

# Coding Guide for Faunal Remains

## EMAP Database Codes

### Bone element

- 1 skull
  - 1.1 maxilla
  - 1.2 mandible
  - 1.3 premaxilla
  - 1.4 horn/ antler
- 2 vertebra
- 3 long bone
  - 3.1 femur
  - 3.2 tibia
  - 3.3 fibula
  - 3.4 humerus
  - 3.5 ulna
  - 3.6 radius
- 4 pelvis
- 5 rib
- 6 bones of hands or feet
  - 6.1 phalange
  - 6.2 metapodial
  - 6.3 metatarsal
  - 6.4 metacarpal
  - 6.5 carpal
  - 6.6 tarsal
  - 6.7 astragalus
  - 6.8 calcaneus
  - 6.9 sesamoid
- 7 dentition
  - 7.1 incisor
  - 7.2 cheek tooth
  - 7.3 molar
  - 7.4 premolar
- 8 other
  - 8.1 scapula
  - 8.2 patella
  - 8.3 coracoid
  - 8.4 sternum
  - 8.5 tarsometatarsus
  - 8.6 carpometacarpus
  - 8.7 tibiotarsus
  - 8.8 carapace

8.11 - Hyoid  
8.12 - Auricula

**Length** 8.9 egg shell  
Record maximum length to the nearest mm.

**Weight**  
Record weight to the nearest 0.5 gram

**Breakage**  
1 whole  
2 more than half present  
3 less than or equal to half present

**Modification**

- 1 not modified
- 2 burned
- 3 cut (butchering)
- 4 incised
- 5 ground to point
- 6 other modification-- write out description
- 7 gnawed
- 8 polished
- 9 bead

10-cut debris  
11-tube w/hole

**Class**

- 1 mammal
- 2 reptile
- 3 amphibian
- 4 bony fish
- 5 bird

\*\* In this column, also record size category of the identified remains.

**Species/ Genus**

Record the species/genus and/or common name if known.

\*\*For any variable,

- 0 no data
- 9 uncertain about which to assign

**Karen's Additional Variables**  
(found only in Karen's Excel database)

**Period**

- 1 Classic
- 2 Postclassic
- 3 Black Mountain

**Area**

- 1 axial
- 2 long bone
- 3 feet

**Unit Burning**

- 1 Room/ unit not burned
- 2 Room/ unit burned

Elevation

- 1 Lower
- 2 Middle
- 3 Upper

Appendix A

Coding Sheet Used for the Analysis of Rattlesnake Point Fauna

1. SPECIES or SIZE CLASS

<b>COMMON NAME</b>		<b>SCIENTIFIC NAME</b>
<b>UNIDENTIFIABLE REMAINS (Prehistoric)</b>		
001	Unidentified Remains (unsorted by size class)	
002	USM-L/R Small Mammal: Rabbit/Rodent-sized	
003	USM-R Small Mammal: Rodent-sized	
004	USM-L Small Mammal: Rabbit-sized	
005	USMM Small-Medium Mammal	
006	UMM Medium Mammal (Carnivore-sized)	
007	UMLM Medium-Large Mammal	
008	ULM Large Mammal (Ungulate-sized)	
009	USA Unidentified Small Animal	
010	INDET Indeterminate Class	
<b>ARTIODACTYLS</b>		<b>Order Artiodactyla</b>
011	Indet. Artiodactyl	Indeterminate Artiodactyl
012	Elk	<i>Cervus elaphus</i>
013	Deer	<i>Odocoileus sp.</i>
014	Mule Deer	<i>Odocoileus hemionus</i>
015	White-tailed Deer	<i>Odocoileus virginianus</i>
016	Pronghorn	<i>Antilocapra americana</i>
017	Bison	<i>Bison bison</i>
018	Bison/Domestic Sheep	<i>Bison bison/Bos taurus</i>
019	Bighorn/Domestic Sheep	<i>Ovis sp.</i>
020	Bighorn Sheep	<i>Ovis canadensis</i>
<b>LAGOMORPHS</b>		<b>Order Lagomorpha</b>
031	Indet. Rabbit	Indeterminate Lagomorpha
032	Cottontail	<i>Sylvilagus sp.</i>
033	Eastern Cottontail	<i>Sylvilagus floridanus</i>
034	Nuttall's Cottontail	<i>Sylvilagus nuttallii</i>
035	Desert Cottontail	<i>Sylvilagus audubonii</i>
036	Jackrabbit	<i>Lepus sp.</i>
037	Black-tailed Jackrabbit	<i>Lepus californicus</i>
038	Antelope Jackrabbit	<i>Lepus alleni</i>
<b>RODENTS</b>		<b>Order Rodentia</b>
041	Indet. Rodents	Indeterminate Rodentia
042	Ground Squirrel	<i>Ammospermophilus/Spermophilus</i>
043	Harris' Antelope Squirrel	<i>Ammospermophilus harrisii</i>
044	Rock Squirrel	<i>Spermophilus variegatus</i>
045	Round-tailed G. Squirrel	<i>Spermophilus tereticaudus</i>
046	Pocket Gopher	<i>Thomomys sp.</i>
047	Botta's Pocket Gopher	<i>Thomomys bottae</i>
048	Pocket Mouse	<i>Perognathus sp.</i>
049	Kangaroo Rat	<i>Dipodomys sp.</i>

050	Ord's Kangaroo Rat	<i>Dipodomys ordii</i>
051	Banner-tailed Kang. Rat	<i>Dipodomys spectabilis</i>
052	Merriam's Kangaroo Rat	<i>Dipodomys merriami</i>
053	Desert Kangaroo Rat	<i>Dipodomys deserti</i>
054	Beaver	<i>Castor canadensis</i>
055	So. Grasshopper Mouse	<i>Onychomys torridus</i>
056	Western Harvest Mouse	<i>Reithrodontomys megalotis</i>
057	White-footed Mouse	<i>Peromyscus</i> sp.
058	Albert's Squirrel	<i>Sciuris aberti</i>
059	Cotton Rat	<i>Sigmodon</i> sp.
060	Hispid Cotton Rat	<i>Sigmodon hispidus</i>
061	Arizona Cotton Rat	<i>Sigmodon arizonae</i>
062	Woodrat	<i>Neotoma</i> sp.
063	White-throated Woodrat	<i>Neotoma albigula</i>
064	Desert Woodrat	<i>Neotoma lepida</i>
065	Muskrat	<i>Ondatra zibethicus</i>
066	Deer Mouse	<i>Peromyscus maniculatus</i>
067	No. Grasshopper Mouse	<i>Onychomys leucogaster</i>
068	Pinon Mouse	<i>Peromyscus truei</i>
069	Porcupine	<i>Erethizon dorsatum</i>
070	Chipmunk	<i>Eutamias</i> sp.
071	Cliff Chipmunk	<i>Eutamias dorsalis</i>
072	Colorado Chipmunk	<i>Eutamias quadrivittatus</i>
073	Prairie Dog	<i>Cynomys</i> sp.
074	Gunnison's Prairie Dog	<i>Cynomys gunnisoni</i>
075	Indet. Sciurid	<i>Sciuris</i> sp.

#### **CARNIVORES**

100	Indet. Carnivore
101	Indet. Small Carnivore
102	Indet. Large Carnivore
103	Indet. Canid
105	Coyote/Dog
106	Domestic Dog
107	Coyote
108	Gray Wolf
109	Red Fox
110	Kit Fox
111	Gray Fox
112	Grizzly Bear
113	Black Bear
114	Raccoon
115	Coati
116	Ringtail
117	Long-tailed Weasel
118	Black footed Ferret
119	Badger
120	Western Spotted Skunk
121	Striped Skunk
122	Hooded Skunk
123	Hog-nosed Skunk
124	River Otter
125	Jaguar
126	Ocelot

#### **Order Carnivora**

Indeterminate Carnivora
Indeterminate Small Carnivora
Indeterminate Large Carnivora
Indeterminate Canidae
<i>Canis</i> sp.
<i>Canis familiaris</i>
<i>Canis latrans</i>
<i>Canis lupus</i>
<i>Vulpes vulpes</i>
<i>Vulpes macrotis</i>
<i>Urocyon cinereoargenteus</i>
<i>Ursus arctos</i>
<i>Ursus americanus</i>
<i>Procyon lotor</i>
<i>Nasus nasua</i>
<i>Bassaricus astutus</i>
<i>Mustela frenata</i>
<i>Mustela nigripes</i>
<i>Taxidea taxus</i>
<i>Spilogale gracilis</i>
<i>Mephitis mephitis</i>
<i>Mephitis macroura</i>
<i>Conepatus mesoleucus</i>
<i>Lutra canadensis</i>
<i>Felis onca</i>
<i>Felis pardalis</i>

127 Mountain Lion  
128 Bobcat

*Felis concolor*  
*Felis rufus*

**FISHES**

200 Indet. Fishes

**Class Osteichthyes**

Indeterminate Osteichthyes

**Minnnows**

201 Indet. Minnow  
202 Chub  
203 Bonytail Chub  
204 Humpback Chub  
205 Roundtail Chub  
206 Gila Chub  
207 Spikedace  
208 Woundfin  
209 Colorado Squawfish  
210 Longfin Dace  
211 Speckled Dace

**Family Cyprinidae**

Indet. Cyprinidae (Family)  
*Gila* sp.  
*Gila elegans*  
*Gila cypha*  
*Gila robusta*  
*Gila intermedia*  
*Meda fulgida*  
*Plagopterus argentissimus*  
*Ptychocheilus lucius*  
*Agosia chrysogaster*  
*Rhinichthys osculus*

**Suckers**

216 Indet. Sucker  
217 Razorback Sucker  
218 Gila Coarse-scaled Sucker  
219 Flannelmouth Sucker  
220 Sucker  
221 Gila Mountain Sucker

**Family Catostomidae**

Indet. Catostomidae (Family)  
*Xyrauchen texanus*  
*Catostomus insignis*  
*Catostomus latipinnis*  
*Catostomus* sp.  
*Catostomus clarki*

**AMPHIBIANS**

300 Indet. Amphibians  
301 Indet. Frogs & Toads  
302 Spadefoot Toad  
303 Indet. Toad  
304 Toads  
305 Colorado River Toad  
306 Great Plains Toad  
307 Indet. Frog  
308 Leopard Frog

**Class Amphibia**

Indeterminate Amphibia  
Indeterminate Salientia (Order)  
*Scaphiopus* sp.  
Indeterminate Bufonidae (Family)  
*Bufo* sp.  
*Bufo alvarius*  
*Bufo cognatus*  
Indeterminate Ranidae (Family)  
*Rana pipiens*

**REPTILES**

400 Indet. Reptiles

**Class Reptilia**

Indeterminate Reptilia

**Turtles**

401 Turtles  
402 Yellow Mud Turtle  
403 Sonoran Mud Turtle  
404 Western Box Turtle  
405 Desert Tortoise  
406 Painted Turtle

**Order Testudinata**

Indeterminate Testudinata (Order)  
*Kinosternon flavescens*  
*Kinosternon sonoriense*  
*Terrapene ornata*  
*Gopherus agassizi*  
*Chrysemys picta*

**Lizards & Snakes**

410 Indet. Lizards & Snakes  
411 Indet. Lizards  
412 Indet. Iguanids  
413 Desert Iguana  
414 Chuckwalla

**Order Squamata**

Indeterminate Squamata (Order)  
Indeterminate Sauria (Suborder)  
Indeterminate Iguanidae (Family)  
*Dipsosaurus dorsalis*  
*Sauromalus obesus*

415 Collared Lizard  
416 Side-Blotched Lizard  
417 Horned Lizard  
418 Indet. Teids  
419 Whiptail  
420 Western Whiptail  
421 Venomous Lizards  
422 Gila Monster  
423 Indet. Snakes  
424 Colubrids  
425 Gopher Snake  
426 Pit Vipers  
427 Rattlesnakes  
428 Garter Snake

*Crotaphytus collaris*  
*Uta stansburiana*  
*Phrynosoma* sp.  
Indeterminate Teidae (Family)  
*Cnemidophorus* sp.  
*Cnemidophorus tigris*  
Helodermatidae (Family)  
*Heloderma suspectum*  
Indeterminate Serpentes (Suborder)  
Colubridae (Family)  
*Pituophis melanoleucus*  
Viperidae (Family)  
*Crotalus* sp.  
*Thamnophis sirtalis*

### **BIRDS**

500 Indet. Birds  
501 Indet. Small Bird  
502 Indet. Medium Bird  
503 Indet. Large Bird  
504 Indet. Very Lg. Bird

### **Class Aves**

Indeterminate Aves  
Indeterminate Small Aves  
Indeterminate Medium Aves  
Indeterminate Large Aves  
Indeterminate Very Large Aves

### **Grebes**

#### **Grebes**

506 Grebe  
507 Least Grebe  
508 Pied-Billed Grebe  
509 Horned Grebe  
510 Red-Necked Grebe  
511 Eared Grebe  
512 Western Grebe  
513 Clark's Grebe

### **Order Podicipediformes**

#### **Family Podicipedidae**

Grebe sp.  
*Tachybaptus dominicus*  
*Podilymbus podiceps*  
*Podiceps auritus*  
*Podiceps grisegena*  
*Podiceps nigricollis*  
*Aechmophorus occidentalis*  
*Aechmophorus clarkii*

### **Pelicans & Their Allies**

#### **Pelicans**

516 White Pelican  
517 Brown Pelican

### **Order Pelecaniformes**

#### **Family Pelecanidae**

*Pelecanus erythrorhynchos*  
*Pelecanus occidentalis*

### **Hérons and Bitterns**

#### **Hérons**

518 Great Blue Heron

### **Order Ciconiiformes**

#### **Family Ardeidae**

*Ardea herodias*

### **Swans, Geese, Ducks, & Allies**

#### **Swans, Geese, & Ducks**

519 Canada Goose  
520 Snow Goose  
521 Duck  
522 Mallard

### **Order Anseriformes**

#### **Family Anatidae**

*Branta canadensis*  
*Chen hyperborea*  
*Anas* sp.  
*Anas platyrhynchos*

### **Vultures, Hawks, & Falcons**

524 Hawks, Falcons

### **Order Falconiformes**

Indeterminate Falconiformes (Order)

### **American Vultures**

### **Family Cathartidae**

525 Turkey Vulture  
526 Black Vulture  
527 California Condor

*Cathartes aura*  
*Coragyps atratus*  
*Gymnogyps californianus*

**Eagles & Hawks**

529 Eagles, Hawks  
530 Osprey  
531 Black-shouldered Kite  
532 Mississippi Kite  
533 Bald Eagle  
534 Northern Harrier  
(formerly Marsh Hawk)  
535 Hawk  
536 Sharp-shinned Hawk  
537 Cooper's Hawk  
538 Northern Goshawk  
539 Common Black-Hawk  
540 Harris' Hawk  
541 Hawk  
542 Red-Shouldered Hawk  
543 Broad-Winged Hawk  
544 Swainson's Hawk  
545 Zone-Tailed Hawk  
546 Red-Tailed Hawk  
546 Ferruginous Hawk  
547 Rough-Legged Hawk  
548 Golden Eagle

**Family Accipitridae**

Indeterminate Accipitridae (Family)  
*Pandion haliaetus*  
*Elanus caeruleus*  
*Ictinia mississippiensis*  
*Haliaeetus leucocephalus*  
*Circus cyaneus*  
  
*Accipiter* sp.  
*Accipiter striatus*  
*Accipiter cooperii*  
*Accipiter gentilis*  
*Buteogallus anthracinus*  
*Parabuteo unicinctus*  
*Buteo* sp.  
*Buteo lineatus*  
*Buteo platypterus*  
*Buteo swainsoni*  
*Buteo albonotatus*  
*Buteo jamaicensis*  
*Buteo regalis*  
*Buteo lagopus*  
*Aquila chrysaetos*

**Caracaras & Falcons**

551 Falcon  
552 Crested Caracara  
553 American Kestrel  
554 Merlin  
555 Peregrine Falcon  
556 Prairie Falcon

**Family Falconidae**

Indeterminate Falconidae (Family)  
*Polyborus plancus*  
*Falco sparverius*  
*Falco columbarius*  
*Falco peregrinus*  
*Falco mexicanus*

**Cranes, Rails, & Allies**

**Cranes**

557 Whooping Crane  
558 Sandhill Crane  
559 Crane

**Order Gruiformes**

**Family Gruidae**

*Grus americana*  
*Grus canadensis*  
*Grus* sp.

**Gallinaceous Birds**

**Grouse, Quails, & Allies**

560 Quail  
561 Scaled Quail  
562 Gambel's Quail

**Order Galliformes**

**Family Phasianidae**

*Callipepla* sp.  
*Callipepla squamata*  
*Callipepla gambelii*

**Turkeys**

565 Turkey

**Family Meleagrididae**

*Meleagris gallopavo*

**Shorebirds, Gulls, & Allies**

**Plovers**

562 Killdeer

**Order Charadriiformes**

**Family Charadriidae**

*Charadrius vociferus*

**Pigeons and Doves**  
**Pigeons and Doves**

- 563 Dove, Pigeon
- 564 White-Winged Dove
- 566 Mourning Dove
- 567 Inca Dove

**Parrots, Macaws, & Allies**  
**Lories, Parrots, & Macaws**

- 570 Macaw
- 571 Military Macaw
- 572 Scarlet Macaw
- 573 Thick-Billed Parrot

**Cuckoos, Roadrunners, & Anis**  
**Cuckoos, Roadrunner, & Anis**

- 575 Roadrunner

**Owls**

**Barn Owls**

- 580 Barn Owl

**Typical Owls**

- 581 Great Horned Owl
- 582 Elf Owl
- 583 Burrowing Owl
- 579 Screech Owl

**Woodpeckers**

**Woodpeckers**

- 584 Woodpecker
- 585 Gila Woodpecker
- 586 Northern Flicker

**Perching Birds**

- 587 Perching Birds

**Jays, Magpies, & Crows**

- 591 Jays, Crows
- 588 Steller's Jay
- 589 Scrub Jay
- 590 Common Raven

**Wrens**

- 593 Cactus Wren

**Mockingbirds and Thrashers**

- 596 Northern Mockingbird
- 597 Thrashers

**Blackbirds & Orioles**

- 600 Meadowlarks, Blackbirds
- 602 Western Meadowlark

**Order Columbiformes**

**Family Columbidae**

- Indeterminate Columbidae (Family)
- Zenaida asiatica*
- Zenaida macroura*
- Columbina inca*

**Order Psittaciformes**

**Family Psittacidae**

- Ara* sp.
- Ara militaris*
- Ara macao*
- Rhynchopsitta pachyrhyncha*

**Order Cuculiformes**

**Family Cuculidae**

- Geococcyx californianus*

**Order Strigiformes**

**Family Tytonidae**

- Tyto alba*

**Family Strigidae**

- Bubo virginianus*
- Micrathene whitneyi*
- Athene cunicularia*
- Otus asio*

**Order Piciformes**

**Family Picidae**

- Indeterminate Picidae (Family)
- Melanerpes uropygialis*
- Colaptes auratus*

**Order Passeriformes**

- Indeterminate Passeriformes (Family)

**Family Corvidae**

- Indeterminate Corvidae (Family)
- Cyanositta stelleri*
- Aphelocoma coerulescens*
- Corvus corax*

**Family Troglodytidae**

- Campylorhynchus brunneicapillus*

**Family Mimidae**

- Mimus polyglottos*
- Toxostoma* sp.

**Family Icteridae**

- Indeterminate Icteridae (Family)
- Sturnella neglecta*



603	Red-Winged Blackbird	<i>Agelaius phoeniceus</i>
604	Great-Tailed Grackle	<i>Quiscalus mexicanus</i>
605	Common Grackle	<i>Quiscalus quiscula</i>
606	Hooded Oriole	<i>Icterus cucullatus</i>

#### DOMESTIC HISTORIC ANIMALS

700	Dog	<i>Canis familiaris</i>
701	Domestic Cat	<i>Felis domestica</i>
702	Horse/Burro	<i>Equus sp.</i>
703	Horse	<i>Equus caballus</i>
704	Burro	<i>Equus asinus</i>
705	Pig	<i>Sus scrofa</i>
706	Cow	<i>Bos taurus</i>
707	Sheep/Goat	<i>Ovis/Capra</i>
708	Sheep/Pig	<i>Ovis aries/Sus scrofa</i>
709	Sheep	<i>Ovis aries</i>
710	Goat	<i>Capra hircus</i>
711	Historic Indet. Artio.	Indeterminate Artiodactyla
712	Very Large Mammal	Unidentified Very Large Mammal
713	Indet. Bird	Indeterminante Aves
714	Duck	<i>Anas sp.</i>
715	Turkey	<i>Meleagris gallopavo</i>
716	Chicken	<i>Gallus gallus</i>
717	Indet. Bird (Eggshell)	Indet. Bird (probably chicken)

#### INTRODUCED HISTORIC ANIMALS IN ARIZONA

801	Virgina Opposum	<i>Didelphis virginiana</i>
802	Black Rat	<i>Rattus rattus</i>
803	Norway Rat	<i>Rattus norvegicus</i>
804	House Mouse	<i>Mus musculus</i>
805	Collared Peccary	<i>Tayassu tajacu</i>
806	Bullfrog	<i>Rana catesbeiana</i>
807	Pacific Pond Turtle	<i>Clemmys marmorata</i>
808	Spiny Softshell Turtle	<i>Trionyx spiniferus</i>
809	European Starling	<i>Sturnus vulgaris</i>

#### MISCELLANEOUS

900	Pleistocene Tortoise	<i>Gopherus sp.</i>
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#### 2. ELEMENT

001	Basioccipital
002	Occipital
003	Sphenoid
004	Pterygoid
005	Vomer
006	Palatine
007	Interparietal
008	Parietal
009	Frontal
010	Temporal
011	Occipital Condyle
012	Frontal/Parietal
013	Temporal/Occipital
014	Temporal/Parietal

015 Temporal/Frontal  
016 Bulla  
017 Squamous  
018 Supraorbital  
019 Petrous  
020 Zygomatic Arch  
021 Malar  
022 Lacrimal  
023 Nasal  
024 Premaxilla w/ teeth  
025 Premaxilla w/o teeth  
026 Maxilla w/ teeth  
027 Maxilla w/o teeth  
028 Maxilla-Premaxilla w/ teeth  
029 Maxilla-Premaxilla w/o teeth  
030 Nearly complete skull w/ teeth  
031 Nearly complete skull w/o teeth  
032 Rear half of skull (minus maxilla-premaxilla)  
033 Nearly complete mandible w/ teeth  
034 Nearly complete mandible w/o teeth  
035 Mandibular symphysis w/ anterior teeth  
036 Mandibular symphysis w/o anterior teeth  
037 Mandibular body w/ molars-premolars  
038 Mandibular body w/o molars-premolars  
039 Mandibular body and symphysis w/ teeth  
040 Mandibular body and symphysis w/o teeth  
041 Mandibular ventral border only  
042 Mandibular angle and/or ascending ramus only  
043 Unidentified skull fragment  
044 Hyoid

045 Horn Core  
046 Antler fragment  
047 Antler (shed)  
048 Antler w/ frontal  
049 Antler/Horn core

052 Atlas  
053 Axis  
054 Cervical vertebrae  
055 Thoracic vertebrae  
056 Lumbar vertebrae  
057 Sacrum  
058 Caudal vertebrae  
059 Unfused vertebral pad  
060 Unfused vertebral spinous process cap  
061 Unidentified vertebrae fragment

063 Rib  
064 Unfused proximal rib epiphysis  
065 Costal Cartilage  
066 Unidentified rib/vertebrae process fragment  
067 Sternebra  
068 Manubrium

069 Sternum

070 Scapula  
071 Clavicle  
072 Coracoid  
073 Humerus  
074 Radius  
075 Ulna  
076 Radius/Ulna fused  
077 Radial Carpal (Scaphoid)  
078 Intermediate Carpal (Lunate or Semilunate)  
079 Ulnar Carpal (Cuneiform)  
080 Accessory Carpal (Pisiform)  
081 First Carpal (Trapezium)  
082 Second Carpal (Trapezoid)  
083 Third Carpal (Capitate or Magnum)  
084 Fourth Carpal (Unciform)  
085 Radial-Intermediate Carpal  
086 Second-Third Carpal  
088 Metacarpal I  
089 Metacarpal II  
090 Metacarpal III  
091 Metacarpal IV  
092 Metacarpal V  
093 Metacarpal II-III (ungulates)  
094 Metacarpal Indeterminate  
095 Proximal Sesamoid (f)  
096 Distal Sesamoid (f)  
097 Sesamoid (f)  
098 First Phalanx (f)  
099 Second Phalanx (f)  
100 Third Phalanx (f)  
101 First or Second Phalanx (f)

102 Complete pelvis w/ sacrum  
103 Complete pelvis w/o sacrum  
104 Innominate

116 Femur  
117 Patella  
118 Tibia  
119 Fibula  
121 Lateral malleolus  
122 Astragalus (talus or tibial-tarsus)  
123 Calcaneous (fibular tarsal)  
124 Central Tarsal (navicular)  
125 First Tarsal  
126 Second Tarsal  
127 Third Tarsal  
128 Fourth Tarsal (cuboid)  
129 Central-Fourth Tarsal (navicular-cuboid)  
130 First-Second Tarsal  
131 Second-Third Tarsal  
133 Metatarsal I

134 Metatarsal II  
135 Metatarsal III  
136 Metatarsal IV  
137 Metatarsal V  
138 Metatarsal III-IV (ungulates)  
139 Metatarsal Indeterminate  
140 Proximal sesamoid (r)  
141 Distal sesamoid (r)  
142 Sesamoid (r)  
148 Metapodial II-V  
149 Metapodial III-IV  
150 Metapodial Indeterminate  
151 Proximal Sesamoid (f/r)  
152 Distal Sesamoid (f/r)  
153 Sesamoid (f/r)  
154 First Phalanx (f/r)  
155 Second Phalanx (f/r)  
156 Third Phalanx (f/r)  
157 First or Second Phalanx  
158 Second or Third Phalanx  
159 Lateral Second Phalanx  
160 Lateral Third Phalanx  
161 Lateral First or Second Phalanx  
162 Tarsal/Carpal  
163 Ossified Tendon  
164 Reduced Metapodial (Dew Claw)

166 Tooth  
167 Enamel fragment  
168 Molar  
169 Premolar  
170 Molar/Premolar  
171 Canine  
172 Incisor  
173 Lower P1  
174 Lower P2  
175 Lower P3  
176 Lower P4  
177 Lower M1  
178 Lower M2  
179 Lower M3  
180 Upper P1  
181 Upper P2  
182 Upper P3  
183 Upper P4  
184 Upper M1  
185 Upper M2  
186 Upper M3

- 198 Unidentified Long Bone Fragment
- 199 Unidentified Fragment

**Fish Elements**

- 200 Unidentified Fish Vertebrae
- 201 Caudal Vertebrae
- 202 Trunk Vertebrae
- 203 Dentary
- 204 Secondary Pectoral Girdle
- 205 Scale
- 206 Palatine
- 207 Opercle
- 208 Quadrate
- 209 Urohyal
- 210 Articular
- 211 Post-temporal
- 212 Maxillary
- 213 Pharyngeal Arch (5th gill)
- 214 First Vertebrae
- 215 Modified Second Vertebrae
- 216 Skull Roof
- 217 Suboperculum
- 218 Preoperculum
- 219 Hypomandible
- 220 Cleithrum
- 221 Radials

**Amphibian Elements**

- 300 Tibio-fibula
- 301 Episternum/Omisternum
- 302 Urostyle
- 303 Radio-ulna

**Reptile Elements**

- 400 Snake Vertebrae
- 401 Turtle Carapace
- 402 Turtle Plastron
- 403 Lizard Skull Fragment

**Bird Elements**

- 500 Ungual Phalange (Terminal Phalanx)
- 501 Coccygeal Vertebrae
- 502 Pygostyle
- 503 Quadrate
- 504 Scapholunar
- 505 "Beak"
- 506 Pollex
- 507 Second or Third Phalange
- 508 Windpipe
- 509 Furcula
- 510 Coracoid
- 511 Tibiotarsus
- 512 Tarsometatarsus

- 516 Digit III
- 517 Synsacrum
- 518 Jugal
- 519 Basal Phalange-Digit I
- 520 Eggshell

**3. SIDE or SYMMETRY**

- 01 Left
- 02 Right
- 04 Indeterminate
- 05 Not applicable

**4. CONDITION**

- 01 Complete
- 02 Complete except for unfused epiphysis (es)
- 03 Nearly complete (slightly broken or damaged)
- 04 More than 3/4 complete
- 05 1/2 to 3/4 complete
- 06 1/4 to 1/2 complete
- 07 Less than 1/4 complete
- 08 Indeterminate
- 09 Not applicable

**5. ORIGIN OF FRAGMENTATION**

- 01 Largely pre- or slightly post-depositional
- 02 Partly pre-depositional and partly recent damage
- 03 Largely recent damage
- 06 Indeterminate
- 07 Not applicable

**6. PROXIMAL-DISTAL (exclude teeth, vertebrae, skull, mandible)**

- 01 Complete
- 02 Proximal epiphysis only
- 03 Proximal end
- 04 Proximal shaft minus proximal epiphysis (unfused)
- 05 Proximal shaft fragment
- 06 Proximal end and shaft (broken)
- 07 Shaft (both ends broken)
- 08 Distal epiphysis only
- 09 Distal end
- 10 Distal shaft minus distal epiphysis
- 11 Distal shaft fragment
- 12 Distal end and shaft fragment (broken)
- (14-28 Innominates only)
- 14 Complete Innominate
- 15 Ilium, Iscium, Pubis present in portions - no acetabulum
- 16 Ilium, Iscium, Pubis, Acetabulum all present in portions
- 17 Pubis
- 18 Ilium
- 19 Ischium
- 20 Ischium with acetabulum

- 21 Ischium without acetabulum
- 22 Ilium with acetabulum
- 23 Ilium without acetabulum
- 24 Pubis without acetabulum
- 25 Acetabulum area only
- 26 Ischium and pubis present in portions with acetabulum
- 27 Ilium and pubis present in portions with acetabulum
- 28 Ilium and Ischium present in portions without acetabulum
- 88 Indeterminate
- 99 Not applicable

**7. DORSAL-VENTRAL (only for vertebrae)**

- 01 Complete (both ventral and dorsal parts present)
- 02 Vertebral body only
- 03 Vertebral arch with nearly complete processes
- 04 Spinous process
- 05 Spinous process (dorsal)
- 06 Spinous process (midsection)
- 07 Spinous process (unfused cap or summit)
- 08 Spinous process (ventral)
- 09 Vertebral body and part of arch
- 10 Vertebral arch fragment only
- 11 Vertebral pad
- 12 Vertebral articular surface
- 13 Spinous process with part of vertebral body
- 14 Vertebral body with ventral process
- 15 Vertebral body and arch with no processes
- 88 Indeterminate vertebral fragment
- 99 Not applicable

**8. FUSION**

- 01 Fused
- 02 Fusing
- 03 Unfused
- 88 Indeterminate
- 99 Not applicable

**9. BURNING**

- 01 Calcined
- 02 Charred
- 03 Partially charred
- 04 Cooking brown
- 06 Unburned
- 88 Indeterminate

**10. BONE ARTIFACTS**

- 01 Awl/Hairpin
- 02 Ring
- 03 Bead
- 04 Needle
- 05 Wand
- 06 Antler flaker
- 07 Tube
- 08 Whistle

- 09 Drill
- 10 Rasp
- 11 Incised
- 12 Tool/implement
- 13 Worked (function unknown)
- 14 Possible worked
- 15 Pendant
- 16 Tube blank (for making rings or beads)
- 17 Painted bone
- 88 Indeterminate
- 99 Not modified

**11. GNAWING**

- 01 Rodent gnawed
- 02 Carnivore gnawed
- 03 Gnawed
- 04 Possible gnawed
- 05 Ungnawed
- 88 Indeterminate
- 99 Not applicable

**12. NATURAL MODIFICATION**

- 01 Weathered
- 02 Diseased
- 03 CaCO<sub>3</sub> coated
- 04 Not modified
- 88 Indeterminate
- 99 Not applicable

**13. BUTCHERING MARKS**

- 01 "V" shaped grooves
- 02 "U" shaped grooves
- 03 Parallel striations
- 04 Present
- 05 Possibly present
- 06 Absent
- 88 Indeterminate
- 99 Not applicable

**14. ACTUAL NUMBER OF FRAGMENTS**

Enter actual bone count (including old and recent breaks)

**15. MINIMUM NUMBER OF FRAGMENTS**

Enter minimum bone count (after refitting or estimating minimum count after potential refitting)

**16. WEIGHT**