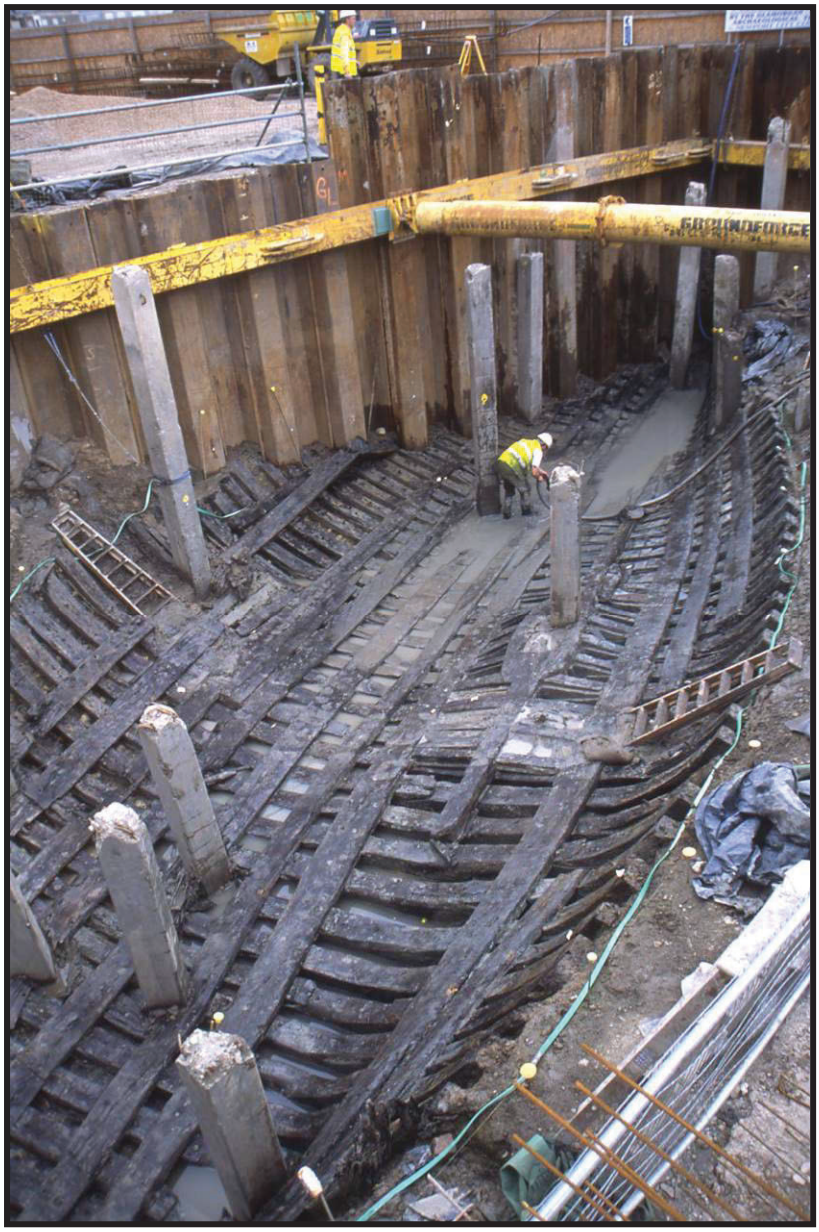
Newport Medieval Ship Project

Specialist Report: FAUNAL REMAINS



Site number: GGAT 467
Site location: NGR: ST 31286 88169 Kingsway, Newport, South Wales, UK.

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The Newport Ship Project

Introduction

In 2002, during the construction of the Riverfront Theatre, on the banks of the River Usk in Newport, South Wales, an archaeological find of great significance was unearthed. In the summer of that year, while undertaking the excavations for the theatre's orchestra pit, the well-preserved remains of a 15th century clinker built merchant vessel were discovered.

The site, which was surrounded by a cofferdam, was being monitored by the Glamorgan Gwent Archaeological Trust at the time of discovery. The ship lay in what is locally known as a pill or small inlet, with its stern closest to the river and its bow facing into the inlet. The timbers were covered in thick alluvial mud, which created an ideal anaerobic environment for successful preservation. Seventeen strakes of planking remained on the port side and thirty-five on the starboard side of the ship. The vessel was approximately 30m in length.

A silver French coin was found purposely inserted into the keel of the vessel, dating the ship to after May 1447. Dendrochronological research has shown the hull planking to be from the Basque country and after 1449 in date.

After a much publicised 'Save Our Ship' campaign, it was decided that the ship would not be recorded and discarded but excavated with the aim to conserve. The riders, stringers, braces, mast step, frames and overlapping clinker planks and keel were dismantled one by one and lifted. Almost 2000 ship components as well as hundreds of artefacts were excavated.

This report examines and lists the faunal remains recovered during the Newport Medieval Ship excavation.

Newport Medieval Ship: Bone report with reference to butchery patterns

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1 October 2012

This bone report considers the assemblage of the larger mammal bone in some detail and makes reference to the bird and rodent bone from the Newport Ship, Newport, County of Newport, Wales. The bone assemblage was recovered under the controlled archaeological excavations of the fifteenth century sailing vessel in 2002. The bone has been subject to some analysis, (Scales, 2010) but is currently under investigation for the specific purpose of extracting further information about butchery patterns. Although there are some really interesting question to be asked of this data set the reality is that it is a relatively small one. This does not detract from the importance of the material.

Taponomy of the bones
The bones may have been subject to a number of modifying processes including tipping, water inundation and hydraulic sorting, as well as activity from fish, plant, roots, sea traffic, building works, all that could have acted as taphonomic agents of modification. As a result of this and past human activity no articulated bone was lifted; most of the bone surface texture was visible with only a few bones encased in hardened concretion: these had not been lifted as sediment blocks. A small number of bones have a ferrous concretion. All bone is disarticulated, jumbled, and with no evidence of being contained in casks, buckets or other containers (check this against the contexts). The bones represent a truly mixed deposition of isolated elements however a number of them are from the same animal.

Sample selection
All the bone was lifted with no selective sampling strategy as such employed with the consequence no selection biases are evident. In this respect what we have is what was there in terms of what survived to be saved.

Treatment of bone
All bone was clean on receipt. It had been washed and free of salt water and sediment. The bone was either individually bagged or groups of bone were bagged. The bone was allowed to reach room temperature and dry if they had sweated in the bag, prior to analysis. The bone was examined by eye, under a magnifying glass and in a few cases under a light powered microscope. There is much further scope for examination by microscope.

The bones were numbered sequentially (and apologies for the double numbering in a few cases-this was the first time students had undertaken this task. As their skill grew the numbers became smaller, neater and with fewer mistakes ....).

The bones were identified to taxon/species and anatomical part, sided with the age/fusion stage noted. A number of taphonomic signatures were recorded, including animal activity

(gnawing, puncture marks etc.) and butchery patterns noted. The bones were counted, measured and weighed. Standard zoo-archaeological techniques for identifying and recording bone were employed using both standard reference texts and the faunal collection at Lampeter. Non-diagnostic bones were either recorded as indeterminate or as size of mammal (LM or large mammal including cattle and MM or medium mammal including sheep/goat, pig etc.). Sheep and goat bones were not distinguished in terms of the recording nor in the analysis of the bone. Other than mammal bones a number of bird bones were present, however the collection does not allow positive identification of all the bird bone. The vast majority could be identified as Gallus, domestic fowl, and were recorded as such.

Overall the bone surface texture is good with the vast majority of bone showing a good level of preservation. Age estimates are based on the assessment of the stage of fusion of the bone (Silver, 1981). All identification and fusion estimates are based on present day comparisons and maturation rates this should be borne in mind as the present day drivers for shape, size and maturation may be very different from those in the past.

Results

Number of bones

The assemblage consists of around 380 recorded bones, 53 bones noted in bag MSG 930 and a further 48 largely indeterminate bones not individually recorded.

Species present

The assemblage consists of three main larger mammal species, domestic pig, domestic cattle and domestic sheep/goat. Also present is a small mammal, a rodent most probably that of black rat and domestic fowl. All species are represented by post cranial (limb) bone and some species by cranial (those of the skull) bone.

Domestic pig

The domestic pig is represented by bones of the axial skeleton including the mandible, rib, vertebrae and a fragment of pelvis. The appendicular skeleton is better represented with bones from the front limb including the humerus, radius, ulna and metacarpals surviving and of the rear limb, the bones from the tibia and fibula, metatarsals and podials. Phalanges are also present but these have not been assigned a limb. The most noticeable absences are the scapula and the femur. There is a minimum of three different animals present, (MNI = 3), represented by a size difference including a baby pig.

Pig butchery patterns

The vertebrae are butchered in a caudal to crania direction – from tail to head. Presumably the carcass was hung by the feet and butchered from the tail towards the head resulting in the division of the carcass down the midline. The direction of central division is indicated by a number of stepped fractures and a number of blow marks on the caudal surface of the centrum (body of the vertebra). A number of vertebrae were then chopped transverse to the main division –see MSG377. Presumably the once split into halves the rib cage was then chopped into shorter lengths, sometimes going through the vertebra but

also in between them. There is some evidence that this was in a right to left direction in terms of the blow indicating the possibility of a right handed butcher.

The mandible fragment, MSG 380, has a number of butchery marks possibly indicating the removal of the tongue, here there are two main groups of fine unidirectional striations clustered on the ramus, and the removal of the major muscles of the cheek. This activity is indicated by a number of small cut marks, one more indicative of a chopping action but three are fine, multidirectional and clustered around the outermost lateral margin of the angle of the mandible. This may indicate removal of the main muscles associated with the cheek, or masseter muscles.

The main limb bones of the fore limbs are characterized by mid-shaft breaks with, mostly, spiral fractures. The humerii all display mid-shaft breaks and such fractures – see examples MSG 310-2, MSG 352. No further butchery appears to have been carried out on these bones, but for MSG 923, also displaying mid-shaft breaks with a spiral fracture, has further evidence of multiple blows to remove the proximal portion of the humerus. These gross marks may indicate a disarticulation of the limb or a jointing action, however, multiple multidirectional fine striations are also evident. These appear to be associated with the muscle attachment and possible associated with detachment of the muscle/tendon removal but filleting cannot be ruled out. Much further microscopic work is needed to record the number and location of cut marks (i.e. frequency distribution) to establish filleting. Regardless, the activity present does indicate the exploitation of meat bearing bone.

The radii, ulna and metacarpals, making up the lower portion of the front limb, are more complete bone. They too could provide evidence of filleting as the radius, MSG 701 and ulna, MSG 305-9, have cut marks that are unidirectional running longitudinally down the bone. The metacarpal, MSG370-7, also has a cut mark running longitudinal to the bone on the caudal (posterior) surface. This is a midline striation in the centre of the bone. Such marks could indicate skinning but these are more normally associated around the most distal portion of the metapodials – so again filleting is a possibility.

Of the main surviving rear limb bones all show evidence of butchery. The tibia, MSG 303 is a fragment displaying a mid shaft break and a spiral fracture. There are a number of striations on the cranial, medial and caudal sides of the bone. These are all fine striations clearly visibly under the microscope. Those on the cranial and medial surface are generally unidirectional running across the bone surface. There is a cut mark on the cranial surface which is longitudinal. In contrast MSG 358, the tibia proximal epiphysis shows a more gross butchery action with a removal of the lateral margin of the epiphysis in a clean chopping action.

The fibula fragment, MSG 363, has five longitudinal unidirectional cut marks indicating a slicing/filleting action near the proximal end of the shaft. Four further shorter and deeper cut marks are near the mid-shaft break are longitudinal to the bone as well.

The phalanges and podials display no clear evidence of butchery. For all a number of them do have striations these may well be of a more recent activity and taphonomic agent. This may rule out skinning as an activity, the rationale being that skinning involves the removal of the skin at the point where the foot bones are. Often the skin is paired back to this point and with any further removal is just easier to cut the feet off with the skin.

Domestic cattle

The cattle are represented by bones of the axial skeleton, including what appears to be a single skull fragment (nasal bone) and mandible along with bones from the vertebral column, rib, scapula, pelvis and sacrum. The appendicular skeleton is represented by all major limb bones, including the humerus, ulna and radius, metacarpals and a single carpal bone of the fore limb. The rear limb includes the femur and tibia, metatarsals and podials. A single patella is also present.

At least three cattle are present (MNI = 3), including two very different sized animals. These are represented by fully fused metacarpals (give size).

Cattle butchery patterns

The vertebrae display a consistent butchery pattern not uncommon in a medieval context. The vertebrae have been butchered in an action that separates the two halves of the carcass. The butchery pattern indicates a chopping along the axis of the skeleton in a caudal-cranial (tail to head) direction. The exact line has not been measured but is generally just off-centre of the mid-line. In some cases the vertebra is then chopped transverse to the mid-line indicating further separation of the rib cage into sections. The consistency of this pattern indicates a repeated action and perhaps one of a skilled butcher (certainly one with repeated experience). The vertebra MSG 279 shows evidence of at least four blows. The first action is in a caudial to cranial (tail to head) direction just off the mid centre to split that carcass into two. The second blow removed the spinal arch (both the spinal and transverse processes). A third blow is visible on the centrum which is a deep cut mark, failing to remove and substantial portion of bone, the final blow shows transverse, across the vertebral body, laterally and at a slight diagonal angle. This right to left angle may again suggest a right handed butcher. It certainly leaves the vertebra with a 'hacked' about feel and this is repeated on other bones of this species.

Consistency in butchery patterns is also seen in the ribs for those identified as Bos and LM (Large Mammal). Here a pattern emerges of the rib cage being separated into sections. After separation into halves the butcher has presumably laid the side of beef on to a block and then chopped through the rib cage in to two main sections from the center of the back towards the belly. The ribs ends identified as closest to and articulating with the vertebrae were butchered into lengths ranging from 7.5-14 cm but with the majority around 11-12 cm in length. The rib cage consisting of the ribs ends closest to the front of the chest/belly were butchered into slightly longer lengths ranging from 11 cm through to 19 cm, with the vast majority (19 out of 24) falling between 13 to 17 cm in length. The other pattern that can be seen is in the shorter lengths of some of the mid rib cage where the ribs are far shorter i.e.6-9 cm in length but this occurs in only a few cases.

It would seem that the carcass was divided into two halves, then butchered along the length of the spine, either in-between the vertebra or in some cases though the vertebral body, most often transverse to the central division. The rib cage was then cut into at least two main lengths producing a rib rack of on around 11-12 cm in length and another slightly longer averaging around 14-15 cm. This presumably produced some thinner cuts of meat suitable for salting or brining or similar preservation method.

The mandible fragment was inspected to see if there is evidence of removal of the tongue but no such pattern of processing was visible.

The limb bones show clear signs of butchery mostly consisting of the articular ends but also showing mid-shaft breakage. Many of these bones have a 'hacked' feel to them. The butchery marks at the articular ends indicate disarticulation and or jointing, often cleanly cleaved. Mid-shaft breakages have a more 'hacked' appearance with multiple blows visible. The actions were produced by a cleaver (or similar) heavy duty tool as there is no evidence of a sawing action. The mid-shaft breakages are mostly but not exclusively spirally fractured.

The humerus distal fragment MSG 278 has the whole of the anterior of the distal articulating surface removed, with both the medial and lateral epicondyle completely chopped through with multiple blows to the mid-shaft producing a spiral fracture. The humerus distal fragment MSG 353 is almost a carbon copy of this butchery pattern – again suggesting consistency in butchery activity.

The radius proximal fragment, MSG 324 has finer multiple striations, that are fine, short striations to long running parallel longitudinally down the bone shaft on the caudal surface/view. They range in length from 6.70 mm to 31.30 mm and may suggest a filleting action rather than jointing/disarticulation. Again this bone is broken mid-shaft with a spiral fracture.

The larger metacarpal MSG 281 has multiple blows to both sides, anterior and posterior (cranial and caudal) of the mid-shaft in order to get through the bone, again producing a spiral fracture and a 'hacked' look. This again looks like a jointing activity. If it were skinning one would expect more activity centered on the distal portion of the bone. Although this bone is not a particularly a meaty part of the carcass on an animal this size it could well have had a substantial meat index.

The rear limb

The femoral fragments of both the shaft and distal portions also display mid-shaft breakage with spiral fractures and multiple cut marks. These again are products of quite forceful blows to the mid-shaft sections.

The main bones of the lower rear limb, the tibia also show a number of different activities. MSG 277-1 is a distal shaft fragment with multiple fine striations, broadly unidirectional running across the bone surface of the lateral margin of the cranial side of

the bone. These are located near the mid-shaft breakage and could possibly indicate filleting. The distal tibia is less attractive as a joint of meat but as consumption of the lower limb, as in trotters, is another possibility (as is skinning). Further microscopic analysis may be able to resolve this particular activity.

The activity again suggests a right handed butcher.

The metatarsal MSG 270 does have a number of butchery marks to its distal margins and could be more indicative of skinning activity as may the butchery marks to the astragalus MSG 290, where the blow is through part of the dorsal articular surface.

The activity with cattle clearly shows a central division of the carcass, quartering of the main limbs (given the scapulae and pelvis butchery patterns) and an interest in section of the carcass suitable for jointing, possibility of filleting and/or disarticulation as well as producing cuts, such as rack of rib, more suited for preserving.

Domestic sheep (and/or goat)
This species is represented by a number of axial bones, including cranial fragments, horn core, vertebrae, rib and pelvis fragments. The appendicular skeleton includes predominately those of the rear limb, the femur, tibia, metatarsals and tarsals. In contrast the fore limb is only represented by metacarpal bone and a scapula fragment. The more major long bones of the front limb are the most notable absences. Phalanges are also present but have not been assigned to particular limbs at this stage.

Sheep/goat butchery patterns
As with the other main species the sheep shows a caudial to cranial division of the carcass to make the central division of the two halves. In MSG 304 this division has removed part of the vertebra on the right side, whereas MSG 290 shows the central division with the removal left side along with all processes and the vertebral arch. In contrast to the cranial-caudial division MSG 371 shows a more dorsal-ventral activity – (top down). Cut marks on the dorsal surface of the transverse process on the right side. The left side transverse process is removed. This looks more dorso-ventral and is more associated with later medieval butchery as a pattern for which further work will need to be undertaken.

The ribs have been cut into sections circa 10 cm. The ribs are represented by sections of the mid rib and a proximal portion near the rib head. The sections range from around 8 cm to 11 cm. It is suggested by the cut marks of the surviving portions that the rib cage was lain on the lateral side (outermost side) and butchered from the medial side (inside). MSG 312-1 a mid-body fragment 10.5 cm long has both a deep and shallow striation on the medial surface of the rib and similar can be seen on MSG 344. After the central division of the carcass the rib rack was lain on the lateral side and further butchered into smaller sections producing a rib rack of meat closest to the vertebral column and a rib rack with the more distal portions.

Both the scapulae (two fragments of the same bone) and pelvises fragments show extensive butchery as part of the activity to quarter the carcass, the disarticulation of the major limb bones. However very few bones of the fore limb are present. The metapodials (metacarpals and metatarsals) and phalanges have been examined but show little evidence of butchery marks.
The rear limb is comparatively well represented with bone from both the femur and tibia. The femoral material consists entirely of distal fragments. Where the shaft is present they show mid-shaft breakages with spiral fractures. MSG 305-6 is a distal portion showing such damage. A portion of the cranial margin of this distal-shaft has been removed in a single chopping action. (Note bones MSG 302 and MSG 384-1 conceivably are from the same animal – they have the same colour, size, bone texture, taphonomic history etc.

Numerically the tibiae dominate the Ovis bone count but in reality they are mostly fragments and some of them may be from the same animal. Again they demonstrate mid-shaft breakage and spiral or irregular perpendicular fractures with many of the shaft fragments having been sprially fractured as well. MSG 306 has many (100's) multiple unidirectional small shallow striations on the caudal surface. This extends for 24.81 mm over the bone surface area and is either very odd butchery or some form of abrasion to this part of the bone. The activity this represents is yet to be identified. The cut marks more typical of the tibiae run longitudinal to the bone on a number of surfaces near the proximal ends and they can be deep or rather shallow. This may represent filleting or jointing and further microscopic work is needed here to establish the number and location of all of these marks.

For all the sheep bone does have similarities with other species in terms of butchery activity (central division of the carcass, separation and butchery of the ribs into sections, separation of the main limbs, jointing and possible filleting) the sheep bone does present slightly different to the other species. The fact the crania is better represented with both cranial bone and horncore does imply the animals may have been taken on board alive or the crania is seen as a possible food source (sheep brain or muggers for example).

Discussion

The division of the carcasses in a central mid-line splitting (although in reality just off the mid-line) is a common pattern in this assemblage – such a pattern was also evident in the Mary Rose assemblage but initially suggested as chopping of vertebrae cranial to caudal, and that this being 'fairly standard and regular suggests skilled to half the carcass' (Coy and Hamilton-Dyer, 2005: 573). The direction of the division was further questioned in the Mary Rose assemblage but is not questioned here. In younger or smaller species, e.g. the young pig or sheep this may not be such a difficult task but in the larger species and certainly the larger of the cattle specimens this must have been more difficult and indeed indicates some skill in this activity.

The carcasses are then quartered and further jointed. The forequarter butchery can be seen on scapula and the hindquarter butchery on the pelvis – where they survive. The jointing into larger joints can be seen on the surviving humerii and femorii – representing the main meat bearing parts (those with a higher meat utility index). The butchery on the

lower portions of the fore and hind limbs is more problematic to interpret as it could be filleting, removal of meat by a pulling action, a form of stripping the meat, further disarticulation or skinning. The main exception is the lower limb bone of the larger cattle specimen- here the meat utility will be disproportionately higher in this specimen compared to smaller cattle and smaller species.

What all of these larger joints of meat indicate is yet to be fully explored but in contrast to the Mary Rose, where few limb bones were recovered, it may indicate that joints could be taken aboard and further indicate provisioning for shorter journeys. The argument for the Mary Rose is that thinner cuts (such as racks of rib) suitable for brining were preferred – as these survived long journeys without despoiling than more meaty and easily spoiled cuts of meat. Equally in contrast to the Mary Rose, which had no limb extremities, i.e. no carpals, tarsals, or phalanges, (Coy and Hamilton-Dyer, 2005: 574) the Newport Ship is represented by these bones of all three main species. This may indicate they were brought on alive, as a source of fresh meat, to be eaten quickly (as in a short journey), or as smoked joints of meat or simply as meat not meant for brining. Having said this, it is unlikely that the largest specimen of cattle may have been taken on board alive – given the size of this particular beast.

Certainly the opinion is that beef would have been transported in a preserved form (regardless of what form this was) is widespread (Migaud, 2011: 287) and based on the relative lack of extremity bone. Certainly the pattern of larger bones broken down, here with predominantly spiral fractures, indicates use of the bone marrow as a source of nutrition itself as indicated by Migaud. Further metric analysis may determine the relative proportions (and associated meat value) of the bones of cattle here as certainly there is some representation of these bones in this assemblage. Migaud (,2011: 288) goes on to outline the lack of importance placed on the lower extremities of pig bones or pork in terms of anatomical part representation. However, again in this assemblage such bones are present. It is not the case that they are from the same animal and therefore could not represent a single live animal but from at least three individuals. This may suggest more of a 'real' pattern. Several live animals on board ship, smoked hams or a liking for pig trotters may be some of the many possible explanations. Whatever the explanation this difference it is worth further examination. One notable similarity worth mentioning is the presence of the evidence of the removal of the pig tongue, a delicacy of the day according to Migaud (2011: 288).

Interestingly Migaud (2011:288) notes sheep as a less-common animal but with around 40 or so bones ranging across much of the skeleton there is certainly some representation of this species here. Although there is a lack of the major meat bearing bones of the fore limb other bones with both high and low meat bearing potential are present. Further work is needed on the kill-off patterns of all the animals aboard ship but the sheep suggest a young age for at least one of the animals, younger than 13-16 months (given caveat that this is a modern fusion rate). The implications of having lamb (as opposed to mutton) also need further exploration. Other evidence suggests they were slaughtered before fusion of the distal femur and proximal tibia, that is before 3.5 years old.

References

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Migaud, P. 2011 A first approach to links between animals and life on board sailing vessels (1500-1800). *The International Journal of Nautical Archaeology* 40(**2**):283-292

Scales, R. (2010) The Animal Bone. Report Updated Post-Excavation Research Design: Oxford Archaeological Unit

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	Animal Marks	Natural Frac Pattern	Butchered Fracture Pattern	Butchery patterns
2	MSG 1190	NOT BONE											
3	MSG 1191	NOT BONE											
4	MSG 1192	NOT BONE											
5	MSG 1193	NOT BONE											
6	MSG 1305	Gallus	Lumbrosacral	fragment	n/a	n/a	n/a	n/a	n/a	no	Spiral	n/a	n/a
7	MSG 1306	Ovis	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Bisected	n/a
8	MSG 1314	Indet	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Spiral x2	n/a	n/a
9	MSG 154-2	Indet	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Sawtooth	Spiral	2x Cut mark
10	MSG 269	Sus	Phalange	complete	Middle	n/a	fused	<1 yr	n/a	no	n/a	n/a	n/a
11	MSG 270-1	Bos	Vertebra	fragment	spineous process	n/a	unfused			no	n/a	irregular perpendicular	4 hacked one cut mark
12	MSG 270-2	Bos	Metatarsal	complete	All	left	fused	2.25.yrs	3 yrs	no	n/a	n/a	1 cut mark
13	MSG 270-3	Bos	Metacarpal	complete	All	right	fused	2 yrs	2.5 yrs	no	n/a	n/a	
14	MSG 271	Ovis	Metacarpal	complete	n/a	left	fused	18 mths	2 yrs	no	n/a	n/a	n/a
15	MSG 272	Ovis	Metatarsal	complete	n/a	left	unfused	n/a	<20-28 mths	no	n/a	n/a	n/a
16	MSG 273-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	Smooth perpendicular	Transverse butchered
17	MSG 273-2	MM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	no	n/a	irregular perpendicular	Transverse cut marks
18	MSG 274-1	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	Gnawing	n/a	Spiral x1 Sawtooth x1	n/a
19	MSG 274-2	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	Gnawing	V shaped & spiral	Smooth perpendicular	Transverse butchered
20	MSG 275-1	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
21	MSG 275-2	Indet	Vertebra	fragment	n/a	n/a	unfused	n/a	n/a	no	n/a	Smooth perpendicular	Transverse butchered
22	MSG 276-1	Sus	Metatarsal	complete	Distal	right	unfused	no	<2.5 yrs	no	Irregular Perp	yes	Transverse butchered
23	MSG 276-2	Ovis	Pelvis	fragment	n/a	right	n/a	n/a	n/a	no		Smooth, x 4	Transverse butchered
24	MSG 276-3	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	spiral	n/a	
25	MSG 276-4	Bos	Rib	fragment	Distal	n/a	n/a	n/a	n/a	no	n/a	irregular perpendicular	Smooth perpendicular
26	MSG 276-5	?Bos	skull	fragment		n/a	n/a	n/a	n/a	no	spiral	Smooth perpendicular	Transverse butchered
27	MSG 277-1	Bos	Tibia	fragment	Distal	left	unfused	n/a	<2 yrs	no	n/a	irregular perpendicular	1x longitudinal cut mark
28	MSG 277-2	Bos	Rib	fragment	Proximal	n/a	unfused	young	n/a	no	n/a	irregular perpendicular	Transverse butchered
29	MSG 277-3	Ovis	Astragalus	complete	n/a	left	fused	n/a	n/a	no	n/a		
30	MSG 278-1	Bos	Humerus	fragment	Distal	left	fused	12 mths	18 mths	no	n/a	Hacked spiral fracture	Multiple blows, hacked
31	MSG 278-2	Sus	Metatarsal	complete	n/a	right	unfused	n/a	<2.25 yrs	Gnawing	tooth pit	n/a	n/a
32	MSG 279	Bos	Vertebra	fragment	centrum	n/a	unfused			no		caudal-cranial	Multiple blows, hacked
33	MSG 280	Bos	Rib	fragment	Proximal	n/a	fused	n/a	n/a	no	Irregular Perp	n/a	n/a
34	MSG 281	Bos	Metacarpal	fragment	Proximal	left	fused	12 mths	18 mths	Gnawing	n/a	Hacked spiral fracture	Multiple blows, hacked
35	MSG 282	Bos	Rib	fragment	Proximal	n/a	fused	mature	n/a	no	n/a	Spiral	sliced and hacked
36	MSG 283-1	LM	Pelvis	fragment	pubis	left	fused	n/a	n/a	no	n/a	Smooth	3 distict chops
37	MSG 283-2	Avies	Tibia	fragment	Shaft	right	fused	n/a	n/a	Gnawing	spiral	n/a	
38	MSG 283-3	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	diagonal x1 perpendicularx1	yes, cuts and scratches
39	MSG 284	Bos	Tibia	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	Spiral	3x parallel cut marks
40	MSG 285	Sus	Metatapodial	complete	n/a	right	unfused	?	?	no	n/a	n/a	n/a
41	MSG 286	Bos	Vertebra	fragment	cervical	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	n/a
42	MSG 288	Ovis	Tibia	fragment	Distal	right	unfused	n/a	<18- 24 mth	Gnawing	spiral	Spiral	transverse chop
43	MSG 289-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	transverse	x2 transverse chop
44	MSG 289-2	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	transverse	x2 transverse chop
45	MSG 289-3	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	transverse + diagonal	
46	MSG 289-4	Sus	Fibula	fragment	Shaft	n/a	n/a	n/a	n/a	no	Spiral	transverse	
47	MSG 289-5	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	transverse + diagonal	
48	MSG 290	LM	LB	fragment	Shaft	n/a	n/a	n/a	n/a	no	Spiral	tranverse longitudinal	
49	MSG 290-1	Ovis	Vertebra	fragment	Centrum	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	Multiple blows, hacked
50	MSG 290-2	Bos	Astragalus	complete	n/a	left	fused	n/a	n/a	Gnawing	n/a	n/a	Mult. Hacks and scrapes
51	MSG 292	Bos	Ulna	fragment	Shaft	left	n/a	n/a	n/a	no	n/a	Spiral	transverse perpendicular
52	MSG 293	Ovis	Pelvis	fragment	Ilium	right	n/a	n/a	n/a	no	n/a	V shape	x 4 choped
53	MSG 294	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	1x Spiral 1x irreg. perp.	Longitudinal split
54	MSG 295	Sus	Vertebra	fragment	centrum	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	Longitudinal split
55	MSG 296-1	Sus	Metatarsal	complete	n/a	left	unfused	n/a	<2.25 yrs	no	n/a	n/a	n/a

	A	B	C	D	E	F	G	H	I	J	K	L	M
56	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	Animal Marks	Natural Frac Pattern	Butchered Fracture Pattern	Butchery patterns
57	MSG 296-2	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Every way	Hacked
58	MSG 296-3	SM	Vertebra	fragment	centrum	n/a	unfused	n/a	n/a	no		caudal-cranial	x2
59	MSG 297-?	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Longitudinal	caudal-cranial	
60	MSG 297-?	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Longitudinal	n/a	
61	MSG 297-?	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	no	n/a	n/a
62	MSG 297-1	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Irregular Perp	n/a	
63	MSG 297-2	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Spiral	n/a	
64	MSG 297-3	LM	Vertebra	fragment	centrum	n/a	unfused	n/a	n/a	no	Longitudinal	caudal-cranial	transverse perpendicular
65	MSG 298-1	Bos	Vertebra	fragment	n/a	n/a	fused	mature	n/a	no	n/a	caudal-cranial	n/a
66	MSG 298-2	Bos	Vertebra	fragment	n/a	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	spiral on spine process
67	MSG 300-1	Bos	Scapula	fragment	Distal	right	fused	mature	n/a	no	n/a	transverse perpendicular	cut mark near fracture
68	MSG 300-2	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Spiral	transverse perpendicular	
69	MSG 301	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Spiral	Smooth Perp.	n/a
70	MSG 302	Ovis	Femur-	complete	epihpesis	right	unfused	n/a	< 2.5-3 yrs	no	no	n/a	n/a
71	MSG 303	Sus	Tibia	fragment	Distal	right	fused	3 yrs	3.5 yrs	no	Spiral	break and twist	1x Cut mark
72	MSG 304-?	Gallus	Clavicula	fragment	cranial/distal	n/a	n/a	n/a	n/a	no	Irregular Perp	transverse perpendicular	
73	MSG 304-?	Gallus	Clavicula	fragment		n/a	n/a	n/a	n/a	no	Irregular Perp		
74	MSG 304-1	Ovis	Vertebra	fragment	centrum	n/a	unfused	n/a	n/a	no	n/a	Longitudinal	n/a
75	MSG 304-2	Bos	Vertebra	fragment	spineous process	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	dorso-ventral along spine proc
76	MSG 305-1	Bos	Scapula	fragment	Blade	n/a	n/a	n/a	n/a	no	n/a	V shape	Multiple blows, hacked
77	MSG 305-10	Sus	Pelvis	fragment	pubis	right	unfused	n/a	<6-7 yrs	no	n/a	Smooth Perp.	
78	MSG 305-11	Bos	Sternum	fragment		n/a	unfused	n/a	n/a	no	n/a	Longitudinal	
79	MSG 305-12	Ovis	Tibia	fragment	Proximal	right	unfused	n/a	<3-3.5 yrs	no	n/a	Spiral	3x Cut mark mid-shaft butche
80	MSG 305-2	Bos	Rib	fragment	Distal	n/a	n/a	n/a	n/a	no	n/a	V shape	cutmarks parallel
81	MSG 305-3	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	no	transverse perpendicular	
82	MSG 305-4	Indet	LB	fragment	shaft	n/a	n/a	n/a	n/a	no	Irregular Perp	Longitudinal	
83	MSG 305-5	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Spiral	transverse perpendicular	
84	MSG 305-6	Ovis	Femur	fragment	Distal	right	unfused	n/a	<3-3.5 yrs	no	n/a	Spiral	Split
85	MSG 305-7	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	Smooth Perp.	transverse
86	MSG 305-8	Sus	Metacarpal	complete	n/a	left	unfused	n/a	<2 yrs	no	n/a	n/a	n/a
87	MSG 305-9	Sus	Ulna	complete	complete	right	unfused	n/a	<10 mths	no	n/a		1 cut mark
88	MSG 306	Ovis	Tibia	fragment	Distal	right	unfused	n/a	<1.5-2 yrs	no		Irregular Perp	Hack
89	MSG 307	Ovis	Matatarsal	complete	complete	right	fused	20-28 mths		no	n/a	cut mark	
90	MSG 308	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	1x Iregular perp 1xLo	n/a	n/a
91	MSG 309	Bos	Rib	fragment	Proximal	n/a	fused	n/a	n/a	Puncture	n/a	Spiral	1x Cut mark
92	MSG 310-1	Aves	Lumbrosacral	fragment	n/a	n/a	n/a	n/a	n/a	no	Smooth perp.	n/a	n/a
93	MSG 310-2	Sus	Humerus	fragment	Distal	right	fused	1 yrs	n/a	no	n/a	Spiral	n/a
94	MSG 310-3	Indet	Vertebra	fragment	Centrum	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	transverse
95	MSG 310-4	Aves	Scapula	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
96	MSG 310-5	Bos	Sacrum	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	Chopping and 1x deep cut ma
97	MSG 311-1	Gallus	Coracoid	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
98	MSG 311-2	Gallus	Femur	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
99	MSG 311-4	Gallus	Clavicula	fragment	n/a	n/a	n/a	n/a	n/a	no	Spiral	n/a	n/a
100	MSG 311-5	Gallus	Radius	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
101	MSG 311-6	Gallus	Clavicula	fragment	n/a	n/a	n/a	n/a	n/a	no	Spiral	n/a	n/a
102	MSG 312-1	Ovis	Rib	fragment	Distal	n/a	unfused	n/a	n/a	no	n/a	smooth perp	1x Cut mark
103	MSG 312-2	Indet	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	no	Irregular Perp	smooth	
104	MSG 313	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no		spiral	
105	MSG 314	Gallus	Rib	complete	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
106	MSG 315	Sus	Vertebra	fragment	Arch	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	Transverse
107	MSG 316-1	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Irregular Perp	irregular perpendicular	2x Cut mark
108	MSG 316-2	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Sawtooth	Spiral	multiple cut marks, shallow
109	MSG 316-3	Ovis	Horncore	fragment	Distal	right	n/a	n/a	n/a	no	Spiral	diagonal	
110	MSG 316-4	LM	Scapula	fragment	Blade	n/a	n/a	n/a	n/a	no		iregular, smooth perp	Multiple hacks

	A	B	C	D	E	F	G	H	I	J	K	L	M
111	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	Animal Marks	Natural Frac Pattern	Butchered Fracture Pattern	Butchery patterns
112	MSG 317-1	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Irregular Perp	Smooth Perp.	n/a
113	MSG 317-2	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	no	n/a	Smooth Perp.	1x Cut mark
114	MSG 318-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	2x Spiral	1x hacking mark near fracture
115	MSG 318-2	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	smooth and irreg perp.	
116	MSG 319	Bos	Rib	fragment	Proximal	n/a	unfused	n/a	n/a	no	n/a	Spiral	1x Cut mark
117	MSG 320	Ovis	Tibia	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	irreg ular perp	1x transverse 1 x V shape
118	MSG 323	Gallus	Scapula	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
119	MSG 324	Bos	Radius	fragment	Proximal	right	fused	12-18 mths	n/a	no	n/a	Spiral	2x slice, Mult. cut marks
120	MSG 325	Bos	Humerus	fragment	Distal	left	fused	1.5 yrs	n/a	no	n/a	Spiral	Min 3 blows, hacked
121	MSG 326	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
122	MSG 326	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
123	MSG 326	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
124	MSG 327	Bos	Metatarsal	complete	complete	right	fused	2.2-3 yrs	n/a	no	n/a	Longitudinal	sliced at prox end
125	MSG 328-1	Bos	Pelvis	fragment	Illium	right	n/a	n/a	adult	no	n/a	transverse x 2	spiral + hacked
126	MSG 328-10	Gallus	Femur	fragment	Shaft	left	n/a	n/a	n/a	Gnawing	spiral	n/a	n/a
127	MSG 328-11	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Smooth Perp.	n/a
128	MSG 328-12	Gallus	Radius	fragment	prox-shaft	right	n/a	n/a	n/a	no	Spiral	n/a	n/a
129	MSG 328-13	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Longitudinal	n/a	n/a
130	MSG 328-14	Gallus	Sternum	fragment	n/a	n/a	n/a	n/a	n/a	no	irregular perp	n/a	n/a
131	MSG 328-2	Bos	Mandible	fragment	ascending ramus	right	n/a	n/a	adult	no	n/a	transverse x 2	1xsmooth 1x irreg +cutmark
132	MSG 328-3	Bos	Vertebra	fragment	cervical	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	Chopping
133	MSG 328-4	Bos	Vertebra	fragment	Lumbar	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	n/a
134	MSG 328-5	Gallus	Pelvis	fragment	Acetabulum	right	fused	n/a	adult	no	Longitudinal	n/a	n/a
135	MSG 328-6	Gallus	Coracoid	complete	n/a	left	fused	n/a	adult	no	n/a	n/a	n/a
136	MSG 328-7	Sus	Phalange	complete	Intermediate	?	unfused	n/a	<9-12 mths	no	n/a	n/a	n/a
137	MSG 328-8	Gallus	Tibia	complete	n/a	left	fused	n/a	adult	no	n/a	n/a	n/a
138	MSG 328-9	Gallus	Humerus	complete	n/a	right	fused	n/a	adult	no	n/a	n/a	n/a
139	MSG 329	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	Smooth Perp.	transverse
140	MSG 330-1	Ovis	Skull	fragment	orbit	right	fused	n/a	adult	no	n/a	n/a	n/a
141	MSG 330-2	LM	Rib	fragment	Distal	n/a	unfused	n/a	n/a	no	1x spiral 1x smooth p	n/a	n/a
142	MSG 331-1	Caprid	Femur	fragment	proximal	left	unfused	n/a	<3-3.5 yrs	no		Spiral	1 x cut mark
143	MSG 331-10	Aves	Femur	complete	n/a	right	fused	n/a	adult	no	n/a	n/a	n/a
144	MSG 331-11	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Irregular Perp	n/a	n/a
145	MSG 331-12	Gallus	Sternum	fragment	n/a	n/a	n/a	n/a	n/a	no		Irregular	
146	MSG 331-13	Indet	Vertebra	fragment	Spineous process	n/a	unfused	n/a	young	no	n/a	diag over spineous process	n/a
147	MSG 331-14	Carnivore?	Vertebra	fragment	Centrum	n/a	unfused	n/a	young	no	Irregular Perp	diagonal	
148	MSG 331-15	Indet	Femur	complete	epihpesis	n/a	unfused	n/a	young	no	n/a	n/a	n/a
149	MSG 331-16	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Irregular Perp	n/a	n/a
150	MSG 331-17	Sus	Vertebra	fragment	plate	n/a	unfused	n/a	young	no	n/a	caudal-cranial	plus transverse
151	MSG 331-18	Ovis	Horncore	fragment	distal	n/a	n/a	n/a	adult	no	n/a	irregual perp or transverse	
152	MSG 331-2	Sus	Vertebra	fragment	Lumbar	n/a	unfused	n/a	young	no	n/a	caudal-cranial	mult. Cut mark
153	MSG 331-3	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	spiral	Smooth perp.	1x Cut mark
154	MSG 331-4	Aves	Tibia	complete	n/a	right	fused	n/a	adult	no	n/a	n/a	n/a
155	MSG 331-5	Gallus	Humerus	complete	n/a	left	fused	n/a	adult	no	n/a	n/a	n/a
156	MSG 331-6	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	1x Natural 1x Column	n/a	n/a
157	MSG 331-7	Gallus	Metatarsus	complete	n/a	left	fused	n/a	adult	no	n/a	n/a	n/a
158	MSG 331-7	Gallus	Femur	complete	n/a	right	fused	n/a	adult	no	n/a	n/a	n/a
159	MSG 331-8	Gallus	Metatarsus	complete	n/a	left	fused	n/a	adult	no	n/a	n/a	n/a
160	MSG 331-8	Gallus	Pelvis	fragment	Acetabulum	right	fused	n/a	adult	Puncture			
161	MSG 331-9	Sus	Vertebra	fragment	Lumbar	n/a	unfused	n/a	young	no	n/a	caudal-cranial	n/a
162	MSG 332	LM	Scapula	fragment	blade	n/a	n/a	n/a	n/a	no	n/a	2x transverse across balde	Longitudinal split
163	MSG 333	MM	Long Bone	fragment	epihpesis	n/a	unfused	n/a	n/a	no	n/a	n/a	n/a
164	MSG 334	Sus	Phalange	complete	Distal	right	fused	n/a	n/a	no	n/a	n/a	n/a
165	MSG 335-1	Indet	Vertebra	fragment	plate	n/a	unfused	n/a	young	no	n/a	caudal-cranial	transverse

	A	B	C	D	E	F	G	H	I	J	K	L	M
166	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	Animal Marks	Natural Frac Pattern	Butchered Fracture Pattern	Butchery patterns
167	MSG 335-2	Sus	Vertebra	fragment	n/a	n/a	unfused	n/a	young	no	n/a	Longitudinal	n/a
168	MSG 335-3	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
169	MSG 335-4	Ratus	Mandible	complete	n/a	right	n/a	n/a	n/a	no	n/a	n/a	n/a
170	MSG 336-1	Gallus	Scapula	complete	Distal	left	fused	n/a	adult	no	n/a	n/a	n/a
171	MSG 336-2	Ovis	Horncore	fragment	middle	n/a	n/a	n/a	n/a	no	n/a	2x transverse	Smooth perpendicular
172	MSG 336-3	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no		2x transverse	Smooth perpendicular
173	MSG 337	Bos	Rib	fragment	Proximal	n/a	fused	n/a	n/a	no	n/a	Spiral	n/a
174	MSG 338	MM	Rib	fragment	Distal	n/a	unfused	n/a	young	no	n/a	irregular perp	
175	MSG 339	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Hacked spiral fracture	transvserse, diagonal cut mar
176	MSG 340	Ovis	Tibia	fragment	Proximal	right	unfused	n/a	<3-3.5 yrs	no	Sawtooth	n/a	n/a
177	MSG 341	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	Puncture	Spiral	irregular perp	n/a
178	MSG 342	Indet	Long Bone	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	Spiral	Longitudinal split
179	MSG 343	LM	Tibia	fragment	Distal	left	unfused	n/a	n/a	no	n/a	Spiral	1x Cut mark
180	MSG 344-1	Ovis	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	1x spiral 1x sawtooth	n/a	3x Cut mark
181	MSG 344-2	Aves	Clavicula	fragment	Proximal	n/a	n/a	n/a	n/a	no	Irregular Perp	n/a	n/a
182	MSG 344-3	Ovis	Horncore	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	transverse	diagonal
183	MSG 344-4	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	transverse	Smooth perpendicular
184	MSG 345	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Spiral	Transverse	n/a
185	MSG 346	Sus	Radius	fragment	Proximal	left	fused	1 yr	n/a	no	n/a	Spiral	n/a
186	MSG 347-1	Gaullus	Sternum	fragment	Proximal	n/a	n/a	n/a	adult	no	Irregular Perp	Longitudinal	n/a
187	MSG 347-2	Bos	Vertebra	fragment	cervical	n/a	unfused	n/a	n/a	no	n/a	n/a	n/a
188	MSG 347-3	Bos	Vertebra	fragment	cervical	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	1x cut mark, slicing
189	MSG 348-1	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Sawtooth	Transverse	1 Cut mark
190	MSG 348-2	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Sawtooth	Longitudinal	n/a
191	MSG 349	Bos	Scapula	fragment	Distal articular	right	fused	n/a	adult	no	n/a	Spiral	Hook marks? Hacked
192	MSG 350-1	Sus	Vertebra	fragment	Spineous process	n/a	n/a	n/a	adult	no	n/a	Longitudinal	n/a
193	MSG 350-2	LM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	no	n/a	Smooth perp.	n/a
194	MSG 350-3	Bos	Sacrum	fragment	Spineous process	n/a	fused	n/a	adult	no	n/a	caudal-cranial	transverse
195	MSG 350-4	LM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	no	n/a	smooth perp	1x irregular perp
196	MSG 351	Bos	Femur	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	Spiral	Longitudinal
197	MSG 352	Sus	Humerus	fragment	Distal	right	fused	1 yrs	n/a	no	n/a	Spiral	2 uni-directional parallel cut m
198	MSG 353	Bos	Humerus	fragment	Distal	right	fused	1.5 yrs	adult	no	n/a	Spiral and Sliced	Multiple blows
199	MSG 354-1	Bos	Rib	fragment	Proximal	n/a	unfused	n/a	n/a	no	n/a	Spiral	1x cut mark
200	MSG 354-2	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	Saw tooth	1 Cut Mark
201	MSG 355	Bos	Scapula	fragment	Blade	n/a	n/a	n/a	adult	no	Sawtooth	Longtudinal x2	diagonal
202	MSG 356	?Sus	Rib	fragment	Proximal	n/a	unfused	n/a	young	no	n/a	Irregular perp	transverse
203	MSG 357	LM	Rib	fragment	Middle	n/a	n/a	n/a	adult	no	n/a	1x Spiral 1x irreg. perp.	n/a
204	MSG 358	Sus	Tibia epiphysis	complete	Proximal	right	unfused	n/a	<3.5 yrs	no	n/a	n/a	1x slice
205	MSG 359	Indet	Vertebra	fragment	plate	n/a	unfused	n/a	n/a	no	n/a	V shape	n/a
206	MSG 360	Bos	Scapula	fragment	blade	left	n/a	n/a	adult	no	Sawtooth	Transverse	fracture lines longitudinal
207	MSG 361-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	adult	no	n/a	1xspiral 1xirregular perp	1x cut mark
208	MSG 361-2	MM	Scapula	fragment	blade	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	Transverse
209	MSG 361-3	Ovis	Pelvis	fragment	Illium	left	n/a	n/a	adult	no	n/a	irregular	hacked, cutmarked x2
210	MSG 361-4	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	Longitudinal
211	MSG 361-5	Sus	Rib	fragment	Proximal	n/a	fused	n/a	adult	no	n/a	Spiral	
212	MSG 361-6	Ovis	Vertebra	fragment	Transverse proce	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	
213	MSG 361-7	Ovis	Phalange	complete	body	n/a	unfused	n/a	<13-16 mths	no	n/a	n/a	n/a
214	MSG 361-8	Ovis	Phalange	complete	epiphesis	n/a	unfused	n/a	<13-16 mths	no	n/a	n/a	n/a
215	MSG 362	Gallus	Tibia	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
216	MSG 363	Sus	Fibula	fragment	Shaft	left	n/a	n/a	n/a	no	n/a	Spiral	Irregular perp
217	MSG 364	Bos	Scapula	fragment	Blade	left	n/a	n/a	adult	no	n/a	Irregular	3 cutmarks
218	MSG 365	LM	Rib	fragment	Middle	n/a	n/a	n/a	adult	no	1x Smooth perp 1xsp	n/a	n/a
219	MSG 366	Indet	Indet	fragment	indet	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
220	MSG 367-1	Bos	Rib	fragment	Middle	n/a	n/a	n/a	adult	no	n/a	Spiral	Smooth perpendicular

	A	B	C	D	E	F	G	H	I	J	K	L	M
221	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	Animal Marks	Natural Frac Pattern	Butchered Fracture Pattern	Butchery patterns
222	MSG 367-2	Bos?	Femur	fragment	epiphesis	n/a	n/a	n/a	n/a	no	n/a	Smooth perp	
223	MSG 368-1	Bos	Vertebra	fragment	Transverse proce	n/a	n/a	n/a	adult	no	n/a	caudal-cranial	Split transverse
224	MSG 368-2	Bos	Vertebra	fragment	Centrum	n/a	fused	n/a	adult	no	n/a	caudal-cranial	Longitudinal
225	MSG 368-2	LM	Sternum	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	n/a
226	MSG 368-3	Bos	Vertabra	fragment	n/a	n/a	n/a	n/a	n/a	no	Longitudinal	n/a	n/a
227	MSG 369	Gallus	Pelvis	fragment	Acetabulum	n/a	n/a	n/a	n/a	no	Longitudinal	n/a	n/a
228	MSG 370-1	Gallus	Tibia	fragment	Distal	n/a	fused	n/a	adult	no	Stepped	n/a	n/a
229	MSG 370-10	Ovis	Skull	fragment	Occipital	right	fused	n/a	adult	no	n/a	Longitudinal	split
230	MSG 370-2	Bos	Vertebra	fragment	Spineous process	n/a	f	n/a	adult	no	n/a	Spiral	Longitudinal
231	MSG 370-3	Indet	Skull	fragment	Occipital	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
232	MSG 370-4	Gallus	Tibia	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
233	MSG 370-5	Galus	Tibia	fragment	Proximal	left	fused	n/a	n/a	no	Spiral	n/a	n/a
234	MSG 370-6	Gallus	Pelvis	fragment	Acetabulum	n/a	n/a	n/a	n/a	no	Irregular Perp	n/a	n/a
235	MSG 370-7	Sus	Metacarpal	complete	n/a	left	fused	2 yrs	n/a	no	n/a	n/a	Cut Mark
236	MSG 370-8	Ovis	Pelvis	fragment	Acetabulum	left	n/a	n/a	adult	no	n/a	Longitudinal	Longitudinal
237	MSG 370-9	Indet	Skull	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	
238	MSG 371	Ovis	Vertebra	fragment	n/a	n/a	unfused	n/a	n/a	no	n/a	Longitudinal	Chopped
239	MSG 372	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
240	MSG 373	Ovis	Tibia	fragment	epiphesis	left	unfused	n/a	<3 yrs	no	n/a	Diagonal	n/a
241	MSG 374	Bos	Vertebra	fragment	half	right	unfused	n/a	n/a	no	n/a	caudal-cranial	chopping
242	MSG 375-1	Gallus	Femur	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
243	MSG 375-2	Gallus	Femur	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
244	MSG 376	Bos	Carpal	fragment	n/a	n/a	fused	n/a	n/a	no	n/a	Smooth perp	chopped
245	MSG 377-1	MM	LB	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	Spiral	Smooth perpendicular
246	MSG 377-2	Sus	Vertebra	fragment	half	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	transverse
247	MSG 378-1	Bos	Vertebra	fragment	Transverse proce	n/a	n/a	n/a	adult	no	n/a	Smooth Perp.	n/a
248	MSG 378-2	MM	Vertebra	fragment	Spineous process	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	3 x chopping
249	MSG 379	LM	Indet	fragment	flat bone	n/a	n/a	n/a	n/a	no	n/a	Hacked spiral fracture	2 cutmarks
250	MSG 380	Sus	Mandible	fragment	ramus	right	n/a	n/a	n/a	no	n/a	Spiral	irregular
251	MSG 381	LM	Vertrbra	fragment	Spineous process	n/a	fused	n/a	n/a	no	n/a	Spiral	n/a
252	MSG 382	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Irregular Perp	Smooth Perp	n/a
253	MSG 383-1	Sus	Metacarpal	complete	n/a	left	fused	2 yrs	n/a	no	n/a	n/a	n/a
254	MSG 383-2	MM	Rib	fragment	Distal	n/a	n/a	n/a	n/a	no	irregular perp	n/a	n/a
255	MSG 384-1	Ovis	Femur	fragment	Distal	right	unfused	n/a	<3-3.5 yrs	no	n/a	Spiral	1 Cut near fracture
256	MSG 384-2	Ovis	Femur	complete	Epiphysis	right	unfused	n/a	<3-3.5 yrs	no	n/a	n/a	n/a
257	MSG 384-3	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	1xspiral 1x irreg. perp	n/a	n/a
258	MSG 385-1	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	no	n/a	Spiral	2 parallel cut marks, 2x cut ma
259	MSG 385-2	LM	Indet	fragment	flat bone	n/a	fused	n/a	n/a	no	n/a	Smooth Perp	Lonitudinal
260	MSG 385-3	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	no	n/a	Spiral	n/a
261	MSG 385-4	Bos	Scapula	fragment	blade	left	n/a	n/a	n/a	no	n/a	Longitudinal	Irregular Perp
262	MSG 385-5	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Hacked spiral fracture	Hacked
263	MSG 385-6	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Spiral	Longitudinal
264	MSG 385-7	Gallus	Tibia	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
265	MSG 385-8	Bos	Femur	fragment	Distal	right	fused	3.5-4 yrs	adult	no	n/a	Spiral	mult. Cut marks, flaking, slices
266	MSG 385-9	Bos	Rib	fragment	Middle	n/a	n/a	n/a	adult	no	n/a	Irregular perp	I x cut Smooth perpendicular
267	MSG 386-1	Indet	Skull	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	n/a
268	MSG 386-10	Sus	Metatarsus	complete	n/a	right	unfused	n/a	<2.25 yrs	no	n/a	n/a	n/a
269	MSG 386-11	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
270	MSG 386-12	Sus	Vertebra	fragment	Spineous process	n/a	n/a	n/a	adult	no	n/a	Spiral	Longitudinal
271	MSG 386-13	Bos	Vertebra	fragment	n/a	n/a	Unfused	n/a	n/a	no	n/a	caudal-cranial	n/a
272	MSG 386-14	Bos	Humerus	fragment	Proximal	right	fused	n/a	3.5-4 yrs	no	n/a	Smooth Slice	Multiple blows, hacked
273	MSG 386-15	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal and Perpendicular	n/a
274	MSG 386-2	Bos	Vertebral Epiphys	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	n/a
275	MSG 386-3	Ovis	Vertebra	fragment	n/a	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	Transverse

	A	B	C	D	E	F	G	H	I	J	K	L	M
276	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	Animal Marks	Natural Frac Pattern	Butchered Fracture Pattern	Butchery patterns
277	MSG 386-4	Bos	Vertebral Epiphys	fragment	n/a	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	n/a
278	MSG 386-5	Sus	Fibula	fragment	Shaft	left	unfused	2.5 yrs	n/a	no	n/a	spiral	n/a
279	MSG 386-6	Gallus	Scapula	fragment	Distal	right	fused	n/a	n/a	no	Spiral	n/a	n/a
280	MSG 386-7	Indet	Vertebra	fragment	half	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	n/a
281	MSG 386-8	Sus	Metatarsus	complete	n/a	right	fused	2.25 yrs	n/a	no	n/a	n/a	n/a
282	MSG 386-9	Gallus	Femur	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
283	MSG 696-1	Bos	Humerus	fragment	Shaft	right	n/a	n/a	n/a	no	n/a	Spiral	multiple cut marks, shallow
284	MSG 696-2	Indet	LB	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	Spiral	Longitudinal
285	MSG 696-3	Bos	Humerus	fragment	Shaft	left	n/a	n/a	n/a	no	n/a	Spiral	Multiple shallow cut marks
286	MSG 701-1	Wood											
287	MSG 701-2	Wood											
288	MSG 701-3	Sus	Radius	complete	n/a	left	fused prox ur	1 yrs	<3.5 yrs	no	n/a	n/a	2x longitudinal & 2x transvers
289	MSG 777-1	MM	Vertebra	fragment	Epiphysis	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	Transverse
290	MSG 777-2	MM	Vertebra	fragment	Centrum	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	Transverse
291	MSG 778	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	n/a
292	MSG 779	Sus	Meta podial	complete	Epiphysis	n/a	unfused	<2 yrs	n/a	no	n/a	n/a	n/a
293	MSG 780	Bos	Patella	complete	n/a	n/a	fused	n/a	n/a	no	n/a	n/a	n/a
294	MSG 792-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	adult	no	n/a	Spiral	n/a
295	MSG 792-2	Sus	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	n/a
296	MSG 793	Bos	Rib	fragment	Middle	n/a	n/a	n/a	adult	no	n/a	1x irregular per. 1x spiral	1x cut mark
297	MSG 794	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
298	MSG 794-1	Sus	Vertebra	fragment	half	n/a	unfused	n/a	n/a	no	n/a	caudal-cranial	n/a
299	MSG 794-2	Gallus	Skull	fragment	cranium	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
300	MSG 794-3	Gallus	Femur	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
301	MSG 794-4	Gallus	Ulna	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
302	MSG 825	MM	tibia	fragment	Shaft	left	n/a	n/a	n/a	no	n/a	spiral	Smooth perpendicular
303	MSG 859	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
304	MSG 922	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	n/a	2x Spiral	1x Cut mark
305	MSG 923	Sus	Humerus	fragment	Shaft	left	n/a	n/a	n/a	no	n/a	2x Spiral 1x longitudinal	Transverse parallel cut marks
306	MSG 923-2	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	
307	MSG 924-1	Gallus	Sternum	fragment	n/a	n/a	n/a	n/a	n/a	no	Spiral	Longitudinal	n/a
308	MSG 924-10	MM	Tibia	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	spiral	Longitudinal
309	MSG 924-11	Gallus	Scapula	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
310	MSG 924-2	Gallus	Pelvis	fragment	n/a	left	n/a	n/a	n/a	no	irregular perp	n/a	n/a
311	MSG 924-3	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	n/a
312	MSG 924-4	MM	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	Transverse
313	MSG 924-5	Gallus	Lumbrosacral	fragment	n/a	n/a	n/a	n/a	n/a	no	Smooth perp.	n/a	n/a
314	MSG 924-6	Gallus	Lumbrosacral	complete	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
315	MSG 924-7	Gallus	Radius	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
316	MSG 924-8	Aves	Tarso MT	fragment	shaft	n/a	n/a	n/a	n/a	no	Sawtooth	n/a	n/a
317	MSG 924-9	Gallus	Coracoid	complete	n/a	n/a	fused	n/a	n/a	no	n/a	n/a	n/a
318	MSG 925	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
319	MSG 926	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	1x smooth perp	n/a
320	MSG 927-1	Aves	Ulna	fragment	Shaft	n/a	n/a	n/a	n/a	no	Sawtooth	spiral	
321	MSG 928-1	LM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	Puncture	n/a	Longitudinal	n/a
322	MSG 928-2	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Spiral	Transverse	n/a
323	MSG 929	Sus	Phalange	complete	Distal	right	fused	n/a	n/a	no	n/a	n/a	n/a
324	MSG 930	Gallus	Carpometacarpus	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
325	MSG 930-1	Sus	Phalange	fragment	distal	left	unfused	<1 yr	n/a	no	n/a	n/a	n/a
326	MSG 931	Ovis	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	1x Irregular perp 1xS	n/a	n/a
327	MSG 932	Bos	Rib	fragment	distal	n/a	n/a	n/a	n/a	no	n/a	Smooth perp	1x cut mark
328	MSG 933	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
329	MSG 934-1	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	1x spiral	n/a	n/a
330	MSG 934-2	LM	LB	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	Spiral	Spiral

	A	B	C	D	E	F	G	H	I	J	K	L	M
331	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	Animal Marks	Natural Frac Pattern	Butchered Fracture Pattern	Butchery patterns
332	MSG 935-1	Indet	LB	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Spiral	n/a
333	MSG 935-2	MM	Vertabra	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	n/a
334	MSG 936	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
335	MSG 937-1	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Transverse irregular	1x Transverse irregular, 1x Spi	n/a
336	MSG 937-2	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Transverse irregular	1x Smooth Transverse, 1x irreg	Smooth Transverse
337	MSG 938	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Longitudinal	n/a	n/a
338	MSG 939	Ratus	Mandible	fragment	n/a	right	n/a	n/a	n/a	no	Longitudinal	n/a	n/a
339	MSG 940	Gallus	Humerus	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
340	MSG 941-1	Gallus	Ulna?	fragment	Shaft	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
341	MSG 941-2	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
342	MSG 942-1	MM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	no	Transverse irregular	1x Transverse Smooth	2x parallel cut marks, 1x parti
343	MSG 942-2	Gallus	Metatarsus	fragment	proximal	n/a	fused	n/a	n/a	no	Spiral	n/a	n/a
344	MSG 943-1	Indet	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	Puncture	n/a	1xlongitudinal 1x smooth perp	1x Cut mark
345	MSG 943-2	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	irregular perp	n/a	n/a
346	MSG 944-1	Gallus	Metatarsus	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
347	MSG 944-10	Gallus	Femur	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
348	MSG 944-11	Gallus	Metatarsus	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
349	MSG 944-12	Gallus	Scapula	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
350	MSG 944-2	Gallus	Humerus	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
351	MSG 944-3	Gallus	Coracoid	complete	n/a	n/a	fused	n/a	n/a	no	n/a	n/a	n/a
352	MSG 944-4	Gallus	Ulna	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
353	MSG 944-5	Ovis	Vertebra	fragment	Centrum	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	1x transerve
354	MSG 944-6	Gallus	Tibia	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
355	MSG 944-7	Gallus	Tibia	complete	n/a	left	fused	n/a	n/a	no	n/a	n/a	n/a
356	MSG 944-8	Gallus	Humerus	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
357	MSG 944-9	Gallus	Pelvis	fragment	n/a	n/a	n/a	n/a	n/a	no	Smooth perp.	n/a	n/a
358	MSG 945-1	Sus?	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal	n/a
359	MSG 945-2	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
360	MSG 945-3	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
361	MSG 945-4	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
362	MSG 946	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
363	MSG 947	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
364	MSG 948	Ratus	Mandible	fragment	n/a	left	n/a	n/a	n/a	no	Longitudinal	n/a	n/a
365	MSG 949	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
366	MSG 950	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
367	MSG 951	Ovis	Tibia	fragment	Distal	n/a	unfused	<1.5-2 yrs	n/a	no	n/a	smooth transverse	n/a
368	MSG 952	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Transverse irregular	n/a	n/a
369	MSG 953	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
370	MSG 954	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
371	MSG 954-1	Sus	Ephipysis	fragment	proximal	right	n/a	n/a	n/a	no	n/a	n/a	n/a
372	MSG 955	Gallus	Radius	complete	n/a	right	fused	n/a	n/a	no	n/a	n/a	n/a
373	MSG 956-1	Sus	Navicular	complete	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
374	MSG 956-2	MM	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	n/a
375	MSG 957-1	Ratus	Femur	complete	n/a	left	unfused	n/a	n/a	no	n/a	n/a	n/a
376	MSG 957-2	Ratus	Femur	complete	n/a	right	unfused	n/a	n/a	no	n/a	n/a	n/a
377	MSG 958	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	2x parallel cut marks
378	MSG 959-1	Ovis	Scapula	fragment	blade	n/a	n/a	n/a	n/a	no	n/a	smooth transverse	2x parallel cut marks
379	MSG 959-2	Ovis	Scapula	fragment	blade	right	n/a	n/a	n/a	no	n/a	smooth transverse	n/a
380	MSG 960	MM	Indet	fragment	flat bone	n/a	n/a	n/a	n/a	no	n/a	smooth perp	1x cut mark
381	MSG 961	Bos	Humerus	fragment	Shaft	right	n/a	n/a	n/a	Gnawing	n/a	Spiral	multiple sets of parallel transv
382	MSG 962-1	Ovis	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Irregular transverse	smooth transverse	n/a
383	MSG 962-2	Ovis	Rib	fragment	Middle	n/a	n/a	n/a	n/a	no	Irregular transverse	n/a	n/a
384	MSG 962-3	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	Longitudinal smooth	n/a
385	MSG 962-4	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	caudal-cranial	n/a

	A	B	C	D	E	F	G	H	I	J	K	L	M
386	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	Animal Marks	Natural Frac Pattern	Butchered Fracture Pattern	Butchery patterns
387	MSG 963	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
388	MSG 964	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Spiral	n/a	n/a
389	MSG 965-1	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Longitudinal	n/a	n/a
390	MSG 965-2	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	Longitudinal	n/a	n/a
391	MSG 966-1	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
392	MSG 967-1	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	smooth transverse	n/a
393	MSG 967-2	Aves	Ulna	fragment	shaft	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
394	MSG 967-3	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a
395	MSG 967-4	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	no	n/a	n/a	n/a

	N	O	P	Q	R
1	Bone Number	cutmk mm	Length MM	Weight G	Additional Comments
2	MSG 1190				Possible Sediment
3	MSG 1191				Possibly Tar
4	MSG 1192				Sediment/fabric?
5	MSG 1193				Hardened Sediment
6	MSG 1305		1.1	40	
7	MSG 1306		44	5	
8	MSG 1314		22	0.6	
9	MSG 154-2		151	17.3	
10	MSG 269		12.29	0.4	
11	MSG 270-1	27.47		34.3	Thoracic
12	MSG 270-2	15.65		118.2	
13	MSG 270-3			122.1	
14	MSG 271			20.8	
15	MSG 272			21	
16	MSG 273-1		168	17.5	
17	MSG 273-2	9.66	81	4	
18	MSG 274-1		160	19.2	
19	MSG 274-2		160.95	18.2	
20	MSG 275-1		7.36	0.3	
21	MSG 275-2		17.33	0.6	vert plate
22	MSG 276-1		71	7.9	MT III
23	MSG 276-2		51.84	8	
24	MSG 276-3		137.12	22.6	I have no idea what this one is
25	MSG 276-4	10.72	89.13	19.2	
26	MSG 276-5		82.9	8.8	
27	MSG 277-1		143	132	Butchered mid shaft
28	MSG 277-2		118	27.7	
29	MSG 277-3		4.15	4.3	is dainty sheep
30	MSG 278-1		90	5.4	Fusion lines not visible
31	MSG 278-2		74.37	9.7	MT III
32	MSG 279	10.41	41.77	11.2	front to back and tranverse
33	MSG 280		98	20.1	
34	MSG 281		94.12	102.1	Massive compared to 270
35	MSG 282		72	10.2	eroded and smoothed
36	MSG 283-1		88.65	26.6	Ovicaprid? Large robust sheep
37	MSG 283-2		121.1	5.8	fine strations cutmarks or tooth?
38	MSG 283-3	5.73	135	18.8	
39	MSG 284	24.74	59	10	break looks recent
40	MSG 285		46	1.4	MCII? Juvenile bone
41	MSG 286		42	7.9	Cervical
42	MSG 288		27	4	
43	MSG 289-1		54.6	3.7	?Bos
44	MSG 289-2		61	4.3	?Bos
45	MSG 289-3		67.3	5.2	?Bos
46	MSG 289-4		82.62	2.5	Juvemile bone
47	MSG 289-5		70.59	5.1	?Bos
48	MSG 290		74.15	22	?tibia
49	MSG 290-1		28.7	2.6	front to back
50	MSG 290-2		61	44.7	tooth pits
51	MSG 292		48.38	10.3	
52	MSG 293		69.76	12.1	
53	MSG 294		60	6.8	pelvis/scapula?
54	MSG 295	17.9	48	8.4	Cervical
55	MSG 296-1		69	7	MT IV

	N	O	P	Q	R
56	Bone Number	cutmk mm	Length MM	Weight G	Additional Comments
57	MSG 296-2		30.25	1.3	skull frag?
58	MSG 296-3		21.5	1.1	
59	MSG 297-?		24.93	0.6	
60	MSG 297-?		15.88	0.7	
61	MSG 297-?			1.4	#NAME?
62	MSG 297-1		19.06	0.6	
63	MSG 297-2		34.33	0.9	
64	MSG 297-3		27.19	2.4	
65	MSG 298-1		83	53.8	ATLAS cut in half
66	MSG 298-2		97	27.6	Thoracic
67	MSG 300-1	11.5	87	55	
68	MSG 300-2		87.35	10.1	?Bos thoracic spine proc.
69	MSG 301		169	25	
70	MSG 302		15.88	2.5	
71	MSG 303		95	26.7	Fusion line not visible
72	MSG 304-?		23.6	0.2	conjoins 304-?
73	MSG 304-?			44.14	conjoins above
74	MSG 304-1		40	11.2	cervical
75	MSG 304-2		114	20.4	Thoracic
76	MSG 305-1		49	9.1	hacked
77	MSG 305-10		58.1	7.3	very young pig - same as Ulna above
78	MSG 305-11		48.44	9.2	split down mid-line
79	MSG 305-12	7.69	87	23	Mid shaft butchered
80	MSG 305-2	14.56	116.16	18.2	
81	MSG 305-3		129.9	21.8	
82	MSG 305-4		79.94	5.4	
83	MSG 305-5		86.07	3.3	
84	MSG 305-6		45	9.4	
85	MSG 305-7		142.01	31.2	transverse across the rib
86	MSG 305-8		64	8.2	MC IV
87	MSG 305-9	17.59	174.99	29.7	upper mid shat cut mark
88	MSG 306		98	16.1	Mid shaft butchered bone surface degradin
89	MSG 307	1.65	143.1	27.8	fusion line still visible
90	MSG 308		163	43.3	
91	MSG 309	6.42	100	15.4	t
92	MSG 310-1		2.5	50	Large for Gallus -
93	MSG 310-2		76	36.7	Fusion lines visible
94	MSG 310-3		18.41	2.9	2 mid linde cuts plus one across
95	MSG 310-4		1.1	84	Large for Gallus -
96	MSG 310-5	15.16	88	48.5	1st sacral vert three planes of butchery
97	MSG 311-1		1.7	62	Gallus but large
98	MSG 311-2		2.6	70	Comparable with modern Gallus
99	MSG 311-4		0.6	68	Conjoins with MSG 311-6
100	MSG 311-5		1	72	Large for Gallus - but looks more Gallus tha
101	MSG 311-6		0.3	40	Conjoins with MSG 311-4 broken same as
102	MSG 312-1	9.8	110	4.9	
103	MSG 312-2		19.29	1	mid-line butchery
104	MSG 313		37.66	3	possible skull frag?
105	MSG 314		71.89	0.5	
106	MSG 315		50	7.6	Lumbar
107	MSG 316-1	7.02	139	19.7	cut across rib
108	MSG 316-2	7.73	116	22.7	cut across rib
109	MSG 316-3		63.44	5	
110	MSG 316-4	16.32	64.95	12.8	four different directions

	N	O	P	Q	R
111	Bone Number	cutmk mm	Length MM	Weight G	Additional Comments
112	MSG 317-1		85	2.6	Possible Carnivore rib?
113	MSG 317-2		129	15.9	possible Sus?
114	MSG 318-1	12.12	112	13.7	
115	MSG 318-2		29.03	0.3	possible Avies frag
116	MSG 319		80	20.3	Big Bos
117	MSG 320		52.19	5.5	longitudinally split
118	MSG 323		1.1	82	also listed in 325-1 No is 232
119	MSG 324	7.77	112	65.9	BIG Bos Fusion line not visible
120	MSG 325		62	90.9	Fusion lines not visible
121	MSG 326		7.43	0.1	
122	MSG 326		9.2	0.4	
123	MSG 326		9.17	0.2	
124	MSG 327		200.31	175.8	BIG Bos
125	MSG 328-1		118.55	30.3	
126	MSG 328-10		64.42	2.3	ends bitten off
127	MSG 328-11		50	5.2	Skull? Frag Sus size
128	MSG 328-12		0.4	51	
129	MSG 328-13		24.7	0.1	NOT numbered
130	MSG 328-14		51.77	1.7	
131	MSG 328-2	15.88	1.1.79	57.6	
132	MSG 328-3		78	32	midline
133	MSG 328-4		99	14	Lumbar
134	MSG 328-5		2.4	90	
135	MSG 328-6		1.7	63	
136	MSG 328-7		1.4	19	Sus 2 Rear?
137	MSG 328-8		3.4	96	
138	MSG 328-9		4.6	86	Is Gallus but looks large
139	MSG 329		155	33	
140	MSG 330-1		46.77	6.4	
141	MSG 330-2		153	11.2	
142	MSG 331-1	6.25	105.4	30.1	closest to goat yet.
143	MSG 331-10		1.7	57	small for Gallus - okay for Mallard. Large fo
144	MSG 331-11		44.93	0.7	?skull frag
145	MSG 331-12		51.24	1.6	ok for Gallus size
146	MSG 331-13		58	3.1	Thoracic
147	MSG 331-14		21.37	1	centrum flattened like small carnivores
148	MSG 331-15		15.22	8.7	round similar to carnivores but no close ma
149	MSG 331-16		24.48	0.3	
150	MSG 331-17		20.41	0.5	conjoins 331-9
151	MSG 331-18		36.71	2.9	adult size blk sticky bitumen deposit
152	MSG 331-2		63	10.5	off midline cut and removal of spin
153	MSG 331-3	5.23	84	4.8	
154	MSG 331-4		2.6	96	closest match for size and shape is Mallard
155	MSG 331-5		1.9	64	
156	MSG 331-6		99	3.6	
157	MSG 331-7		1.6	65	looks small for Gallus
158	MSG 331-7		2.8	76	ok for Gallus
159	MSG 331-8		2.2	73	ok for Gallus
160	MSG 331-8		62.41	1.3	smaller than 328-5
161	MSG 331-9		51	11.7	midline split - same size as 331-2
162	MSG 332		107.72	24.6	No good match in collections
163	MSG 333		18.52	6.8	No good match in collections
164	MSG 334		1.9	25	Sus 12?
165	MSG 335-1		20.56	0.7	

	N	O	P	Q	R
166	Bone Number	cutmk mm	Length MM	Weight G	Additional Comments
167	MSG 335-2		35	7.3	Good match with Sus MSG 331
168	MSG 335-3		14.55	0.6	plus 8 indet frags .8g
169	MSG 335-4		0.3	21	Good match with black rat
170	MSG 336-1		93	1.9	Good match for gaullus if small
171	MSG 336-2		33.25	1.9	
172	MSG 336-3		93.96		Lks like Equus lateral metapodial made of h
173	MSG 337		125	23.5	
174	MSG 338		92.98	3.2	
175	MSG 339	34.63	59.15	7.8	flat bone
176	MSG 340		27.8	117	
177	MSG 341		157	17.5	Cusp outline visible
178	MSG 342		57.61	3.8	bone broken with fresh break
179	MSG 343		82	20	Juvemile bone shaft like Bos distal end like
180	MSG 344-1		92	5.4	
181	MSG 344-2		44.09	0.4	good match for Mallard
182	MSG 344-3		76.33	8	
183	MSG 344-4		17.02	0.3	
184	MSG 345		142	13.4	Ovis size
185	MSG 346		55	9.8	Small sized pig
186	MSG 347-1		83.61	4.4	
187	MSG 347-2		37.74	3.5	conjoins 347-3
188	MSG 347-3		70	50.5	way off midline butchery conjoins 347-2, bla
189	MSG 348-1	4.58	117	4.2	plus one rib frag 0.1g. Size of small Sus wit
190	MSG 348-2		111	4.5	
191	MSG 349		74	38	blade marks?
192	MSG 350-1		54	7.5	Thoracic, off midline split of spineous proce
193	MSG 350-2		112	13.8	Could be Bos or Sus
194	MSG 350-3		135.68	40.1	off midline cut
195	MSG 350-4		47.65	6.3	
196	MSG 351		116.37	42.1	
197	MSG 352	10.11	110	55.6	Fusion line not visible
198	MSG 353		115	77	Fusion lines not visible
199	MSG 354-1	6.98	145	27	
200	MSG 354-2	9.18	149.35	7.3	
201	MSG 355		66.16	30.9	
202	MSG 356		66.06	3.2	Small enough for the young Sus
203	MSG 357		112	22.3	Bos/Equus size
204	MSG 358		45	10.5	Proximal epiphysis, complete
205	MSG 359		20.5	0.8	vert plate frag Boss/Sus size
206	MSG 360		123.11	79.3	
207	MSG 361-1	7.91	146	29.8	
208	MSG 361-2		72.48	8.1	
209	MSG 361-3	24.93	46.5	8.7	
210	MSG 361-4		23.27	0.8	
211	MSG 361-5		41.55	8.1	Large adult pig
212	MSG 361-6		49.67	1.8	Lumbar
213	MSG 361-7		27.29	2.6	1st phal Conjoins with 361-8
214	MSG 361-8		7.47	0.9	1 st Phal Conjoins with 361-7
215	MSG 362		7.1	132	pathology at distal end - over growth of bon
216	MSG 363		2.35	3.3	better match for wild than domestic thicknes
217	MSG 364	40.18	33.71	50.3	multiple fine striations - cutmarks
218	MSG 365		190	26.4	Bos or Sus
219	MSG 366		79.92	2.4	.5g of 3 indet frags Skull/nasal bone?
220	MSG 367-1		122	23.2	Bos size and shape

	N	O	P	Q	R
221	Bone Number	cutmk mm	Length MM	Weight G	Additional Comments
222	MSG 367-2		16.64	11.6	Cut clean across
223	MSG 368-1		73	5.9	Lumbar conjoins 368-4
224	MSG 368-2		55	20.4	Lumbar
225	MSG 368-2		57	21.2	Bos?
226	MSG 368-3		112	8.6	Dorsal frag, Conjoins with MSG 368-1
227	MSG 369		66.7	1.5	
228	MSG 370-1		2.7	85	
229	MSG 370-10		80.94	20.8	off midline split
230	MSG 370-2		95.56	25.3	Longitudinal along spine process
231	MSG 370-3		32.26	1.5	NOT good match for Ovis =?
232	MSG 370-4			102	
233	MSG 370-5		2.8	95	
234	MSG 370-6		47.27	0.8	
235	MSG 370-7	8.5	73	9.5	MC III cut mark longitudinal to bone
236	MSG 370-8		85.52	17.5	Large Ovis
237	MSG 370-9		24	2.9	PLUS 1.0 of 5 indet frags
238	MSG 371		54	10.6	Lumbar transverse process chopped off
239	MSG 372			3	9 frags
240	MSG 373		11.48	3.2	cut across epiph
241	MSG 374		115	57.8	Axis cut off midline
242	MSG 375-1		5.4	90	Good match for pair with 375-2
243	MSG 375-2		5.4	90	Good match for pair with 375-1
244	MSG 376		15.75	8.9	
245	MSG 377-1		43.5	6.7	bone has juvenile feel to surface
246	MSG 377-2		54	10.6	midline split to thoracic
247	MSG 378-1		75	12.8	Lumbar
248	MSG 378-2		43.94	2.2	off mid centre
249	MSG 379		67.31	11.5	bos size - pelvis?
250	MSG 380		72.77	17.3	
251	MSG 381		41.38	8.3	Large Sus in shape/size Bos? Thoracic
252	MSG 382		52.25	0	NOT weight in concretion
253	MSG 383-1		74	8.9	MC IV
254	MSG 383-2		149	5.5	eroded bone surface texture
255	MSG 384-1	6	82	16	conjoins with MSG 384-2
256	MSG 384-2		22	9.2	Conjoins with MSG 384-1
257	MSG 384-3		163	24.5	
258	MSG 385-1	5.95	116	24.9	Could be Sus
259	MSG 385-2		51.12	5.4	Plevis OR scapula - Sus?
260	MSG 385-3		210	30.2	Sus? Size
261	MSG 385-4		141.38	41.6	
262	MSG 385-5		33.31	1.4	
263	MSG 385-6		56.29	7.9	
264	MSG 385-7		3.3	95	small Gallus
265	MSG 385-8		160	96.4	
266	MSG 385-9	10.55	81.34	14.5	
267	MSG 386-1		93	38.1	Ferrous concretion
268	MSG 386-10		64	9.5	MT III
269	MSG 386-11		90.15	2.3	no idea what this is check ID
270	MSG 386-12		81.54	0	Ferous concretion
271	MSG 386-13		100	73.4	Off mid-line cut, Lumbar
272	MSG 386-14		81	46.6	Fusion line visible
273	MSG 386-15		17.57	2.5	x6 indet frags
274	MSG 386-2		34	3.2	off midline cut
275	MSG 386-3		62.18	5	off midline cut

	N	O	P	Q	R
276	Bone Number	cutmk mm	Length MM	Weight G	Additional Comments
277	MSG 386-4		35	4.4	off midline cut
278	MSG 386-5		122.38	3.8	part of the small young pig
279	MSG 386-6		0.7	64	ok size for Gallus
280	MSG 386-7		43029	6.9	off midline cut Ovis small pig size
281	MSG 386-8		85	11.4	MT III
282	MSG 386-9		2	61	small for Gallus but ok match
283	MSG 696-1		83.43	44.5	
284	MSG 696-2		64.46	21.6	
285	MSG 696-3		63.22	31.3	
286	MSG 701-1				
287	MSG 701-2				
288	MSG 701-3	7.96	120	31.4	
289	MSG 777-1		17.86	1.9	Conjoins with 777-2
290	MSG 777-2		26.91	5.1	Conjoins with 777-1
291	MSG 778		24.58	2.3	1x indet frag 0.5g
292	MSG 779		15.66	2.1	
293	MSG 780		53.91	27.6	
294	MSG 792-1		118	13.4	
295	MSG 792-2		50	6.8	Lumbar
296	MSG 793	11.44	173	37.4	
297	MSG 794		34.04	0.2	
298	MSG 794-1		51	5.5	
299	MSG 794-2		39.77	3.2	small Gallus
300	MSG 794-3		87	4.5	large for Gallus
301	MSG 794-4		2.1	78	
302	MSG 825		85.79	14.7	Ovis size
303	MSG 859		16.91	0.6	
304	MSG 922	4.07	153	44.9	
305	MSG 923	5.87	73	47	
306	MSG 923-2		16.13	0.12	2x indet frags 0.2g
307	MSG 924-1		5.7	104	half a bird
308	MSG 924-10		47.39	2.6	Ovis size
309	MSG 924-11		1	78	half a bird
310	MSG 924-2		3.9	95	half a bird
311	MSG 924-3		50.37	0.5	half a bird
312	MSG 924-4		38.5	2.5	
313	MSG 924-5		2	45	half a bird
314	MSG 924-6		4.5	65	half a bird
315	MSG 924-7		1.8	58	large for Gallus
316	MSG 924-8		50.61	1.1	half a bird
317	MSG 924-9		1.8	58	large for Gallus
318	MSG 925		13.18	0.2	
319	MSG 926		18.19	1.3	2x indet frags 0.2g
320	MSG 927-1		41.66	1	1x indet frag 0g
321	MSG 928-1		55	5.3	
322	MSG 928-2		57.69	5.7	Bos size
323	MSG 929		2.4	28	
324	MSG 930		1.1	43	11x ribs, 1x scaupla, 17x indet frags, 1x cla
325	MSG 930-1		13.24	0.7	2nd phalange, 5x indent Mammal frags 4.3g
326	MSG 931		142	11.3	
327	MSG 932	10.43	82.45	14.2	Large Bos
328	MSG 933		11.12	0.1	
329	MSG 934-1		25	0.5	
330	MSG 934-2		34.48	4.1	

	N	O	P	Q	R
331	Bone Number	cutmk mm	Length MM	Weight G	Additional Comments
332	MSG 935-1		17.85	0.2	
333	MSG 935-2		18.67	0.5	
334	MSG 936		7.98	0	too light to weigh
335	MSG 937-1		39.67	1.2	small pig or sheep
336	MSG 937-2		43.98	1.4	small pig or sheep
337	MSG 938		19.24	0.1	bird?
338	MSG 939		0.1	13	Black rat
339	MSG 940		2.7	69	
340	MSG 941-1		34.5	0.4	
341	MSG 941-2		25.86	0.5	
342	MSG 942-1	6.7	32.97	0.8	
343	MSG 942-2		22.82	0.8	
344	MSG 943-1		130	16.8	
345	MSG 943-2		60.02	6.9	possibly skull?
346	MSG 944-1		4.5	87	Evidence of Spur
347	MSG 944-10		4.9	87	
348	MSG 944-11		4.4	86	Evidence of Spur
349	MSG 944-12		0.9	71	
350	MSG 944-2		4.2	76	
351	MSG 944-3		1.6	56	
352	MSG 944-4		2.2	77	
353	MSG 944-5		30.44	3.7	
354	MSG 944-6		6.2	124	
355	MSG 944-7		6.2	124	
356	MSG 944-8		4.2	77	
357	MSG 944-9		3.7	94	
358	MSG 945-1		47	8.3	3x indet frags 0.2g
359	MSG 945-2		30.9	0.4	
360	MSG 945-3		26.62	0.3	
361	MSG 945-4		16.13	0.4	
362	MSG 946		11.93	0.1	1x frag wood? 0.2g
363	MSG 947		16.92	0.2	
364	MSG 948		0.1	15	
365	MSG 949		13.92	0.4	
366	MSG 950		8.13	0.1	
367	MSG 951		72.63	4	
368	MSG 952		33.84	0.1	3x rat rib frags 0.1g
369	MSG 953		11.46	0.2	1x indet frag 0.1g
370	MSG 954		15.78	0.5	5x indet frags 0.6g
371	MSG 954-1		22.49	1.6	
372	MSG 955		0.8	70	
373	MSG 956-1		26.22	2.9	
374	MSG 956-2		20	1.6	
375	MSG 957-1		0.4	34	Black rat
376	MSG 957-2		0.2	24	Black rat, 1x indet frag 0.3g
377	MSG 958	7.03	22.99	0.3	
378	MSG 959-1	10.15	39.03	1	conjoins with 959-2
379	MSG 959-2		71.45	6	conjoins with 959-1
380	MSG 960	10.19	25.02	2.3	
381	MSG 961		90	44.4	MISSING
382	MSG 962-1		55.9	1	conjoins with 962-2
383	MSG 962-2		27.35	0.2	conjoins with 962-1
384	MSG 962-3		29.89	0.5	
385	MSG 962-4		22.02	1.5	

	N	O	P	Q	R
386	Bone Number	cutmk mm	Length MM	Weight G	Additional Comments
387	MSG 963		10.33	0	too light to weigh
388	MSG 964		30.68	2.2	
389	MSG 965-1		25.64	1.2	
390	MSG 965-2		25.55	0.5	
391	MSG 966-1		21.16	1	1x indet frag 9.78mm, too light to weigh
392	MSG 967-1		28.71	1.2	
393	MSG 967-2		43.63	0.6	
394	MSG 967-3		20.61	0.5	
395	MSG 967-4		16.25	0.5	

	A	B	C	D	E	F	G	H	I	J
1	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	
2	MSG 276-5	?Bos	skull	fragment		n/a	n/a	n/a	n/a	
3	MSG 356	?Sus	Rib	fragment	Proximal	n/a	unfused	n/a	young	
4	MSG 344-2	Aves	Clavicula	fragment	Proximal	n/a	n/a	n/a	n/a	
5	MSG 331-10	Aves	Femur	complete	n/a	right	fused	n/a	adult	
6	MSG 794	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
7	MSG 924-3	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
8	MSG 945-2	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
9	MSG 945-3	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
10	MSG 952	Aves	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
11	MSG 310-1	Aves	Lumbrosacral	fragment	n/a	n/a	n/a	n/a	n/a	
12	MSG 310-4	Aves	Scapula	complete	n/a	right	fused	n/a	n/a	
13	MSG 924-8	Aves	Tarso MT	fragment	shaft	n/a	n/a	n/a	n/a	
14	MSG 331-4	Aves	Tibia	complete	n/a	right	fused	n/a	adult	
15	MSG 927-1	Aves	Ulna	fragment	Shaft	n/a	n/a	n/a	n/a	
16	MSG 967-2	Aves	Ulna	fragment	shaft	n/a	n/a	n/a	n/a	
17	MSG 283-2	Avies	Tibia	fragment	Shaft	right	fused	n/a	n/a	
18	MSG 290-2	Bos	Astragalus	complete	n/a	left	fused	n/a	n/a	
19	MSG 376	Bos	Carpal	fragment	n/a	n/a	fused	n/a	n/a	
20	MSG 351	Bos	Femur	fragment	Shaft	n/a	n/a	n/a	n/a	
21	MSG 385-8	Bos	Femur	fragment	Distal	right	fused	3.5-4 yrs	adult	
22	MSG 278-1	Bos	Humerus	fragment	Distal	left	fused	12 mths	18 mths	
23	MSG 325	Bos	Humerus	fragment	Distal	left	fused	1.5 yrs	n/a	
24	MSG 353	Bos	Humerus	fragment	Distal	right	fused	1.5 yrs	adult	
25	MSG 386-14	Bos	Humerus	fragment	Proximal	right	fused	n/a	3.5-4 yrs	
26	MSG 696-1	Bos	Humerus	fragment	Shaft	right	n/a	n/a	n/a	
27	MSG 696-3	Bos	Humerus	fragment	Shaft	left	n/a	n/a	n/a	
28	MSG 961	Bos	Humerus	fragment	Shaft	right	n/a	n/a	n/a	
29	MSG 328-2	Bos	Mandible	fragment	ascending ramus	right	n/a	n/a	adult	
30	MSG 270-3	Bos	Metacarpal	complete	All	right	fused	2 yrs	2.5 yrs	
31	MSG 281	Bos	Metacarpal	fragment	Proximal	left	fused	12 mths	18 mths	
32	MSG 327	Bos	Metatarsal	complete	complete	right	fused	2.2-3 yrs	n/a	
33	MSG 780	Bos	Patella	complete	n/a	n/a	fused	n/a	n/a	
34	MSG 324	Bos	Radius	fragment	Proximal	right	fused	12-18 mths	n/a	
35	MSG 276-4	Bos	Rib	fragment	Distal	n/a	n/a	n/a	n/a	
36	MSG 277-2	Bos	Rib	fragment	Proximal	n/a	unfused	young	n/a	
37	MSG 280	Bos	Rib	fragment	Proximal	n/a	fused	n/a	n/a	
38	MSG 282	Bos	Rib	fragment	Proximal	n/a	fused	mature	n/a	
39	MSG 283-3	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
40	MSG 305-2	Bos	Rib	fragment	Distal	n/a	n/a	n/a	n/a	
41	MSG 305-3	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
42	MSG 305-7	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
43	MSG 308	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
44	MSG 309	Bos	Rib	fragment	Proximal	n/a	fused	n/a	n/a	
45	MSG 316-1	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
46	MSG 316-2	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
47	MSG 319	Bos	Rib	fragment	Proximal	n/a	unfused	n/a	n/a	
48	MSG 329	Bos	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
49	MSG 337	Bos	Rib	fragment	Proximal	n/a	fused	n/a	n/a	
50	MSG 354-1	Bos	Rib	fragment	Proximal	n/a	unfused	n/a	n/a	
51	MSG 367-1	Bos	Rib	fragment	Middle	n/a	n/a	n/a	adult	
52	MSG 385-9	Bos	Rib	fragment	Middle	n/a	n/a	n/a	adult	
53	MSG 793	Bos	Rib	fragment	Middle	n/a	n/a	n/a	adult	
54	MSG 932	Bos	Rib	fragment	distal	n/a	n/a	n/a	n/a	
55	MSG 310-5	Bos	Sacrum	fragment	n/a	n/a	n/a	n/a	n/a	

	A	B	C	D	E	F	G	H	I	J
56	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	
57	MSG 350-3	Bos	Sacrum	fragment	Spineous process	n/a	fused	n/a	adult	
58	MSG 300-1	Bos	Scapula	fragment	Distal	right	fused	mature	n/a	
59	MSG 305-1	Bos	Scapula	fragment	Blade	n/a	n/a	n/a	n/a	
60	MSG 349	Bos	Scapula	fragment	Distal articular	right	fused	n/a	adult	
61	MSG 355	Bos	Scapula	fragment	Blade	n/a	n/a	n/a	adult	
62	MSG 360	Bos	Scapula	fragment	blade	left	n/a	n/a	adult	
63	MSG 364	Bos	Scapula	fragment	Blade	left	n/a	n/a	adult	
64	MSG 385-4	Bos	Scapula	fragment	blade	left	n/a	n/a	n/a	
65	MSG 305-11	Bos	Sternum	fragment		n/a	unfused	n/a	n/a	
66	MSG 277-1	Bos	Tibia	fragment	Distal	left	unfused	n/a	<2 yrs	
67	MSG 284	Bos	Tibia	fragment	Shaft	n/a	n/a	n/a	n/a	
68	MSG 292	Bos	Ulna	fragment	Shaft	left	n/a	n/a	n/a	
69	MSG 368-3	Bos	Vertabra	fragment	n/a	n/a	n/a	n/a	n/a	
70	MSG 270-1	Bos	Vertebra	fragment	spineous process	n/a	unfused			
71	MSG 279	Bos	Vertebra	fragment	centrum	n/a	unfused			
72	MSG 286	Bos	Vertebra	fragment	cervical	n/a	n/a	n/a	n/a	
73	MSG 298-1	Bos	Vertebra	fragment	n/a	n/a	fused	mature	n/a	
74	MSG 298-2	Bos	Vertebra	fragment	n/a	n/a	unfused	n/a	n/a	
75	MSG 304-2	Bos	Vertebra	fragment	spineous process	n/a	n/a	n/a	n/a	
76	MSG 328-3	Bos	Vertebra	fragment	cervical	n/a	unfused	n/a	n/a	
77	MSG 328-4	Bos	Vertebra	fragment	Lumbar	n/a	n/a	n/a	n/a	
78	MSG 347-2	Bos	Vertebra	fragment	cervical	n/a	unfused	n/a	n/a	
79	MSG 347-3	Bos	Vertebra	fragment	cervical	n/a	unfused	n/a	n/a	
80	MSG 368-1	Bos	Vertebra	fragment	Transverse proce	n/a	n/a	n/a	adult	
81	MSG 368-2	Bos	Vertebra	fragment	Centrum	n/a	fused	n/a	adult	
82	MSG 370-2	Bos	Vertebra	fragment	Spineous process	n/a	f	n/a	adult	
83	MSG 374	Bos	Vertebra	fragment	half	right	unfused	n/a	n/a	
84	MSG 378-1	Bos	Vertebra	fragment	Transverse proce	n/a	n/a	n/a	adult	
85	MSG 386-13	Bos	Vertebra	fragment	n/a	n/a	Unfused	n/a	n/a	
86	MSG 386-2	Bos	Vertebral Epiphys	fragment	n/a	n/a	n/a	n/a	n/a	
87	MSG 386-4	Bos	Vertebral Epiphys	fragment	n/a	n/a	unfused	n/a	n/a	
88	MSG 270-2	Bos	Metatarsal	complete	All	left	fused	2.25.yrs	3 yrs	
89	MSG 328-1	Bos	Pelvis	fragment	Illium	right	n/a	n/a	adult	
90	MSG 367-2	Bos?	Femur	fragment	epiphesis	n/a	n/a	n/a	n/a	
91	MSG 331-1	Caprid	Femur	fragment	proximal	left	unfused	n/a	<3-3.5 yrs	
92	MSG 331-14	Carnivore?	Vertebra	fragment	Centrum	n/a	unfused	n/a	young	
93	MSG 930	Gallus	Carpometacarpus	complete	n/a	left	fused	n/a	n/a	
94	MSG 304-?	Gallus	Clavicula	fragment	cranial/distal	n/a	n/a	n/a	n/a	
95	MSG 304-?	Gallus	Clavicula	fragment		n/a	n/a	n/a	n/a	
96	MSG 311-4	Gallus	Clavicula	fragment	n/a	n/a	n/a	n/a	n/a	
97	MSG 311-6	Gallus	Clavicula	fragment	n/a	n/a	n/a	n/a	n/a	
98	MSG 311-1	Gallus	Coracoid	complete	n/a	right	fused	n/a	n/a	
99	MSG 328-6	Gallus	Coracoid	complete	n/a	left	fused	n/a	adult	
100	MSG 924-9	Gallus	Coracoid	complete	n/a	n/a	fused	n/a	n/a	
101	MSG 944-3	Gallus	Coracoid	complete	n/a	n/a	fused	n/a	n/a	
102	MSG 311-2	Gallus	Femur	complete	n/a	right	fused	n/a	n/a	
103	MSG 328-10	Gallus	Femur	fragment	Shaft	left	n/a	n/a	n/a	
104	MSG 375-1	Gallus	Femur	complete	n/a	left	fused	n/a	n/a	
105	MSG 375-2	Gallus	Femur	complete	n/a	right	fused	n/a	n/a	
106	MSG 386-9	Gallus	Femur	complete	n/a	right	fused	n/a	n/a	
107	MSG 794-3	Gallus	Femur	complete	n/a	left	fused	n/a	n/a	
108	MSG 944-10	Gallus	Femur	complete	n/a	right	fused	n/a	n/a	
109	MSG 328-9	Gallus	Humerus	complete	n/a	right	fused	n/a	adult	
110	MSG 331-5	Gallus	Humerus	complete	n/a	left	fused	n/a	adult	

	A	B	C	D	E	F	G	H	I	J
111	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	
112	MSG 940	Gallus	Humerus	complete	n/a	left	fused	n/a	n/a	
113	MSG 944-2	Gallus	Humerus	complete	n/a	left	fused	n/a	n/a	
114	MSG 944-8	Gallus	Humerus	complete	n/a	right	fused	n/a	n/a	
115	MSG 1305	Gallus	Lumbrosacral	fragment	n/a	n/a	n/a	n/a	n/a	
116	MSG 924-5	Gallus	Lumbrosacral	fragment	n/a	n/a	n/a	n/a	n/a	
117	MSG 924-6	Gallus	Lumbrosacral	complete	n/a	n/a	n/a	n/a	n/a	
118	MSG 331-7	Gallus	Metatarsus	complete	n/a	left	fused	n/a	adult	
119	MSG 331-8	Gallus	Metatarsus	complete	n/a	left	fused	n/a	adult	
120	MSG 942-2	Gallus	Metatarsus	fragment	proximal	n/a	fused	n/a	n/a	
121	MSG 944-1	Gallus	Metatarsus	complete	n/a	left	fused	n/a	n/a	
122	MSG 944-11	Gallus	Metatarsus	complete	n/a	right	fused	n/a	n/a	
123	MSG 328-5	Gallus	Pelvis	fragment	Acetabulum	right	fused	n/a	adult	
124	MSG 331-8	Gallus	Pelvis	fragment	Acetabulum	right	fused	n/a	adult	
125	MSG 369	Gallus	Pelvis	fragment	Acetabulum	n/a	n/a	n/a	n/a	
126	MSG 370-6	Gallus	Pelvis	fragment	Acetabulum	n/a	n/a	n/a	n/a	
127	MSG 924-2	Gallus	Pelvis	fragment	n/a	left	n/a	n/a	n/a	
128	MSG 944-9	Gallus	Pelvis	fragment	n/a	n/a	n/a	n/a	n/a	
129	MSG 311-5	Gallus	Radius	complete	n/a	right	fused	n/a	n/a	
130	MSG 328-12	Gallus	Radius	fragment	prox-shaft	right	n/a	n/a	n/a	
131	MSG 924-7	Gallus	Radius	complete	n/a	left	fused	n/a	n/a	
132	MSG 955	Gallus	Radius	complete	n/a	right	fused	n/a	n/a	
133	MSG 314	Gallus	Rib	complete	n/a	n/a	n/a	n/a	n/a	
134	MSG 323	Gallus	Scapula	complete	n/a	left	fused	n/a	n/a	
135	MSG 336-1	Gallus	Scapula	complete	Distal	left	fused	n/a	adult	
136	MSG 386-6	Gallus	Scapula	fragment	Distal	right	fused	n/a	n/a	
137	MSG 924-11	Gallus	Scapula	complete	n/a	left	fused	n/a	n/a	
138	MSG 944-12	Gallus	Scapula	complete	n/a	right	fused	n/a	n/a	
139	MSG 794-2	Gallus	Skull	fragment	cranium	n/a	n/a	n/a	n/a	
140	MSG 328-14	Gallus	Sternum	fragment	n/a	n/a	n/a	n/a	n/a	
141	MSG 331-12	Gallus	Sternum	fragment	n/a	n/a	n/a	n/a	n/a	
142	MSG 924-1	Gallus	Sternum	fragment	n/a	n/a	n/a	n/a	n/a	
143	MSG 328-8	Gallus	Tibia	complete	n/a	left	fused	n/a	adult	
144	MSG 362	Gallus	Tibia	complete	n/a	right	fused	n/a	n/a	
145	MSG 370-1	Gallus	Tibia	fragment	Distal	n/a	fused	n/a	adult	
146	MSG 370-4	Gallus	Tibia	complete	n/a	right	fused	n/a	n/a	
147	MSG 385-7	Gallus	Tibia	complete	n/a	left	fused	n/a	n/a	
148	MSG 944-6	Gallus	Tibia	complete	n/a	right	fused	n/a	n/a	
149	MSG 944-7	Gallus	Tibia	complete	n/a	left	fused	n/a	n/a	
150	MSG 794-4	Gallus	Ulna	complete	n/a	left	fused	n/a	n/a	
151	MSG 944-4	Gallus	Ulna	complete	n/a	right	fused	n/a	n/a	
152	MSG 941-1	Gallus	Ulna?	fragment	Shaft	n/a	n/a	n/a	n/a	
153	MSG 331-7	Gallus	Femur	complete	n/a	right	fused	n/a	adult	
154	MSG 370-5	Galus	Tibia	fragment	Proximal	left	fused	n/a	n/a	
155	MSG 347-1	Gaullus	Sternum	fragment	Proximal	n/a	n/a	n/a	adult	
156	MSG 331-15	Indet	Femur	complete	epihpesis	n/a	unfused	n/a	young	
157	MSG 275-1	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
158	MSG 276-3	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
159	MSG 296-2	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
160	MSG 297-?	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
161	MSG 297-?	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
162	MSG 297-?	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
163	MSG 297-1	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
164	MSG 297-2	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
165	MSG 318-2	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	

	A	B	C	D	E	F	G	H	I	J
166	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	
167	MSG 326	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
168	MSG 326	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
169	MSG 326	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
170	MSG 328-11	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
171	MSG 328-13	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
172	MSG 331-11	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
173	MSG 331-16	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
174	MSG 335-3	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
175	MSG 336-3	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
176	MSG 344-4	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
177	MSG 361-4	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
178	MSG 366	Indet	Indet	fragment	indet	n/a	n/a	n/a	n/a	
179	MSG 372	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
180	MSG 385-5	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
181	MSG 385-6	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
182	MSG 386-11	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
183	MSG 386-15	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
184	MSG 778	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
185	MSG 859	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
186	MSG 923-2	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
187	MSG 925	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
188	MSG 926	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
189	MSG 933	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
190	MSG 934-1	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
191	MSG 936	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
192	MSG 938	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
193	MSG 946	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
194	MSG 947	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
195	MSG 949	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
196	MSG 950	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
197	MSG 953	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
198	MSG 954	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
199	MSG 963	Indet	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
200	MSG 305-4	Indet	LB	fragment	shaft	n/a	n/a	n/a	n/a	
201	MSG 696-2	Indet	LB	fragment	Shaft	n/a	n/a	n/a	n/a	
202	MSG 935-1	Indet	LB	fragment	n/a	n/a	n/a	n/a	n/a	
203	MSG 342	Indet	Long Bone	fragment	Shaft	n/a	n/a	n/a	n/a	
204	MSG 1314	Indet	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
205	MSG 154-2	Indet	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
206	MSG 943-1	Indet	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	
207	MSG 370-3	Indet	Skull	fragment	Occipital	n/a	n/a	n/a	n/a	
208	MSG 370-9	Indet	Skull	fragment	n/a	n/a	n/a	n/a	n/a	
209	MSG 386-1	Indet	Skull	fragment	n/a	n/a	n/a	n/a	n/a	
210	MSG 275-2	Indet	Vertebra	fragment	n/a	n/a	unfused	n/a	n/a	
211	MSG 310-3	Indet	Vertebra	fragment	Centrum	n/a	unfused	n/a	n/a	
212	MSG 312-2	Indet	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	
213	MSG 331-13	Indet	Vertebra	fragment	Spineous process	n/a	unfused	n/a	young	
214	MSG 335-1	Indet	Vertebra	fragment	plate	n/a	unfused	n/a	young	
215	MSG 359	Indet	Vertebra	fragment	plate	n/a	unfused	n/a	n/a	
216	MSG 386-7	Indet	Vertebra	fragment	half	n/a	unfused	n/a	n/a	
217	MSG 294	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
218	MSG 300-2	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
219	MSG 313	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
220	MSG 339	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	

	A	B	C	D	E	F	G	H	I	J
221	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	
222	MSG 379	LM	Indet	fragment	flat bone	n/a	n/a	n/a	n/a	
223	MSG 382	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
224	MSG 385-2	LM	Indet	fragment	flat bone	n/a	fused	n/a	n/a	
225	MSG 928-2	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
226	MSG 943-2	LM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
227	MSG 290	LM	LB	fragment	Shaft	n/a	n/a	n/a	n/a	
228	MSG 934-2	LM	LB	fragment	Shaft	n/a	n/a	n/a	n/a	
229	MSG 283-1	LM	Pelvis	fragment	pubis	left	fused	n/a	n/a	
230	MSG 273-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
231	MSG 274-1	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	
232	MSG 274-2	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
233	MSG 289-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
234	MSG 289-2	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
235	MSG 289-3	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
236	MSG 289-5	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
237	MSG 301	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
238	MSG 317-2	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	
239	MSG 318-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
240	MSG 330-2	LM	Rib	fragment	Distal	n/a	unfused	n/a	n/a	
241	MSG 341	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
242	MSG 350-2	LM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	
243	MSG 350-4	LM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	
244	MSG 357	LM	Rib	fragment	Middle	n/a	n/a	n/a	adult	
245	MSG 361-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	adult	
246	MSG 365	LM	Rib	fragment	Middle	n/a	n/a	n/a	adult	
247	MSG 384-3	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
248	MSG 385-1	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	
249	MSG 385-3	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	
250	MSG 792-1	LM	Rib	fragment	Middle	n/a	n/a	n/a	adult	
251	MSG 922	LM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
252	MSG 928-1	LM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	
253	MSG 969	LM	Rib	fragment	Proximal	n/a	fused	n/a	n/a	
254	MSG 316-4	LM	Scapula	fragment	Blade	n/a	n/a	n/a	n/a	
255	MSG 332	LM	Scapula	fragment	blade	n/a	n/a	n/a	n/a	
256	MSG 368-2	LM	Sternum	fragment	n/a	n/a	n/a	n/a	n/a	
257	MSG 343	LM	Tibia	fragment	Distal	left	unfused	n/a	n/a	
258	MSG 297-3	LM	Vertebra	fragment	centrum	n/a	unfused	n/a	n/a	
259	MSG 381	LM	Vertrbra	fragment	Spineous process	n/a	fused	n/a	n/a	
260	MSG 941-2	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
261	MSG 945-4	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
262	MSG 958	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
263	MSG 960	MM	Indet	fragment	flat bone	n/a	n/a	n/a	n/a	
264	MSG 962-3	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
265	MSG 962-4	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
266	MSG 964	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
267	MSG 965-1	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
268	MSG 965-2	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
269	MSG 966-1	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
270	MSG 967-1	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
271	MSG 967-3	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
272	MSG 967-4	MM	Indet	fragment	n/a	n/a	n/a	n/a	n/a	
273	MSG 377-1	MM	LB	fragment	Shaft	n/a	n/a	n/a	n/a	
274	MSG 333	MM	Long Bone	fragment	epihpesis	n/a	unfused	n/a	n/a	
275	MSG 968-2	MM	Long Bone	fragment	Shaft	n/a	n/a	n/a	n/a	

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276	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	
277	MSG 273-2	MM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	
278	MSG 305-5	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
279	MSG 317-1	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
280	MSG 331-3	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
281	MSG 331-6	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
282	MSG 338	MM	Rib	fragment	Distal	n/a	unfused	n/a	young	
283	MSG 345	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
284	MSG 348-1	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
285	MSG 348-2	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
286	MSG 354-2	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
287	MSG 383-2	MM	Rib	fragment	Distal	n/a	n/a	n/a	n/a	
288	MSG 937-1	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
289	MSG 937-2	MM	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
290	MSG 942-1	MM	Rib	fragment	Proximal	n/a	n/a	n/a	n/a	
291	MSG 968-3	MM	Rib	fragment	Distal	n/a	fused	n/a	n/a	
292	MSG 361-2	MM	Scapula	fragment	blade	n/a	n/a	n/a	n/a	
293	MSG 959-1	MM	Scapula	fragment	blade	n/a	n/a	n/a	n/a	
294	MSG 825	MM	tibia	fragment	Shaft	left	n/a	n/a	n/a	
295	MSG 924-10	MM	Tibia	fragment	Shaft	n/a	n/a	n/a	n/a	
296	MSG 935-2	MM	Vertabra	fragment	n/a	n/a	n/a	n/a	n/a	
297	MSG 378-2	MM	Vertebra	fragment	Spineous process	n/a	n/a	n/a	n/a	
298	MSG 777-1	MM	Vertebra	fragment	Epiphysis	n/a	unfused	n/a	n/a	
299	MSG 777-2	MM	Vertebra	fragment	Centrum	n/a	unfused	n/a	n/a	
300	MSG 924-4	MM	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	
301	MSG 956-2	MM	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	
302	MSG 1190	NOT BONE								
303	MSG 1191	NOT BONE								
304	MSG 1192	NOT BONE								
305	MSG 1193	NOT BONE								
306	MSG 277-3	Ovis	Astragalus	complete	n/a	left	fused	n/a	n/a	
307	MSG 305-6	Ovis	Femur	fragment	Distal	right	unfused	n/a	<3-3.5 yrs	
308	MSG 384-1	Ovis	Femur	fragment	Distal	right	unfused	n/a	<3-3.5 yrs	
309	MSG 302	Ovis	Femur-	complete	epihpesis	right	unfused	n/a	< 2.5-3 yrs	
310	MSG 384-2	Ovis	Femur	complete	Epiphysis	right	unfused	n/a	<3-3.5 yrs	
311	MSG 316-3	Ovis	Horncore	fragment	Distal	right	n/a	n/a	n/a	
312	MSG 331-18	Ovis	Horncore	fragment	distal	n/a	n/a	n/a	adult	
313	MSG 336-2	Ovis	Horncore	fragment	middle	n/a	n/a	n/a	n/a	
314	MSG 344-3	Ovis	Horncore	fragment	Middle	n/a	n/a	n/a	n/a	
315	MSG 307	Ovis	Matatarsal	complete	complete	right	fused	20-28 mths		
316	MSG 271	Ovis	Metacarpal	complete	n/a	left	fused	18 mths	2 yrs	
317	MSG 272	Ovis	Metatarsal	complete	n/a	left	unfused	n/a	<20-28 mths	
318	MSG 293	Ovis	Pelvis	fragment	Ilium	right	n/a	n/a	n/a	
319	MSG 361-3	Ovis	Pelvis	fragment	Illium	left	n/a	n/a	adult	
320	MSG 370-8	Ovis	Pelvis	fragment	Acetabulum	left	n/a	n/a	adult	
321	MSG 276-2	Ovis	Pelvis	fragment	n/a	right	n/a	n/a	n/a	
322	MSG 361-7	Ovis	Phalange	complete	body	n/a	unfused	n/a	<13-16 mths	
323	MSG 361-8	Ovis	Phalange	complete	epiphesis	n/a	unfused	n/a	<13-16 mths	
324	MSG 312-1	Ovis	Rib	fragment	Distal	n/a	unfused	n/a	n/a	
325	MSG 344-1	Ovis	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
326	MSG 931	Ovis	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
327	MSG 962-1	Ovis	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
328	MSG 962-2	Ovis	Rib	fragment	Middle	n/a	n/a	n/a	n/a	
329	MSG 959-2	Ovis	Scapula	fragment	blade	right	n/a	n/a	n/a	
330	MSG 330-1	Ovis	Skull	fragment	orbit	right	fused	n/a	adult	

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331	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	
332	MSG 370-10	Ovis	Skull	fragment	Occipital	right	fused	n/a	adult	
333	MSG 306	Ovis	Tibia	fragment	Distal	right	unfused	n/a	<1.5-2 yrs	
334	MSG 373	Ovis	Tibia	fragment	epiphesis	left	unfused	n/a	<3 yrs	
335	MSG 288	Ovis	Tibia	fragment	Distal	right	unfused	n/a	<18- 24 mths	
336	MSG 305-12	Ovis	Tibia	fragment	Proximal	right	unfused	n/a	<3-3.5 yrs	
337	MSG 320	Ovis	Tibia	fragment	Shaft	n/a	n/a	n/a	n/a	
338	MSG 340	Ovis	Tibia	fragment	Proximal	right	unfused	n/a	<3-3.5 yrs	
339	MSG 951	Ovis	Tibia	fragment	Distal	n/a	unfused	<1.5-2 yrs	n/a	
340	MSG 1306	Ovis	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	
341	MSG 290-1	Ovis	Vertebra	fragment	Centrum	n/a	unfused	n/a	n/a	
342	MSG 304-1	Ovis	Vertebra	fragment	centrum	n/a	unfused	n/a	n/a	
343	MSG 361-6	Ovis	Vertebra	fragment	Transverse proce	n/a	n/a	n/a	n/a	
344	MSG 371	Ovis	Vertebra	fragment	n/a	n/a	unfused	n/a	n/a	
345	MSG 386-3	Ovis	Vertebra	fragment	n/a	n/a	unfused	n/a	n/a	
346	MSG 944-5	Ovis	Vertebra	fragment	Centrum	n/a	n/a	n/a	n/a	
347	MSG 957-1	Ratus	Femur	complete	n/a	left	unfused	n/a	n/a	
348	MSG 957-2	Ratus	Femur	complete	n/a	right	unfused	n/a	n/a	
349	MSG 335-4	Ratus	Mandible	complete	n/a	right	n/a	n/a	n/a	
350	MSG 939	Ratus	Mandible	fragment	n/a	right	n/a	n/a	n/a	
351	MSG 948	Ratus	Mandible	fragment	n/a	left	n/a	n/a	n/a	
352	MSG 296-3	SM	Vertebra	fragment	centrum	n/a	unfused	n/a	n/a	
353	MSG 954-1	Sus	Ephipysis	fragment	proximal	right	n/a	n/a	n/a	
354	MSG 289-4	Sus	Fibula	fragment	Shaft	n/a	n/a	n/a	n/a	
355	MSG 386-5	Sus	Fibula	fragment	Shaft	left	unfused	2.5 yrs	n/a	
356	MSG 310-2	Sus	Humerus	fragment	Distal	right	fused	1 yrs	n/a	
357	MSG 352	Sus	Humerus	fragment	Distal	right	fused	1 yrs	n/a	
358	MSG 923	Sus	Humerus	fragment	Shaft	left	n/a	n/a	n/a	
359	MSG 380	Sus	Mandible	fragment	ramus	right	n/a	n/a	n/a	
360	MSG 779	Sus	Meta podial	complete	Epiphysis	n/a	unfused	<2 yrs	n/a	
361	MSG 305-8	Sus	Metacarpal	complete	n/a	left	unfused	n/a	<2 yrs	
362	MSG 370-7	Sus	Metacarpal	complete	n/a	left	fused	2 yrs	n/a	
363	MSG 383-1	Sus	Metacarpal	complete	n/a	left	fused	2 yrs	n/a	
364	MSG 285	Sus	Metatapodial	complete	n/a	right	unfused	?	?	
365	MSG 276-1	Sus	Metatarsal	complete	Distal	right	unfused	no	<2.5 yrs	
366	MSG 278-2	Sus	Metatarsal	complete	n/a	right	unfused	n/a	<2.25 yrs	
367	MSG 296-1	Sus	Metatarsal	complete	n/a	left	unfused	n/a	<2.25 yrs	
368	MSG 386-10	Sus	Metatarsus	complete	n/a	right	unfused	n/a	<2.25 yrs	
369	MSG 386-8	Sus	Metatarsus	complete	n/a	right	fused	2.25 yrs	n/a	
370	MSG 956-1	Sus	Navicular	complete	n/a	n/a	n/a	n/a	n/a	
371	MSG 305-10	Sus	Pelvis	fragment	pubis	right	unfused	n/a	<6-7 yrs	
372	MSG 269	Sus	Phalange	complete	Middle	n/a	fused	<1 yr	n/a	
373	MSG 328-7	Sus	Phalange	complete	Intermediate	?	unfused	n/a	<9-12 mths	
374	MSG 334	Sus	Phalange	complete	Distal	right	fused	n/a	n/a	
375	MSG 929	Sus	Phalange	complete	Distal	right	fused	n/a	n/a	
376	MSG 930-1	Sus	Phalange	fragment	distal	left	unfused	<1 yr	n/a	
377	MSG 967-5	Sus	Phalange	complete	Proximal?	?	fused	n/a	n/a	
378	MSG 346	Sus	Radius	fragment	Proximal	left	fused	1 yr	n/a	
379	MSG 701-3	Sus	Radius	complete	n/a	left	fused prox ur	1 yrs	<3.5 yrs	
380	MSG 361-5	Sus	Rib	fragment	Proximal	n/a	fused	n/a	adult	
381	MSG 303	Sus	Tibia	fragment	Distal	right	fused	3 yrs	3.5 yrs	
382	MSG 358	Sus	Tibia epiphysis	complete	Proximal	right	unfused	n/a	<3.5 yrs	
383	MSG 305-9	Sus	Ulna	complete	complete	right	unfused	n/a	<10 mths	
384	MSG 295	Sus	Vertebra	fragment	centrum	n/a	unfused	n/a	n/a	
385	MSG 315	Sus	Vertebra	fragment	Arch	n/a	n/a	n/a	n/a	

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386	Bone Number	Species	Anatomical Part	complete/frag	Distal/Proximal	left/right	fused/Unfus	Age min	Age max	
387	MSG 331-17	Sus	Vertebra	fragment	plate	n/a	unfused	n/a	young	
388	MSG 331-2	Sus	Vertebra	fragment	Lumbar	n/a	unfused	n/a	young	
389	MSG 331-9	Sus	Vertebra	fragment	Lumbar	n/a	unfused	n/a	young	
390	MSG 335-2	Sus	Vertebra	fragment	n/a	n/a	unfused	n/a	young	
391	MSG 350-1	Sus	Vertebra	fragment	Spineous process	n/a	n/a	n/a	adult	
392	MSG 377-2	Sus	Vertebra	fragment	half	n/a	unfused	n/a	n/a	
393	MSG 386-12	Sus	Vertebra	fragment	Spineous process	n/a	n/a	n/a	adult	
394	MSG 792-2	Sus	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	
395	MSG 794-1	Sus	Vertebra	fragment	half	n/a	unfused	n/a	n/a	
396	MSG 968-1	Sus	Vertebra	fragment	Centrum	n/a	unfused	n/a	n/a	
397	MSG 363	Sus	Fibula	fragment	Shaft	left	n/a	n/a	n/a	
398	MSG 945-1	Sus?	Vertebra	fragment	n/a	n/a	n/a	n/a	n/a	
399	MSG 701-1	Wood								
400	MSG 701-2	Wood								