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Fauna of Wādī Yanā'im (WYi), Yemen Arab Republic

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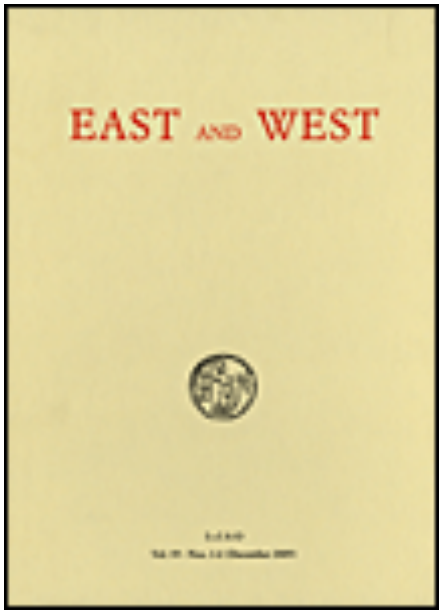

This article, together with A. de Maigret's 'A Bronze Age for Southern Arabia' and L. Costantini's 'Plant impressions in Bronze Age pottery from Yemen Arab Republic', was reissued as *The Bronze Age culture of the Yemen Arab Republic*, a special publication of IsMEO, Rome (1984), 126 pages.

Errata

p 118	line 7 from bottom	of and ancient bone	→	of an ancient bone
p 119	line 3 from bottom	of age	→	of age;

Fauna of Wādī Yanā'im (*WYi*), Yemen Arab Republic

by Francesco G. Fedele

This report presents and discusses in summary form the animal material finds from the 1984 excavation of the site *WYi*. This material consists of a small number of frequently abraded animal bones, the morphology of which has however been fairly well preserved. Some 148 specimens (46.4% of the total of 315 finds) have been determined and studied. More than 53% of the finds consist of fragments that cannot be identified even at a generic level. On the basis of archaeological evidence and C14 datings, the site *WYi* has been assigned to the first half of the 2nd millennium.

Analysis

The faunal collection of *WYi* (1984) contains the following *taxa*, in decreasing order of frequency (bone count):

Ovis and *?Capra* (domestic sheep and goats)	+ + +
Bos taurus (domestic ox)	—
Sus scrofa (pig and/or wild boar)	—
Gerbillinae (gerbil, gjird): present-day intrusions?	—
Indeterminate microrodents, gnawed bones.	—

The main zooarchaeological observations are as follows.

Caprinae, sheep and goats

Mainly sub-adults or *young adults* (aged about 2-3 years, estimated from 14 finds), one of which comparatively small. There are rare cases of two other age groups: *immature* (about 3-7 months, three obvious cases; less than 1 year, one more case) and *full adults* (3-3.5 years, two cases). There are 5 undecided 'young' animals, probably ascribable to the sub-adults, and 2 'adults'. As far as the species are concerned, the highly limited sample and the current technical devices allow only *Ovis*, the sheep, to be identified. Room L10 has yielded

almost an entire, probably female, hornless sheep, of sub-adult or young adult age (about 3 years old, like most of the sheep and goats). There are also three or four other cases, probably of the same age (2 females and possibly a male). Although not yet actually ascertained four finds seem to belong to the *Capra* species. They are all young or sub-adult animals (one younger than 2.5 years, on the basis of the unfused head of the femur, from L10).

Bos taurus, domestic ox

Not extensively represented (minimum number of 2 individuals, one adult and one sub-adult), above all it raises the question of the possible intrusion of present-day materials: see the final part of the present report for a short discussion. However, the collection also includes many ancient-looking fragments comparable to *Bos* in histology and size, produced by intense slaughtering. The archaeological frequency of the ox could thus appear to be less than it actually was.

Sus scrofa, pig and/or wild boar

Traces. Attributed to pig is a fragment of right maxilla with the alveolus and roots of the last deciduous molar (m^3; mesiodistal alveolar L — 19.5 mm); this is therefore a single immature individual. Another three finds could be ascribed to *Sus* owing to their thick diaphysis cortex (or else to robust wild adult animals). It would be prudent to consider the presence of pig not have been completely ascertained, although the fragment with m^3 is more indicative of the domestic than the wild form.

Gerbillinae THOMAS 1896 (*Gerbillidae* PETTER 1971)

The remains of at least 6 individuals, three of which more or less complete. They are all probably modern or sub-modern and intrusive with respect to the prehistoric levels of the archaeological site, having died in their lairs. However, there is one case of rodent gnawing of and ancient bone. Until a specific study can be carried out, the finds have been assigned to a form of *Meriones* ILLIGER (gjird) or *Gerbillus* DEMAREST (gerbil); see Petter 1961, Harrison 1972, and Büttiker and Harrison 1982, pp. 495-502. Jaw measurements:

L row M_1-M_3 = 60 — 64 mm
L M_1 = 27 — 32 mm
Width M_1 = 18 — 19 mm

Distribution in the site

The topographic denominations L1-L12 refer to the ring of huts and adjoining structures, most of which are closed, excavated in 1984. In each room *level 1* corresponds to the surface level, *level 2* to the underlying layer down to the room floor level, and *level 3* to the sediments forming the floor (see A. de Maigret's report for further details).

L1. N area. Level 1: 2 fragments of pelvis and tibial diaphysis of immature sheep or goats, probably related to the level 2 finds.
Level 2: fragments of jawbone and scapula of immature and young sheep and goats, probably including *Capra* (despite the elliptical glenoid fossa); incomplete intrusive gerbil skeleton.

L3. Connected to L1. On the surface, some remains of present-day ox (see below). Level 1: fragments of upper and lower jawbones and post-cranial splinters of immature and sub-adult sheep and goats; the maxillary fragment with m^3 from immature *Sus* comes from here (fig. 4).
Level 2: some thirty or so post-cranial fragments of sub-adult sheep and goats, possibly including *Capra*; on the floor, two further remains (rib, ascending mandibular branch). Two incomplete skeletons and other parts of at least 4 gerbils, some with the limb bones in anatomical connection and fixed by thin carbonate concretion, are to be considered intrusive (one individual under the collapsed stones of L3).

L4. Level 2: remains of adult sheep or goat (left tibia).

L5. Connected to L4. Levels 1-2: remains of lower jawbones of adult sheep or goats, splinters of long bones, and a fragment of diaphysis (humerus?) of a robust adult animal, cf. *Sus* (wild?).

L7. Traces of oxen on surface. Level 1, floor: centimetre-sized sheep or goat fragments.

L8. Small annexe. Part of right pelvis of sub-adult sheep (probably female), cf. find in L10 (fig. 2); and other comparable remains.

L10. Level 1: part of left hind hoof of adult sheep, butchered by chopping through tibial extremities (but see Level 2 below); lower jaw of immature sheep or goat killed at 7-8 months of age other sheep or goat remains and fragments of long bones ascribable to ox; isolated gerbil lower jaw.
Level 2: part of the skeleton of an adult sheep 3-3.5 years old, probably

a hornless female (on the basis of the characters of the epistropheus as indicated by Boessneck); the cervical vertebrae, ribs, and bones of the right side of the body (maxilla, pre-maxilla, mandible, pelvis, femur, a phalanx; figs. 1-3) are present. There is a burnt fragment of diaphysis. For reasons of statistical economy I would attribute to the same individual the sheep or goat remains of the same age collected from Level 1, which are anatomically complementary to those described above (a left hoof, a left mandible, fragments of rib cage). There are also various traces of at least one young sheep/goat, possibly *Capra* (left femur and tibia, ribs), and of at least one small sub-adult ox (cow?; tibia, pelvis), which could be *the only truly prehistoric bovine find* in the whole site. There is also abundant highly fragmented material.

L11. Level 1: a few fragments of adult sheep/goats. Level 2, under the collapsed stones: some thirty cranial and post-cranial fragments of fully adult sheep/goats (at least 2 individuals, including a probably female sheep, as indicated by atlas; fig. 2), sub-adult-young (at least 1 individual) and immature ovicaprids (upper jaw with m^1-m^3 of animal killed in 4-7th month). Fragments of long bones and ribs ascribable to sheep/goats and ox; remains of long bones of a robust adult animal, cf. *Sus*, with evidence of *burning*. Demolition of the semi-circular internal structure: further remains of robust adult animal (wild *?Sus*); calcaneus of sub-adult sheep (male?) and a small number of other sheep/goat remains, including a fragment *gnawed* at the tip.

L12. Small isolated structure to the south. 3 fragments of adult sheep/goat tibia.

Summary of Results

The zooarchaeological study of this collection, probably the first ever to be published for North Yemen, seems to indicate that *WYi* was inhabited by a group *linked to sheep/goat husbandry*. A small proportion of the animals was slaughtered between the third and eighth (at the latest, tenth) month of life, during the summer moonsoon season, or at the beginning of the winter. However, the majority were killed during the second and above all third year of life. The hornless sheep in L10 has been assigned the age of 3 years or just over owing to the barely completed ossification of the femoral epiphyses and the incomplete fusion of the coxal, as are found in the pre-industrial breeds.

It is not clear whether the kill-off pattern that emerges points to the slaughtering of animals for meat during the first-third year of life and a limited

preservation of adults for wool and milk, as well as for restocking, until the fourth year of life. These age estimates must be interpreted cautiously in that, for the time being, the biological growth of these sheep/goat populations is unknown (cf. Silver 1969).

Much less abundant and more problematic is the presence of oxen and swine. The scanty data referring to oxen point to a form that is indistinguishable from the race today raised in the Yemen highlands (a bone collection has been started for the purposes of comparison). Since bovine carrion has been seen in the *WYi* area, it is legitimate to suspect the presence of modern intrusions in the excavated levels (F. Fedele, on the spot observations). It would thus be prudent to consider only a small portion of the finds (L10) to be prehistoric and, on the basis of these, it is not possible to estimate how many head of oxen were raised for meat. Also the presence of swine is comparatively negligible and their domestic nature doubtful: only a tiny find with milk teeth seems to indicate that there were any pigs. On the other hand, the collection does not indicate any explicit interest in wild fauna or hunting.

The finds display no pathological signs. The extreme rarity of thin or fragile bones is indicative of persistent conditions of exposure to the air, abrasion due to being trodden underfoot and subsequent slow burial. The rarity of heat scars is surprising. On the other hand, the collection clearly refers to domestic kitchen refuse.

It seems to be no coincidence that the largest quantity of animal remains should come from the three large rooms, L3, L10 and L11. So far, there is a positive correlation between the frequency of the slaughtered/cooked animal remains and the large rooms with pillars or internal structures, i.e. between these rooms and the preparation and/or customary eating of meals. Also the traces of burning on bones have so far been found only in L10-L11.

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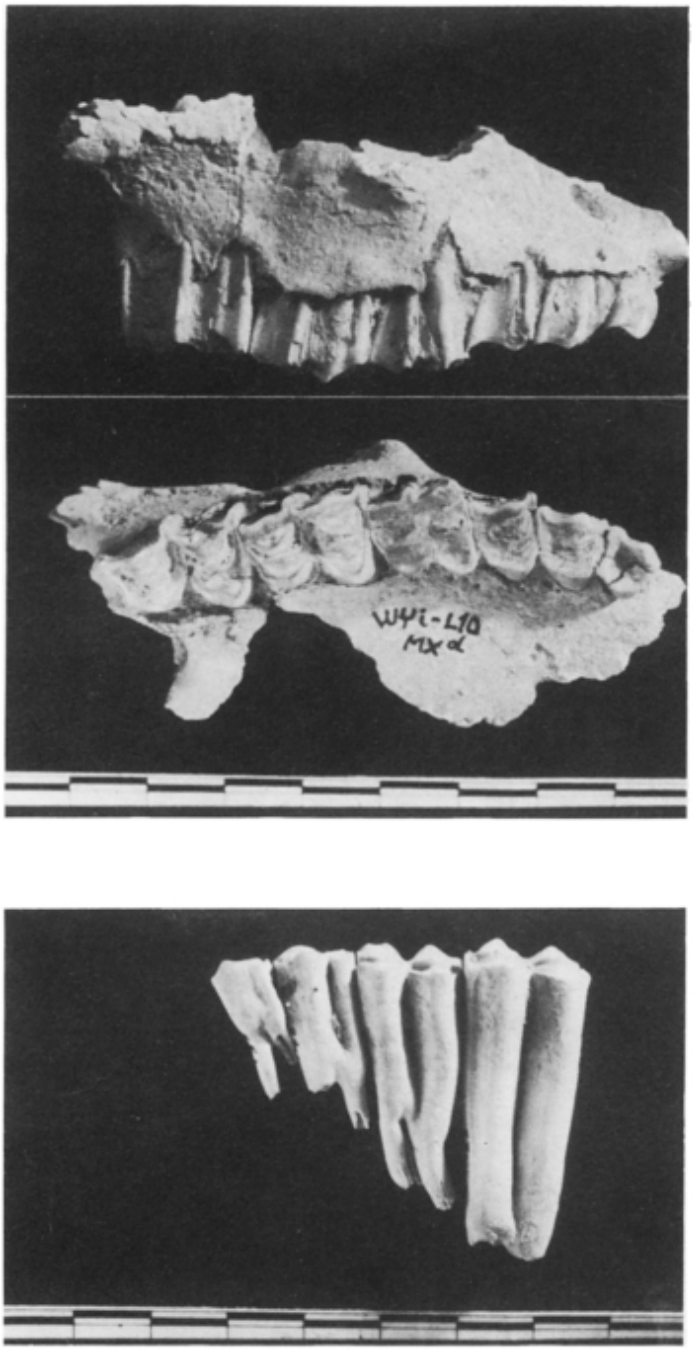

Fig. 1 - Site *WYi,* L10. Domestic *Ovis/Capra*: upper jaw + P^2-M^3; lower jaw teeth P_3-M_2. Phot. A. Solazzi.

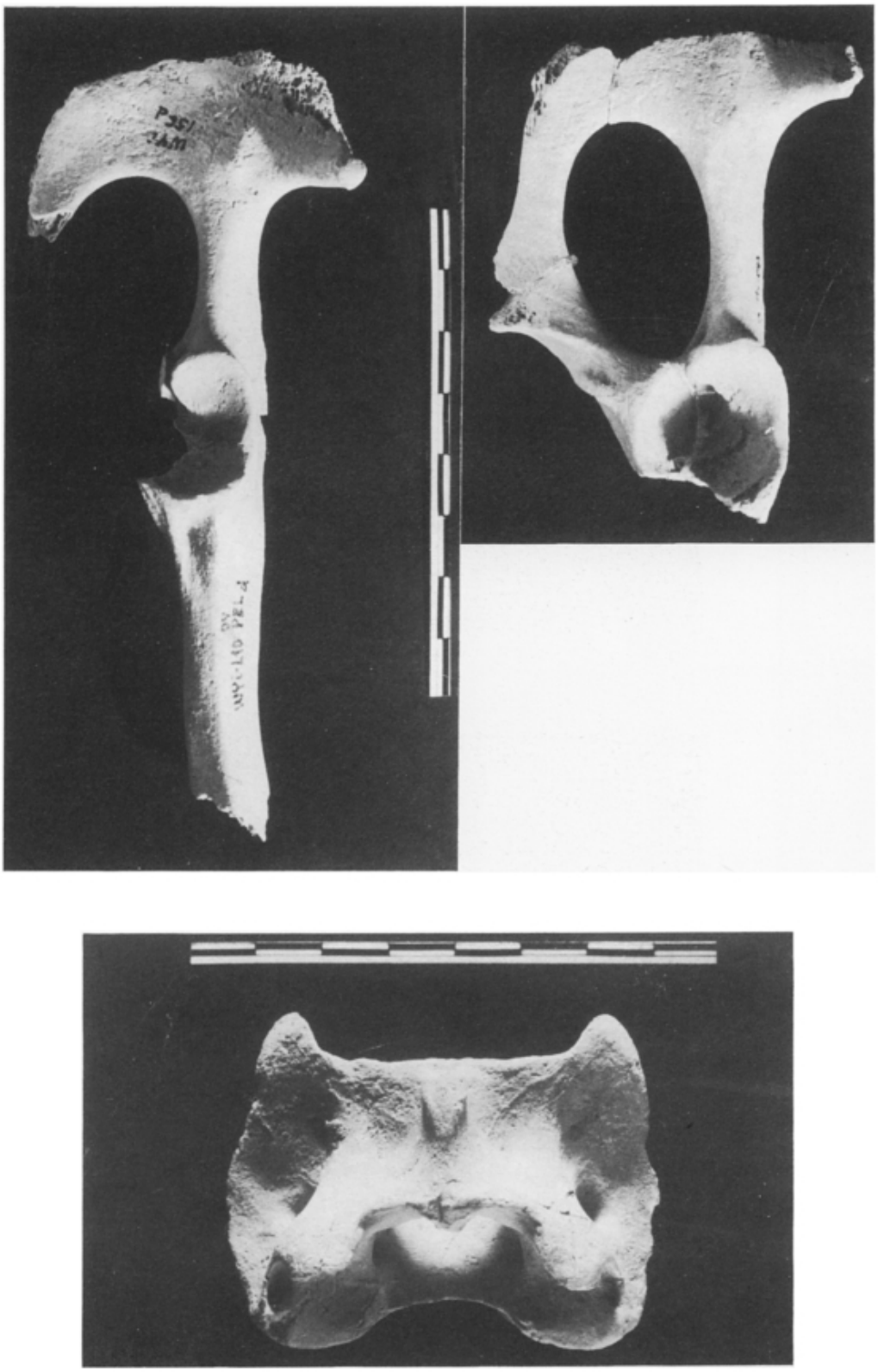

Fig. 2 - Site *WYi*. *Ovis aries,* sheep: top, L10 and L8, pelvises; below, L11, atlas. Phot. A. Solazzi.

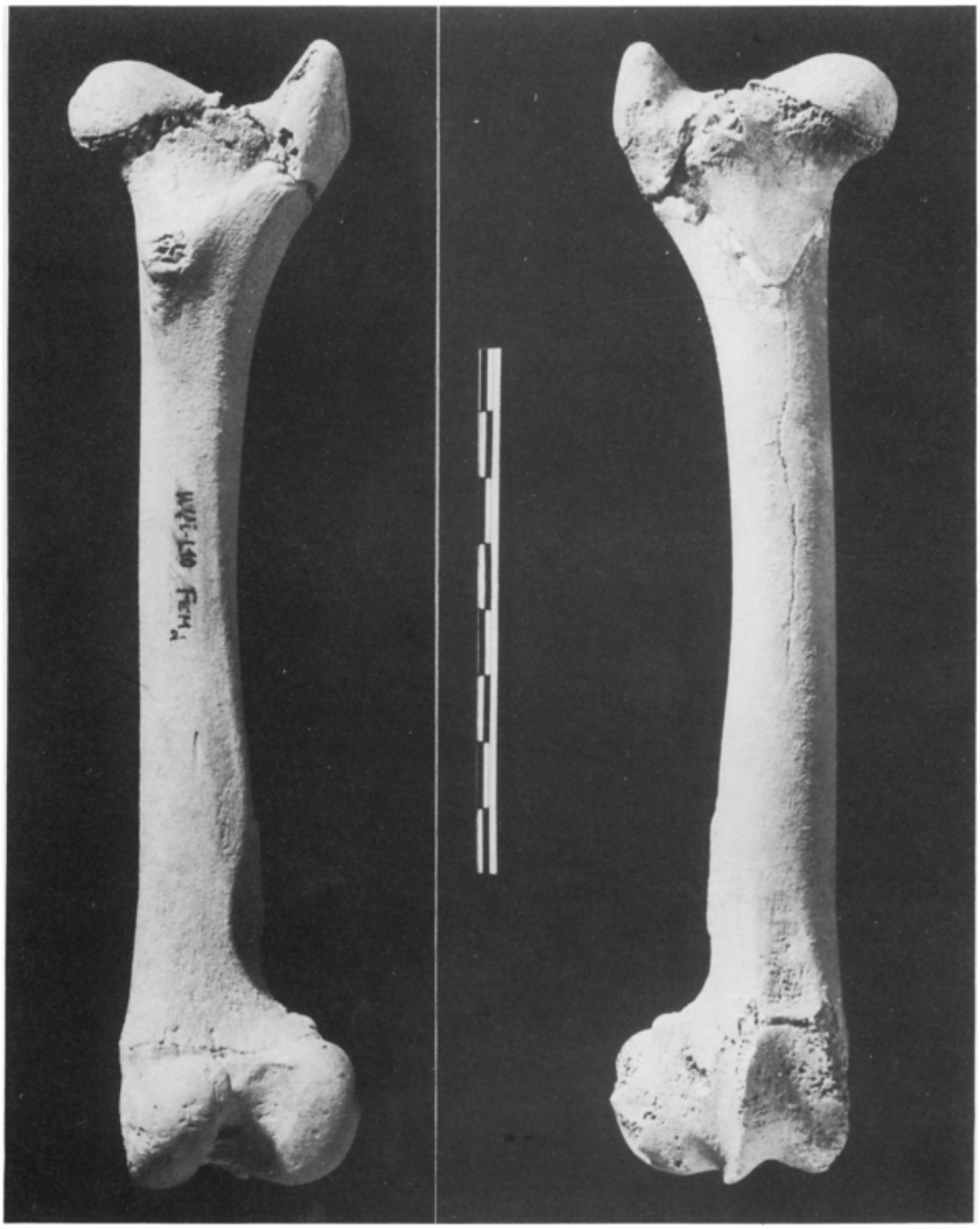

Fig. 3 - Site *WYi*, L10. *Ovis aries*, sheep, right femur. Phot. A. Solazzi.

Fig. 4 - Site *WYi*, L3. Immature *Sus scrofa*, upper jaw + m^3. Phot. A. Solazzi.