B	150	22K	1	2006	14	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F115	1B	150	22K	1	2006	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F116	1B	150	22K	1	2006	7	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F117	1B	150	22K	1	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F118	1B	150	22K	1	2006	1	TESTUDINES	APP	LB	N	FR	N	N	3	N	CB	N
F119	1G	651	17F	5	2015	1	BRACHYURA	EXO	CLW	N	CO	N	N	NA	EX	BR?	Y
F120	1G	651	17F	5	2015	1	TESTUDINES	APP	TA	R	PSH	S	N	2	N	BR, CB	Y
F121	1G	651	17F	5	2015	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR, G?	N
F122	1G	604	16G	1	2015	1	CF. LOBATUS RANINUS	MS	MS	N	OTL, FR	N	N	NA	N	BR	Y
F123	1F	620	15I	2	2015	2	NEPHRONAIAS SP.	FS	FS	L	CO	N	N	NA	N	N	N
F124	1F	620	15I	2	2015	12	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	N	N
F125	1G	MISSING	17G	4	2015	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	NA	N	BR, CB	Y
F126	1G	MISSING	17G	4	2015	1	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	BR, CB	N
F127	1G	661	17F	6	2015	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	NA	N	BR	Y
F128	1G	661	17F	6	2015	5	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	N	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F129	1F	634	15I	3	2015	3	NEPHRONAIAS SP.	FS	FS	L	CO	N	N	NA	N	N	Y
F130	1F	634	15I	3	2015	1	PACHYCHILUS GLAPHYRUS	FS	FS	N	CO	N	N	NA	EX	LO, BR	Y
F131	1F	620	15F?	2	2015	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	NA	N	N	Y
F132	1F	620	15F?	2	2015	1	PACHYCHILUS GLAPHYRUS	FS	FS	N	FR	N	N	NA	EX	BR	N
F133	1F	601	15H	1	2015	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	NA	N	BR?	Y
F134	1F	601	15H	1	2015	3	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	N	N
F135	1F	601	15H	1	2015	1	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	N	BR, CB	N
F136	1F	601	15H	1	2015	3	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	N	N	N
F137	1F	644	15H	-	2015	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	NA	N	BR?	Y
F138	1F	627	15H	3	2015	2	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	BR	Y
F139	1G	606	17F	1	2015	1	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	N	N	N
F140	1G	606	17F	1	2015	1	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	BR	N
F141	1G	606	17F	1	2015	1	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	N	N
F142	1F	618	14H	2	2015	1	BRACHYURA	EXO	CLW	N	CO	N	N	2	N	N	N
F143	1B	133	24K	1	2006	1	SERPENTES	AX	VT	N	CO	N	N	3	N	CB	Y
F144	1G	610	16G	2	2015	2	AVES	APP	LB	N	FR	N	N	4	N	G	N
F145	1G	610	16G	2	2015	1	TAYASSUIDAE	CRN	MO/PM	N	FR	S	N	5	N	BR	Y
F146	1G	610	16G	2	2015	1	LUNARCA OVALIS	MS	MS	R	CO	N	N	NA	N	PO?	Y
F147	1G	610	16G	2	2015	1	CF. STROMBIDAE	MS	MS	N	FR	N	N	NA	N	G?	Y
F148	1G	659	16F	5	2015	5	BRACHYURA	EXO	CLW	N	CO	N	N	NA	N	N	N
F149	1G	659	16F	5	2015	2	BRACHYURA	EXO	CLW	N	CO	N	N	NA	N	BR, CB	N
F150	1G	659	16F	5	2015	2	BRACHYURA	EXO	CLW	N	CO	N	N	NA	N	CB	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F151	1G	659	16F	5	2015	1	BRACHYURA	EXO	CLW	N	SH	N	N	NA	N	N	N
F152	1G	659	16F	5	2015	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F153	1G	659	16F	5	2015	1	CF. RODENTIA	APP	LB	N	SH	N	N	1	N	BR	N
F154	1G	609	17G	2	2015	1	TAYASSUIDAE	CRN	FN	L	CO	S	N	5	EX	N	Y
F155	1G	609	17G	2	2015	1	CF. ARTIODACTYLA	APP	TA	N	FR	N	N	5	N	BR, CB	Y
F156	1G	609	17G	2	2015	1	AVES	APP	LB	N	FR	N	N	4	N	N	Y?
F157	1G	609	17G	2	2015	2	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	N
F158	1G	609	17G	2	2015	1	TESTUDINES	TRT	CRP	N	FR	N	N	3	N	N	Y
F159	1G	607	17F	2	2015	1	CF. CASSIS SP.	MS	MS	N	OTL, FR	N	N	N	N	BR	Y
F160	1G	608	16F	2	2015	1	BRACHYURA	EXO	CLW	N	CO	N	N	NA	N	BR, CB	N
F161	1G	608	16F	2	2015	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	Y
F162	1G	608	16F	2	2015	1	CF. CERVIDAE	APP	TA	R	FR	N	N	5	EX	N	Y
F163	1G	608	16F	2	2015	1	CF. CERVIDAE	APP	LB	N	FR	N	N	5	EX	BR, G	Y
F164	1G	608	16F	2	2015	1	MAMMALIA	AX	CD	N	CO	S	N	4	N	BR	Y
F165	1G	608	16F	2	2015	2	CF. ARTIODACTYLA	APP	PH	N	FR	A	N	5	N	BR	N
F166	1G	608	16F	2	2015	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F167	1G	608	16F	2	2015	1	AVES	APP	LB	N	FR	N	N	4	EX	BR	N
F168	1G	659	16F	5	2015	1	NEPHRONAIAS SP.	FS	FS	L	CO	N	N	NA	N	BR	N
F169	1G	659	16F	5	2015	1	NEPHRONAIAS SP.	FS	FS	L	CO	N	N	NA	N	N	N
F170	1G	659	16F	5	2015	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	NA	N	N	N
F171	1G	659	16F	5	2015	9	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	N	N
F172	1G	663	17G	6	2015	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	NA	N	N	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F173	1F	621	14H	3	2015	1	CF. CRICETIDAE	APP	FM	L	CO	S	N	1	N	N	N
F174	1F	621	14H	3	2015	1	AVES	APP	CCD	L	CO	A	N	3	N	BR	Y
F175	1F	621	14H	3	2015	1	SQUAMATA	AX	VT	N	CO	A	N	1	N	BR	Y
F176	1B	147	23K	3	2006	1	AVES	APP	TBT	L	SH	N	N	2	N	BR	N
F177	1B	147	23K	3	2006	1	MAMMALIA	APP	LB	L	FR	N	N	5	N	BR, CB	Y
F178	1G	626	16G	3	2015	1	DIDELPHIDAE	CRN	DT	L	TR	N	N	3	RG, ID?	BR	Y
F179	1G	626	16G	3	2015	1	CF. RODENTIA	APP	HM	L	SH	N	N	1	N	BR	N
F180	1E	620	15I	3	2015	5	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F181	1E	620	15I	3	2015	2	RODENTIA	APP	LB	N	FR	N	N	1	N	N	N
F182	1E	620	15I	3	2015	1	RODENTIA	APP	FM	R	SH	N	N	1	N	N	N
F183	1E	620	15I	3	2015	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F184	1E	620	15I	3	2015	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR	N
F185	1G	623	17G	3	2015	4	TAYASSUIDAE	AX	RB	R	PSH	N	N	5	N	BR	Y
F186	1G	623	17G	3	2015	1	DASYPUS NOVEMCINCTUS	APP	MC	R		N	N	3	N	BR	N
F187	1G	645	16F	4	2015	1	CF. MELEAGRIS SP.	APP	PH	N	PSH	N	N	5	EX	CB	Y?
F188	1A	36	13G	2	2005	1	CUNICULUS PACA	CRN	MO	R	CO	N	N	3	N	BR?	Y
F189	1A	36	13G	2	2005	1	MAMMALIA	APP	PH	N	DSS	S	N	5	EX	CB	Y
F190	1A	36	13G	2	2005	1	MAMMALIA	AX	RB	R	DSS	N	N	5	EX	N	Y
F191	1A	2	12G	1	2005	1	CF. KINOSTERNIDAE	TRT	PLS	N	FR	N	N	3	N	BR, CB	Y
F192	1994	14	8	1	1994	3	AVES	AX	SN	N	CO	N	N	1	N	N	Y?
F193	1994	14	8	1	1994	3	MAMMALIA	APP	LB	N	SH	N	N	3	N	BR, CB	Y?
F194	1A	47	12G	3	2005	1	MAMMALIA	APP	MP	N	SH	N	N	3	N	BR	Y

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F195	1A	47	12G	3	2005	1	MAMMALIA	APP	LB	N	FR	N	N	3	EX	BR	Y
F196	1A	49	13G	3	2005	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	Y
F197	1A	49	13G	3	2005	1	MAMMALIA	AX	RB	N	FR	N	N	3	EX	BR	N
F198	1A	49	13G	3	2005	1	CUNICULUS PACA	CRN	CRN	R	FR	N	N	3	EX	BR	Y
F199	1A	4	13G	1	2005	1	BRACHYURA	EXO	CLW	N	SH	N	N	2	EX, COL	N	Y
F200	1A	4	13G	1	2005	1	AVES	APP	TBT	N	DSE	N	N	5	EX	BR?	Y
F201	1A	4	13G	1	2005	1	MAMMALIA	APP	LB	N	SH	N	N	3	N	BR	Y
F202	1A	3	13F	1	2005	2	MAMMALIA	AX	CD	N	CN	S	N	3	EX	BR	N
F203	1A	3	13F	1	2005	2	AVES	APP	LB	N	FR	N	N	5	N	G	Y
F204	1A	3	13F	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	G	Y
F205	1A	3	13F	1	2005	1	CF. KINOSTERNIDAE	TRT	PCRP	N	FR	N	N	2	N	BR	Y
F206	1A	3	13F	1	2005	10	AVES	APP	LB	N	FR	N	N	5	N	N	N
F207	1A	3	13F	1	2005	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F208	1A	3	13F	1	2005	1	BRACHYURA	EXO	CLW	N	CO	N	N	2	N	BR	Y
F209	1A	3	12F	3	2005	1	MAMMALIA	APP	UL	L	SH	N	N	3	N	BR, CB	Y
F210	1A	3	12F	3	2005	1	AVES	APP	LB	N	FR	N	N	4	N	G	N
F211	1G	605	17G	1	2015	1	CF. CERVIDAE	APP	TA	N	FR	N	N	5	RG	BR	Y
F212	1A	49	13G	3	2005	1	CF. CERVIDAE	APP	LB	N	FR	N	N	5	N	BR, G	Y
F213	1A	49	13G	3	2005	2	RODENTIA	APP	LB	N	FR	N	N	1	N	N	N
F214	1A	49	13G	3	2005	1	RODENTIA	APP	FM	L	PSH	N	N	3	N	CB, CL	N
F215	1A	49	13G	3	2005	1	DASYPUS NOVEMCINCTUS	APP	MT	L	CO	N	N	3	N	BR, CB	Y
F216	1A	49	13G	3	2005	1	MAMMALIA	APP	RD	N	PSH	N	N	3	N	BR, CB	Y

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F217	1A	49	13G	3	2005	1	MAMMALIA	AX	RB	N	PSH	S	N	5	N	CB	Y
F218	1A	4	13G	1	2005	1	AVES	APP	HM	R	SH	N	N	4	EX	G	Y
F219	1A	4	13G	1	2005	1	SQUAMATA	AX	VT	N	CO	N	N	2	EX	N	N
F220	1A	4	13G	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	3	EX	BR	N
F221	1A	4	13G	1	2005	1	MAMMALIA	AX	VT	N	CN	N	N	4	EX	N	N
F222	1A	4	13G	1	2005	1	MAMMALIA	AX	RB	L	FR	N	N	3	EX	N	N
F223	1A	4	13G	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	Y
F224	1G	615	17F	3	2015	1	BRACHYURA	EXO	CLW	N	FR	N	N	2	N	CB	N
F225	1G	615	17F	3	2015	1	CF. GALLIFORMES	APP	PH	N	DSH	N	N	5	N	EX	N
F226	1G	615	17F	3	2015	1	MAMMALIA	AX	RB	R	DSS	N	N	3	EX	BR	N
F227	1G	615	17F	3	2015	1	MAMMALIA	APP	LB	N	FR	N	N	3	EX	BR	Y
F228	1G	615	17F	3	2015	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR	Y
F229	1G	615	17F	3	2015	1	BRACHYURA	EXO	CLW	N	CO	N	N	2	N	N	N
F230	1G	615	17F	3	2015	1	ANURA	APP	HM	R	DSH	N	N	2	N	CB	N
F231	1G	615	17F	3	2015	1	DASYPUS NOVEMCINCTUS	APP	RD	L	PSS	N	N	3	N	BR, CB	N
F232	1G	623	17G	3	2015	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, G?	Y?
F233	1G	636	17F	4	2015	1	BRACHYURA	EXO	CLW	N	FR	N	N	2	N	BR, CB	Y
F234	1G	636	17F	4	2015	1	DASYPUS NOVEMCINCTUS	APP	PHT	N	CO	A	N	3	N	BR, CB	N
F235	1B	126	23H	3	2006	1	AVES	APP	LB	N	SH	N	N	4	N	CB	Y
F236	1B	126	23H	3	2006	1	MAMMALIA	APP	LB	N	SH	N	N	3	N	CB	N
F237	1B	126	23H	3	2006	1	MAMMALIA	APP	PH	N	SH	N	N	3	N	CB	N
F238	1B	126	23H	3	2006	1	MAMMALIA	AX	RB	R	SH	N	N	3	N	BR, CB	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F239	1B	126	23H	3	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR, CB	N
F240	1B	44	24H	2	2005	1	NEPHRONAIAS SP.	FS	FS	L	CO	N	N	NA	N	N	Y
F241	1B	139	24K	2	2006	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	N
F242	1B	139	24K	2	2006	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR	N
F243	1B	139	24K	2	2006	1	ORTHOGEOMYS HISPIDUS	APP	HM	R	CO	S	N	1	N	BR	Y
F244	1D	145	21O	6	2006	29	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	N
F245	1D	145	21O	6	2006	37	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR	Y
F246	1D	145	21O	6	2006	1	BRACHYURA	EXO	CLW	N	FR	N	N	2	N	BR, CB	Y
F247	1D	145	21O	6	2006	1	BRACHYURA	EXO	CLW	N	SH	N	N	2	N	BR, CB	Y
F248	1D	145	21O	6	2006	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	Y
F249	1D	145	21O	6	2006	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR	N
F250	1D	145	21O	6	2006	1	CF. KINOSTERNIDAE	AX	CE	N	CO	S	N	2	EX	BR	N
F251	1D	145	21O	6	2006	1	TAYASSUIDAE	APP	MP	N	DSE	S	N	5	EX, RG	BR, CB?	N
F252	1D	145	21O	6	2006	5	SQUAMATA	AX	VT	N	CO	A	N	3	MD?	BR	Y
F253	1D	145	21O	6	2006	1	DIDELPHIDAE	AX	CE	N	CO	S	N	3	EX	BR	Y
F254	1D	145	21O	6	2006	1	DIDELPHIDAE	AX	TH	N	CO	S	N	3	N	BR	Y
F255	1D	145	21O	6	2006	1	CF. TAYASSUIDAE	AX	LUM	N	CEN	S	N	5	EX, MD	N	N
F256	1D	145	21O	6	2006	2	CF. TAYASSUIDAE	AX	VT	N	CEP	S	N	5	N	BR	N
F257	1D	145	21O	6	2006	2	CUNICULUS PACA	AX	CE	N	CO	S	N	3	N	BR	Y
F258	1D	145	21O	6	2006	4	MAMMALIA	AX	VT	N	TSP	N	N	3	N	BR	N
F259	1D	145	21O	6	2006	2	MAMMALIA	AX	AT	N	FR	A	N	3	N	BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F260	1D	145	21O	6	2006	1	MAMMALIA	AX	LUM	N	TSP	N	N	3	N	BR, CB	N
F261	1D	145	21O	6	2006	1	CF. DIDELPHIDAE	AX	VT	N	CEN	S	N	3	EX	N	N
F262	1D	145	21O	6	2006	1	CF. DIDELPHIDAE	AX	VT	N	FR	S	N	3	EX	N	N
F263	1D	145	21O	6	2006	1	MAMMALIA	AX	LUM	N	CO	A	N	3	N	BR, CB	Y?
F264	1D	145	21O	6	2006	1	CUNICULUS PACA	APP	CAL	L	CO	S	N	3	N	N?	Y
F265	1D	145	21O	6	2006	29	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	??	BR	Y
F266	1D	145	21O	6	2006	1	CUNICULUS PACA	CRN	IN	N	SH	N	N	3	N	BR	Y
F267	1D	145	21O	6	2006	1	RODENTIA	APP	FB	N	SH	N	N	3	MD?	PO?	N
F268	1D	145	21O	6	2006	17	MAMMALIA	AX	RB	N	FR	N	N	3	N	BR?	N
F269	1D	145	21O	6	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	Y
F270	1D	145	21O	6	2006	5	CF. TAPIRUS BAIRDII	APP	LB	N	FR	S	N	5	EX	BR	N
F271	1D	145	21O	6	2006	1	CF. CRICETIDAE	APP	FM	L	CO	S	N	1	N	BR?	N
F272	1D	145	21O	6	2006	1	CF. CRICETIDAE	APP	HM	L	SH	N	N	1	N	BR, CB	N
F273	1D	145	21O	6	2006	1	CF. DIDELPHIDAE	APP	TA	R	PSH	S	N	3	N	BR, CB	N
F274	1D	145	21O	6	2006	1	DASYPUS NOVEMCINCTUS	APP	UL	L	SH	N	N	3	N	BR	Y?
F275	1D	145	21O	6	2006	1	CUNICULUS PACA	APP	MP	N	CO	A	N	3	N	BR	Y
F276	1D	145	21O	6	2006	8	MAMMALIA	AX	RB	N	SH	N	N	3	MD?	BR	N
F277	1D	145	21O	6	2006	1	MAMMALIA	AX	LUM	R	TSP	N	N	3	MD?	BR	N
F278	1D	145	21O	6	2006	22	MAMMALIA	AX	VT	N	FR	N	N	3	N	BR?	N
F279	1D	145	21O	6	2006	4	CF. ARTIODACTYLA	AX	RB	N	FR	N	N	5	EX, MD?	BR	N
F280	1D	145	21O	6	2006	14	MAMMALIA	APP	LB	N	FR	N	N	5	MD?	BR	Y
F281	1D	145	21O	6	2006	1	MAMMALIA	APP	LB	N	DSS	S	N	5	N	BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F282	1D	145	21O	6	2006	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F283	1D	145	21O	6	2006	4	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F284	1D	145	21O	6	2006	2	CF. CERVIDAE	APP	MP	N	FR	N	N	5	MD?	BR	Y
F285	1D	145	21O	6	2006	29	MAMMALIA	APP	LB	N	FR	N	N	5	MD	N	N
F286	1D	145	21O	6	2006	1	MAMMALIA	CRN	DT	N	FR	N	N	3	MD	BR	N
F287	1D	145	21O	6	2006	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR, PO?	N
F288	1D	145	21O	6	2006	2	MAMMALIA	APP	SC	N	FR	N	N	3	N	BR	N
F289	1D	145	21O	6	2006	1	RODENTIA	APP	SC	L	SH	N	N	1	N	BR	N
F290	1D	145	21O	6	2006	1	RODENTIA	APP	IN	N	FR	N	N	1	N	BR	N
F291	1D	145	21O	6	2006	1	AVES	APP	LB	N	FR	N	N	3	N	N	N
F292	1D	145	21O	6	2006	1	CF. BRADYPUS SP.	APP	FB	N	DSS	S	N	5	WEA, MD, IG	N	Y
F293	1D	145	21O	6	2006	1	TAYASSUIDAE	APP	SC	R	SH	S	N	5	MD, CG?	BR, PO?	Y
F294	1D	145	21O	6	2006	1	TAYASSUIDAE	APP	FM	R	SH	N	N	5	CG, SC, PO?	BR	Y
F295	1D	145	21O	6	2006	1	TAYASSUIDAE	APP	MC	L	SH	N	N	5	MD	BR	Y
F296	1D	145	21O	6	2006	1	CF. CERVIDAE	APP	PB	R	FR	N	N	5	N	BR, CB	Y
F297	1D	145	21O	6	2006	1	CF. TAYASSUIDAE	APP	FM	L	DSE	N	N	5	MD?	BR, CB?	Y
F298	1D	145	21O	6	2006	1	CF. TAYASSUIDAE	APP	FM	R	DSS	N	N	5	EX	BR	Y
F299	1D	145	21O	6	2006	1	CF. TAYASSUIDAE	APP	HM	R	DSE	N	N	5	EX, IG	BR	Y
F300	1D	145	21O	6	2006	3	TAYASSUIDAE	APP	FM	R	SH	N	N	5	N	BR	Y
F301	1D	145	21O	6	2006	1	CF. CERVIDAE	APP	TA	N	FR	N	N	5	N	BR, CM, G?	Y
F302	1D	145	21O	6	2006	1	CF. ARTIODACTYLA	APP	LB	N	FR	N	N	5	CG	BR	Y

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F303	1D	145	21O	6	2006	1	CF. TAYASSUIDAE	APP	RD	L	DSS	A	N	5	N	BR	N
F304	1D	145	21O	6	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F305	1D	145	21O	6	2006	1	TAYASSUIDAE	APP	TA	R	DSE	S	N	5	N	BR	N
F306	1D	145	21O	6	2006	4	CF. TAYASSUIDAE	CRN	CFR	N	FR	N	N	5	MD?	BR	N
F307	1D	145	21O	6	2006	3	MAMMALIA	APP	LB	N	FR	N	N	5	CONCRETE	BR	N
F308	1D	145	21O	6	2006	1	SQUAMATA	AX	VT	N	FR	N	N	3	CONCRETE	BR	N
F309	1D	145	21O	6	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	PO, CONCRETE	BR	N
F310	1D	145	21O	6	2006	2	MAMMALIA	APP	SC	L	DSS	A	N	3	N	BR	Y
F311	1D	145	21O	6	2006	1	DASYPUS NOVEMCINCTUS	APP	PHT	L	CO	N	N	3	N	BR, CB	N
F312	1D	145	21O	6	2006	1	MAMMALIA	APP	PHS	L	DSS	N	N	3	N	BR	N
F313	1D	145	21O	6	2006	1	MAMMALIA	APP	PHS	L	DSS	N	N	3	N	BR, CB	N
F314	1D	145	21O	6	2006	1	MAMMALIA	APP	MP	L	DSS	N	N	3	N	BR, CB	N
F315	1D	145	21O	6	2006	1	MAMMALIA	APP	POD	L	DSS	N	N	3	N	BR	N
F316	1A	36	13G	NA	2005	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	N
F317	1A	36	13G	NA	2005	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR	Y
F318	1A	36	13G	NA	2005	1	BRACHYURA	EXO	CLW	N	FR	N	N	2	N	CB	N
F319	1A	36	13G	NA	2005	5	BRACHYURA	EXO	CLW	N	FR	N	N	2	N	N	N
F320	1A	36	13G	NA	2005	10	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F321	1A	36	13G	NA	2005	1	MAMMALIA	AX	TH	N	SPP	N	N	3	N	BR	N
F322	1A	36	13G	NA	2005	2	MAMMALIA	AX	RB	N	FR	N	N	5	N	BR	N
F323	1A	36	13G	NA	2005	1	MAMMALIA	AX	RB	N	SH	N	N	5	N	CB, CL	N
F324	1A	36	13G	NA	2005	1	AVES	APP	LB	N	FR	N	N	5	N	G	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F325	1A	36	13G	NA	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F326	1A	36	13G	NA	2005	1	MAMMALIA	APP	LB	N	SH	N	N	3	N	BR	N
F327	1B	0	NA	3 & 4	2005	2	BRACHYURA	EXO	CLW	N	FR	N	N	2	N	BR	N
F328	1B	0	NA	3 & 4	2005	1	BRACHYURA	EXO	CLW	N	CO	N	N	2	N	BR, CB	Y
F329	1B	0	NA	3 & 4	2005	3	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	Y
F330	1B	0	NA	3 & 4	2005	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	N
F331	1B	0	NA	3 & 4	2005	2	CF. TAPIRUS BAIRDII	APP	LB	N	FR	N	N	5	EX	BR	N
F332	1B	0	NA	3 & 4	2005	1	CF. RODENTIA	APP	RD	L	PSH	N	N	3	N	CB	N
F333	1B	0	NA	3 & 4	2005	1	TESTUDINES	AX	VT	N	CO	A	N	2	N	BR	N
F334	1A	1	12F	1	2005	2	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	N
F335	1A	1	12F	1	2005	1	AVES	CRN	CFR	N	FR	N	N	5	N	N	N
F336	1A	1	12F	1	2005	5	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F337	1A	1	12F	1	2005	1	MAMMALIA	APP	SC	R	SH	N	N	1	EX	N	N
F338	1A	1	12F	1	2005	1	MAMMALIA	CRN	CFR	N	FR	N	N	5	N	BR	N
F339	1B	137	23K	2	2006	1	MAMMALIA	APP	RD	L	PSH	A	N	3	N	BR	N
F340	1B	137	23K	2	2006	7	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F341	1B	137	23K	2	2006	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F342	1B	137	23K	2	2006	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F343	1B	137	23K	2	2006	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	N	N
F344	1B	137	23K	2	2006	2	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	N	N
F345	1B	137	23K	2	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BCP, CM, BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F346	1A	73	13F	4	2005	5	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F347	1A	73	13F	4	2005	1	AVES	APP	LB	N	SH	N	N	5	N	N	N
F348	1A	2	12G	1	2005	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	N	N
F349	1A	2	12G	1	2005	1	MAMMALIA	AX	RB	L	PSS	N	N	3	N	BR	N
F350	1A	2	12G	1	2005	1	MAMMALIA	AX	RB	R	SH	N	N	3	EX	N	N
F351	1A	2	12G	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F352	1A	2	12G	1	2005	10	MAMMALIA	AX	VT	N	FR	N	N	3	N	N	N
F353	1A	34	12G	2	2005	1	AVES	APP	PH	N	CO	N	N	5	RE, DG?, EX	N	Y?
F354	1A	34	12G	2	2005	1	BRACHYURA	EXO	CLW	N	CO	N	N	2	N	BR, CB	N
F355	1A	34	12G	2	2005	1	CERVIDAE	APP	UL	L	SH	N	N	5	N	BR, CB	N
F356	1A	34	12G	2	2005	1	CF. CERVIDAE	AX	RB	L	PSS	S	N	5	N	BR, CB	N
F357	1A	34	12G	2	2005	1	CF. CERVIDAE	AX	RB	R	SH	N	N	5	N	BR, CB	N
F358	1A	34	12G	2	2005	1	CF. CERVIDAE	EXO	CLW	N	PSS	N	N	2	N	BR, CB, PO?	N
F359	1A	34	12G	2	2005	1	AVES	AX	RB	L	SH	N	N	5	N	N	Y
F360	1A	34	12G	2	2005	1	MAMMALIA	APP	LB	N	SH	N	N	5	N	BR, CB	N
F361	1A	34	12G	2	2005	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F362	1A	34	12G	2	2005	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F363	1A	34	12G	2	2005	1	MAMMALIA	APP	PHT	N	CO	N	N	5	PO?	N	N
F364	1A	48	13F	3	2005	5	MAMMALIA	AX	VT	N	FR	N	N	5	EX	N	N
F365	1A	48	13F	3	2005	4	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	N
F366	1A	48	13F	3	2005	1	MAMMALIA	APP	TA	N	FR	N	N	5	N	N	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F367	1A	51	12F	B36B	2005	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR, CB	N
F368	1A	51	12F	B36B	2005	1	MAMMALIA	AX	VT	N	FR	N	N	3	EX	BR	N
F369	1A	51	12F	B36B	2005	1	MAMMALIA	AX	RB	N	SH	N	N	3	EX	BR	N
F370	1A	51	12F	B36B	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR	N
F371	1A	51	12F	B36B	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F372	1A	B38	B38	B38	2005	3	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR, CB	N
F373	1A	B38	B38	B38	2005	1	DASYPUS NOVEMCINCTUS	APP	RD	R	SH	N	N	3	PO	CB	N
F374	1A	B38	B38	B38	2005	1	DASYPUS NOVEMCINCTUS	APP	CAL	L	CO	S	N	3	EX	BR, CB	N
F375	1A	B38	B38	B38	2005	1	CF. ODOCOILEUS VIRGINIANUS	APP	MT	N	FR	N	N	5	N	BR	N
F376	1A	B38	B38	B38	2005	1	CF. CERVIDAE	APP	PHF	N	FR	N	N	5	N	BR, CB	N
F377	1A	B38	B38	B38	2005	1	CERVIDAE	APP	MC	L	FR	N	N	5	N	BR	N
F378	1A	B38	B38	B38	2005	2	CERVIDAE	AX	VT	N	TSP	N	N	5	N	N	N
F379	1A	B38	B38	B38	2005	4	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F380	1A	B38	B38	B38	2005	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, G	N
F381	1A	B38	B38	B38	2005	3	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR	N
F382	1A	B38	B38	B38	2005	1	MAMMALIA	APP	LB	N	SH	N	N	3	N	BR, CB, G?	N
F383	1A	B38	B38	B38	2005	1	CF. CERVIDAE	AX	RB	R	PSS	N	N	5	N	BR, CB	N
F384	1A	B38	B38	B38	2005	1	AVES	APP	PH	N	SH	N	N	5	N	BR	N
F385	1D	132	21O	3	2006	13	MAMMALIA	AX	RB	N	FR	N	N	5	N	BR	N
F386	1D	132	21O	3	2006	1	MAMMALIA	AX	CD	N	CO	A	N	3	N	BR	N
F387	1D	132	21O	3	2006	1	MAMMALIA	APP	TA	N	SH	N	N	3	N	BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F388	1D	132	21O	3	2006	1	MAMMALIA	AX	VT	N	FR	N	N	3	N	BR	N
F389	1D	132	21O	3	2006	1	MAMMALIA	AX	RB	N	SH	N	N	3	N	BR	N
F390	1A	51	12F	3	2005	1	MAMMALIA	AX	VT	N	TSP	S	N	4	N	BR	N
F391	1A	51	12F	3	2005	1	CUNICULUS PACA	APP	MP	N	DSH	N	N	3	N	BR	Y
F392	1A	51	12F	3	2005	1	RODENTIA	APP	LB	N	SH	N	N	1	N	BR	N
F393	1A	51	12F	3	2005	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR	N
F394	1A	51	12F	3	2005	1	MAMMALIA	AX	VT	N	FR	N	N	3	N	BR	N
F395	1F	657	17G	5	2015	2	BRACHYURA	EXO	CLW	N	CO	N	N	2	N	N	Y
F396	1F	657	17G	5	2015	1	BRACHYURA	EXO	CLW	N	DSH	N	N	2	N	N	N
F397	1F	657	17G	5	2015	1	DIDELPHIDAE	CRN	DT	L	TW	S	N	3	RG	BR	Y
F398	1F	657	17G	5	2015	4	MAMMALIA	APP	LB	N	FR	N	N	5	RG	BR, CB	N
F399	1F	657	17G	5	2015	1	RODENTIA	CRN	IN	N	FR	N	N	3	N	BR	N
F400	1F	657	17G	5	2015	1	MAMMALIA	AX	RB	N	SH	N	N	3	N	BR, CB	N
F401	1G	607	17F	2	2015	1	AVES	CRN	MX/PMX	N	CO	N	N	3	N	N	Y
F402	1G	607	17F	2	2015	1	AVES	CRN	MD	N	CO	N	N	3	N	N	Y
F403	1G	607	17F	2	2015	1	AVES	CRN	OCP	N	FR	N	N	3	N	N	N
F404	1G	607	17F	2	2015	1	AVES	AX	RB	N	SH	N	N	3	CG?	N	N
F405	1G	607	17F	2	2015	11	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F406	1G	607	17F	2	2015	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	Y
F407	1G	607	17F	2	2015	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F408	1G	607	17F	2	2015	2	MAMMALIA	APP	LB	N	FR	N	N	5	EX, RE	N	N
F409	1G	607	17F	2	2015	8	MAMMALIA	APP	LB	N	FR	N	N	5	CG, RG?	N	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F410	1G	607	17F	2	2015	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	ED	N
F411	1G	607	17F	2	2015	1	MAMMALIA	AX	RB	N	SH	N	N	5	N	CB, PO?	Y
F412	1G	607	17F	2	2015	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CW?, PO	Y
F413	1G	607	17F	2	2015	14	AVES	APP	LB	N	FR	N	N	5	N	BR?	Y
F414	1G	607	17F	2	2015	1	MAMMALIA	APP	IS	N	SH	N	N	5	EX, CG?	N	N
F415	1G	607	17F	2	2015	1	MAMMALIA	APP	IL	N	SH	N	N	4	N	BR	N
F416	1G	607	17F	2	2015	1	CF. ORTHOGEOMYS HISPIDUS	CRN	IC	N	FR	N	N	1	N	N	N
F417	1G	607	17F	2	2015	1	SQUAMATA	AX	VT	N	CO	N	N	2	N	CB, CL	N
F418	1G	607	17F	2	2015	1	CF. KINOSTERNIDAE	AX	VT	N	CO	N	N	2	N	BR	N
F419	1G	607	17F	2	2015	1	MAMMALIA	AX	VT	N	TSP	S	N	4	N	DG?, EX	N
F420	1G	607	17F	2	2015	1	SAURIA	APP	HM	R	CO	S	N	1	N	N	N
F421	1G	607	17F	2	2015	1	CF. STROMBIDAE	MS	MS	N	FR	N	N	N	N	BR, CB	N
F422	1G	607	17F	2	2015	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	N
F423	1G	607	17F	2	2015	9	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	Y
F424	1G	607	17F	2	2015	11	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F425	1G	607	17F	2	2015	4	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F426	1G	607	17F	2	2015	1	MAMMALIA	APP	LB	N	SH	N	N	5	N	BR, CB	N
F427	1G	607	17F	2	2015	2	CF SCARUS SP.	CRN	CRN	N	FR	N	N	3	N	BR?	N
F428	1G	607	17F	2	2015	1	SYLVILAGUS SP.	APP	HM	L	PSE	S	N	3	DG?	N	N
F429	1G	607	17F	2	2015	1	MAMMALIA	APP	TA	R	DSE	S	N	3	DG?	N	N
F430	1G	607	17F	2	2015	1	MAMMALIA	APP	TA	R	PSH	A	N	3	DG, COL	N	N
F431	1G	607	17F	2	2015	1	MAMMALIA	AX	VT	N	CEN	S	N	3	DG?	N	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F432	1G	607	17F	2	2015	1	MAMMALIA	APP	PH	N	FR	N	N	4	DG?	N	N
F433	1G	607	17F	2	2015	1	CRICETIDAE	APP	FM	R	PSH	A	N	1	DG	N	N
F434	1G	607	17F	2	2015	1	CF. ARTIODACTYLA	AX	RB	N	SH	N	N	5	EX	N	N
F435	1G	607	17F	2	2015	1	MAMMALIA	APP	LB	N	SH	N	N	5	CG?, G, PO	N	N
F436	1G	607	17F	2	2015	1	SCARUS SP.	CRN	PMX	R	CO	N	N	3	N	BR	Y
F437	1994	13	6	2	1994	1	PTERONOTUS DAVYI	CRN	CRN	N	CO	A	N	1	N	N	N
F438	1994	13	6	2	1994	1	CF. PERCIFORMES	CRN	CLT?	N	CO	N	N	3	N	BR	Y
F439	1994	13	6	2	1994	1	MAMMALIA	APP	POD	N	CO	N	N	5	N	BR, CB	Y
F440	1994	13	6	2	1994	1	MAMMALIA	APP	LB	N	FR	N	N	5	CG?, DG?	BR, PO	Y
F441	1994	13	6	2	1994	3	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	N
F442	1994	13	6	2	1994	3	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	N
F443	1994	13	6	2	1994	2	MAMMALIA	CRN	CFR	N	FR	N	N	5	N	BR	Y
F444	1994	13	6	2	1994	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	Y
F445	1994	13	6	2	1994	2	MAMMALIA	AX	RB	N	SH	N	N	3	N	BR	N
F446	1994	13	6	2	1994	1	MAMMALIA	APP	HM	R	SH	N	N	3	N	BR, CB	N
F447	1994	13	6	2	1994	1	MAMMALIA	APP	LB	N	SH	N	N	3	RG	BR	N
F448	1994	13	6	2	1994	1	MAMMALIA	APP	LB	N	SH	N	N	3	EX	BR, CB	N
F449	1994	13	6	2	1994	1	MAMMALIA	APP	LB	N	SH	N	N	5	EX	BR, CB	N
F450	1994	13	6	2	1994	1	MAMMALIA	AX	RB	N	SH	N	N	4	N	BR	N
F451	1994	13	6	2	1994	1	AVES	APP	LB	N	SH	N	N	4	EX	BR	N
F452	1994	13	6	2	1994	1	MAMMALIA	APP	LB	N	SH	N	N	5	N	CB	N
F453	1994	13	6	2	1994	1	MAMMALIA	APP	LB	N	SH	N	N	5	EX	BR, CB	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F454	1994	13	6	2	1994	1	MAMMALIA	APP	LB	N	SH	N	N	5	EX	BR, CB	N
F455	1994	13	6	2	1994	1	MAMMALIA	AX	VT	N	FR	N	N	5	N	BR	N
F456	1994	13	6	2	1994	1	ANURA	APP	HM	L	CO	N	N	2	N	BR, CB, PO	Y
F457	1994	13	6	2	1994	1	CF. CRICETIDAE	APP	HM	R	DSH	N	N	1	N	BR, CB, PO?	N
F458	1994	13	6	2	1994	1	MAMMALIA	APP	LB	N	SH	S	N	3	N	BR	N
F459	1A	34	12G	2	2005	1	CF. TAYASSUIDAE	APP	IL	R	FR	N	N	5	CG, DG, PO	G?	N
F460	1A	34	12G	2	2005	2	MAMMALIA	APP	LB	N	FR	N	N	5	CG, DG, PO	G?	N
F461	1A	34	12G	2	2005	1	MAMMALIA	APP	TA	R	FR	N	N	3	CG, DG, PO	G?	N
F462	1A	34	12G	2	2005	1	MAMMALIA	APP	PH	N	PSH	N	N	4	N	G	N
F463	1A	34	12G	2	2005	1	MAMMALIA	APP	SC	R	DSH	N	N	3	N	BR, CB	N
F464	1A	34	12G	2	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F465	1A	34	12G	2	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F466	1A	34	12G	2	2005	1	MAMMALIA	AX	RB	N	FR	N	N	3	N	N	N
F467	1A	34	12G	2	2005	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	N
F468	1A	34	12G	2	2005	1	CF. KINOSTERNIDAE	TRT	PCRP	N	FR	N	N	2	N	BR, CB	N
F469	1A	3	13F	1	2005	1	CF. TAYASSUIDAE	APP	MP	N	PSS	S	N	5	DG, CG?	N	N
F470	1A	3	13F	1	2005	1	MAMMALIA	APP	IL	R	SH	N	N	5	N	BR	N
F471	1A	3	13F	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	4	CG?	N	N
F472	1A	33	12F	2	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR?	N
F473	1A	33	12F	2	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F474	1A	33	12F	2	2005	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F475	1A	33	12F	2	2005	1	MAMMALIA	APP	LB	N	FR	N	N	4	DG?	BR, G?, PO?	N
F476	1A	33	12F	2	2005	1	MAMMALIA	APP	LB	N	FR	N	N	3	EX	N	N
F477	1A	33	12F	2	2005	4	MAMMALIA	AX	VT	N	FR	N	N	3	N	N	N
F478	1A	33	12F	2	2005	1	BRACHYURA	EXO	CLW	N	DSH	N	N	2	N	N	N
F479	1A	2	12G	1	2005	11	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F480	1A	2	12G	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F481	1A	2	12G	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	CG, DG?, PO?	N	N
F482	1A	2	12G	1	2005	1	MAMMALIA	APP	IS	N	SH	N	N	3	CG, DG?, PO?	N	N
F483	1A	2	12G	1	2005	1	CUNICULUS PACA	APP	MC	N	CO	N	N	3	N	BR	Y
F484	1A	2	12G	1	2005	1	CF. KINOSTERNIDAE	TRT	PCRP	N	FR	N	N	2	N	BR, CB	Y
F485	1A	2	12G	1	2005	1	CF. ODOCOILEUS VIRGINIANUS	CRN	FN	R	FR	N	N	5	EX	BR?	N
F486	1A	2	12G	1	2005	1	MAMMALIA	CRN	CFR	N	FR	N	N	5	EX	N	N
F487	1A	1	12F	1	2005	1	CUNICULUS PACA	APP	AS	R	CO	N	N	3	N	CB	Y
F488	1A	1	12F	1	2005	1	CUNICULUS PACA	APP	AS	R	CO	S	N	3	N	BR	Y?
F489	1A	1	12F	1	2005	3	MAMMALIA	CRN	CFR	N	FR	N	N	3	N	N	N
F490	1A	1	12F	1	2005	1	MAMMALIA	CRN	CFR	N	FR	N	N	5	N	N	N
F491	1A	1	12F	1	2005	1	MAMMALIA	AX	RB	N	SH	N	N	3	N	BR	N
F492	1A	1	12F	1	2005	1	MAMMALIA	APP	MP	N	PSS	N	N	5	EX	CB	N
F493	1A	51	12F	3	2005	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F494	1A	51	12F	3	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F495	1A	51	12F	3	2005	1	MAMMALIA	AX	RB	N	SH	N	N	5	N	BR	N
F496	1A	51	12F	3	2005	1	MAMMALIA	AX	RB	N	FR	N	N	3	N	BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F497	1A	51	12F	3	2005	1	MAMMALIA	AX	RB	L	PSS	N	N	5	N	N	N
F498	1A	51	12F	3	2005	1	DIDELPHIDAE	CRN	MO	R	CO	N	N	3	EX	N	N
F499	1A	51	12F	3	2005	2	DIDELPHIDAE	CRN	DT	L	FR	N	N	3	EX	N	N
F500	1A	51	12F	3	2005	1	MAMMALIA	CRN	DT	N	FR	N	N	3	EX	N	N
F501	1A	51	12F	3	2005	1	CUNICULUS PACA	APP	PH	N	CO	N	N	3	N	BR	N
F502	1D	142	210	5	2006	1	TAYASSUIDAE	APP	HM	L	SH	N	N	5	MD?	BR, CM	Y
F503	1D	142	210	5	2006	1	CF. TAYASSUIDAE	APP	POD	L	CO	N	N	5	N	BR	N
F504	1D	142	210	5	2006	1	CF. CERVIDAE	APP	MP	L	DSE	S	N	5	N	BR	N
F505	1D	142	210	5	2006	1	CF. TAYASSUIDAE	APP	FM	R	FR	N	N	5	MD?	BR, CB?	Y
F506	1D	142	210	5	2006	1	CF. TAYASSUIDAE	AX	RB	R	PSH	N	N	5	MD?	BR, CB?	Y
F507	1D	142	210	5	2006	7	CF. TAYASSUIDAE	AX	RB	N	FR	N	N	5	MD?	BR, CB?	Y
F508	1D	142	210	5	2006	4	MAMMALIA	AX	RB	N	FR	N	N	5	N	BR, CB?	N
F509	1D	142	210	5	2006	1	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F510	1D	142	210	5	2006	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F511	1D	142	210	5	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F512	1D	142	210	5	2006	6	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F513	1D	142	210	5	2006	1	MAMMALIA	APP	TA	L	FR	N	N	5	N	BR	N
F514	1D	142	210	5	2006	2	MAMMALIA	AX	RB	N	SH	N	N	5	N	BR	N
F515	1D	142	210	5	2006	3	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	N
F516	1D	142	210	5	2006	3	MAMMALIA	APP	LB	N	FR	N	N	3	N	N	N
F517	1D	142	210	5	2006	1	MAMMALIA	APP	LB	N	DSH	S	N	2	N	BR	N
F518	1D	142	210	5	2006	1	CANIS LUPUS FAMILIARIS	CRN	MX	L	FR	A	N	5	N	BR	Y

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F519	1D	142	210	5	2006	3	CUNICULUS PACA	CRN	ZY	L	FR	N	N	3	N	BR	N
F520	1D	142	210	5	2006	1	TAYASSUIDAE	CRN	MX	N	TR	S	N	5	N	BR, CB	Y
F521	1D	142	210	5	2006	1	TAYASSUIDAE	CRN	MX	R	TR	N	N	5	N	BR, CB, CL	Y
F522	1D	142	210	5	2006	1	TAYASSUIDAE	CRN	MO	R	CO	N	N	5	N	BR, CB, CL	Y
F523	1D	142	210	5	2006	1	TAYASSUIDAE	CRN	CN	N	SH	N	N	5	N	BR	Y
F524	1D	142	210	5	2006	1	TAYASSUIDAE	CRN	DT	L	FR	N	N	5	CG?	BR	Y
F525	1D	142	210	5	2006	10	CF. TAYASSUIDAE	CRN	CFR	N	FR	N	N	5	N	BR	Y
F526	1D	142	210	5	2006	2	CF. TAYASSUIDAE	CRN	CFR	N	FR	N	N	5	N	BR, CB	Y
F527	1D	142	210	5	2006	1	CUNICULUS PACA	CRN	ZY	L	FR	N	N	3	N	BR	N
F528	1D	142	210	5	2006	1	CUNICULUS PACA	CRN	IN	L	FR	N	N	3	N	BR	Y
F529	1D	142	210	5	2006	1	CUNICULUS PACA	CRN	MO	N	FR	N	N	3	N	BR, CB, CL	N
F530	1D	142	210	5	2006	1	IGUANIDAE	CRN	DT	N	TR	A	N	3	N	BR	Y
F531	1D	142	210	5	2006	1	CRICETIDAE	CRN	DT	R	CO	A	N	1	N	BR	N
F532	1D	142	210	5	2006	11	MAMMALIA	CRN	CFR	N	FR	N	N	3	N	BR	N
F533	1D	142	210	5	2006	1	DASYPUS NOVEMCINCTUS	CRN	MX	L	FR	A	N	3	N	BR	N
F534	1D	142	210	5	2006	1	RODENTIA	CRN	NS	N	FR	N	N	3	N	BR	N
F535	1D	142	210	5	2006	2	RODENTIA	CRN	MX	R	FR	N	N	3	N	BR	N
F536	1D	142	210	5	2006	1	RODENTIA	CRN	MX	N	FR	N	N	3	N	BR	N
F537	1D	142	210	5	2006	1	RODENTIA	CRN	MO	N	CO	N	N	3	N	BR	N
F538	1D	142	210	5	2006	1	SQUAMATA	AX	VT	N	CO	N	N	2	N	BR	N
F539	1D	142	210	5	2006	1	SQUAMATA	AX	VT	N	FR	N	N	2	N	BR	N
F540	1D	142	210	5	2006	8	MAMMALIA	AX	VT	N	FR	N	N	2	N	BR	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F541	1D	142	210	5	2006	1	MAMMALIA	AX	TH	N	SPR	N	N	3	N	BR	N
F542	1D	142	210	5	2006	2	MAMMALIA	AX	VT	N	FR	N	N	3	N	BR	N
F543	1D	142	210	5	2006	1	MAMMALIA	AX	CE	N	CEN		N	5	N	BR	Y
F544	1D	142	210	5	2006	1	MAMMALIA	AX	VT	N	TSP	N	N	5	N	BR	Y
F545	1D	142	210	5	2006	1	MAMMALIA	AX	LU	N	TSP	N	N	5	N	BR	Y
F546	1D	142	210	5	2006	1	MAMMALIA	AX	TH	N	CN	S	N	5	N	BR	Y
F547	1D	142	210	5	2006	1	MAMMALIA	AX	VT	N	CN	S	N	5	N	BR	Y
F548	1D	142	210	5	2006	1	MAMMALIA	AX	SAC	L	FR	A	N	5	N	BR, CM?	Y
F549	1D	142	210	5	2006	1	MAMMALIA	AX	SAC	N	CO	A	N	5	N	BR, PO?	Y
F550	1D	142	210	5	2006	1	DASYPUS NOVEMCINCTUS	APP	POD	N	CO	A	N	3	N	BR	N
F551	1D	142	210	5	2006	1	DASYPUS NOVEMCINCTUS	APP	PHT	N	CO	A	N	3	N	BR	N
F552	1D	142	210	5	2006	1	DASYPUS NOVEMCINCTUS	APP	UL	R	PSH	A	N	3	N	BR	Y
F553	1D	142	210	5	2006	1	DASYPUS NOVEMCINCTUS	APP	SC	L	DSH	A	N	3	N	BR, CB	Y
F554	1D	142	210	5	2006	1	DASYPUS NOVEMCINCTUS	APP	HM	L	DSH	A	N	3	MD?	BR	Y
F555	1D	142	210	5	2006	1	NEPHRONAIAS SP.	FS	FS	R	CO	N	N	NA	N	N	Y
F556	1A	2	12F	1	2005	5	MAMMALIA	AX	VT	N	FR	N	N	5	N	BR	N
F557	1A	2	12F	1	2005	3	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F558	1A	2	12F	1	2005	1	CF. CERVIDAE	AX	RB	R	PSS	N	N	5	N	BR	Y
F559	1A	2	12F	1	2005	1	CF. CERVIDAE	AX	RB	L	PSS	N	N	5	N	BR	N
F560	1A	2	12F	1	2005	1	CF. CARNIVORA	CRN	PMO	N	CO	N	N	3	N	BR, CB	N
F561	1A	2	12F	1	2005	1	MAMMALIA	APP	PHT	N	CO	N	N	3	N	BR	N
F562	1A	2	12F	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F563	1A	2	12F	1	2005	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F564	1A	2	12F	1	2005	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F565	1A	2	12F	1	2005	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	EX	BR	N
F566	1A	33	12F	2	2005	4	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F567	1A	33	12F	2	2005	2	MAMMALIA	APP	LB	N	FR	N	N	4	DG, PO, EX	N	N
F568	1A	33	12F	2	2005	2	MAMMALIA	CRN	CFR	N	FR	N	N	4	EX	N	N
F569	1A	33	12F	2	2005	1	MAMMALIA	APP	LB	N	FR	N	N	3	CB	N	N
F570	1A	33	12F	2	2005	3	MAMMALIA	AX	VT	N	FR	S	N	5	EX	BR?	N
F571	1A	0	NA	NA	2005?	8	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F572	1A	0	NA	NA	2005?	1	MAMMALIA	AX	RB	N	FR	N	N	5	N	BR	N
F573	1A	0	NA	NA	2005?	6	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F574	1A	0	NA	NA	2005?	1	MAMMALIA	AX	CD	N	CN	N	N	3	N	N	N
F575	1A	0	NA	NA	2005?	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	N
F576	1A	0	NA	NA	2005?	2	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR	N
F577	1A	0	NA	NA	2005?	1	MAMMALIA	APP	RD	L	PSS	N	N	5	N	CB, CL	N
F578	1A	FAUNAL FROM LOT 000	NA	NA	2005?	3	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	Y
F579	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	CB, CL	N
F580	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	CF. KINOSTERNIDAE	TRT	PCRP	N	CO	N	N	3	EX	CL	N
F581	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	CF. ODOCOILEUS VIRGINIANUS	APP	PHS	N	CO	N	N	5	N	CB, CL	N
F582	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	DIDELPHIDAE	AX	VT	N	CO	N	N	3	EX	BR	N
F583	1A	FAUNAL FROM LOT 000	NA	NA	2005?	3	MAMMALIA	CRN	CFR	N	FR	N	N	5	N	BR, CB	Y
F584	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	APP	LB	N	FR	N	N	3	DG, EX	N	N

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F585	1A	FAUNAL FROM LOT 000	NA	NA	2005?	7	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F586	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F587	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	APP	LB	N	PSS	S	N	5	N	BR	N
F588	1A	FAUNAL FROM LOT 000	NA	NA	2005?	3	MAMMALIA	AX	RB	N	FR	N	N	5	EX, RE	BR	N
F589	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	AX	RB	N	FR	N	N	5	EX, RE	CB	N
F590	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	AX	RB	L	FR	N	N	5	N	N	N
F591	1A	FAUNAL FROM LOT 000	NA	NA	2005?	3	MAMMALIA	AX	VT	N	FR	N	N	5	N	N	N
F592	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	AX	LU	N	TSP	S	N	4	EX, RE	BR	N
F593	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	AX	RB	R	PSS	S	N	5	N	BR	Y
F594	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	Y
F595	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	APP	MP	N	DSH	N	N	3	RE	BR	N
F596	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	CUNICULUS PACA	APP	MT	N	PSH	N	N	3	N	CB	Y
F597	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	APP	MP	N	PSH	N	N	3	N	BR	N
F598	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	MAMMALIA	APP	PH	N	DSH	N	N	3	N	BR	N
F599	1A	FAUNAL FROM LOT 000	NA	NA	2005?	1	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	N	CB	N
F600	1B	135	23K	1	2006	11	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F601	1B	135	23K	1	2006	3	MAMMALIA	AX	RB	N	SH	N	N	4	N	BR	N
F602	1B	135	23K	1	2006	4	MAMMALIA	AX	RB	N	FR	N	N	5	N	BR	N
F603	1B	135	23K	1	2006	2	CF. KINOSTERNIDAE	TRT	PCRP	N	FR	N	N	2	N	BR, CB	Y
F604	1B	135	23K	1	2006	2	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	Y
F605	1B	135	23K	1	2006	2	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	Y

CAT #	OP	LOT	EU	LVL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F606	1B	135	23K	1	2006	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	N
F607	1B	135	23K	1	2006	2	MAMMALIA	CRN	CFR	N	FR	N	N	5	N	BR	N
F608	1B	135	23K	1	2006	1	CF. CRICETIDAE	APP	TF	L	SH	N	N	1	N	BR	Y
F609	1B	135	23K	1	2006	1	CF. CRICETIDAE	APP	UL	N	SH	N	N	1	N	N	N
F610	1B	135	23K	1	2006	1	CF. CRICETIDAE	APP	UL	L	SH	N	N	1	N	BR	N
F611	1B	135	23K	1	2006	1	CF. CRICETIDAE	CRN	DT	L	CO	S	N	3	N	N	Y
F612	1B	135	23K	1	2006	1	MAMMALIA	CRN	DT	R	FR	N	N	3	N	N	N

Appendix C. Condensed Data Collected for Faunal Analysis of Sapodilla Rockshelter

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F001	DZ	2	-	-	2010	1	BRACHYURA	EXO	CLW	N	CO	N	N	NA	RE	N	Y
F002	DZ	2	-	-	2010	1	BRACHYURA	EXO	CLW	N	FR	N	N	NA	RE	N	N
F003	DZ	2	-	-	2010	1	CF. CUNICULUS PACA	CRN	MO	N	FR	S	N	3	N	BR	Y
F004	DZ	2	-	-	2010	1	CF. CUNICULUS PACA	APP	MP	N	FR	A	N	3	N	BR, CB	Y
F005	DZ	2	-	-	2010	1	CF. CUNICULUS PACA	APP	MP	N	FR	S	N	3	N	BR, CB	Y
F006	DZ	2	-	-	2010	1	CF. CUNICULUS PACA	AX	VT	N	CEN	A	N	3	N	BR	Y
F007	DZ	2	-	-	2010	1	MAMMALIA	AX	VT	N	FR	S	N	3	N	CB	N
F008	DZ	2	-	-	2010	1	AVES	APP	FM	L	CO	A	N	2	PT	N	Y
F009	DZ	2	-	-	2010	1	AVES	APP	TMT	R	CO	A	N	2	N	N	Y
F010	DZ	2	-	-	2010	1	CF. IGUANA IGUANA	APP	RD	L	PSH	N	N	3	PT	N	Y
F011	DZ	2	-	-	2010	1	CF. CRICETIDAE	APP	FM	L	PSH	S	N	1	N	N	N
F012	DZ	2	-	-	2010	1	CF. ORYZOMYS COUESI	APP	FM	L	SH	N	N	1	N	N	N
F013	DZ	2	-	-	2010	1	MAMMALIA	APP	LB	N	FR	N	N	5	PO	BR, CB	N
F014	LZ	1W	-	-	2010	1	MAMMALIA	AX	RB	R	FR	N	N	3	PO, RE	BR	Y
F015	LZ	1W	-	-	2010	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	CB	N
F016	1C	1	-	-	2010	2	BRACHYURA	EXO	CLW	N	CO	N	N	NA	N	N	Y
F017	1C	1	-	-	2010	1	BRACHYURA	EXO	CLW	N	FR	N	N	NA	N	N	N
F018	1C	1	-	-	2010	5	BRACHYURA	EXO	LEG	N	FR	N	N	NA	N	N	N
F019	1C	1	-	-	2010	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	N	Y
F020	1C	1	-	-	2010	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	Y
F021	1C	1	-	-	2010	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	CB	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F022	1C	1	-	-	2010	1	DASYPUS NOVEMCINCTUS	APP	CAL	R	CO	A	N	3	PO	BR, CB	Y
F023	1C	1	-	-	2010	1	CUNICULUS PACA	APP	AS	L	CO	N	N	3	N	BR, CB	Y
F024	1C	1	-	-	2010	2	DASYPUS NOVEMCINCTUS	APP	MT	L	CO	A	N	3	MD, LEX	BR	N
F025	1C	1	-	-	2010	1	DASYPUS NOVEMCINCTUS	APP	MT	R	CO	A	N	3	MD, PO	BR	Y
F026	1C	1	-	-	2010	1	CUNICULUS PACA	APP	MP	N	CO	N	N	3	N	BR	Y
F027	1C	1	-	-	2010	1	CUNICULUS PACA	APP	PHF	N	CO	N	N	3	N	BR	N
F028	1C	1	-	-	2010	1	MAZAMA SP.	APP	AS	R	CO	A	N	5	N	BR	Y
F029	1C	1	-	-	2010	1	MAZAMA SP.	APP	MT	L	DSS	A	N	5	N	BR	Y
F030	1C	1	-	-	2010	1	CF. MAZAMA SP.	APP	FM	L	DSS	A	N	5	N	BR, CB, CL	N
F031	1C	1	-	-	2010	1	CF. ODOCOILEUS VIRGINIANUS	AX	LU	N	CO	S	N	5	N	BR	Y
F032	1C	1	-	-	2010	1	MAZAMA SP.	APP	MT	L	SH	N	N	5	N	BR	Y
F033	1C	1	-	-	2010	1	MELEAGRIS SP.	APP	PHF	L	CO	N	N	5	N	N	Y
F034	1C	1	-	-	2010	1	AVES	CRN	DT	L	FR	N	N	5	N	N	Y
F035	1C	1	-	-	2010	1	AVES	APP	TMT	L	PSH	N	N	1	N	N	N
F036	1C	1	-	-	2010	1	TAYASSUIDAE	CRN	MX	L	FR	N	N	5	N	BR	Y
F037	1C	1	-	-	2010	1	CF. CHELONIOIDEA	APP	MP	N	CO	A	N	4	N	N	Y
F038	1C	1	-	-	2010	2	TESTUDINES	TRT	CRP	N	FR	N	N	2	N	N	Y
F039	1C	1	-	-	2010	1	SYLVILAGUS SP.	APP	FM	L	PSH	S	N	3	N	BR	Y
F040	1C	1	-	-	2010	17	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F041	1C	1	-	-	2010	37	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F042	1C	1	-	-	2010	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F043	1C	1	-	-	2010	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F044	1C	1	-	-	2010	6	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F045	1C	1	-	-	2010	3	MAMMALIA	APP	LB	N	FR	N	N	5	WE	N	Y
F046	1C	1	-	-	2010	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	G	Y
F047	1C	1	-	-	2010	1	MAMMALIA	APP	LB	N	FR	N	N	5	RE	CB	Y
F048	1C	1	-	-	2010	1	MAMMALIA	APP	LB	N	FR	N	N	5	LEX	BR	Y
F049	1C	1	-	-	2010	2	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR	Y
F050	1C	1	-	-	2010	1	TAYASSUIDAE	APP	MC	L	DSS	A	N	5	N	BR	Y
F051	1C	1	-	-	2010	1	CF. CERVIDAE	APP	SC	L	DSS	N	N	5	N	BR,	Y
F052	1C	1	-	-	2010	1	CF. CERVIDAE	APP	SC	L	DSS	N	N	5	MD, PO	BR, CB	Y
F053	1C	1	-	-	2010	1	CF. DASYPROCTA PUNCTATA	APP	UL	L	PSS	N	N	3	N	BR, CB	N
F054	1C	1	-	-	2010	1	HETEROMYS SP.	APP	FM	R	CO	S	N	1	N	N	N
F055	1C	1	-	-	2010	1	HETEROMYS SP.	APP	TA	R	PSH	S	N	1	N	N	N
F056	1C	1	-	-	2010	1	CF. HETEROMYS SP.	APP	TF	R	CO	S	N	1	N	N	N
F057	1C	1	-	-	2010	1	CF. HETEROMYS SP.	APP	TF	L	CO	S	N	1	N	N	N
F058	1C	1	-	-	2010	1	CF. HETEROMYS SP.	APP	HM	R	SH	N	N	1	N	N	N
F059	1C	1	-	-	2010	1	MAMMALIA	CRN	CA	N	CO	N	N	5	N	CB	N
F060	1C	1	-	-	2010	1	AVES	APP	PH	N	CO	N	N	4	N	N	N
F061	1C	1	-	-	2010	1	MAZAMA SP.	CRN	FN/ANT	L	FR	N	M	5	N	BR	Y
F062	1C	1	-	-	2010	1	TAYASSUIDAE	AX	RB	R	PSS	A	N	5	N	BR	N
F063	1C	1	-	-	2010	1	CF. TAYASSUIDAE	AX	RB	R	PSH	A	N	5	N	BR	Y
F064	1C	1	-	-	2010	2	MAMMALIA	APP	MP	N	PSH	A	N	3	PO	BR, CB	Y
F065	1C	1	-	-	2010	1	MAMMALIA	APP	FM	L	PSS	A	N	3	N	BR, CB, CL	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F066	1C	1	-	-	2010	1	MAMMALIA	APP	HM	L	DSS	N	N	3	PO	BR	N
F067	1C	1	-	-	2010	1	MAZAMA SP.	APP	UL	R	DSS	N	N	5	PO	BR, CB	Y
F068	1C	1	-	-	2010	1	TESTUDINES	APP	IM	N	SH	N	N	3	PO	BR	Y
F069	1C	1	-	-	2010	1	ARTIODACTYLA	APP	PH	N	FR	N	N	5	N	CB, CL	N
F070	1C	1	-	-	2010	1	CF. ARTIODACTYLA	APP	LB	N	DSS	N	N	5	N	CB	N
F071	1C	1	-	-	2010	1	MAMMALIA	APP	MP	N	PSH	A	N	3	PO	BR, CB	N
F072	1C	1	-	-	2010	1	CF. ARTIODACTYLA	APP	SC	N	SH	N	N	5	N	BR, CB	N
F073	1C	1	-	-	2010	1	ANURA	AX	VT	N	CO	S	N	3	N	BR	Y
F074	1C	1	-	-	2010	1	CF. CAUDATA	AX	VT	N	CO	S	N	2	N	BR	N
F075	1C	1	-	-	2010	1	CF. CAUDATA	AX	VT	N	CO	S	N	2	N	BR, CM?	N
F076	1C	1	-	-	2010	2	CF. TESTUDINES	AX	CN	N	FR	S	N	2	N	N	Y
F077	1C	1	-	-	2010	1	MAMMALIA	AX	CD	N	PR	A	N	3	N	BR, CB	N
F078	1C	1	-	-	2010	1	MAMMALIA	AX	TH	N	FR	N	N	3	N	BR, CB	Y
F079	1C	1	-	-	2010	1	MAMMALIA	AX	VT	N	CN	N	N	4	PO	N	Y
F080	1C	1	-	-	2010	1	MAMMALIA	AX	CD	N	CO	S	N	3	N	CB	N
F081	1C	1	-	-	2010	5	MAMMALIA	AX	RB	N	SH	N	N	3	N	BR	N
F082	1C	1	-	-	2010	1	BRACHYURA	EXO	CLW	N	FR	N	N	NA	N	CB, CL	N
F083	1C	1	-	-	2010	2	AVES	APP	LB	N	FR	N	N	3	N	N	N
F084	1C	1	-	-	2010	1	AVES	APP	LB	N	FR	N	N	5	N	BR	N
F085	1C	1	-	-	2010	1	AVES	APP	LB	N	FR	N	N	4	N	N	N
F086	1C	1	-	-	2010	1	AVES	AX	RB	N	SH	N	N	4	N	BR	N
F087	1C	1	-	-	2010	1	AVES	AX	RB	N	SH	N	N	4	N	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F088	1C	1	-	-	2010	1	AVES	APP	FM	L	DSH	S	N	3	PI	N	N
F089	1C	1	-	-	2010	1	AVES	APP	TN	N	FR	N	N	5	N	BR	N
F090	1C	1	-	-	2010	1	TESTUDINES	AX	VT	N	FR	N	N	2	N	N	N
F091	1C	1	-	-	2010	1	TESTUDINES	APP	RD	R	CO	N	N	2	N	BR	Y
F092	1C	1	-	-	2010	1	TESTUDINES	APP	PH	N	CO	N	N	2	N	BR	Y
F093	1C	1	-	-	2010	1	TESTUDINES	APP	PH	N	DSH	N	N	2	N	BR	Y
F094	1C	1	-	-	2010	1	TESTUDINES	APP	FM	R	DSH	N	N	3	N	BR, CB	N
F095	1C	1	-	-	2010	1	TESTUDINES	APP	FM	L	DSH	N	N	3	N	BR	Y
F096	1C	1	-	-	2010	1	TESTUDINES	APP	FB	N	DSS	N	N	3	N	BR	Y
F097	1C	1	-	-	2010	1	TESTUDINES	APP	IM	N	FR	N	N	3	N	BR, CB	Y
F098	1C	1	-	-	2010	1	MAMMALIA	APP	FM	N	FR	N	N	3	N	BR	N
F099	1C	1	-	-	2010	1	TESTUDINES	APP	PH	N	FR	N	N	3	N	N	N
F100	1C	1	-	-	2010	1	MAMMALIA	AX	VT	N	FR	N	N	4	N	BR	N
F101	1C	1	-	-	2010	1	MAMMALIA	AX	VT	N	FR	N	N	4	N	BR, CB	N
F102	1C	1	-	-	2010	1	CF. ODOCOILEUS VIRGINIANUS	APP	LB	N	FR	N	N	5	N	N	Y
F103	1C	1	-	-	2010	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F104	1C	1	-	-	2010	1	CF. ODOCOILEUS VIRGINIANUS	AX	RB	N	FR	N	N	5	RE	BR, CB	Y
F105	1C	1	-	-	2010	1	ODOCOILEUS VIRGINIANUS	APP	MP	N	FR	N	N	5	N	BR, CB	Y
F106	1C	1	-	-	2010	1	ODOCOILEUS VIRGINIANUS	APP	TA	N	FR	N	N	5	N	BR	N
F107	1C	1	-	-	2010	2	CF. ARTIODACTYLA	AX	RB	N	DSS	N	N	5	N	BR	Y
F108	1C	1	-	-	2010	2	MAMMALIA	APP	SC	N	FR	N	N	5	N	BR, CB	Y
F109	1C	1	-	-	2010	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F110	1C	1	-	-	2010	3	MAMMALIA	CRN	CRN	N	FR	N	N	5	N	CB	Y
F111	1C	1	-	-	2010	2	MAMMALIA	CRN	CRN	N	FR	N	N	5	N	CB, BR	Y
F112	1C	1	-	-	2010	1	NASUA SP.	CRN	DT	L	TW	N	N	3	N	CB, BR	Y
F113	1C	1	-	-	2010	1	NASUA SP.	CRN	MO	L	CO	N	N	3	N	CB	Y
F114	1C	1	-	-	2010	1	MAMMALIA	CRN	MX	N	FR	N	N	3	N	BR	N
F115	1C	1	-	-	2010	1	MAMMALIA	CRN	DT	N	FR	N	N	3	N	N	N
F116	1C	1	-	-	2010	1	AVES	APP	TBT	N	DSH	S	N	5	PO	N	Y
F117	1C	1	-	-	2010	1	AVES	APP	LB	N	FR	N	N	5	N	N	Y
F118	1C	1	-	-	2010	1	TESTUDINES	AX	VT	N	FR	N	N	2	N	BR	N
F119	1C	1	-	-	2010	1	MAMMALIA	CRN	CRN	N	FR	N	N	3	N	BR	N
F120	1C	1	-	-	2010	4	MAMMALIA	CRN	CRN	N	FR	N	N	5	N	BR	Y
F121	1C	1	-	-	2010	1	ACTINOPTERYGII	CRN	CRN	N	FR	N	N	3	N	BR	N
F122	1C	1	-	-	2010	1	TESTUDINES	AX	VT	N	FR	N	N	2	N	N	N
F123	1C	1	-	-	2010	1	SQUAMATA	AX	VT	N	FR	N	N	3	N	BR	N
F124	1C	1	-	-	2010	1	SQUAMATA	AX	RB	N	FR	N	N	2	N	BR	N
F125	1C	1	-	-	2010	1	MAMMALIA	APP	FB	N	FR	N	N	4	N	N	N
F126	LZ	1	-	-	2010	1	CF. ARTIODACTYLA	APP	SC	N	SH	N	N	5	N	BR, CB	N
F127	1C	1C	-	-	2010	1	TESTUDINES	TRT	CRP	N	FR	N	N	2	PO	BR	Y
F128	1C	1C	-	-	2010	1	CF. CARNIVORA	APP	FM	R	HE	A	N	3	N	BR	Y
F129	1C	1C	-	-	2010	1	DASYPUS NOVEMCINCTUS	APP	AS	R	CO	N	N	3	N	BR, CB	Y
F130	1C	1C	-	-	2010	3	SQUAMATA	AX	VT	N	CO	A	N	2	N	BR, CB	Y
F131	1C	1C	-	-	2010	1	SQUAMATA	AX	VT	N	CO	A	N	3	N	CB	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F132	1C	1C	-	-	2010	1	DASYPUS NOVEMCINCTUS	AX	CD	N	CO	N	N	3	N	BR	Y
F133	1C	1C	-	-	2010	1	MAMMALIA	AX	CD	N	CO	S	N	3	N	BR, CB	Y
F134	1C	1C	-	-	2010	1	DASYPUS NOVEMCINCTUS	APP	UL	R	PSH	N	N	3	N	N	Y
F135	1C	1C	-	-	2010	1	DASYPUS NOVEMCINCTUS	APP	CAL	R	DSH	N	N	3	N	BR, CB, CL	Y
F136	1C	1C	-	-	2010	1	MAMMALIA	APP	HM	L	DSS	N	N	2	N	BR	N
F137	1C	1C	-	-	2010	1	MAMMALIA	APP	UL	L	PSS	N	N	2	N	BR	N
F138	1C	1C	-	-	2010	5	MAMMALIA	APP	LB	N	FR	N	N	4	N	CB	N
F139	1C	1C	-	-	2010	1	MAMMALIA	APP	MP	N	PSS	N	N	4	N	CB	N
F140	1C	1C	-	-	2010	1	MAMMALIA	APP	MP	N	DSS	S	N	4	N	CB	N
F141	1C	1C	-	-	2010	1	TESTUDINES	APP	PH	N	CO	N	N	3	N	N	N
F142	1C	1C	-	-	2010	1	CF. TESTUDINES	APP	PH	N	SH	N	N	2	N	N	N
F143	1C	1C	-	-	2010	1	CF. CARNIVORA	APP	MP	N	CO	S	N	3	N	N	N
F144	1C	1C	-	-	2010	1	RODENTIA	APP	HM	L	SH	N	N	1	N	N	N
F145	1C	1C	-	-	2010	2	ANURA	APP	TBF	N	FR	N	N	1	N	N	N
F146	SA	1	-	-	2010	1	SQUAMATA	AX	VT	N	CO	A	N	3	N	CB	Y
F147	SA	1	-	-	2010	1	SQUAMATA	AX	VT	N	CO	A	N	2	N	BR	Y
F148	SA	1	-	-	2010	1	MAMMALIA	AX	RB	N	DSS	N	N	5	N	CB, CL	N
F149	SA	1	-	-	2010	1	TESTUDINES	TRT	CRP	N	FR	N	N	2	N	CL	N
F150	SA	1	-	-	2010	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F151	SA	1	-	-	2010	4	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F152	SA	1	-	-	2010	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F153	SA	1	-	-	2010	1	MAMMALIA	APP	UL	N	FR	N	N	3	N	BR, CB	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F154	SA	1	-	-	2010	1	TESTUDINES	TRT	CRP	N	FR	N	N	3	N	BR, CB, CL	N
F155	SA	1	-	-	2010	1	MAZAMA SP.	APP	PHF	N	CO	N	N	5	EX,	BR	Y?
F156	SA	1	-	-	2010	1	CF. CERVIDAE	APP	TA	L	DSS	N	N	5	EX	BR, CB	N
F157	SA	1	-	-	2010	1	ODOCOILEUS VIRGINIANUS	APP	MP	N	DSS	A	N	5	N	BR, CB	Y
F158	SA	1	-	-	2010	1	MAMMALIA	APP	FB	N	SH	N	N	5	N	BR	N
F159	SA	1	-	-	2010	1	SAURIA	APP	HM	R	CO	N	N	1	N	N	N
F160	SA	1	-	-	2010	1	ACTINOPTERYGII	CRN	CRN	N	FR	N	N	3	N	BR	N
F161	1B	38	8	4	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR	N
F162	1B	38	8	4	2011	1	MAMMALIA	AX	VT	N	CN	N	N	3	N	CB	N
F163	1B	38	8	4	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	N	N
F164	1B	38	8	4	2011	1	MAMMALIA	APP	MP	N	FR	N	N	3	PAT?, WE	N	N
F165	1G	57	1	1	2011	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	Y
F166	1G	57	1	1	2011	1	CF. CUNICULUS PACA	CRN	IC	N	FR	N	N	3	N	N	N
F167	1G	57	1	1	2011	1	MAMMALIA	APP	FM	N	FR	N	N	3	MD	BR	Y
F168	1G	57	1	1	2011	1	AVES	AX	VT	N	FR	N	N	4	N	N	N
F169	1G	57	1	1	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F170	1G	57	1	1	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	CB	N
F171	1G	57	1	1	2011	1	MAMMALIA	APP	MP	N	FR	N	N	3	N	BR	N
F172	SA	1	-	-	2010	1	MAMMALIA	APP	UL	N	FR	N	N	4	N	N	N
F173	SA	1	-	-	2010	3	AVES	CRN	CRN	N	FR	N	N	4	N	N	N
F174	SA	1	-	-	2010	1	AVES	APP	LB	N	FR	N	N	5	N	N	N
F175	SA	1	-	-	2010	1	MAMMALIA	APP	PH	N	FR	N	N	3	N	BR	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F176	SA	1	-	-	2010	1	MAMMALIA	AX	VT	N	FR	N	N	4	N	BR, CB	N
F177	SA	1	-	-	2010	1	MAMMALIA	AX	VT	N	CN	N	N	4	N	BR	N
F178	SA	1	-	-	2010	1	CF. CERVIDAE	APP	UL	R	SH	N	N	5	N	BR, CB, CL	N
F179	SA	1	-	-	2010	1	MAZAMA SP.	APP	PHT	N	CO	N	N	5	N	BR	Y
F180	SA	1	-	-	2010	1	CF. TAPIRUS BAIRDII	CRN	PP	N	FR	N	N	5	N	BR	Y
F181	SA	1	-	-	2010	1	MAMMALIA	CRN	MX	N	FR	N	N	5	N	BR, CB	N
F182	1J	8	5		2017	1	SCARUS SP.	CRN	NRC	N	FR	N	N	3	N	N	Y
F183	1J	8	5		2017	1	SCARUS SP.	CRN	PMX	N	FR	N	N	3	N	N	Y
F184	1J	8	5		2017	7	ACTINOPTERYGII	CRN	CRN	N	FR	N	N	3	N	N	Y
F185	1J	8	5		2017	1	MAMMALIA	AX	RB	L	SH	N	N	3	N	CM	Y
F186	1J	8	5		2017	1	CF. CRICETIDAE	APP	FM	R	CO	S	N	1	N	N	Y
F187	1J	8	5		2017	1	DIDELPHIDAE	APP	IL	L	SH	N	N	3	N	N	Y
F188	1J	8	5		2017	3	MAMMALIA	APP	LB	N	FR	N	N	5	MD	BR	Y
F189	1J	8	5		2017	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	Y
F190	1J	8	5		2017	2	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F191	1J	8	5		2017	1	CF. DASYPROCTA PUNCTATA	APP	RD	L	PSH	N	N	3	LEX	N	Y?
F192	1J	8	5		2017	1	TAYASSUIDAE	CRN	UCA	L	FR	N	N	5	N	CB, CL	N
F193	1J	8	5		2017	1	CF. CARNIVORA	CRN	CA	N	CO	N	N	3	N	N	Y
F194	1J	8	5		2017	1	AVES	APP	CCD	L	SH	N	N	3	N	BR, CM?	N
F195	1J	8	5		2017	1	MAMMALIA	CRN	CRN	N	FR	N	N	5	N	N	N
F196	1A	26	1	6-8	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	MD	BR	Y
F197	1A	26	1	6-8	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	CB, CL	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F198	1A	26	1	6-8	2011	1	AVES	APP	LB	N	SH	N	N	4	EX	N	Y
F199	1B	14	7	4	2011	1	CF. MAZAMA SP.	APP	PHT	N	CO	N	N	5	EX	BR	Y
F200	1B	14	7	4	2011	1	ACTINOPTERYGII	AX	VT	N	CO	N	N	3	N	N	Y
F201	1C	18	BURIAL 2 EXTENSION	2	2011	2	NASUA SP.	CRN	PM	R	CO	N	N	3	N	N	Y
F202	1I	89	1	4	2011	5	CF. MAZAMA SP.	APP	HM	L	DSH	A	N	5	EX, MD	N	Y
F203	1I	89	1	4	2011	1	DASYPUS NOVEMCINCTUS	APP	HM	R	DSH	A	N	3	PO	N	Y
F204	1I	89	1	4	2011	1	DASYPUS NOVEMCINCTUS	APP	MP	N	DSH	A	N	3	PO, MD	N	Y
F205	1I	89	1	4	2011	8	MAMMALIA	APP	LB	N	FR	N	N	5	MD	N	N
F206	1I	89	1	4	2011	2	CF. RODENTIA	APP	LB	N	SH	N	N	1	MD	N	N
F207	1I	89	1	4	2011	1	MAMMALIA	APP	LB	N	FR	N	N	1	MD	N	N
F208	1B	4	7	2	2011	1	TESTUDINES	TRT	NCRP	N	CO	N	N	3	N	N	Y
F209	1B	41	5	4	2011	1	CF. SERPENTES	AX	VT	N	CO	N	N	3	N	N	Y
F210	1B	14	7	4	2011	1	TESTUDINES	APP	IL	L	CO	N	N	2	N	N	Y?
F211	1B	14	7	4	2011	1	DIDELPHIDAE	AX	CD	N	CO	S	N	3	MD	N	Y
F212	1B	14	7	4	2011	1	CF. CERVIDAE	APP	PHT	N	PSH	N	N	5	N	BR	N
F213	1B	14	7	4	2011	1	MAMMALIA	APP	HM	N	FR	N	N	3	N	BR?	N
F214	1B	14	7	4	2011	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	N	Y
F215	1E	90	3	4	2011	1	CF. ODOCOILEUS VIRGINIANUS	APP	UL	R	SH	N	N	5	MD	N	Y
F216	1E	90	3	4	2011	1	MAMMALIA	AX	RB	L	SH	N	N	2	EX	N	N
F217	1E	90	3	4	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	NA	BR, CB	N
F218	1E	90	3	4	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	MD	N	N
F219	1E	90	3	5	2011	1	MAMMALIA	AX	RB	L	SH	N	N	3	N	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F220	1E	90	3	5	2011	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	MD	N	Y
F221	1E	95	3	4-5	2011	2	CF. ARTIODACTYLA	APP	LB	N	FR	N	N	5	MD	G?	Y
F222	1E	95	3	4-5	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	MD	BR	Y
F223	1E	95	3	4-5	2011	2	CF. CRICETIDAE	APP	TF	R	CO	S	N	1	N	N	N
F224	1E	95	3	4-5	2011	1	MAMMALIA	CRN	DT	N	SH	N	N	3	N	CB, CL	N
F225	1E	95	3	4-5	2011	1	CF. CERVIDAE	APP	PHT	N	FR	N	N	5	N	BR	N
F226	1E	95	3	4-5	2011	2	CF. SERPENTES	AX	VT	N	CO	N	N	3	N	BR	N
F227	1E	95	3	4-5	2011	1	CF. ODOCOILEUS VIRGINIANUS	APP	TA	R	PSS	S	N	5	EX	N	Y
F228	1E	95	3	4-5	2011	2	AVES	APP	LB	N	FR	N	N	5	N	N	N
F229	1C	1C	NA	NA	2010	1	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	N	N
F230	1E	59	NA	2-3	2011	1	DIDELPHIDAE	AX	CE	N	CO	S	N	3	N	N	Y?
F231	1P	45	1	1	2011	1	BRACHYURA	EXO	CLW	N	CO	N	N	NA	RE	N	Y
F232	1P	45	1	1	2011	1	DIDELPHIDAE	AX	CD	N	CO	S	N	3	RG, EX	N	Y?
F233	1P	45	1	1	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CM, BR	N
F234	1P	45	1	1	2011	1	CUNICULUS PACA	APP	MC	L	CO	A	N	3	N	CB, CL	N
F235	1B	41	5	4	2011	1	AVES	APP	TN	N	CO	N	N	3	N	N	N
F236	1B	42	5	4	2011	1	MAMMALIA	AX	TH	N	CO	S	N	3	N	N	Y
F237	1B	42	5	4	2011	1	TAYASSUIDAE	APP	MC	N	FR	N	N	5	N	CB, CL	N
F238	1A	27	3	8	2011	37	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	Y
F239	1A	27	3	8	2011	22	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	CB	Y
F240	1A	27	3	8	2011	6	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	CL	Y
F241	1A	27	3	8	2011	2	CF. CUNICULUS PACA	AX	CE	N	CNW	A	N	3	N	CB	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F242	1A	27	3	8	2011	1	CF. CUNICULUS PACA	AX	TH	N	CNW	A	N	3	N	CB	Y
F243	1A	27	3	8	2011	1	CF. CUNICULUS PACA	AX	TH	N	SP	N	N	3	N	CB	N
F244	1A	27	3	8	2011	2	CF. CUNICULUS PACA	AX	VT	N	CN	A	N	3	N	CB	Y
F245	1A	27	3	8	2011	11	CF. CUNICULUS PACA	AX	VT	N	TSP	N	N	3	N	CB	N
F246	1A	27	3	8	2011	1	CUNICULUS PACA	APP	PHS	N	CO	A	N	3	EX	N	N
F247	1A	27	3	8	2011	1	TAYASSUIDAE	APP	PHS	N	CO	A	N	5	MD	BR?	Y
F248	1A	27	3	8	2011	1	CF. TAYASSUIDAE	APP	SPB	N	DSH	N	N	5	MD	BR	N
F249	1A	27	3	8	2011	1	ARTIODACTYLA	APP	PHF	N	FR	N	N	5	MD	BR	N
F250	1A	27	3	8	2011	1	TAYASSUIDAE	APP	MC	L	PSS	N	N	5	EX, MD	BR, CB	N
F251	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MP	N	CO	S	N	3	N	BR	N
F252	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MP	N	CO	S	N	3	N	CB	N
F253	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MP	N	CO	S	N	3	N	CL	N
F254	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MC	N	CO	N	N	3	N	CB	N
F255	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MC	N	CO	N	N	3	N	CB, CL	N
F256	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MC	N	CO	N	N	3	N	N	N
F257	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MC	N	CO	N	N	3	N	BR	N
F258	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MT	L	CO	N	N	3	N	CB	N
F259	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	MT	R	CO	N	N	3	N	BR	N
F260	1A	27	3	8	2011	2	CF. CUNICULUS PACA	APP	MP	N	PSH	S	N	3	N	BR	N
F261	1A	27	3	8	2011	1	TAYASSUIDAE	APP	FM	N	HE	A	N	5	N	BR, CB	Y
F262	1A	27	3	8	2011	1	TAYASSUIDAE	APP	MP	N	DSE	S	N	5	N	BR	N
F263	1A	27	3	8	2011	1	SQUAMATA	AX	VT	N	CO	A	N	1	N	BR	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F264	1A	27	3	8	2011	2	SQUAMATA	AX	VT	N	CO	A	N	2	N	BR	N
F265	1A	27	3	8	2011	6	SQUAMATA	AX	VT	N	CO	A	N	3	N	BR	Y
F266	1A	27	3	8	2011	4	SQUAMATA	AX	VT	N	CO	A	N	3	N	CB	Y
F267	1A	27	3	8	2011	1	SQUAMATA	AX	VT	N	CO	A	N	1	N	CB, CL	N
F268	1A	27	3	8	2011	1	SQUAMATA	AX	VT	N	NRS	A	N	1	N	CB, CL	N
F269	1A	27	3	8	2011	1	SQUAMATA	AX	VT	N	CNW	A	N	3	N	CB, CL	N
F270	1A	27	3	8	2011	1	CF. RODENTIA	AX	SAC	N	CO	S	N	3	N	BR	N
F271	1A	27	3	8	2011	2	CF. RODENTIA	AX	LU	N	CNW	S	N	3	N	BR, CB	N
F272	1A	27	3	8	2011	3	CF. RODENTIA	AX	CD	N	CO	S	N	3	N	BR, CB	N
F273	1A	27	3	8	2011	1	CF. RODENTIA	AX	VT	N	CO	S	N	3	N	BR	N
F274	1A	27	3	8	2011	1	BRACHYURA	EXO	CLW	N	CO	N	N	NA	RE	N	Y
F275	1A	27	3	8	2011	2	DASYPUS NOVEMCINCTUS	APP	CAL	L	CO	N	N	3	MD?	BR, CB	Y
F276	1A	27	3	8	2011	1	DASYPUS NOVEMCINCTUS	APP	AS	L	CO	N	N	3	MD?	BR, CB	Y
F277	1A	27	3	8	2011	1	CERVIDAE	APP	TRP	L	CO	N	N	5	N	BR, CB	Y
F278	1A	27	3	8	2011	1	DASYPUS NOVEMCINCTUS	APP	AS	R	FR	N	N	3	N	BR, CB	N
F279	1A	27	3	8	2011	1	CF. MAZAMA SP.	APP	PHF	N	CO	N	N	5	N	BR	Y
F280	1A	27	3	8	2011	2	CF. MAZAMA SP.	APP	PHF	N	CO	N	N	5	N	CB	Y
F281	1A	27	3	8	2011	1	CF. MAZAMA SP.	APP	PHF	N	CO	N	N	5	N	CL	N
F282	1A	27	3	8	2011	2	CF. MAZAMA SP.	APP	PHT	N	DSH	N	N	5	N	BR, CB	N
F283	1A	27	3	8	2011	2	CERVIDAE	APP	PH	N	FR	N	N	5	N	BR, CB	N
F284	1A	27	3	8	2011	1	CARNIVORA	CRN	PM	N	CO	N	N	5	N	CB	N
F285	1A	27	3	8	2011	1	ARTIODACTYLA	CRN	MX	L	FR	N	N	5	MD	BR	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F286	1A	27	3	8	2011	1	DASYPUS NOVEMCINCTUS	APP	UL	L	SH	N	N	3	MD	BR	Y
F287	1A	27	3	8	2011	1	DASYPUS NOVEMCINCTUS	APP	RD	L	PSS	N	N	3	N	CL	N
F288	1A	27	3	8	2011	2	DASYPUS NOVEMCINCTUS	APP	UL	L	SH	N	N	3	MD	CB	Y
F289	1A	27	3	8	2011	1	MAMMALIA	APP	UL	L	SH	N	N	3	MD	BR	Y
F290	1A	27	3	8	2011	1	MAMMALIA	APP	UL	L	SH	N	N	2	N	BR, CB	N
F291	1A	27	3	8	2011	1	MAMMALIA	APP	UL	L	SH	N	N	2	N	BR	N
F292	1A	27	3	8	2011	1	MAMMALIA	APP	UL	R	SH	N	N	3	N	CL	N
F293	1A	27	3	8	2011	1	CERVIDAE	CRN	DT	L	FR	N	N	5	MD	BR	Y
F294	1A	27	3	8	2011	1	CF. CERVIDAE	CRN	DT	R	FR	N	N	5	N	BR, CB	N
F295	1A	27	3	8	2011	1	CF. CERVIDAE	CRN	DT	N	FR	N	N	5	N	CL	N
F296	1A	27	3	8	2011	1	CF. MAZAMA SP.	APP	UL	R	PSS	N	N	5	N	BR	Y
F297	1A	27	3	8	2011	1	MAMMALIA	APP	AS	N	FR	N	N	3	N	CL	N
F298	1A	27	3	8	2011	1	KINOSTERNIDAE	APP	HM	L	PSH	N	N	1	N	BR	Y?
F299	1A	27	3	8	2011	1	KINOSTERNIDAE	APP	FM	R	PSH	N	N	1	N	BR	Y?
F300	1A	27	3	8	2011	11	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	1	N	BR	Y?
F301	1A	27	3	8	2011	4	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	1	N	BR, CB	Y?
F302	1A	27	3	8	2011	3	CF. KINOSTERNIDAE	TRT	PCRP	N	FR	N	N	1	N	BR, CB	Y?
F303	1A	27	3	8	2011	1	MAMMALIA	APP	FM	L	PSH	N	N	3	RG, EX	BR?	Y
F304	1A	27	3	8	2011	1	CERVIDAE	APP	FM	L	PSH	N	N	3	MD	BR	Y
F305	1A	27	3	8	2011	1	MAMMALIA	APP	HM	L	SH	N	N	3	RG, EX	BR?	Y
F306	1A	27	3	8	2011	1	CF. CUNICULUS PACA	APP	HM	L	SH	N	N	3	MD	BR	Y
F307	1A	27	3	8	2011	1	CF. MAZAMA SP.	APP	CAL	L	DSS	A	N	5	MD	BR, CB	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F308	1A	27	3	8	2011	1	MAMMALIA	APP	CAL	L	CO	A	N	3	N	CB	Y
F309	1A	27	3	8	2011	23	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F310	1A	27	3	8	2011	4	MAMMALIA	APP	LB	N	FR	N	N	3	N	CL	N
F311	1A	27	3	8	2011	19	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N
F312	1A	27	3	8	2011	1	SYLVILAGUS SP.	APP	FM	R	PSS	A	N	3	EX	BR	Y?
F313	1A	27	3	8	2011	1	RODENTIA	CRN	IN	N	FR	A	N	3	N	CB, CL	N
F314	1A	27	3	8	2011	1	CUNICULUS PACA	CRN	PM	L	CO	A	N	3	N	BR,CB, CL	N
F315	1A	27	3	8	2011	8	MAMMALIA	CRN	CRN	N	FR	N	N	5	MD	BR	Y
F316	1A	27	3	8	2011	8	MAMMALIA	CRN	CRN	N	FR	N	N	5	MD	CB,CL	Y
F317	1A	27	3	8	2011	3	CF. ARTIODACTYLA	APP	PH	N	FR	N	N	5	N	BR	N
F318	1A	27	3	8	2011	1	CF. ARTIODACTYLA	APP	CAR	N	FR	N	N	5	N	BR, CB	N
F319	1A	27	3	8	2011	1	TESTUDINES	APP	TA	L	PSH	N	N	2	N	BR	Y?
F320	1A	27	3	8	2011	1	TESTUDINES	APP	TA	R	PSH	N	N	2	N	BR	Y?
F321	1A	27	3	8	2011	1	CF. ORTHOGEOMYS HISPIDUS	APP	HM	R	DSH	N	N	1	N	BR	Y
F322	1A	27	3	8	2011	1	AVES	APP	TMT	N	SH	N	N	3	N	CB	Y
F323	1A	27	3	8	2011	1	CERVIDAE	CRN	ANT	N	TNFR	N	N	5	N	BR, CB	Y
F324	1A	27	3	8	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CM, BR, CB	N
F325	1A	27	3	8	2011	1	TAYASSUIDAE	CRN	CN	N	FR	N	N	5	N	BR, CB	Y
F326	1A	27	3	8	2011	9	MAMMALIA	APP	LB	N	FR	N	N	3	EX	N	N
F327	1A	27	3	8	2011	41	MAMMALIA	APP	LB	N	FR	N	N	5	MD	BR	Y
F328	1A	27	3	8	2011	56	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	Y
F329	1A	27	3	8	2011	35	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F330	1A	27	3	8	2011	31	MAMMALIA	AX	RB	N	FR	N	N	5	N	CB	N
F331	1A	27	3	8	2011	14	MAMMALIA	AX	RB	N	FR	N	N	5	N	BR	N
F332	1A	27	3	8	2011	13	MAMMALIA	APP	LB	N	FR	N	N	5	MD	BR, G?	N
F333	1A	27	3	8	2011	5	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, G?	N
F334	1A	27	3	8	2011	12	MAMMALIA	APP	LB	N	FR	N	N	3	N	CB	N
F335	1A	27	3	8	2011	10	MAMMALIA	AX	VT	N	FR	N	N	3	N	BR, CB	N
F336	1A	27	3	8	2011	14	MAMMALIA	CRN	CRN	N	FR	N	N	3	N	BR	N
F337	1A	27	3	8	2011	1	MAMMALIA	CRN	DT	N	FR	N	N	5	N	BR, CB	N
F338	1A	27	3	8	2011	2	CF. CUNICULUS PACA	CRN	MX	N	FR	N	N	3	N	BR	N
F339	1A	27	3	8	2011	5	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	N
F340	1A	27	3	8	2011	3	CF. ARTIODACTYLA	APP	PH	N	FR	N	N	5	N	BR	N
F341	1A	27	3	8	2011	1	ARTIODACTYLA	APP	TA	L	FR	N	N	5	MD	BR	Y
F342	1A	27	3	8	2011	1	CF. ARTIODACTYLA	APP	TA	N	FR	N	N	5	N	CB	Y
F343	1A	27	3	8	2011	1	CF. CERVIDAE	APP	MP	N	FR	N	N	5	MD	BR	Y
F344	1A	27	3	8	2011	1	CF. CERVIDAE	APP	MP	N	FR	N	N	5	N	CB	Y
F345	1A	27	3	8	2011	1	TESTUDINES	APP	LB	N	FR	S	N	3	N	BR, CB	N
F346	1A	27	3	8	2011	1	CF. MELEAGRIS SP.	APP	PH	N	DSS	A		5	N	N	Y?
F347	1A	27	3	8	2011	3	CF. RODENTIA	APP	LB	N	FR	N	N	1	N	CB	N
F348	1A	27	3	8	2011	2	CF. RODENTIA	APP	LB	N	FR	N	N	1	N	BR	N
F349	1A	27	3	8	2011	1	CF. CRICETIDAE	APP	TF	R	DSH	N	N	1	N	BR	N
F350	1A	27	3	8	2011	13	TESTUDINES	TRT	PLS	N	FR	N	N	3	N	BR	N
F351	1A	27	3	8	2011	4	TESTUDINES	TRT	CRP	N	FR	N	N	3	N	BR, CB	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F352	1A	27	3	8	2011	1	TESTUDINES	TRT	CRP	N	FR	N	N	3	MD	BR	N
F353	1A	27	3	8	2011	1	TESTUDINES	TRT	PLS	N	FR	N	N	3	N	BR	N
F354	1A	27	3	8	2011	1	TESTUDINES	TRT	PCRP	N	FR	N	N	3	N	CB, CL	N
F355	1A	27	3	8	2011	9	MAMMALIA	APP	LB	N	FR	N	N	3	N	BR	N
F356	1A	27	3	8	2011	4	MAMMALIA	AX	RB	N	FR	N	N	4	N	CL	N
F357	1A	27	3	8	2011	1	MAMMALIA	APP	UL	N	FR	N	N	5	N	CB, CL	N
F358	1A	27	3	8	2011	1	MAMMALIA	APP	UL	N	FR	N	N	3	N	CB, CL	N
F359	1A	27	3	8	2011	1	MAMMALIA	APP	UL	N	FR	N	N	3	N	BR, CB	N
F360	1A	27	3	8	2011	1	MAMMALIA	APP	FM	R	DSS	S	N	3	N	BR, CB	Y
F361	1A	27	3	8	2011	1	CF. RODENTIA	APP	TF	N	FR	N	N	1	N	CB	N
F362	1A	27	3	8	2011	1	MAMMALIA	APP	MP	N	PSS	N	N	3	N	BR, CB	Y
F363	1A	27	3	8	2011	1	MAMMALIA	APP	LB	N	SH	N	N	3	N	BR	Y
F364	1A	27	3	8	2011	3	MAMMALIA	AX	RB	N	FR	N	N	3	N	BR, CB	N
F365	1A	27	3	8	2011	2	MAMMALIA	APP	UL	N	SH	N	N	3	N	BR	N
F366	1A	27	3	8	2011	1	CF. ARTIODACTYLA	AX	TH	N	FR	N	N	5	EX	BR	Y
F367	1A	27	3	8	2011	1	MAMMALIA	APP	IM	R	SH	A	N	5	N	BR, CB, CL	N
F368	1A	27	3	8	2011	2	MAMMALIA	APP	LB	N	SH	N	N	5	EX	BR	Y
F369	1A	27	3	8	2011	1	DIDELPHIDAE	APP	IL	R	SH	N	N	3	N	CB	Y
F370	1A	27	3	8	2011	1	MAMMALIA	APP	IS	L	SH	N	N	3	N	BR, CB	Y
F371	1A	27	3	8	2011	1	MAMMALIA	APP	UL	N	SH	N	N	4	MD, RG	BR, CB	Y
F372	1A	27	3	8	2011	1	MAMMALIA	APP	LB	N	FR	S	N	3	MD	N	N
F373	1A	27	3	8	2011	1	MAMMALIA	APP	LB	N	FR	S	N	3	MD	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F374	1A	27	3	8	2011	1	SYLVILAGUS SP.	APP	TA	R	DSS	A	N	3	N	CB	Y?
F375	1A	27	3	8	2011	1	MAMMALIA	APP	IS	L	SH	N	N	3	MD	BR	Y
F376	1A	27	3	8	2011	4	MAMMALIA	APP	MP	N	SH	N	N	3	N	BR	Y
F377	1A	27	3	8	2011	1	MAMMALIA	APP	MP	N	PSH	N	N	3	N	BR	Y
F378	1A	27	3	8	2011	1	MAMMALIA	APP	MP	N	DSH	N	N	3	N	CB	Y
F379	1A	27	3	8	2011	4	MAMMALIA	AX	VT	N	FR	N	N	3	MD	BR	N
F380	1A	27	3	8	2011	1	CERVIDAE	APP	TA	R	PSS	N	N	5	N	BR, CL	N
F381	1A	27	3	8	2011	2	MAMMALIA	APP	LB	N	FR	N	N	4	N	CB, CL	N
F382	1A	27	3	8	2011	1	CF. DIDELPHIS SP.	APP	TA	N	SH	N	N	3	N	BR, CB	N
F383	1A	27	3	8	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CM, PO, WR	N
F384	1A	27	3	8	2011	3	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	N	BR	N
F385	1E	80	2	3	2011	2	BRACHYURA	EXO	CLW	N	CO	N	N	NA	RE	N	Y
F386	1E	80	2	3	2011	1	BRACHYURA	EXO	CLW	N	FR	N	N	NA	RE	N	N
F387	1E	80	2	3	2011	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	CB	N
F388	1E	80	2	3	2011	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR	N
F389	1E	80	2	3	2011	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	N	N
F390	1E	80	2	3	2011	1	CF. MAZAMA SP.	APP	PHT	N	CO	N	N	5	EX	BR	Y
F391	1E	80	2	3	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL, GR	N
F392	1E	80	2	3	2011	1	MAMMALIA	AX	RB	N	FR	N	N	5	N	CL	N
F393	1E	80	2	3	2011	1	AVES	APP	PH	N	DSH	N	N	4	N	BR, CB	Y
F394	1E	80	2	3	2011	4	MAMMALIA	AX	AX	N	CO	N	N	3	EX	N	Y
F395	1E	80	2	3	2011	1	TESTUDINES	TRT	CRP	N	FR	N	N	2	N	CB	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F396	1E	80	2	3	2011	1	TESTUDINES	TRT	CRP	N	FR	N	N	2	N	BR	Y
F397	1E	80	2	3	2011	1	CF. DIDELPHIS SP.	CRN	CN	L	CO	N	N	3	EX	N	Y
F398	1E	80	2	3	2011	1	CF. DIDELPHIS SP.	CRN	CN	R	CO	N	N	3	EX	N	Y
F399	1E	80	2	3	2011	2	CF. MARMOSA SP.	APP	FM	L	CO	A	N	3	N	N	Y
F400	1E	80	2	3	2011	1	CF. DIDELPHIS SP.	APP	FM	R	PSH	S	N	3	N	N	Y
F401	1E	80	2	3	2011	1	MAMMALIA	APP	FM	L	SH	N	N	3	N	BR, CB	Y
F402	1E	80	2	3	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	EX	WR, PO	N
F403	1E	80	2	3	2011	3	CF. CUNICULUS PACA	APP	MP	N	CO	S	N	3	MD	N	Y
F404	1E	80	2	3	2011	2	MAMMALIA	APP	TA	R	DSH	S	N	3	MD	BR?	Y
F405	1E	80	2	3	2011	1	CF. DIDELPHIS SP.	APP	SC	R	PSS	N	N	3	EX	N	Y
F406	1E	80	2	3	2011	2	MAMMALIA	APP	LB	N	SH	N	N	3	N	BR, CB	N
F407	1E	80	2	3	2011	5	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	Y
F408	1E	80	2	3	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	MD	BR	Y
F409	1E	80	2	3	2011	6	MAMMALIA	APP	LB	N	FR	N	N	5	MD	N	Y
F410	1E	80	2	3	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	RG	BR, G	Y
F411	1E	80	2	3	2011	1	CF. RODENTIA	CRN	TE	N	RT	N	N	3	EX	N	N
F412	1E	80	2	3	2011	1	MAMMALIA	CRN	SQA	R	FR	N	N	3	EX	N	N
F413	1E	80	2	3	2011	1	ARTIODACTYLA	CRN	PMX	L	FR	N	N	5	N	CB	Y
F414	1E	80	2	3	2011	1	ARTIODACTYLA	CRN	CN	N	FR	N	N	5	N	CB	Y
F415	1E	80	2	3	2011	2	MAMMALIA	AX	RB	N	FR	N	N	5	N	CB	N
F416	1E	80	2	3	2011	1	MAMMALIA	AX	RB	N	FR	N	N	3	N	CB	N
F417	1E	80	2	3	2011	1	MAMMALIA	AX	CD	N	CO	A	N	3	N	BR, CB	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F418	1E	80	2	3	2011	1	MAMMALIA	APP	FB	N	SH	A	N	4	N	N	Y
F419	1E	80	2	3	2011	1	MAMMALIA	APP	MP	N	SH	A	N	3	RG	N	Y
F420	1E	80	2	3	2011	1	AVES	AX	STN	N	FR	N	N	4	EX	N	N
F421	1E	80	2	3	2011	1	AVES	APP	PHF	L	CO	A	N	4	N	N	Y
F422	1B	4	7	2	2011	4	DASYPUS NOVEMCINCTUS	APP	HM	L	CO	S	N	3	N	N	Y
F423	1B	4	7	2	2011	1	MAMMALIA	AX	RB	L	SH	N	N	3	EX	N	Y
F424	1B	4	7	2	2011	1	MAMMALIA	AX	RB	N	SH	N	N	3	EX	N	Y
F425	1B	4	7	2	2011	1	MAMMALIA	AX	RB	N	FR	N	N	5	EX, PO	N	N
F426	1B	4	7	2	2011	1	MAMMALIA	CRN	CRN	N	FR	N	N	3	EX	BR	Y?
F427	1B	4	7	2	2011	1	AVES	APP	TBT	R	CO	N	N	3	EX?	N	Y
F428	1B	4	7	2	2011	1	CF. IGUANIDAE	APP	UL	L	CO	A	N	3	EX?	BR?	Y
F429	1B	4	7	2	2011	1	CF. IGUANIDAE	AX	RB	R	CO	N	N	3	EX?	BR?	Y
F430	1B	4	7	2	2011	2	MAMMALIA	CRN	CRN	N	FR	N	N	1	EX	N	N
F431	1B	14	7	4	2011	1	DASYPUS NOVEMCINCTUS	APP	HM	L	DSS	A	N	3	N	BR	Y
F432	1B	14	7	4	2011	1	DASYPUS NOVEMCINCTUS	APP	UL	L	SH	N	N	3	N	BR, CB	Y
F433	1B	14	7	4	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N
F434	1B	14	7	4	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F435	1B	14	7	4	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F436	1B	14	7	4	2011	1	MAMMALIA	APP	CAL	N	FR	N	N	5	N	N	N
F437	1H	60	1	3	2011	3	CF. CRICETIDAE	APP	FM	N	CO	S	N	1	N	N	Y?
F438	1B	42	5	4	2011	1	SCIURUS SP.	CRN	FN	R	POP	N	N	1	N	BR?	N
F439	1E	55	1	3	2011	1	ARTIODACTYLA	APP	PHF	N	CO	N	N	5	EX, WEA?	N	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F440	1E	55	1	3	2011	1	CERVIDAE	APP	MT	L	FR	N	N	5	MD?	BR?, G?	Y
F441	1E	55	1	3	2011	1	DASYPUS NOVEMCINCTUS	APP	HM	R	SH	N	N	3	EX, RE	N	Y
F442	1E	55	1	3	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	Y
F443	1E	55	1	3	2011	1	ARTIODACTYLA	APP	MP	L	FR	N	N	5	N	CB	Y
F444	1E	55	1	3	2011	1	CF. CENTROPOMUS SP.	AX	DFN	N	PSS	N	N	3	N	CB	Y?
F445	1E	55	1	3	2011	3	CF. BUFO MARINUS	APP	TBF	R	SH	N	N	3	N	N	N
F446	1E	55	1	3	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	MD	N	Y
F447	1E	55	1	3	2011	1	MAMMALIA	AX	RB	N	FR	N	N	4	N	CB	Y
F448	1E	55	1	3	2011	1	MELEAGRIS SP.	APP	TBT	R	DSS	N	N	5	PO	CG?, CW, CM	Y
F449	1E	55	1	3	2011	1	MAMMALIA	APP	IS	L	SH	N	N	3	EX	N	N
F450	1E	55	1	3	2011	1	DASYPUS NOVEMCINCTUS	APP	PHT	N	CO	N	N	3	EX	N	N
F451	1E	58	1	4	2011	1	CF. CRICETIDAE	APP	TF	L	PSS	N	N	1	N	N	N
F452	1E	58	1	4	2011	1	CF. IGUANIDAE	CRN	DT	R	SH	N	N	3	EX, WEA?	N	Y
F453	1E	58	1	4	2011	1	MAMMALIA	AX	VT	N	TSP	N	N	3	EX	N	Y
F454	1E	58	1	4	2011	1	MAMMALIA	APP	FM	L	SH	N	N	3	N	N	Y
F455	1E	58	1	4	2011	1	ORYZOMYS COUESI	CRN	MX	R	FR	N	N	1	N	N	N?
F456	1E	58	1	4	2011	1	CF. CERVIDAE	APP	MP	N	FR	N	N	5	N	BR, CB	Y
F457	1E	58	1	4	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F458	1E	58	1	4	2011	1	CF. LEOPARDUS WIEDII	APP	MC	N	CO	N	N	3	N	N	Y
F459	1E	58	1	4	2011	1	CF. LEOPARDUS WIEDII	APP	MC	N	PSS	N	N	3	N	BR?	N
F460	LZ	1W	NA	NA	2010	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	N
F461	LZ	1W	NA	NA	2010	1	CUNICULUS PACA	APP	MC	N	CO	A	N	3	N	CL	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F462	LZ	1W	NA	NA	2010	1	MAMMALIA	AX	CD	N	CO	N	N	5	N	CB	Y
F463	LZ	1W	NA	NA	2010	1	CF. CERVIDAE	APP	RD	R	FR	N	N	5	N	BR	Y
F464	LZ	1W	NA	NA	2010	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	Y
F465	LZ	1W	NA	NA	2010	4	MAMMALIA	APP	LB	N	FR	N	N	4	N	CB	Y
F466	LZ	1W	NA	NA	2010	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR	Y
F467	1B	22	8	2	2011	1	HETEROMYS SP.	APP	TF	R	CO	A	N	1	N	N	N
F468	1D	33	1	2	2011	2	TESTUDINES	TRT	CRP	N	FR	N	N	2	EX	N	Y?
F469	1D	33	1	2	2011	1	CF. DASYPROCTA PUNCTATA	CRN	LIN	R	CO	N	N	3	N	N	Y
F470	1D	33	1	2	2011	1	RODENTIA	CRN	IN	N	FR	N	N	3	N	N	Y?
F471	1D	33	1	2	2011	4	MAMMALIA	AX	RB	N	FR	N	N	5	EX	N	N
F472	1D	33	1	2	2011	1	MAMMALIA	AX	RB	N	FR	N	N	3	EX	N	N
F473	1D	33	1	2	2011	6	MAMMALIA	AX	RB	N	FR	N	N	5	EX	N	N
F474	1D	33	1	2	2011	1	CF. RODENTIA	AX	AX	N	CO	N	N	1	EX	N	N
F475	1D	33	1	2	2011	1	SQUAMATA	AX	VT	N	FR	N	N	3	EX	N	N
F476	1D	33	1	2	2011	1	TESTUDINES	AX	VT	N	CNW	N	N	5	EX	N	N
F477	1I	84	1	2	2011	1	ODOCOILEUS VIRGINIANUS	APP	PHT	N	CO	N	N	5	EX	BR	Y
F478	1I	84	1	2	2011	1	CF. STRIGIFORMES	APP	HM	R	SH	N	N	4	EX, MD?	CW, PO, WR	Y
F479	1I	84	1	2	2011	1	AVES	APP	HM	L	CO	N	N	1	DG? OR EX/	N	Y
F480	1I	84	1	2	2011	4	MAMMALIA	AX	RB	N	FR	N	N	5	RE, EX	BR?	N
F481	1I	84	1	2	2011	2	CF. CERVIDAE	AX	RB	R	SH	N	N	5	EX	BR?	N
F482	1I	84	1	2	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	N
F483	1I	84	1	2	2011	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	N	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F484	1C	8	11	2	2011	1	TESTUDINES	AX	VT	N	CNW	A	N	3	EX	N	Y?
F485	1C	8	11	2	2011	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	EX	BR	Y?
F486	1C	8	11	2	2011	2	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	EX	N	Y?
F487	1C	8	11	2	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	G	Y
F488	1C	8	11	2	2011	1	ORTHOGEOMYS HISPIDUS	APP	FM	L	CO	N	N	1	N	G	Y
F489	1C	8	11	2	2011	5	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F490	1C	8	11	2	2011	1	CF. CARNIVORA	CRN	DT	R	ACP	N	N	3	EX	N	Y
F491	1C	8	11	2	2011	1	MAMMALIA	APP	LB	N	FR	S	N	4	EX	N	N
F492	1B	42	5	4	2011	1	CF. CHELONIOIDEA	APP	PH	N	PSS	N	N	4	N	N	Y?
F493	1B	42	5	4	2011	1	CF. CHELONIOIDEA	APP	PH	N	DSS	N	N	4	N	N	Y?
F494	1B	42	5	4	2011	11	CF. CHELONIOIDEA	APP	PH	N	FR	N	N	4	N	N	Y?
F495	1C	10	12	2	2011	1	DASYPUS NOVEMCINCTUS	APP	RD	L	PSH	A	N	3	N	BR, CB	Y
F496	1C	15	12	2	2011	1	NASUA SP.	CRN	MO	R	CO	A	N	3	N	N	Y
F497	1C	15	12	2	2011	12	NASUA SP.	CRN	CN	N	FR	N	N	3	N	N	Y
F498	1B	13	7	3	2011	1	CRICETIDAE	APP	HM	L	DSH	A	N	1	N	N	N
F499	1B	13	7	3	2011	1	CRICETIDAE	AX	CD	N	CO	N	N	1	N	N	N
F500	1B	22	8	2	2011	3	CF. ARTIODACTYLA	AX	RB	N	FR	N	N	5	EX	N	N
F501	1B	22	8	2	2011	1	MAMMALIA	AX	VT	N	FR	N	N	5	EX	N	N
F502	1B	22	8	2	2011	1	MAMMALIA	AX	RB	R	PSS	N	N	3	EX	N	N
F503	1B	22	8	2	2011	1	ORYZOMYS COUESI	CRN	MX	L	TR	N	N	1	EX	N	N
F504	1B	22	8	2	2011	2	ORYZOMYS COUESI	CRN	MX	R	TR	N	N	1	EX	N	N
F505	1J	10	2	5	2017	1	DIDELPHIDAE	APP	IL	R	N	N	N	3	EX	BR?	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F506	1J	10	2	5	2017	1	DIDELPHIDAE	APP	FM	R	PSH	S	N	3	EX	N	Y
F507	1J	10	2	5	2017	1	TAYASSUIDAE	APP	MP	N	CO	A	N	5	N	N	Y
F508	1J	10	2	5	2017	1	CF. ARTIODACTYLA	APP	LB	N	FR	N	N	5	MD	BR, G	Y
F509	1J	10	2	5	2017	1	MAMMALIA	APP	LB	N	FR	N	N	5	MD	N	Y
F510	1J	10	2	5	2017	2	MAMMALIA	AX	RB	L	PSH	A	N	3	N	BR	Y
F511	1J	10	2	5	2017	1	AVES	APP	TBT	R	SH	N	N	2	N	BR	Y
F512	1J	17-12	2	6	2017	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX, RE	BR, G	Y
F513	1K	17-15	2	5	2017	1	TAYASSUIDAE	APP	MP	N	PSH	A	N	5	EX	N	N
F514	1K	17-15	2	5	2017	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F515	1J	17-12	2	6	2017	2	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	PI	N	Y
F516	1J	17-12	2	6	2017	1	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	N	Y
F517	1J	17-12	2	6	2017	1	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	NA	N	CB	Y
F518	1J	17-12	2	6	2017	1	MAMMALIA	AX	RB	L	PSH	S	N	3	N	BR, CB	Y
F519	1K	17-20	2	6	2017	1	MAMMALIA	AX	RB	N	FR	N	N	3	N	BR	N
F520	1K	17-20	2	6	2017	2	MAMMALIA	AX	RB	N	SH	N	N	3	N	BR	N
F521	1K	17-20	2	6	2017	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N
F522	1K	17-20	2	6	2017	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	CB	N
F523	1K	17-20	2	6	2017	2	MAMMALIA	APP	LB	N	FR	N	N	5	CG?	BR, G?	Y
F524	1K	17-20	2	6	2017	1	MAMMALIA	AX	CD	N	CO	N	N	3	N	BR	Y
F525	1K	17-20	2	6	2017	1	CF. ORTHOGEOMYS HISPIDUS	CRN	LIC	N	FR	N	N	3	N	BR	Y
F526	1K	17-20	2	6	2017	1	NASUA SP.	CRN	LPM	N	CO	N	N	3	N	NA	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F527	1K	17-20	2	6	2017	1	MAMMALIA	CRN	CRN	N	FR	N	N	3	EX	NA	Y
F528	1J	12	2	6	2017	2	CF. CERVIDAE	APP	FM	N	DSE	A	N	5	EX	BR	Y
F529	1J	12	2	6	2017	2	CF. ODOCOILEUS VIRGINIANUS	APP	SC	L	PSS	N	N	5	EX	BR	Y
F530	1J	12	2	6	2017	1	CERVIDAE	APP	MT	N	DSE	S	N	5	EX, RE	BR	Y
F531	1J	12	2	6	2017	1	CF. CERVIDAE	AX	VT	N	CN	A	N	5	N	BR	Y
F532	1J	12	2	6	2017	1	CF. CERVIDAE	CRN	PAR	N	FR	N	N	5	N	BR	Y
F533	1J	12	2	6	2017	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR	Y
F534	1J	12	2	6	2017	1	MAMMALIA	APP	LB	N	FR	A	N	5	EX, RE	CB,CL, G	Y
F535	1I	84	1	2	2011	1	CF. LOBATUS GIGAS	MS	MS	N	OTL, FR	N	N	N	EX	COL?	Y
F536	1J	17-17	3	4	2017	1	MAZAMA SP.	APP	FM	L	DSS	A	N	5	N	CB, CL	N
F537	1J	17-17	3	4	2017	1	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	N	Y
F538	1J	17-17	3	4	2017	1	TAYASSUIDAE	APP	TA	L	DSS	A	N	5	N	BR, CB, CL	N
F539	1J	17-17	3	4	2017	1	CF. TAYASSUIDAE	APP	SC	L	DSS	N	N	5	N	BR	Y
F540	1J	17-17	3	4	2017	1	CF. CERVIDAE	APP	TA	N	FR	A	N	5	N	BR	Y
F541	1J	17-11	1	6	2017	1	CF. ODOCOILEUS VIRGINIANUS	APP	FM	R	PSS	S	N	5	N	BR, G?	Y
F542	1J	17-11	1	6	2017	1	CERVIDAE	APP	TA	R	DSS	A	N	5	N	CB, G?	Y
F543	1J	17-11	1	6	2017	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, G?	N
F544	1J	17-11	1	6	2017	1	CF. IGAUNA IGUANA	CRN	DT	R	FR	N	N	3	N	N	Y?
F545	1J	9	1	5	2017	2	MAMMALIA	CRN	PAR	N	FR	S	N	3	N	BR	Y
F546	1J	9	1	5	2017	1	DASYPUS NOVEMCINCTUS	APP	MT	R	CO	A	N	3	N	CB	Y
F547	1J	9	1	5	2017	1	TAYASSUIDAE	CRN	DT	R	TR	N	N	5	N	BR	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F548	1J	9	1	5	2017	1	TAYASSUIDAE	CRN	DT	L	ANG	N	N	5	N	BR, CB	Y
F549	1J	9	1	5	2017	1	CF. CRICETIDAE	APP	FM	L	CO	S	N	1	N	N	Y
F550	1J	9	1	5	2017	1	CF. URYCYON CINEREOARGENTEUS	APP	IS	R	FR	A	N	3	N	BR	Y?
F551	1J	9	1	5	2017	1	MAMMALIA	APP	IL	R	FR	N	N	3	N	BR, CB	Y
F552	1J	9	1	5	2017	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	Y
F553	1J	9	1	5	2017	1	CF. IGUANIDAE	APP	TA	L	PSH	N	N	3	N	BR	Y?
F554	1J	9	1	5	2017	1	AVES	APP	FM	R	DSH	N	N	3	N	BR	Y?
F555	1J	9	1	5	2017	2	CF. BUFO MARINUS	APP	TBF	R	SH	N	N	3	N	BR	Y?
F556	1J	9	1	5	2017	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	3	N	BR	Y?
F557	1B	70	6.5	3	2011	1	MAMMALIA	APP	TA	N	FR	N	N	5	N	EX	Y
F558	1B	70	6.5	3	2011	1	ACTINOPTERYGII	CRN	CRN	N	FR	N	N	3	PO	G?	Y
F559	1B	70	6.5	3	2011	8	MAMMALIA	APP	TA	R	PSH	N	N	3	EX	BR	Y
F560	1B	70	6.5	3	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR	Y
F561	1J	17-19	3	6	2017	1	AVES	APP	LB	N	FR	N	N	5	N	PO?, G	Y?
F562	1J	17-19	3	6	2017	1	DASYPUS NOVEMCINCTUS	APP	TA	L	PSH	S	N	3	N	BR, G?	Y
F563	1J	17-19	3	6	2017	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, G	Y
F564	1J	17-19	3	6	2017	2	MAMMALIA	AX	RB	N	FR	N	N	4	N	BR	N
F565	1J	17-19	3	6	2017	1	DASYPROCTA PUNCTATA	APP	CAL	R	CO	N	N	3	N	CB	Y
F566	1J	17-19	3	6	2017	1	ACTINOPTERYGII	CRN	DT	R	FR	N	N	3	N	BR	Y
F567	1B	24	8	3	2011	1	CF. CRICETIDAE	APP	FM	L	PSH	S	N	1	N	N	N
F568	1B	24	8	3	2011	2	CF. CRICETIDAE	APP	FM	R	PSH	A	N	1	N	N	N
F569	1B	24	8	3	2011	1	AVES	APP	LB	N	SH	N	N	1	N	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F570	1B	24	8	3	2011	1	MAMMALIA	AX	RB	L	FR	N	N	4	N	BR	Y
F571	1B	24	8	3	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	CB	Y
F572	1B	24	8	3	2011	1	MAMMALIA	AX	RB	N	DSS	N	N	3	N	N	Y
F573	1B	24	8	3	2011	4	MAMMALIA	APP	LB	N	FR	N	N	3	N	N	N
F574	1B	24	8	3	2011	4	MAMMALIA	AX	RB	N	FR	N	N	3	N	N	N
F575	1B	24	8	3	2011	1	CF. KINOSTERNIDAE	AX	VT	N	CO	S	N	2	N	BR	N
F576	1D	29	1	1	2011	1	CF. CHELONIOIDEA	APP	PH	N	CO	S	N	4	N	BR?	Y
F577	1D	29	1	1	2011	1	CF. CHELONIOIDEA	APP	PH	N	CO	S	N	4	N	BR?	Y
F578	1D	29	1	1	2011	1	CF. CHELONIOIDEA	APP	MP	N	CO	S	N	4	EX	BR?	Y
F579	1D	29	1	1	2011	1	CF. DERMATEMYS MAWII	APP	TA	L	PSH	S	N	3	N	BR?	Y
F580	1D	29	1	1	2011	1	TESTUDINES	APP	FB	L	PSH	S	N	3	N	BR?	Y
F581	1D	29	1	1	2011	1	ORTHOGEOMYS HISPIDUS	CRN	UIC	L	CO	N	N	1	N	N	Y
F582	1D	29	1	1	2011	1	BRACHYURA	EXO	CLW	N	SH	N	N	NA	N	CB?	Y
F583	1D	29	1	1	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	N	N	N
F584	1K	17-15	2	5	2017	1	CF. ODOCOILEUS VIRGINIANUS	AX	LU	N	CO	S	N	5	WE, EX, RG	N	Y
F585	1K	17-15	2	5	2017	1	MAMMALIA	APP	TA	L	PSS	S	N	3	EX	BR	Y
F586	1K	17-15	2	5	2017	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR, CB	Y
F587	1K	17-15	2	5	2017	1	CF. DIDELPHIS SP.	AX	VT	N	CEP	S	N	3	N	N	N
F588	1L	10	12	2	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F589	LZ	1	NA	0	2010	1	CF. LOBATUS GIGAS	MS	MS	N	OTL, FR	N	N	N	EX	N	Y
F590	LZ	1	NA	0	2010	1	CF. LOBATUS GIGAS	MS	MS	N	OTL, FR	N	N	N	PO, EX	N	Y
F591	LZ	1	NA	0	2010	1	ANADARA NOTABILIS	MS	MS	R	CO	N	N	N	N	N	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F592	LZ	1	NA	0	2010	1	PACHYCHILUS GLAPHYRUS	FS	FS	N	FR	N	N	N	N	CB	N
F593	1A	1	SURFACE	0	2011	1	AVES	APP	HM	R	SH	N	N	4	N	N	Y
F594	SURFACE	1	NA	SURFACE	2010	1	LOBATUS GIGAS	MS	MS	N	SPR, FR	N	N	N	N	BR, CB	Y
F595	SURFACE	1	NA	SURFACE	2010	1	CF. STROMBIDAE	MS	MS	N	OTL, FR	N	N	N	N	N	Y
F596	SURFACE	1	NA	SURFACE	2010	1	CF. OLIVA SP.	MS	MS	N	OTL, FR	N	N	N	EX?	PO?	Y
F597	SURFACE	1	NA	SURFACE	2010	1	CF. LOBATUS GIGAS	MS	MS	N	OTL, FR	N	N	N	N	DH, PO	Y
F598	SURFACE	1	NA	SURFACE	2010	9	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	N	N	N	N
F599	1A	1	1-4	0	2011	1	AVES	APP	UL	R	CO	N	N	3	N	N	Y
F600	LZ	1	NA	NA	2010	1	MAMMALIA	AX	VT	N	SP	N	N	5	N	BR, CB	N
F601	1A	40	2	7	2011	2	MAMMALIA	CRN	DT	L	CDL	N	N	5	PO	BR, CB	Y
F602	1C	1C	NA	0	2010	1	CF. STROMBIDAE	MS	MS	N	OTL, FR	N	N	N	N	PO, BR, CB	Y
F603	1C	1C	NA	0	2010	1	NEPHRONAIAS SP.	FS	FS	N	FR	N	N	N	RE?	BR, CB	N
F604	1A	50	2	7	2011	1	NEPHRONAIAS SP.	FS	FS	R	FR	N	N	N	N	BR?	Y
F605	1A	50	2	7	2011	1	PACHYCHILUS GLAPHYRUS	FS	FS	N	FR	N	N	N	N	BR, CB, PO	N
F606	1D	33	1	2	2011	3	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	N	N
F607	1C	5	10	3	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	Y
F608	1C	5	10	3	2011	1	CF. ARTIODACTYLA	APP	LB	N	FR	N	N	5	N	G?	Y
F609	1C	5	10	3	2011	1	MAMMALIA	AX	RB	N	FR	N	N	5	EX	N	N
F610	1C	5	10	3	2011	1	CF. CRICETIDAE	APP	HM	L	CO	S	N	1	N	N	N
F611	1C	5	10	3	2011	1	AVES	APP	SC	R	CO	N	N	1	N	N	N
F612	1C	5	10	3	2011	3	BRACHYURA	EXO	CLW	N	FR	N	N	NA	EX	N	N
F613	1B	19	7-EXTENDED	1-3	2011	1	AVES	AX	VT	N	TSP	S	N	5	EX	BR?	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F614	1B	19	7-EXTENDED	1-3	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	N
F615	1B	19	7-EXTENDED	1-3	2011	1	CF. ARTIODACTYLA	APP	LB	N	FR	N	N	5	MD	BR	N
F616	SURFACE	4	3	1	2013	1	PACHYCHILUS GLAPHYRUS	FS	FS	N	FR	N	N	N	N	PO?	N
F617	DZ	2	NA	NA	2010	14	TAPIRUS BAIRDII	CRN	MO	N	FR	N	N	5	N	N	Y
F618	DZ	2	NA	NA	2010	1	CF. LOBATUS GIGAS	MS	MS	N	BDW, FR	N	N	N	N	COL, PO, WR	N
F619	1H	60	1	3CIRCULAR DARKZONE CHAMBER	2011	1	ARTIODACTYLA	CRN	IC	L	CO	N	N	5		N	Y
F620	1H	60	1	3CIRCULAR DARKZONE CHAMBER	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F621	1H	60	1	3CIRCULAR DARKZONE CHAMBER	2011	1	MAMMALIA	AX	RB	N	FR	N	N	3	N	N	N
F622	1H	60	1	3CIRCULAR DARKZONE CHAMBER	2011	1	MAMMALIA	CRN	CFR	N	FR	N	N	5	N	G?	N
F623	DZ	2	NA	NA	2010	1	CF. CRICETIDAE	APP	FM	L	CO	N	N	1	N	N	N
F624	DZ	2	NA	NA	2010	1	AVES	APP	FM	L	PSH	N	N	4	N	N	Y
F625	DZ	2	NA	NA	2010	2	AVES	APP	TMT	L	PSH	N	N	4	N	N	Y
F626	DZ	2	NA	NA	2010	1	BRACHYURA	EXO	CLW	N	PFR	N	N	NA	N	BR	N
F627	DZ	2	NA	NA	2010	1	DASYPUS NOVEMCINCTUS	SCTS	DC	R	CO	A	N	3	N	BR, CB	N
F628	DZ	2	NA	NA	2010	1	MAMMALIA	APP	CAL	L	PSH	N	N	3	N	N	Y?
F629	DZ	2	NA	NA	2010	1	SQUAMATA	AX	VT	N	CO	N	N	3	N	N	Y?
F630	DZ	2	NA	NA	2010	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F631	DZ	2	NA	NA	2010	1	AVES	AX	SYN	N	FR	N	N	4	PUN?	N	Y
F632	DZ	2	NA	NA	2010	2	AVES	AX	SYN	N	FR	N	N	4	PUN?	N	N
F633	DZ	2	NA	NA	2010	1	AVES	CRN	FN	N	FR	N	N	4	N	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F634	DZ	2	NA	NA	2010	1	AVES	APP	CMT	R	CO	N	N	3	N	N	N
F635	DZ	2	NA	NA	2010	1	AVES	APP	HM	R	CO	N	N	3	N	N	Y
F636	DZ	2	NA	NA	2010	1	AVES	APP	LB	N	FR	N	N	5	N	N	Y
F637	DZ	2	NA	NA	2010	1	CF. ODOCOILEUS VIRGINIANUS	APP	CBNV	N	CO	N	N	5	MD?	BR	Y
F638	DZ	2	NA	NA	2010	1	CF. TAYASSUIDAE	APP	PH	N	DSS	N	N	5	EX	G?	N
F639	DZ	2	NA	NA	2010	2	CF. CRICETIDAE	APP	FM	L	PSH	S	N	1	DG, PUN	N	N
F640	DZ	2	NA	NA	2010	1	CF. CRICETIDAE	APP	FM	R	PSH	S	N	1	DG, PUN	N	N
F641	DZ	2	NA	NA	2010	1	CF. CRICETIDAE	APP	HM	R	CO	S	N	1	DG, PUN	N	N
F642	DZ	2	NA	NA	2010	1	CF. CRICETIDAE	APP	RD	L	PSH	S	N	1	DG, PUN	N	N
F643	DZ	2	NA	NA	2010	1	MAMMALIA	AX	RB	N	SH	N	N	3	N	N	N
F644	DZ	2	NA	NA	2010	1	SAURIA	APP	LB	N	FR	S	N	1	DG?	N	N
F645	DZ	2	NA	NA	2010	1	MAMMALIA	APP	LB	N	FR	N	N	4	N	N	N
F646	1B	30	5	2	2011	1	CHIROPTERA	CRN	DT	L	CO	N	N	1	N	N	N
F647	1B	30	5	2	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	G	N
F648	1B	30	5	2	2011	1	AVES	APP	LB	N	FR	N	N	5	N	N	N
F649	1B	30	5	2	2011	1	SAURIA	APP	SC	R	CO	S	N	3	N	N	N
F650	1B	30	5	2	2011	1	SAURIA	APP	TA	L	CO	S	N	3	N	N	N
F651	1B	30	5	2	2011	1	SAURIA	APP	TA	R	CO	S	N	3	N	N	N
F652	1B	9	7	3	2011	1	AVES	AX	VT	N	TSP	N	N	5	N	N	N
F653	1B	9	7	3	2011	1	AVES	AX	VT	N	CEN	N	N	5	N	N	N
F654	1B	9	7	3	2011	1	SAURIA	APP	LB	N	FR	N	N	3	EX?, DG?	N	Y
F655	1B	9	7	3	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	Y

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F656	1C	3	10	2	2011	1	CF. ARTIODACTYLA	AX	CD	N	CO	S	N	5	N	BR?	Y
F657	1B	9	7	3	2011	4	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	N
F658	1B	9	7	3	2011	1	CF. SERPENTES	AX	VT	N	CO	A	N	3	N	N	Y
F659	1B	9	7	3	2011	3	MAMMALIA	AX	RB	N	FR	N	N	5	EX	N	N
F660	1B	9	7	3	2011	2	MAMMALIA	APP	LB	N	FR	S	N	3	N	BR	N
F661	1B	9	7	3	2011	1	DIDELPHIDAE	CRN	CN	N	CO	N	N	3	N	BR	Y?
F662	1B	9	7	3	2011	1	MAMMALIA	AX	VT	N	TSP	S	N	5	EX	BR	Y
F663	1B	9	7	3	2011	1	DIDELPHIDAE	APP	HM	L	DSH	S	N	3	N	BR	N
F664	1B	9	7	3	2011	1	DIDELPHIDAE	AX	RB	R	CO	S	N	3	N	BR	N
F665	1B	9	7	3	2011	1	AVES	APP	UL	R	PSH	N	N	2	N	BR	N
F666	1C	1	NA	NA	2010	1	TRIPLOFUSUS PAPILLOSUS	MS	MS	N	SPR, FR	N	N	N	N	N	Y
F667	1C	1	NA	NA	2010	1	CF. LOBATUS GIGAS	MS	MS	N	OTL, FR	N	N	N	N	CB	Y
F668	1C	1	NA	NA	2010	1	CF. LOBATUS GIGAS	MS	MS	N	OTL, FR	N	N	N	N	PO	Y
F669	1B	37	5	3	2011	6	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F670	1B	37	5	3	2011	1	MAMMALIA	AX	RB	N	SH	N	N	5	N	N	N
F671	1B	37	5	3	2011	1	CF. ARTIODACTYLA	APP	FM	N	PSE	S	N	5	DG?, EX?	N	N
F672	1B	37	5	3	2011	1	MAMMALIA	AX	RB	R	CO	N	N	2	N	N	N
F673	1B	37	5	3	2011	1	MAMMALIA	AX	RB	L	SH	N	N	2	N	N	N
F674	1B	37	5	3	2011	1	MAMMALIA	AX	RB	N	SH	N	N	4	N	CB, BR	N
F675	1B	37	5	3	2011	1	MAMMALIA	APP	LB	N	SH	N	N	3	N	BR	N
F676	1B	37	5	3	2011	1	CUNICULUS PACA	CRN	MO	N	CO	N	N	3	EX	BR, CL?	N
F677	1B	37	5	3	2011	1	CF. ODOCOILEUS VIRGINIANUS	APP	POD	N	CO	S	N	5	EX	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F678	1B	37	5	3	2011	2	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F679	1B	37	5	3	2011	1	MAMMALIA	APP	LB	N	SH	N	N	3	EX, MD, RE	BR	N
F680	1B	37	5	3	2011	1	DASYPUS NOVEMCINCTUS	APP	AS	L	CO	N	N	3	N	N	Y
F681	1B	37	5	3	2011	1	MAMMALIA	APP	AS	L	CO	N	N	3	N	N	Y
F682	1B	37	5	3	2011	4	AVES	AX	SYN	N	FR	N	N	4	RE	N	N
F683	1B	37	5	3	2011	1	AVES	CRN	FN	N	FR	N	N	4	N	N	N
F684	1B	37	5	3	2011	1	MAMMALIA	AX	VT	N	FR	N	N	4	N	N	N
F685	1B	37	5	3	2011	1	CHIROPTERA	APP	FM	R	PSH	N	N	1	N	N	N
F686	1B	37	5	3	2011	1	CHIROPTERA	APP	UL	R	DSH	N	N	1	N	N	N
F687	1E	47	1	2	2011	15	MAMMALIA	CRN	CRN	N	CFR	N	N	5	N	N	Y
F688	1E	47	1	2	2011	2	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR	Y
F689	1E	47	1	2	2011	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	Y
F690	1E	47	1	2	2011	1	DIDELPHIDAE	APP	FM	L	PSH	S	N	3	N	N	Y
F691	1E	47	1	2	2011	1	ANURA	AX	VT	N	CO	S	N	2	N	N	N
F692	1E	47	1	2	2011	1	MAMMALIA	AX	RB	N	SH	N	N	3	N	N	N
F693	1E	47	1	2	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F694	1E	47	1	2	2011	2	MAMMALIA	APP	LB	N	FR	N	N	3	N	CL	N
F695	1E	47	1	2	2011	1	MAMMALIA	APP	POD	N	CO	N	N	5	EX	N	N
F696	1E	47	1	2	2011	1	MAMMALIA	AX	VT	N	CEN	N	N	3	N	BR, CB	N
F697	1E	47	1	2	2011	1	MAMMALIA	AX	VT	N	CEN	N	N	3	N	CL	N
F698	1E	47	1	2	2011	1	TESTUDINES	APP	LB	N	SH	N	N	3	EX	N	N
F699	1H	82	3	1	2011	41	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F700	1H	82	3	1	2011	50	MAMMALIA	AX	RB	N	FR	N	N	5	EX	N	N
F701	1H	82	3	1	2011	11	MAMMALIA	AX	VT	N	FR	N	N	5	EX	N	N
F702	1H	82	3	1	2011	2	DASYPROCTA PUNCTATA	SCTS	DC	N	CO	N	N	5	EX	N	Y
F703	1H	82	3	1	2011	1	DASYPROCTA PUNCTATA	SCTS	DC	N	FR	N	N	5	EX	N	N
F704	1H	82	3	1	2011	1	AVES	AX	CE	N	CO	N	N	3	N	N	N
F705	1H	82	3	1	2011	4	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	N
F706	1H	82	3	1	2011	3	TESTUDINES	TRT	CRP	N	FR	N	N	2	EX	BR	N
F707	1H	82	3	1	2011	1	MAMMALIA	APP	HM	L	SH	N	N	3	EX	BR	N
F708	1H	82	3	1	2011	1	MAMMALIA	AX	RB	N	SH	N	N	5	EX	CL	N
F709	1H	82	3	1	2011	1	ARTIODACTYLA	APP	PHF	N	DSS	N	N	5	EX	BR, CB	N
F710	1H	82	3	1	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	EX	CB	N
F711	1H	82	3	1	2011	1	CF. OLIVA SP.	MS	MS	N	CNL	N	N	N	N	CB	Y
F712	1H	82	3	1	2011	1	CF. OLIVA SP.	MS	MS	N	OTL, FR	N	N	N	N	CB	Y
F713	1H	82	3	1	2011	1	POMACEA FLAGELLATA	FS	FS	N	FR	N	N	NA	N	N	N
F714	1H	82	3	1	2011	1	DIDELPHIDAE	CRN	SQA	R	FR	N	N	3	N	N	Y
F715	1H	82	3	1	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	DG, EX	N	N
F716	1H	82	3	1	2011	1	MAMMALIA	AX	VT	N	FR	N	N	3	N	N	N
F717	1H	82	3	1	2011	1	MAMMALIA	APP	CAL	R	DSH	S	N	3	EX	N	N
F718	1H	82	3	1	2011	1	MAMMALIA	APP	PH	N	DSH	N	N	3	EX	N	N
F719	1H	82	3	1	2011	1	MAMMALIA	APP	HM	N	DSS	N	N	3	EX	N	N
F720	1H	82	3	1	2011	1	AVES	APP	PH	N	PSH	N	N	4	N	N	N
F721	1H	82	3	1	2011	1	MAMMALIA	APP	FB	N	PSH	N	N	3	N	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F722	1H	86	3	2	2011	1	BRACHYURA	EXO	CLW	N	DSS	N	N	NA	N	BR	N
F723	1H	86	3	2	2011	1	BRACHYURA	EXO	CLW	N	CO	N	N	NA	EX	N	N
F724	1H	86	3	2	2011	1	BRACHYURA	EXO	CLW	N	SH	N	N	NA	N	BR	N
F725	1H	86	3	2	2011	13	MAMMALIA	APP	LB	N	FR	N	N	5	EX	N	N
F726	1H	86	3	2	2011	6	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, G	N
F727	1H	86	3	2	2011	11	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F728	1H	86	3	2	2011	3	DASYPROCTA PUNCTATA	SCTS	DC	N	FR	N	N	3	N	BR	N
F729	1H	86	3	2	2011	3	MAMMALIA	AX	RB	N	FR	N	N	5	EX	N	N
F730	1H	86	3	2	2011	1	MAMMALIA	AX	RB	N	FR	N	N	5	PO?	BR	N
F731	1H	86	3	2	2011	2	MAMMALIA	AX	RB	N	FR	N	N	5	EX	N	N
F732	1H	86	3	2	2011	1	MAMMALIA	AX	RB	N	FR	N	N	3	N	BR	N
F733	1H	86	3	2	2011	1	MAMMALIA	AX	RB	N	FR	N	N	3	EX	N	N
F734	1H	86	3	2	2011	9	MAMMALIA	CRN	CRN	N	FR	N	N	5	EX	N	N
F735	1H	86	3	2	2011	2	CUNICULUS PACA	CRN	JUG/ZYG	N	FR	N	N	3	N	N	Y?
F736	1H	86	3	2	2011	2	ARTIODACTYLA	CRN	DT	N	FR	N	N	5	EX, RE	N	N
F737	1H	86	3	2	2011	1	CF. CERVIDAE	APP	MP	N	DSE	S	N	5	N	BR, CB	Y?
F738	1H	86	3	2	2011	1	CF. TAYASSUIDAE	APP	PHT	N	DSH	S	N	5	EX	N	Y?
F739	1H	86	3	2	2011	1	MAMMALIA	APP	HM	L	DSS	A	N	3	EX, DG	N	N
F740	1H	86	3	2	2011	1	AVES	APP	FM	R	DSS	A	N	3	EX	CM, CW	N
F741	1H	86	3	2	2011	1	TAYASSUIDAE	APP	TA	L	DSS	N	N	5	N	BR, CB	N
F742	1H	86	3	2	2011	1	MAMMALIA	APP	FM	L	SH	N	N	3	EX	BR	N
F743	1H	86	3	2	2011	2	DIDELPHIDAE	CRN	PSBS	N	N	N	N	3	N	N	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F744	1H	86	3	2	2011	1	DIDELPHIDAE	CRN	DT	R	ANG/CDL	N	N	3	N	N	N
F745	1H	86	3	2	2011	1	DIDELPHIDAE	CRN	CRN	N	SKO	N	N	3	N	N	N
F746	1H	86	3	2	2011	2	SQUAMATA	AX	VT	N	CO	N	N	3	N	BR	N
F747	1H	86	3	2	2011	1	SQUAMATA	AX	VT	N	CO	N	N	3	N	CL	N
F748	1H	86	3	2	2011	1	AVES	AX	CE	N	CO	N	N	3	N	CL	N
F749	1H	86	3	2	2011	1	MAMMALIA	AX	VT	N	CO	A	N	3	N	N	Y
F750	1H	86	3	2	2011	1	MAMMALIA	AX	VT	N	CEN	S	N	4	N	N	N
F751	1H	86	3	2	2011	1	CF. DIDELPHIS SP.	AX	VT	N	EP	N	N	3	N	N	N
F752	1H	86	3	2	2011	1	MAMMALIA	APP	SC	N	FR	N	N	3	N	BR	N
F753	1H	86	3	2	2011	1	MAMMALIA	APP	LB	N	FR	N	N	3	EX	N	N
F754	1H	86	3	2	2011	2	MAMMALIA	CRN	CRN	N	SKO	N	N	3	N	BR	N
F755	1H	86	3	2	2011	2	DIDELPHIDAE	AX	CE	N	CO	S	N	3	N	N	N
F756	1H	86	3	2	2011	1	RODENTIA	CRN	IC	N	DSS	N	N	3	N	CL	N
F757	1H	86	3	2	2011	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F758	1H	86	3	2	2011	1	MAMMALIA	APP	HM	N	SH	N	N	3	EX	N	N
F759	1H	86	3	2	2011	1	MAMMALIA	APP	MP	N	PSH	S	N	3	N	CB, CL	N
F760	1H	86	3	2	2011	1	MAMMALIA	APP	FB	R	DSH	N	N	4	N	CB	N
F761	1H	86	3	2	2011	1	MAMMALIA	APP	FB	R	PSH	N	N	3	EX	N	N
F762	1H	86	3	2	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, PO, WR	N
F763	1H	86	3	2	2011	1	CF. LEOPARDUS WIEDII	CRN	MO	L	CO	N	N	3	N	N	Y?
F764	1A	20	3	7	2011	2	CERVIDAE	APP	UL	N	SH	N	N	5	N	BR, CB	N
F765	1A	20	3	7	2011	3	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F766	1A	20	3	7	2011	3	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N
F767	1A	20	3	7	2011	10	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	N
F768	1A	20	3	7	2011	17	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	N
F769	1A	20	3	7	2011	11	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F770	1A	20	3	7	2011	1	KINOSTERNIDAE	TRT	CRP	N	FR	N	N	1	N	BR, CB	N
F771	1A	20	3	7	2011	4	BRACHYURA	EXO	CLW	N	FR	N	N	NA	N	BR, CB?	N
F772	1A	20	3	7	2011	3	SQUAMATA	AX	VT	N	CO	N	N	2	N	BR	Y?
F773	1A	20	3	7	2011	1	SQUAMATA	AX	VT	N	CO	N	N	3	N	BR	Y?
F774	1A	20	3	7	2011	2	SQUAMATA	AX	VT	N	CO	N	N	2	N	CB	Y?
F775	1A	20	3	7	2011	1	DASYPUS NOVEMCINCTUS	APP	MT	L	CO	N	N	3	N	BR, CB	Y
F776	1A	20	3	7	2011	1	DASYPUS NOVEMCINCTUS	APP	MP	N	SH	N	N	3	N	BR, CB	Y
F777	1A	20	3	7	2011	1	DASYPUS NOVEMCINCTUS	AX	CD	N	CO	N	N	3	N	BR, CB	Y
F778	1A	20	3	7	2011	1	CUNICULUS PACA	CRN	MO	N	FR	N	N	3	N	BR	N
F779	1A	16	1	7	2011	1	CF. SERPENTES	AX	VT	N	CO	N	N	3	N	BR, CB	Y
F780	1A	16	1	7	2011	5	CF. SERPENTES	AX	VT	N	CO	N	N	2	N	BR	Y
F781	1A	16	1	7	2011	2	CF. SERPENTES	AX	VT	N	CO	N	N	2	N	CB	Y
F782	1A	16	1	7	2011	1	CF. SERPENTES	AX	VT	N	CO	N	N	1	N	CB, CL	Y
F783	1A	16	1	7	2011	3	CF. SERPENTES	AX	VT	N	CO	N	N	1	N	BR	Y
F784	1A	16	1	7	2011	1	CF. SERPENTES	AX	AT	N	CO	N	N	1	N	BR	Y
F785	1A	16	1	7	2011	11	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, CB	N
F786	1A	16	1	7	2011	1	CF. KINOSTERNIDAE	TRT	PCRP	N	FR	N	N	1	N	BR, CB	N
F787	1A	16	1	7	2011	1	CF. KINOSTERNIDAE	TRT	PCRP	N	FR	N	N	2	N	CL	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F788	1A	16	1	7	2011	9	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	BR, CB	N
F789	1A	16	1	7	2011	7	DASYPUS NOVEMCINCTUS	SCTS	DC	N	CO	N	N	3	N	CB	N
F790	1A	16	1	7	2011	3	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	BR, CB	N
F791	1A	16	1	7	2011	5	DASYPUS NOVEMCINCTUS	SCTS	DC	N	FR	N	N	3	N	CB	N
F792	1A	16	1	7	2011	3	TAYASSUIDAE	CRN	CN	N	FR	N	N	5	N	BR	Y
F793	1A	16	1	7	2011	1	CUNICULUS PACA	CRN	MO	L	CO	N	N	3	N	BR	Y
F794	1A	16	1	7	2011	1	CUNICULUS PACA	CRN	MO	R	CO	N	N	3	N	BR	Y
F795	1A	16	1	7	2011	1	CUNICULUS PACA	CRN	MO	L	CO	N	N	3	N	BR	Y
F796	1A	16	1	7	2011	2	CF. CUNICULUS PACA	CRN	IN	N	FR	N	N	3	N	BR	N
F797	1A	16	1	7	2011	1	CUNICULUS PACA	CRN	MO	N	FR	S	N	3	N	BR	N
F798	1A	16	1	7	2011	1	ORTHOGEOMYS HISPIDUS	CRN	DT	L	TRW	N	N	3	N	BR, CB	Y
F799	1A	16	1	7	2011	1	CF. CRICETIDAE	CRN	DT	L	CO	N	N	1	N	BR,CB	N
F800	1A	16	1	7	2011	1	DIDELPHIDAE	CRN	DT	N	TRW	N	N	3	N	BR, CB	N
F801	1A	16	1	7	2011	1	MAMMALIA	CRN	DT	N	TRW	N	N	3	N	CB	N
F802	1A	16	1	7	2011	5	MAMMALIA	CRN	CRN	N	SKO	N	N	3	N	BR, CB	N
F803	1A	16	1	7	2011	1	MAMMALIA	CRN	CRN	N	PET	N	N	3	N	BR, CB	Y
F804	1A	16	1	7	2011	1	TAYASSUIDAE	APP	HM	R	DSS	N	N	5	N	BR	Y
F805	1A	16	1	7	2011	1	TAYASSUIDAE	APP	SC	R	DSS	S	N	5	N	BR, CB	Y
F806	1A	16	1	7	2011	1	CERVIDAE	APP	TA	L	DSE	S	N	5	N	CB	Y
F807	1A	16	1	7	2011	1	TAYASSUIDAE	APP	PAT	L	CO	N	N	5	N	BR	Y
F808	1A	16	1	7	2011	5	TAYASSUIDAE	APP	MP	N	PSH	A	N	5	N	BR, CB	Y?
F809	1A	16	1	7	2011	2	TAYASSUIDAE	APP	MP	N	DSS	N	N	5	N	BR, CB	Y?

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F810	1A	16	1	7	2011	2	TAYASSUIDAE	APP	PHT	N	CO	N	N	5	N	BR, CB	Y
F811	1A	16	1	7	2011	1	TAYASSUIDAE	APP	PHS	N	CO	N	N	5	N	BR, CB	Y
F812	1A	16	1	7	2011	1	TAYASSUIDAE	APP	PHF	N	DSS	N	N	5	N	BR, CB	Y?
F813	1A	16	1	7	2011	1	TAYASSUIDAE	APP	PHF	N	FR	N	N	5	N	BR, CB	N
F814	1A	16	1	7	2011	3	TAYASSUIDAE	APP	MP	N	DSS	A	N	5	N	BR, CB	Y?
F815	1A	16	1	7	2011	2	TAYASSUIDAE	APP	MP	N	PSS	N	N	5	N	BR, CB	N
F816	1A	16	1	7	2011	2	TAYASSUIDAE	APP	MP	N	PSS	N	N	5	N	CB, CL	N
F817	1A	16	1	7	2011	1	DASYPUS NOVEMCINCTUS	APP	CAL	L	CO	S	N	3	N	CB, CL	N
F818	1A	16	1	7	2011	1	DASYPUS NOVEMCINCTUS	APP	CAL	L	CO	S	N	3	N	BR	Y
F819	1A	16	1	7	2011	1	CUNICULUS PACA	APP	AS	L	CO	N	N	3	N	BR	N
F820	1A	16	1	7	2011	1	MAMMALIA	APP	CAL	L	SH	N	N	3	N	BR	N
F821	1A	16	1	7	2011	1	DASYPUS NOVEMCINCTUS	APP	TS	L	CO	N	N	3	N	CB	N
F822	1A	16	1	7	2011	1	DASYPUS NOVEMCINCTUS	APP	MT	R	CO	A	N	3	N	BR, CB	Y
F823	1A	16	1	7	2011	1	DASYPUS NOVEMCINCTUS	APP	MT	L	DSH	A	N	3	N	CB	N
F824	1A	16	1	7	2011	1	DASYPUS NOVEMCINCTUS	APP	MC	L	CO	A	N	3	N	BR, CB	Y
F825	1A	16	1	7	2011	1	DASYPUS NOVEMCINCTUS	APP	MT	L	CO	S	N	3	N	BR, CB	Y
F826	1A	16	1	7	2011	1	MAMMALIA	AX	RB	R	SH	N	N	3	EX	BR, CB, CM	Y?
F827	1A	16	1	7	2011	1	TAYASSUIDAE	AX	RB	L	SH	N	N	5	N	BR, CB	N
F828	1A	16	1	7	2011	2	MAMMALIA	AX	RB	N	SH	N	N	3	N	BR, CB	Y
F829	1A	16	1	7	2011	1	MAMMALIA	AX	RB	R	CO	N	N	3	N	CB, CL	N
F830	1A	16	1	7	2011	1	MAMMALIA	AX	RB	L	SH	N	N	3	N	CL	N
F831	1A	16	1	7	2011	1	MAMMALIA	AX	RB	R	SH	N	N	3	N	CL	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F832	1A	16	1	7	2011	1	MAMMALIA	AX	RB	N	SH	N	N	3	N	BR	Y
F833	1A	16	1	7	2011	5	MAMMALIA	APP	LB	N	FR	N	N	5	N	CL	N
F834	1A	16	1	7	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N
F835	1A	16	1	7	2011	49	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR	Y
F836	1A	16	1	7	2011	32	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB	Y
F837	1A	16	1	7	2011	44	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB	Y
F838	1A	16	1	7	2011	49	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F839	1A	16	1	7	2011	43	MAMMALIA	AX		N	FR	N	N	5	N	N	N
F840	1A	16	1	7	2011	15	MAMMALIA	AX	RB	N	FR	N	N	5	N	BR	N
F841	1A	16	1	7	2011	2	MAMMALIA	AX	RB	N	SH	N	N	5	N	BR	N
F842	1A	16	1	7	2011	1	MAMMALIA	AX	RB	N	SH	N	N	5	N	N	N
F843	1A	16	1	7	2011	1	CRICETIDAE	APP	FM	L	CO	S	N	1	N	N	N
F844	1A	16	1	7	2011	1	CF. CRICETIDAE	APP	FM	R	DSH	A	N	1	N	BR	N
F845	1A	16	1	7	2011	1	MAMMALIA	APP	IL	L	SH	N	N	3	N	CL	N
F846	1A	16	1	7	2011	1	MAMMALIA	APP	IL	R	SH	N	N	3	N	CB, BR	N
F847	1A	16	1	7	2011	1	MAMMALIA	APP	IL	R	SH	N	N	3	N	BR	N
F848	1A	16	1	7	2011	2	MAMMALIA	AX	CD	N	CO	N	N	3	N	BR, CB	Y
F849	1A	16	1	7	2011	1	MAMMALIA	AX	CD	N	CO	N	N	3	N	BR	Y
F850	1A	16	1	7	2011	5	MAMMALIA	AX	VT	N	FR	N	N	3	N	BR, CB	N
F851	1A	16	1	7	2011	1	MAMMALIA	AX	LU	N	SP	N	N	3	N	BR, CB	N
F852	1A	16	1	7	2011	1	DIDELPHIDAE	AX	TH	N	CO	S	N	3	EX	BR	N
F853	1A	16	1	7	2011	1	DIDELPHIDAE	AX	LU	N	CO	S	N	3	EX	BR	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F854	1A	16	1	7	2011	1	MAMMALIA	APP	UL	L	SH	N	N	3	N	CL	N
F855	1A	16	1	7	2011	1	MAMMALIA	APP	UL	R	SH	N	N	3	N	CB	N
F856	1A	16	1	7	2011	1	MAMMALIA	APP	UL	L	PSS	N	N	3	N	BR, CB	N
F857	1A	16	1	7	2011	1	MAMMALIA	APP	UL	N	SH	N	N	3	N	BR, CB	N
F858	1A	16	1	7	2011	1	MAMMALIA	APP	FB	R	DSS	S	N	3	N	CB	N
F859	1A	16	1	7	2011	1	MAMMALIA	APP	FB	L	DSS	S	N	3	N	BR	N
F860	1A	16	1	7	2011	1	MAMMALIA	APP	FB	L	PSS	N	N	3	N	BR	N
F861	1A	16	1	7	2011	1	MAMMALIA	APP	FM	L	SH	N	N	3	N	BR	Y
F862	1A	16	1	7	2011	1	DIDELPHIDAE	APP	SC	R	DSH	S	N	3	N	BR	N
F863	1A	16	1	7	2011	2	CF. IGUANA IGUANA	APP	RD	R	CO	A	N	3	N	BR	N
F864	1A	16	1	7	2011	1	TESTUDINES	APP	RD	L	CO	A	N	1	N	BR	N
F865	1A	16	1	7	2011	1	CF. IGUANA IGUANA	APP	FM	L	DSH	S	N	3	N	BR	N
F866	1A	16	1	7	2011	1	CF. IGUANA IGUANA	APP	SC	N	FR	N	N	3	N	BR	N
F867	1A	16	1	7	2011	1	MAMMALIA	APP	UL	N	SH	N	N	3	N	CB	N
F868	1A	16	1	7	2011	1	CF. TAYASSUIDAE	APP	MP	N	DSH	N	N	5	N	BR, CB	N
F869	1A	16	1	7	2011	1	MAMMALIA	APP	HM	R	DSE	A	N	3	N	BR, CB	N
F870	1A	16	1	7	2011	1	MAMMALIA	APP	PHF	N	PSH	N	N	3	RG	BR, CB	N
F871	1A	16	1	7	2011	1	MAMMALIA	APP	LB	N	DSH	S	N	5	N	BR, CB	N
F872	1A	16	1	7	2011	1	ANURA	APP	TBF	N	SH	N	N	2	N	N	N
F873	1A	16	1	7	2011	1	TESTUDINES	APP	LB	N	DSH	N	N	1	N	N	N
F874	1A	16	1	7	2011	1	AVES	APP	UL	L	CO	N	N	1	N	N	N
F875	1A	16	1	7	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB, WR?	N

CAT#	OP	LOT	E.U.	LEVEL	YEAR	QTY	NEAREST TAXA	BODY	ELE	SD	POR	AGE	SEX	SIZE	N MOD	C MOD	S/O
F876	1A	16	1	7	2011	1	MAMMALIA	APP	LB	N	FR	N	N	5	N	BR, CB, WR?	Y
F877	1A	7	3	6	2011	1	CF. KINOSTERNIDAE	TRT	CRP	N	FR	N	N	2	N	BR, PO	N
F878	1A	7	3	6	2011	2	PACHYCHILUS GLAPHYRUS	FS	FS	N	CO	N	N	N	N	LO	Y
F879	1A	7	3	6	2011	1	PACHYCHILUS GLAPHYRUS	FS	FS	N	CO	N	N	N	N	LO	Y
F880	1A	7	3	6	2011	1	BRACHYURA	EXO	CLW	N	SH	N	N	N	EX	N	N
F881	1A	7	3	6	2011	3	BRACHYURA	EXO	CLW	N	FR	N	N	N	RE, EX	N	N
F882	1A	7	3	6	2011	1	BRACHYURA	EXO	CLW	N	DSS	N	N	N	RE, EX	N	N
F883	1A	7	3	6	2011	1	DASYPROCTA PUNCTATA	SCTS	DC	N	CO	N	N	3	N	CB, CL	N
F884	1A	7	3	6	2011	2	DASYPROCTA PUNCTATA	SCTS	DC	N	CO	N	N	3	N	CB	N
F885	1A	7	3	6	2011	5	DASYPROCTA PUNCTATA	SCTS	DC	N	CO	N	N	3	N	BR	N
F886	1A	7	3	6	2011	9	MAMMALIA	AX	RB	N	FR	N	N	5	N	N	N
F887	1A	7	3	6	2011	1	CF. MAZAMA SP.	CRN	ANT	N	SH?	N	N	5	N	CB, CL	N
F888	1A	7	3	6	2011	1	CF. CERVIDAE	APP	PHT	N	FR	N	N	5	RE	BR, CB	N
F889	1A	7	3	6	2011	1	CF. CERVIDAE	APP	PH	N	FR	N	N	5	N	CB, CL	N
F890	1A	7	3	6	2011	1	CF. IGUANA IGUANA	CRN	MX	L	FR	A	N	3	N	N	N
F891	1A	7	3	6	2011	1	CRICETIDAE	CRN	DT	L	CO	N	N	1	N	N	N
F892	1A	7	3	6	2011	7	MAMMALIA	APP	LB	N	FR	N	N	5	N	N	N
F893	1A	7	3	6	2011	17	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR	N
F894	1A	7	3	6	2011	16	MAMMALIA	APP	LB	N	FR	N	N	5	EX	BR, CB	N
F895	1A	7	3	6	2011	5	MAMMALIA	APP	LB	N	FR	N	N	5	N	CB, CL	N
F896	1A	7	3	6	2011	2	CF. STROMBIDAE	MS	MS	N	FR	N	N	N	N	N	N
F897	1A	7	3	6	2011	9	MAMMALIA	CRN	CFR	N	CFR	N	N	5	N	BR	N

CAT#	**OP**	**LOT**	**E.U.**	**LEVEL**	**YEAR**	**QTY**	**NEAREST TAXA**	**BODY**	**ELE**	**SD**	**POR**	**AGE**	**SEX**	**SIZE**	**N MOD**	**C MOD**	**S/O**
F898	1A	7	3	6	2011	1	MAMMALIA	CRN	PEP	N	FR	N	N	3	N	BR	Y
F899	1A	7	3	6	2011	1	CUNICULUS PACA	APP	AS	L	CO	N	N	3	N	BR	Y
F900	1A	7	3	6	2011	1	DASYPROCTA PUNCTATA	APP	MP	N	PSH	N	N	3	N	N	N
F901	1A	7	3	6	2011	1	DASYPUS NOVEMCINCTUS	APP	PHT	N	CO	N	N	3	N	N	N
F902	1A	7	3	6	2011	1	CUNICULUS PACA	APP	MC	L	CO	A	N	3	RE	N	Y
F903	1A	7	3	6	2011	1	DASYPUS NOVEMCINCTUS	APP	MC	N	CO	S	N	3	MD	N	N
F904	1A	7	3	6	2011	2	CF. SERPENTES	AX	VT	N	CO	A	N	3	N	CB	Y?
F905	1A	7	3	6	2011	7	CF. KINOSTERNON SP.	TRT	CRP	N	FR	N	N	3	N	BR	Y
F906	1A	7	3	6	2011	2	CF. KINOSTERNON SP.	TRT	PCRP	N	FR	N	N	3	N	BR, CB	Y
F907	1A	7	3	6	2011	1	CF. KINOSTERNON SP.	TRT	PCRP	N	FR	N	N	3	N	BR	Y