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Botanical and Faunal Remains From Tell es-Sweyhat

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BOTANICAL REMAINS

Charred plant remains from ancient sites open a window onto many aspects of ancient landscape and economy. In the Near East, for example, wood charcoal comes primarily from trees and shrubs burned as fuel. It reflects which woody plants were available for cutting and therefore aids in reconstructing the ancient environment. Charred seeds from burnt buildings are most likely the remains of stored crops or food. They reflect the agricultural production and consumption that took place in and around the site. Charred seeds from trash deposits originated primarily in dung burned as fuel. They reflect the diet not of people, but of domestic herds, and therefore ancient use of pasture and crop land.

Today the only trees in the Sweyhat embayment are those along water sources or tended in gardens. Before deforestation, however, the natural vegetation around the site would have been open oak woodland interspersed with steppe vegetation. A riparian forest would have grown along the banks of the Euphrates, about 3 kilometers from the site (Zohary 1973).

This patchy environment is reflected in the plant remains from Sweyhat. The small amount of identified charcoal consists primarily of willow or poplar. These are both riparian types, which suggests a certain amount of deforestation had already occurred; people were fetching wood from the banks of the Euphrates rather than from the immediate vicinity. Nevertheless, tiny amounts of wood of both oak and a steppeland shrub of the *Chenopodiaceae* family have been recovered. High proportions of seeds relative to wood charcoal indicate dung was in use as an alternative fuel to relatively scarce wood.

Most of the seeds from Sweyhat's 1970s excavations are stored crop and food remains from burnt buildings, not the trash remains typical of the current excavation. The crops include barley and grass pea (*Lathyrus*); a jar contained caper buds and unripe fruits (van Zeist and Bakker-Heeres 1985). There is an almost complete absence of wild or weed seeds.

The contrast with the current Sweyhat assemblage is instructive. Among the cultigens, barley is still the most prominent. Bread wheat, emmer, einkorn, and a few pulses (mainly pea) also occur. The vast majority of the seeds by count come from wild plants, however. Of these, small legumes (*Trigonella*) predominate. Although it is doubtful that every single seed in the assemblage comes from burned dung, it is fair to say

that the proportion of wild plants relative to cultivated ones reflects in a general way how people fed their herds which in turn reflects labor costs. Pasturing is less work than growing crops as fodder. It seems that at Sweyhat shepherds brought the herds out to the steppe to graze, perhaps to avoid their trampling the fields within the ring of intensive cultivation postulated by Tony Wilkinson (1982). Such specialization of labor has been postulated for the slightly earlier site of Kurban Höyük, about 170 kilometers to the north (Wattenmaker 1990).

Two samples from near an oven in the somewhat earlier site of Hajji Ibrahim show remarkable differences from the Sweyhat remains. Though the proportions of wild to cultivated seeds are similar, the primary wild seed is a grass, *Eremopyrum*, that is more likely to be a field weed than a steppe plant (van Zeist and Bakker-Heeres 1985). It is possible that these samples are either burnt crop-processing debris or the remains of a straw-fed fire. If, however, they are contextually analogous to the Sweyhat samples and represent the remains of burnt dung, perhaps we should envision a small village occupied by farmers whose dependence on farming did not permit them to send shepherds off to more distant pastures. Analysis that will help answer this question awaits more samples from this site.

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FAUNAL REMAINS

Analysis of animal bone from archaeological sites provides a picture of ancient patterns of animal production and use. When compared within and between sites, these patterns can reflect differences in area or site functions and status. A preliminary analysis of species represented at Sweyhat and Hajji Ibrahim suggests considerable differences between the two sites. It also highlights differences between Sweyhat and other urban centers in northern Mesopotamia.

Third millennium Near Eastern sites typically relied almost completely on domestic animals: sheep, goat, pig, and cattle. Our analysis shows that Hajji Ibrahim is no exception. Nearly 100 percent of the animal remains represent these four domestic animals; the only wild species is hare. The evidence from the site to date reflects a very small settlement whose inhabitants would have been busy working in the barley fields, tending their small herds of sheep, goat, and cattle, and keeping an eye on the household pig population.



Sweyhat deviates from this pattern, with remains from both domestic and wild animals in atypical proportions (bones analyzed to date come predominantly from 2 areas on the western side of the Tell). In addition to raising domestic herds of sheep, goat, and cattle, Sweyhat's ancient inhabitants exploited several natural environments for their food: the steppe for onager and gazelle, the gallery forests for fallow deer and the occasional beaver or fish, and remnant stands of oak for the larger red deer. Figures from the main occupation phase at Sweyhat reveal that 24 percent of the food remains (by count) were from wild animals. Because of the larger size of the wild species fragments, this figure jumps to 59 percent when the species are measured by weight. Another atypical finding is that equids comprise a significant percentage of the food remains—up to 36 percent by weight during Sweyhat's main occupation. Most of these seem to be wild onager, *Equus hemionus*, which ran in herds on the open steppe present around Sweyhat during its occupation. The remainder of equid bones represent the domestic donkey. As yet, we have not found any horse bones. A large proportion of these equid bones show signs of butchering.

The botanical evidence (see above) suggests that some degradation of the environment had occurred by the time of Sweyhat's occupation. As Sweyhat's location makes dry farming a risky activity, perhaps the inhabitants attempted to broaden their subsistence base by exploiting more stable wild resources. The percentage of wild animal remains (particularly equid) reaches a maximum when Sweyhat's population is at its highest. Conversely, the smaller population of Hajji Ibrahim

easily subsisted on the food they produced. Further analysis of the faunal material will help to clarify these relationships between population, environment, and resource exploitation.

Major differences occur between Sweyhat and other Near Eastern urban sites, in particular Tell Leilan located 200 kilometers east of Sweyhat. Pig is a major contributor to the faunal assemblage from mid 3rd millennium levels at Leilan (Weiss et al., n.d.). This is especially true for the lower town residential area where pig comprise up to 63 percent of the faunal remains (Weiss et al. 1993: note 30). Even in upper town elite sectors of the site, pigs represent about 20 percent of the analyzed assemblage of faunal remains (Weiss et al., n.d.). In contrast, Sweyhat has no evidence of pig from the lower town deposits or the trash deposits from the upper town. Wild animals constitute only 8 percent of the total remains from Leilan's upper town. This is in stark contrast to Tell es-Sweyhat where wild animals total 24 percent in the main occupation. Further analysis will clarify whether Sweyhat's provocative faunal remains are the result of environmental, economic, or ethnic factors.

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FIG. 1. An irrigated garden in the village of Nefile near Tell es-Sweyhat.

Photo by Naomi Miller

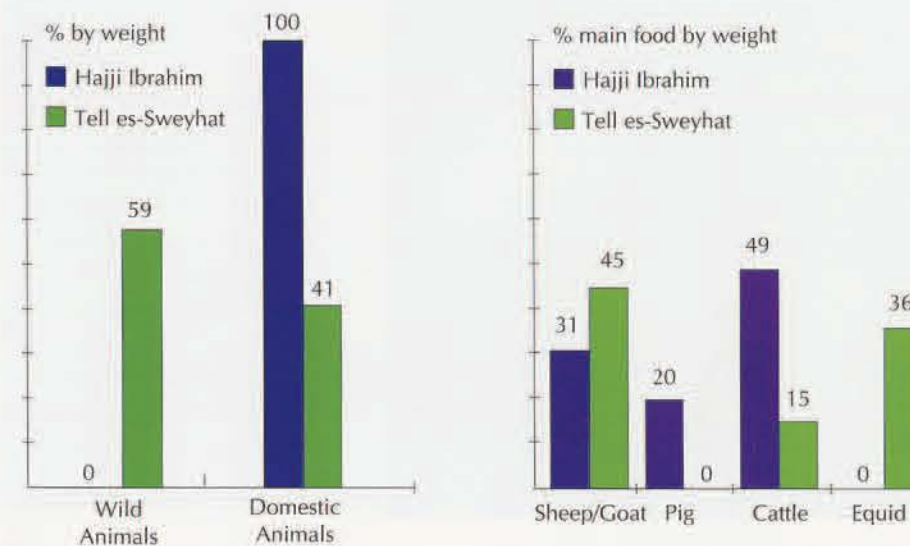


FIG. 2. Comparative percentages, by weight, of animal remains at the sites of Hajji Ibrahim and Tell es-Sweyhat.

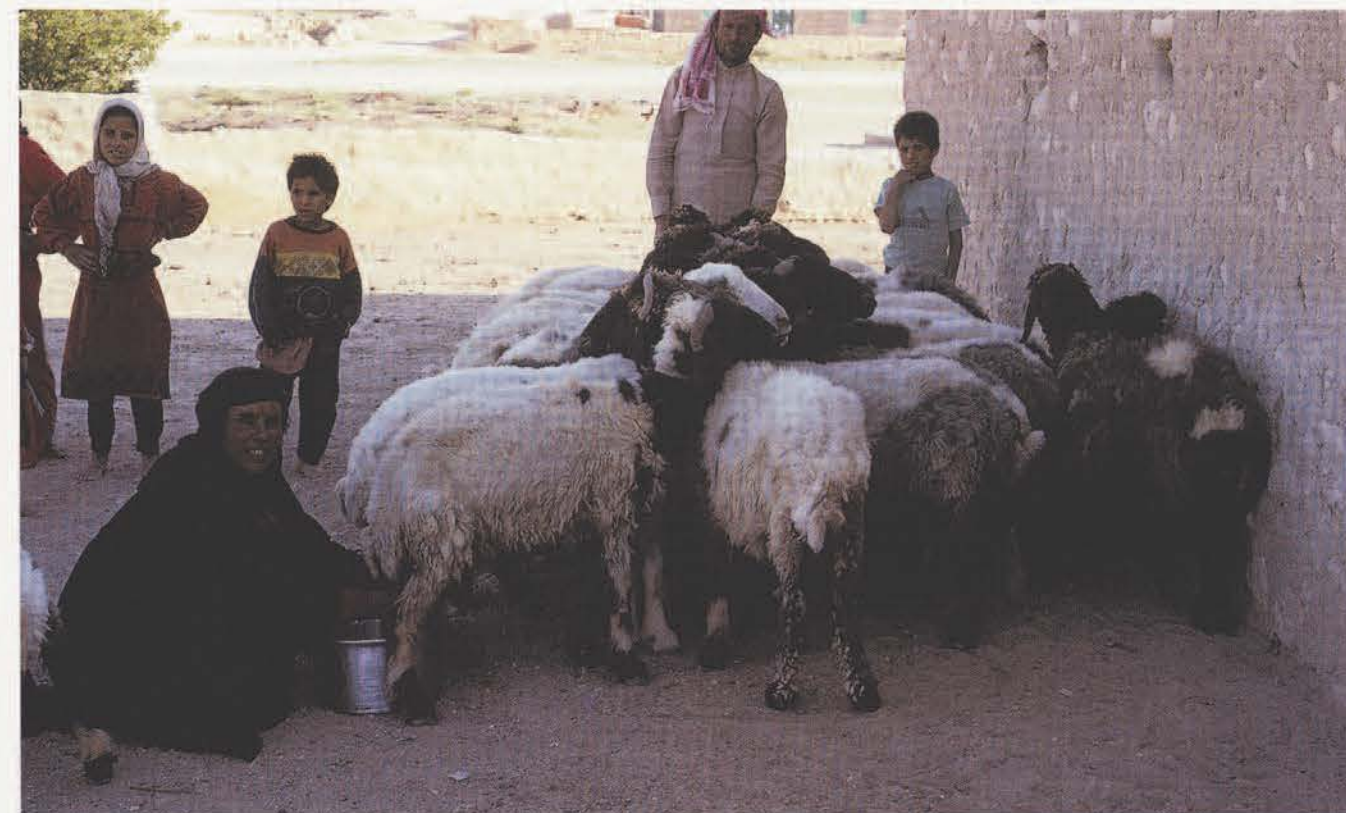


FIG. 3. Milking sheep in the village of Nefile.

Photo by Naomi Miller