

(15702) and a wild sheep horn core from (14587). A high proportion of pathological sheep/goat elements was noted from (15702), which may or may not derive from a single individual, and while some would tend to signify osteoarthritis, the severity of surface modification and exostoses and range of elements affected all suggest a different aetiology.

The section below comparing Space 319 and Building 44 presents taxonomic representation from the Space 319 middens in terms of %NISP. Here (Table 4), the raw NISP counts and DZ's are presented for the fully recorded units: (14587, 15702, 15728). Even with these small samples, caprines clearly dominate, making up 93% by NISP count and 88% by DZ (both counts including the sheep/goat/roe category). Since these middens were only partially excavated, results must remain tentative.

TP Area

The zooarchaeological laboratory work in Çatalhöyük led in the 2007 season to the study of 8609 animal bone specimens from the TP area. They come from pit infill (13545, 13543), infill layers (13571, 15216, 15261, 15803) and midden layers (13570, 15217, 15234, 15282, 15820). In addition, worked bone (bone points, worked equid metapodial, knucklebone, pendant, fragments of spoon) was also recorded from 10 various categories of units (see Russell, worked bone, this report). Animal bones came from Buildings 73 and 74 (Space 326) as well as Space 318.

In the south part of the trench was situated a very shallow cluster of bones with a north-south alignment (13545) in pit infill about dimensions 1.18 x 0.80 x 0.08 m and with a not very distinct basal boundary. Large fragments of cattle and cattle-sized bones were in this sample, although sheep/goat is also present. There is also a pig incisor, a large bird vertebra, a fish vertebra, and some amphibian and reptilian microfauna. Anatomically there are long bone fragments, rib, scapula and pelvis of large mammal and a cattle phalanx fragment and mandibular fragments. Some similar parts of sheep-size and sheep/goat are also present. Both sizes are heavy on the meaty parts, short on the feet. This element distribution suggests that the material is post-consumption; rather single-purpose but probably not a single meal. It was fairly rapidly buried, because the edges are generally sharp, although there is evidence of carnivore ravaging. From post-depositional contact there are traces of plaster on some of the bones. Sheep/goat specimens show pathological changes as well as a cattle tibia that may have signs of malnourishment. Surface condition is good; very little burning, not much digestion. Two quasi-complete sheep/goat mandibles (different ages) and two maxillae were included. Some integrity in multiple specimens of what may be the same two sheep (young and old) and a youngish cow (also less of a mature one). Fragments are larger than usual, but it looks more processed than a classic feasting deposit. But nevertheless the deposit may be feasting remains of some kind, given the high proportion of cattle, which is certainly unusual. It may be that some portions of feasting remains are deposited in real feasting deposits, others distributed to individual households for more or less ordinary consumption.

Next to the bone concentration (13545) lay bone deposit (13543) in a greyish and black layer of burnt soil aligned east-west, also situated in the south part of the trench. The area of burning provided animal remains that look like a fill deposit, because their surfaces have mostly rather worn and degraded surface conditions. The range of burnt bone is variable. Some of the bones are burnt, mostly the smaller ones in the

dry-sieved material and about 30% in flotation sample, mostly low temperature but some calcined. Either the burnt material is from the fill, burnt in situ, or there is a small burnt component mixed with the fill. Bones are highly fragmented with no coherence, some digestion. Body part distribution is fairly even, notably including vertebrae. The indeterminate bones predominate, which are mostly sheep-size, but with a certain amount of large mammal. Only few and scrappy diagnostics are preserved.

The western section (13570) of a midden(s) deposit between walls (13538) and (13059) in Space 318 was separated by a small wall from (15217). The deposit also contained worked bone (points 15217.X3, 15217.X6) charcoal, pottery, obsidian, shell, and crystal, and was rather homogeneous. None of the bone tools is useable in present form, although two have post depositional breaks (with the other part missing). Bone deposit of average size, contained the remnants of sheep/goat, cattle, equid, pig, canid, and hare-sized animals. The majority of bones come from sheep/goat but there is a good amount of cattle bones. The rest of the taxa are represented by just a few body parts (for example, a tibia and a tooth fragment for equid and a metapodial and a tooth for pig). Body-part distribution is fairly even, indicating heavy processing (i.e. very little vertebra and pelvis, lots of long bone fragments). A good amount of diagnostics, mostly sheep/goat; they include an almost complete femur and tibia, half of a radius, as well as long bone cylinders (maybe due to dog gnawing or marrow extraction). Additionally, there are many teeth, all sheep/goat except one equid, one pig tooth, and a few cattle tooth fragments. In this unit, there are big pieces compared to other TP units. Although most of the long bones are highly fragmented, diagnostics are much less fragmented, and some diagnostics are hardly processed at all. Not too much digestion or gnawing. A good amount of burning (about 10% of all bones), and some fragments are partially burnt on the tip(s) of the fragments, these must have been exposed to fire after they were fragmented. These are mostly sheep/goat shaft splinters. Medium homogeneous weathering. This unit does not have high coherence because the long bone fragments are highly processed, whereas many diagnostics are hardly processed at all. It is a mixed midden deposit, probably covered quickly.

In Space 318, between walls recorded as units (13059), (13088), (13089) and (13093) was located an infill layer (13571), about dimensions 0.23 x 1.540 x 1.22 m, which included bones, pottery, obsidian, shell and charcoal. During exploration two sub-layers of infill were identified: a bricky upper layer (with the highest density of construction elements such as mudbricks and plaster in its eastern part) and a relatively homogeneous dark brown layer underneath. A large piece of shed antler (13571.X1) was excavated in the eastern part of the unit. It has the look of an abandonment deposit, but must have lain exposed for a while as the surface condition is highly weathered. It was at one time part of a raw material store, with grooves for removing splinters. Odd that it was discarded. Under the layer recorded as unit (13571) there was an infill layer (15216), from which a knucklebone (15216.X5) was recovered. Directly underneath was found a midden layer (15217) located between walls recorded as units (15218, 13088, 13089, 13093). It was separated by a small wall from (13570). Deposit with a majority of sheep-size bone remains but present also a substantial amount of large mammal in both diagnostics and scrap. Diagnostics are all sheep/goat, spread through the body. One bird long bone shaft fragment was also recorded. Surface condition of remnants is somewhat variable, mostly a bit worn/ degraded and some water worn fragments. Ca. 10-15% bones are burnt, more

among the long bone shaft fragments. Mostly low temperature, but some calcined. Some gnawing and digestion also was found. Not much coherence apart from an articulating cattle metacarpal and one phalanx, which seem notably small. Fragmentation is moderate. Fairly even body part representation. Bone deposit looks perhaps more slowly accumulating than (13570), and seems to be less dense.

From the northern part of the trench comes a midden deposit (15234), which has a low density of bone. This deposit is incoherent but importantly it is well-preserved compared to many other TP assemblages. It is incoherent because the two predominant groups of bones (sheep and cow size) have divergent taphonomic features. Namely, the sheep-size bone remains appear to have a similar depositional history because there is more coherence in their weathering, fragmentation and body part representation. These all suggest quite rapid burial. However, cow-size remains do not appear to have been quickly buried as they are more weathered. Bones are mostly from sheep-size animals, but also cow-sized (in this category most of them are Bos, but there is also an equid scapula). In the caprine body-part distribution the whole animal is present, with a lot of meaty parts (scapulae; several pelvis fragments, both fore and hind limbs), but also some primary butchery parts (heads: a lot of teeth, some cranial, a nearly complete mandible; feet). There are many long bone fragments, but few rib fragments, very few vertebrae and a moderate amount of cranial fragments in sheep-size remnants. In the body-part distribution of cow-size pieces some long bones and vertebrae are present, a small amount of ribs, and a few other pieces. One tooth, a cuneiform and a phalanx fragment were derived from cattle. From very small mammals originated a long bone and a fox-size rib. Also one bird bone recorded. Animal bones generally are broken up but not heavily so. Fragment length spans a more or less continuous distribution between roughly 1 and 16 cm. Long bone fragments are 4 cm in average, but cow-size long bones 5 cm in average, and mostly 7-2 cm, except one fragment 16 cm, and a few of fragments of 1 cm. Surface condition is good. Roughly 10-15% of the bones are burned, mostly to a high temperature (mostly carbonized, some carbonized/calcined). Most of the burned bones are sheep-size long bone shaft fragments, also a Bos phalanx fragment. The same percentage of bone of both category size remains have heavy carnivore gnawing. These pieces were very weathered (exfoliating). Not many of bones fragments are digested, except caprine phalanges and some long bone fragments. The bones were not trampled.

From a second layer of arbitrarily divided midden (15282) in the western part of Building 73 animal bones come mostly from sheep/goat. There was also a little cattle, and an upper fragmentary female wild boar canine. This unit is arbitrarily separated from unit (15234). While it shares some characteristics with (15234), in terms of taxon and body part distribution, and the greater weathering of the cattle bones (not true of most of the large mammal long bone shaft fragments), it is generally somewhat more fragmented and worn, and there is considerably more digestion. Bones have no coherence. There are few diagnostics, and one fish bone. The most interesting items are two bear teeth, a canine with the crown broken off and a very worn molar. This is the first bear we have seen that does not seem to be getting any special treatment, although it is just isolated teeth and so conceivably ultimately from a disturbed special deposit. It certainly doesn't look like they were eating bear. Ca. 10% of remnants is burnt, at low temperature, postdepositionally. Several bone tools were recovered in this sample. One is particularly interesting. It was burnt in a

reducing atmosphere, i.e. after it was buried, then broken after that, and only one half recovered. Thus it was originally deposited and burnt somewhere else, redeposited here.

Directly on top of the floor (15809) in Space 326 of Building 74 was placed infill, which was relatively homogeneous and consisted of dark brown and greyish soil mixed up with fragments of mudbricks and other constructional elements. The infill contained pottery, obsidian, shell and charcoal and also animal bones (15261). Because of the location of the animal remains on top of the floor, these are interpreted by the excavators as an abandonment deposit. Bones originate mainly from cattle. From among four mandibles, two (15261.X9- more damaged, 15261.X12) are fairly nearly complete, one (15261.X11) lacks the heel and incisor areas. A large segment of rib (15261.X21) lay with one of the mandibles. Two scapulae (15261.X20- very fragmented and 15261.X22) have no traces of working or use. One skull fragment (15261.X10) was preserved with the stub of one or both horns. An especially crumbly sheep horn core (15261.X24) might be wild, certainly male, and quasi-complete. At least some of the bones (the rib and horn core) were placed in shallow holes in the floor. All of these finds are in very poor condition, not exfoliating, as in prolonged weather exposure, so much as the usual TP damage.

In the same part of Building 74, defined in the eastern part as Space 326 directly on the floor (15807) within an infill layer (15803) were found a large piece of antler (15803.X3), a young cattle maxilla (15803.X12) and worked bones - points (15803.X2, 15803.X4, 15803.X9, 15803.X10). From the western part of the excavated area comes an ashy midden deposit (15820). In this typically layered midden made up of numerous parallel layers made of burnt soil, charcoal and ash were 1224 bone remnants. This sample looks like a midden, however, it differs from the "classic" Çatalhöyük midden. That is, the sample appears to be fairly rapidly deposited but is almost entirely sheep/goat with few big animals, is almost entirely food waste, is moderately heavily processed (long bones broken up, but whole mandibles), and is not very dense (322 litres, but the dry sieve bone material is a small sample). There is mostly sheep-sized bone, with a little cow-sized material and one hare-sized bone. A fragment of human bone and a bird bone were also recorded. One fish specimen and one snake vertebra were recovered from the flotation sample. The body part distribution is uneven. Sheep-sized animals are represented by long bone shaft, rib, vertebral, scapula, and cranial fragments. Sheep-sized scrap is predominantly long bone shaft fragments, with some rib and a few vertebral fragments; there are almost no tooth splinters. Cow-sized animals are predominantly represented by long bone shaft fragments, with one vertebral fragment and two rib fragments. All sheep-sized diagnostics are caprine, and include skull, pelvis, forelimb, hindlimb, and feet. Among caprine diagnostics, hindlimb fragments outnumber forelimb fragments almost 2:1. Caprine phalanges are underrepresented: there are only two in the sample. There are only nine diagnostics from non-caprine animals: one or two fragments each from bovid forelimb, hindlimb, feet, and skull, and an equid tooth. Bovine body part distribution is difficult to discuss, as there are so few fragments. Some of the bone is burnt (ca. 5%), mostly carbonized or carbonized and burnt. Burnt material includes both size classes, and does not affect any body part or size class disproportionately. Burnt material includes long bone, rib, vertebral, and cranial fragments, tarsals, and some maxillary teeth as well as one of the bone tools. The material is moderately fragmented, with most fragments (>60%, excluding teeth)

around 4-6 cm. There are some larger fragments, including some 15 cm long bone cylinders and mandibles, and some smaller fragments of rib and long bone shaft. There is some carnivore gnawing (>5%), mostly heavy, that has removed the ends of long bones and marked long bone shaft fragments. There is also a little rodent gnawing (<2%). Very little of the bone is digested (<2%). The material is in moderately good condition. The cow-sized material appears to be in generally worse surface condition. A small number of long bone shaft fragments are marked by heavy gray and green concretions. There are two bone tools, a point and a possible pottery smoother.

West Mound

The 2007 season saw the continuation of West Mound Trench 5 as well as the excavation of a deep sounding, designated Trench 7.

Trench 5: excavation in this area was complicated by late-period burials, as in 2006. The majority of units were clearly of mixed period and only two were deemed worthy of faunal assessment. The first of these (14279) was the fill of Space 310, the only Chalcolithic space to be defined from the current West Mound project thus far. The second (15306) was a pit cut into Chalcolithic deposits. In both cases the fauna strongly suggests a mixed fill, with fragment size, surface condition, and colouration all indicating multiple taphonomic histories. Two clearly discrete taphonomic signatures in (15306) suggest a combination of reworked Chalcolithic material with that from a much later episode of pit digging and filling. In any case, a lack of sieving prohibited full recording of either unit.

Trench 7: units from the deep sounding were mostly arbitrary blocks of virtually no value for faunal analysis. Nonetheless, four such units (15101, 15102, 15105, 15108) were assessed from the first three hand-excavated spits. Probable intrusive material in the uppermost spits – presumably from the slope wash of the modern irrigation ditch – was less evident by the third, although all units are in any case subject to chronological mixing within the Chalcolithic. The overall impression is rather different to previous West Mound faunal units, with a surprising number of larger than sheep-sized specimens. However, this probably reflects a lack of sieving more than any genuine trend, and indeed the only flotation sample yet processed from Trench 7 (15108.s2) shows the expected predominance of caprines.

A few units were excavated stratigraphically in Trench 7, notably a surface on which several ceramic vessels were found in situ (15107). Hand-collection again undermines the potential for faunal analysis, but flotation samples may prove informative when processed.