Codes to describe skeletal element and part of skeletal element, HbRf-39 master faunal catalogue

Compiled (with minor editing) by Jonathan Driver from:

Alessandria Testani. 2020. Zooarchaeology and ethnozoology at Tse'K'wa (Charlie Lake Cave), North Peace Region, British Columbia. Unpublished M.A. thesis, Department of Archaeology, Simon Fraser University

Each identified specimen was given a code to describe the skeletal element (e.g. HU = humerus) and a code to define which part of the skeletal element was represented (e.g. 1 = whole element; 105 = distal end of a long bone with at least 50% of the diaphysis present).

Element Codes – Mammals

For the analysis of Randal Preston's legacy data in A. Testani's thesis, the following element codes were created

ZX – Carpal or tarsal
ZV – Rib or vertebral process
ZW – Tubular compact bone

Mammalian element codes arranged anatomically

AN ANTLER
HC HORN CORE
CR CRANIAL
BO BASIOCCIPITAL
BS BASISPHENOID
BU BULLA
FA FACIAL
FR FRONTAL
LA LACRIMAL
MX MAXILLA
NS NASAL
OC OCCIPITAL CONDYLE
OX OCCIPITAL
PE PETROSA
PO PAROCCIPITAL
PR PARIETAL
PM PREMAXILLA
PS PRESPHENOID
SP SPHENOID
SQ SQUAMOSAL
TE TEMPORAL

ZG ZYGOMATIC
MN MANDIBLE
HY HYOID

VE VERTEBRA
AT ATLAS
AX AXIS
CE CERVICAL
TH THORACIC
RI RIB
OO OSSIFIED COSTAL CARTILAGE
ST STERNUM
LU LUMBAR
SA SACRAL
UR CAUDAL

LO LONG BONE (Only used for chemically sampled specimen)

SC SCAPULA
CL CLAVICLE
HU HUMERUS
RA RADIUS
UL ULNA
CP CARPAL
SK SCAPHOID
LY LUNATE
MC METACARPUS
ML LATERAL METACARPUS (UNGULATES)

IN INNOMINATE
FE FEMUR
PA PATELLA
FI FIBULA
TI TIBIA
AS ASTRAGALUS
CA CALCANEUS
TA OTHER TARSALS
MT METATARSUS
MV LATERAL METATARSUS (UNGULATES)

MP METAPODIAL
1P PROXIMAL PHALANX (FIRST PHALANX)
2P MEDIAL PHALANX (SECOND PHALANX)
3P TERMINAL PHALANX (THIRD PHALANX)
PH PHALANX
SE SESAMOID

BA BACULUM

Coding system for mammalian teeth

The only teeth to be coded are loose teeth. Teeth that can be fitted back into mandibles and maxillae were not coded. Each tooth is assigned a two-letter code. The first letter defines the type of tooth (incisor, premolar etc.). The second letter describes the tooth as either deciduous or permanent. Remember that only incisors, canines and premolars have deciduous precursors; there are no deciduous molars.

Tooth name codes (first letter)
Y INCISOR
K CANINE
X PREMOLAR
Z MOLAR
T UNKNOWN TOOTH FRAGMENT

Age codes (second letter)
D DECIDUOUS
P PERMANENT
N NOT KNOWN

Element Codes – Birds

For bird skeletal elements, use all applicable mammalian codes, with the following additions and
changes.

Mandible - although bird mandibles are composed of more than one skeletal element, in most cases the portions that survive archaeologically will not be of individual specimens but composite pieces. Therefore, bird mandibles will be coded as MN (as in mammals).

Tracheal Rings - (TR)

Vertebral column - Same codes, but posterior thoracics, lumbars, sacrals, and anterior caudals are fused to form the synsacrum (SS). The most posterior vertebra is the pygostyle (PY).

Ribs - Same codes but birds also have separate sternal ribs (SR) which lie between the ribs and the sternum.

Pectoral girdle - Same code for scapula; add coracoid (CO) and furculum (FU)

Pelvic girdle - Same codes

Wing - Same codes for analogous skeletal elements. The carpometacarpus is coded as a metacarpus (MC), as in the mammals. See below for phalanx codes.

Leg - Same codes for analogous skeletal elements. The tibiotarsus is coded as a tibia (TI). The tarsometatarsus is coded as a metatarsus (MT), as in mammals. Birds don't have tarsals. See below for phalanx codes.

Ossified tendons (OT) might be recovered.

The phalanges of the feet are often difficult to distinguish, with the exception of the terminal phalanx. If confident of the position of the individual phalanx, use the following codes: proximal phalanx (P1), second phalanx (P2), third phalanx (P3), terminal phalanx (P4). If no distinction can be made PH (phalanx) will be used.

TR TRACHEAL RING
SS SYNSACRUM
PY PYGOSTYLE
SR STERNAL RIB
CO CORACOID
FU FURCULUM
PH ANY PHALANX
P1 PROXIMAL PHALANX
P2 SECOND PHALANX
P3 THIRD PHALANX
P4 TERMINAL PHALANX
EG EGG SHELL
QU QUADRATE
OT OSSIFIED TENDON

<u>Element Codes – Amphibians and Reptiles</u>
When possible, the codes for mammals and birds are to be used for amphibian

and reptile skeletal elements that have the same names. Use the system for bird phalanges to code
phalanges of amphibians and reptiles. Notes and additions to the codes are as follows:

Cranium and Mandible - Use CR and MN (as for mammals and birds) for any fragments that are composed of more than one named skeletal element

Vertebrae - are not always named in the same way as birds and mammals. For unassigned vertebrae use VE. Some reptiles and amphibians have urostyle (US).

Long bones - As radius/ulna and tibia/fibula are fused together in amphibians, use RU for the former and TF for the latter.

Sternum - All portions of the sternal complex should be coded as ST (same as birds and mammals).

The unique element codes for amphibians and reptiles are:
PL PLASTRON
CC CARAPACE
SH SHELL (INDETERMINATE TURTLE SHELL)
VE VERTEBRA
US UROSTYLE
RU RADIUS/ULNA
TF TIBIA/FIBULA

Part Codes

A one- or two-digit code is used to describe the portion of the element represented.

Mammal Element Part Codes

Antler/ horn core

1 Complete
10 Fragment attached to cranium
2 Fragment

Cranial

The cranium is composed of individually named skeletal elements. If the cranial fragment consists only of a single skeletal element, name the element and use the following codes
1 Complete
2 Fragment

If the specimen is a complete cranium, or if it is a fragment made up of more than one cranial skeletal element use the following codes.

1 Complete
3 Posterior fragment
4 Anterior fragment
5 Ventral fragment
6 Dorsal fragment
7 Other fragment
20 Complete posterior to nasals
21 Fragment with complete maxilla and premaxilla
22 Fragment with complete maxilla
23 Fragment with partial maxilla
24 Fragment with complete premaxilla
25 Fragment with partial premaxilla
26 Fragment with maxilla and partial premaxilla
27 Fragment with partial maxilla and premaxilla
28 Fragment with partial maxilla and partial premaxilla

Mandible

1 Complete
30 Molar and premolar toothrow
31 Molar row with partial premolar row
32 Premolar row with partial molar row
33 Fragment of molar row
34 Fragment of premolar row
35 Anterior to premolars
36 Posterior to molars
37 Anterior through molar row
38 Anterior through partial molar row
39 Anterior through partial premolar row
40 Premolar and molar row plus ascending ramus
41 Partial premolar row, molar row, and ascending ramus
42 Partial molar row plus ascending ramus
43 Ventral fragment of horizontal ramus
44 Mandibular condyle
45 Fragment of ascending ramus
46 Fragment of ventral body of mandible, no toothrow
47 Dentary fragment
48 Articular fragment
49 Angular fragment

130 Anterior fragment (incisor area)

Loose teeth
1 Complete
2 Fragment

Hyoid
1 Complete
2 Fragment

Vertebrae
1 Complete
50 Complete centrum
51 Centrum fragment
52 Unfused epiphysis of centrum
53 Centrum plus neural arch
54 Neural arch fragment
55 Transverse process, complete or fragment
56 Spinous process, complete or fragment
57 Anterior or posterior zygopophysis
58 Vertebra split along anterior/posterior axis
59 Vertebra split along medio/lateral axis
7 Other fragment

Ribs
1 Complete
70 Ventral fragment
71 Dorsal fragment
72 Shaft fragment

Costal cartilage
1 Complete

2 Fragment

Sternum
1 Complete

2 Fragment

Scapula
1 Complete
80 Glenoid area plus part of blade
81 Blade fragment
82 Fragment of glenoid area

Innominate
1 Complete
90 Fragment with ilium, acetabulum, pubis and ischium
91 Ilium fragment
92 Ilium plus acetabulum
93 Ischium and/or pubis fragment
94 Ischium and/or pubis fragment plus acetabulum
95 Acetabulum fragment

Long bones (includes humerus, radius, ulna, metacarpus, femur, fibula, tibia, metatarsus and phalanges)
1 Complete
100 Proximal end complete, plus >50% of shaft
101 Proximal end present but incomplete, plus >50% of shaft
102 Proximal end complete, plus <50% of shaft
103 Proximal end present but incomplete, <50% of shaft
104 Unfused proximal epiphysis
105 Distal end complete, plus >50% of shaft
106 Distal end present but incomplete, plus >50% of shaft
107 Distal end complete, plus <50% of shaft
108 Distal end present but incomplete, plus <50% of shaft
109 Unfused distal epiphysis
110 Diaphysis (Shaft)
Other skeletal elements (includes carpals, tarsals, sesamoids, patella, clavicle, baculum)
1 Complete
120 Fragment with more than 50%
121 Fragment with less than 50%

<u>Bird Element Part Codes</u>
As far as possible, bird codes will follow mammal codes. Differences are discussed

below:
Mandible
As birds lack teeth, most mammalian codes will be inappropriate. Therefore, the following codes will apply:
1 Complete
2 Fragment
3 Posterior fragment
4 Anterior fragment

Sternal ribs
1 Complete
2 Fragment

Sternum
This skeletal element is more complex in birds, and requires more codes
1 Complete
4 Anterior fragment
7 Other fragment

Furculum
1 Complete
5 Ventral fragment
6 Dorsal fragment
7 Other fragment

Coracoid
1 Complete
4 Fragment with anterior end (end which articulates with scapula)
6 Fragment with posterior end (end which articulates with sternum)
7 Other fragment

<u>Reptile and Amphibian Element Part Codes</u>
Same system for mammals and birds. For all skeletal elements not included in those systems, use the following codes:
1 Complete
2 Fragment