

CHAPTER 11

PRELIMINARY REPORT ON THE FAUNAL REMAINS FROM THE WORKMEN'S VILLAGE

by

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11.1 Introduction

During the 1982 field season a preliminary examination was made of the faunal remains from the Workmen's Village and its immediate surroundings (cf. Kemp 1983: 21, 24 for a brief report). Because the results of this initial study were very encouraging, work was continued during the 1983 season, thereby enlarging the sample which is the basis of this report. More faunal material will be forthcoming from other localities as the excavation continues, and will be included in subsequent reports.

This preliminary report is based on a sample of over 3000 animal bones methodically collected since excavation was resumed at el-Amarna in 1979. A breakdown of the species identified so far, by area, is given in Table 11.1. The following additional mammalian species have been identified in this faunal assemblage: [1] *Ovis aries* (Domestic sheep)**, *Equus asinus* (Domestic donkey), *Equus caballus* (Domestic horse)**, *Oryx dammah* (Scimitar horned oryx)**, *Ammotragus lervia* (Barbary sheep)**, *Canis familiaris* (Domestic dog), *Vulpes vulpes* (Nile fox)**, *Hyaena hyaena* (Striped hyaena), *Gerbillus pyramidum* (Greater gerbil)**. In addition, Peet and Woolley (1923: 89) report finding a gazelle horn in one of the houses on West Street in the Walled Village. No gazelle bones, however, were actually identified in this study sample. There were also plentiful remains of fish, bird and reptile; these will be intensively studied in a future season.

Before discussing the findings of this preliminary analysis, a few introductory comments are in order. To begin with, preservation at the site is excellent in that there appears to be little loss of bone due to post-depositional processes such as erosion and decomposition. Because of the arid climate, the type of soil and the lack (or extreme paucity) of agents that "metabolize" animal flesh, many of the bones still have muscle and connective tissue, skin and even hair adhering to them. The possibility of finding foetal and very immature remains is therefore great. There is evidence of canid-type

[1] Those species marked by a double asterisk (**) are only provisional identifications. Except for the domestic forms, all the genus and species terms used here are based on the usage of Osborn and Helmy (1980).

TABLE 11.1. THE FAUNAL SAMPLE FROM THE WORKMEN'S VILLAGE: NUMBER OF IDENTIFIED BONES. [1]

Species	LW6	OWV	Woolley's Dump [2]	Sum for WV	Zir- Area	Chapels	Animal Pens	X1 Site	Totals
<i>Sus</i>	94	613	120	827	21	7	29	109	993
<i>domesticus</i>	9.5%	61.7%	12.1%	83.3%	2.1%	0.7%	2.9%	11.0%	[48.8%**]
	45.2%	30.9%	42.7%	33.4%	34.4%	7.8%	36.3%	29.8%	32.3%
<i>Capra</i>	33	424	85	542	11	19	16	83	671
<i>hircus</i>	4.9%	63.2%	12.7%	80.8%	1.6%	2.8%	2.4%	12.4%	[33.0%**]
	15.9%	21.3%	30.2%	21.9%	18.0%	21.1%	20.0%	22.7%	21.8%
<i>Bos</i>	4	308	29	341	8	7	2	12	370
<i>taurus</i>	1.1%	83.2%	7.8%	92.2%	2.2%	1.9%	0.5%	3.2%	[18.2%**]
	1.1%	15.5%	10.3%	13.8%	13.1%	7.8%	2.5%	3.3%	12.0%
<i>Equus</i>	1	12	2	15	-	4	-	-	19
species [3]	5.3%	63.2%	10.5%	78.9%	-	21.1%	-	-	
	0.5%	0.6%	0.7%	0.6%	-	4.4%	-	-	0.6%
Misc.	5	11	-	16	2	-	-	1	19
Bovidae	26.3%	57.9%	-	84.2%	10.5%	-	-	5.3%	
	2.4%	0.6%	-	0.6%	3.3%	-	-	0.3%	0.6%
Medium	-	7	-	7	2	-	2	12	23
Carnivore	-	30.4%	-	30.4%	8.7%	-	8.7%	52.2%	
[4]	-	0.4%	-	0.3%	3.3%	-	2.5%	3.3%	0.7%
Small	2	5	-	7	-	3	-	3	13
Carnivore	15.4%	38.5%	-	53.8%	-	23.1%	-	23.1%	
[5]	1.0%	0.3%	-	0.3%	-	3.3%	-	0.8%	0.4%
Small	2	4	-	6	1	-	-	3	10
Mammal	20.0%	40.0%	-	60.0%	10.0%	-	-	30.0%	
	1.0%	0.2%	-	0.2%	1.6%	-	-	0.8%	0.3%
Medium	15	155	13	183	9	7	5	50	254
Mammal	5.9%	61.0%	5.1%	72.0%	3.5%	2.6%	2.0%	19.7%	
	7.2%	7.8%	4.6%	7.4%	14.8%	7.8%	6.3%	13.7%	8.3%
Large	1	96	9	106	5	6	-	4	121
Mammal	0.8%	79.3%	7.4%	87.6%	4.1%	5.0%	-	3.3%	
	0.5%	4.8%	3.2%	4.3%	8.2%	6.7%	-	1.1%	3.9%
	34	223	10	267	1	26	20	50	364
Fish	9.3%	61.3%	2.7%	73.4%	0.3%	7.1%	5.5%	13.7%	
	16.3%	11.2%	3.6%	10.8%	1.6%	28.9%	25.0%	13.7%	11.8%
	12	118	11	141	1	7	5	37	191
Bird	6.3%	61.8%	5.8%	73.8%	0.5%	3.7%	2.6%	19.4%	
	5.8%	5.9%	3.9%	5.7%	1.6%	7.8%	6.3%	10.1%	6.2%
	5	10	2	17	-	4	1	2	24
Reptile	20.1%	41.7%	8.3%	70.8%	-	16.7%	4.2%	3.3%	
	2.4%	0.5%	0.7%	0.7%	-	4.4%	1.3%	0.5%	0.8%
Totals	208	1986	281	2475	61	90	80	366	3072
	6.8%	64.6%	9.1%	80.6%	2.0%	2.9%	2.6%	11.9%	

Abbreviations in Table 11.1.

LW6: Long Wall Street, house no. 6, inside the Walled Village.

OWV: extra-mural area outside the Walled Village, mostly rubbish heaps.

WV: Workmen's Village: only material from inside the Walled Village.

**: subsample of just the three primary mammalian food animals.

Percentages: the first is of the species total; the second is by site.

Notes on Table 11.1.

- [1]. Excludes ribs and all vertebrae except the atlas, axis and sacrum.
- [2]. This is a spoil heap from the 1920's excavations within the Walled Village.
- [3]. Primarily *Equus asinus* (Domestic donkey); a few may be *E. caballus* (Domestic horse).
- [4]. Most are *Canis familiaris* (Domestic dog); some may be *Vulpes vulpes* (Nile fox).
- [5]. Rodent forms.

gnawing and rodent activity, yet there does not appear to be very much bone loss attributable to these causes. Quantifying this, however, is extremely difficult, and better ways of doing so are being sought. Over and above their excellent preservation the excavated bones are also fairly clean and free of any sort of encrustation. This eliminates the necessity of washing them and facilitates measurement and the close examination of diagnostically critical anatomical landmarks.

Furthermore, the generally clean condition of the bones allows fragments of the same bone, whether broken recently (with clean fresh fractures) or in the distant past, to be more readily identified. As a consequence a fair number of broken bones were "reassembled", including, in a few cases, fragments coming from different parts of the site. The time invested in this type of tedious work was therefore sufficiently rewarding to encourage deliberate bone mending. It should also be noted that in a few cases where fragments of the same bone came from two different and widely dispersed parts of the site, this yielded direct information on the horizontal displacement of the midden deposits and possibly even information on butchering and food consumption practices.

There follows discussion of the major mammalian food animals identified in the el-Amarna faunal sample.

11.2 *Sus domesticus* (Erxleben 1777): domestic pig.

The most frequently encountered domestic species was the pig. [2] At this stage of the analysis the specific racial variety or breed has not been determined, but it is clear from the length of the third molars that we are dealing with a domestic form. No wild form seems to be present. The fact that all the skeletal elements of this species are present, as well as both sexes and

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- [2] Since the pig's skeleton has more bones than the goat's or the ox's, the suggestion that pig was the most important animal meat source could be exaggerated. However, the fact that there were significantly more pig bones at el-Amarna than of any other domestic species, that all the skeletal elements and ages of pigs were represented, and that an adult pig provides at least two times (if not three) as much useable meat as an adult goat, more than offset any error introduced by the fact that pigs have more bones than the other two food species under consideration.

a wide variety of age groups, indicates that the pigs were slaughtered locally and very likely raised in or near the Workmen's Village.

If some of the workers were raising animals, as I believe was the case, it throws into question Peet and Woolley's (1923: 51, note 1) conclusion that a fragmentary inscription with the word "herdsman" on it does not refer to the occupant of the house but "to some attribute of the Aten." [3] (The inscription was found in House no. 10 on Main Street inside the Walled Village). It also shows that the workers were not restricted to cutting out tombs in the nearby cliffs but were involved in other economic activities as well. This also appears to be the case at Deir el-Medina, where workers engaged in crafts in addition to quarrying and tomb decorating (Janssen 1975: 183-84, 502-03). In this context it is significant that several pig skulls, on exhibit in the Agricultural Museum in Dokki (Cairo), are very probably associated with New Kingdom settlement (Keimer 1937; Hecker, in press).

The discovery in 1983 of a complex of what can best be described as "animal pens", just outside the Walled Village, further supports the conclusion that some of the village inhabitants were engaged in raising animals (see Chapter 4). Unfortunately, too few bones were uncovered in this area to tell for certain which domestic species occupied them, but the circumstantial evidence and the preliminary results of an analysis of coprolites reported in Chapter 4 support the contention that they were used as pig sties, each with its own creep or nest (?) for piglets. Furthermore, the stratigraphic situation of the pens and their modes of construction suggest that animal raising was probably as old as the village itself.

As for the ages at which the el-Amarna pigs were slaughtered (or died), a preliminary study of the lower jaws and teeth [4] gives the following results (Figure 11.1): roughly 43.3% (N=39) were killed (or died) before nine months of age; an equal percentage by 24 months; with only 13.4% (N=12) surviving beyond their second birthday. The significance is twofold: a) the workmen had access to the pigs all year long, from which we infer that they raised them locally; b) the preferred ages at which the pigs were slaughtered were between 2-8 months and between 14-24 months, [5] which may indicate that the males were killed at one age and the females at another. If this was indeed the practice in New Kingdom times, it would be similar to modern practices, except that today the preferred ages are five months for males and twelve months for females. [6]

[3] See also Gunn's translation (*ibid.*: 147) of another fragmentary inscription in which the Seth-animal (i.e. the pig) is referred to.

[4] The teeth and jaws were taken from all parts of the site and pooled for this study.

[5] Of the 37 lower jaws between 2-9 months, 10 (29.7%) fell between 2-4 months, 16 (43.2%) between 4-6 months, and 11 (29.7%) between 6-9 months.

[6] Based on an informant interviewed on a visit to the pig-raising village of el-Bayadiya, just to the north-east of Mallawi, and only 14 kilometres north of el-Amarna.

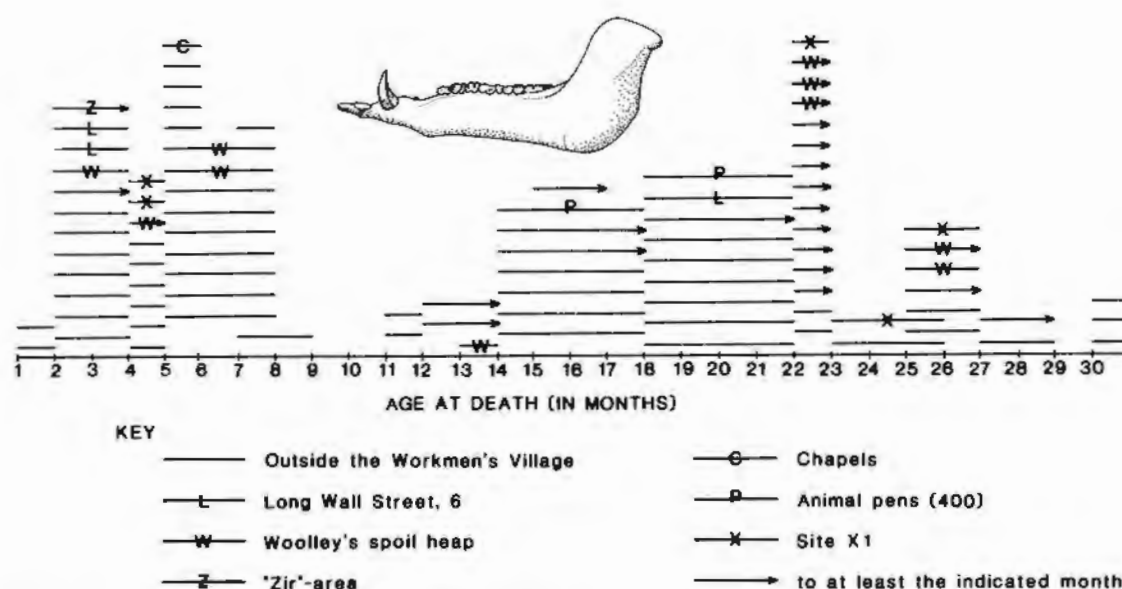


Figure 11.1. The slaughter ages of the pigs from the Workmen's Village, based on a study of 89 mandibles. Tooth eruption data from Higham (1967), Matschke (1967), and Bull and Payne (n.d.).

If the 14-24 month age group represents primarily females (sows) then it would seem that they were being culled, perhaps on a regular basis, over a period of one year, with a slight bias or preference toward killing them near the end of their second year. This would mean that the females were being removed after they had reached their reproductive age and possibly after they had had their first litter or had shown themselves to be infertile. The males, on the other hand, would have been killed before or just as they reached reproductive maturity, i.e. before they reached an age at which they would be difficult to handle or care for because of their large size.

Only a small percentage of the pigs, some 13.4%, survived into their third year and beyond. According to the exploitation model proposed here, these older animals would have been special breeding females and certain selected males. Unfortunately, the number of jaws that have so far been sexed is too small either to support or to refute the interpretation presented here.

11.3 *Capra hircus* (Linnaeus 1758): Domestic goat.

Bones of domestic goat are the second most common species identified in the el-Amarna faunal assemblage. Like the pigs, goats appear to have been locally raised, since many were apparently slaughtered on the site. At this stage of the analysis, the only other interesting observation to be made concerns the distribution of horn cores and sheaths. These elements represent about 20% of the goat remains found in the multi-roomed non-residential building located approximately fifty metres south-west of the Walled Village

(referred to as the X1 site, cf. Figure 1.3), but only about 5% of the goat remains found inside the village (the Long Wall Street sub-sample), and in the midden immediately outside. Since differential preservation cannot be invoked to explain this disparity in distribution, it would appear that it may have a cultural explanation.

It could be that the horns and/or the sheaths had some special economic or social importance (e.g. for tool-making, craft objects or status markers), and were collected and processed in or near this building. [7] Or it may be that the goats were slaughtered at the building, after which the "more" useable meat parts were parcelled out as rations to the inhabitants of the village proper. This would lend some support to the suggestion that this structure may have served some sort of administrative function (Kemp 1980: 8). Alternatively, part of this building complex may have been used to house some of the goats. This is inferred from the observation that although goat droppings were reported from all the areas that have been excavated, they appear to have been more common in some of the rooms of this building than in others (Kemp 1980: 8, 10).

While some of the goats may have been kept at the X1 site, I think, as did Peet and Woolley (1923: 54, 60), that it is more likely that the herd would have been regularly kept in the open space at the south-west corner of the Walled Village. Some may also have been penned in individual workmen's houses (ibid.: 60, 86, 90), but if so they probably represent exceptions, not the rule.

11.4 *Bos taurus* (Linnaeus 1758): Domestic cattle.

The third most common domestic food species is cattle. Whether it was the long- or short-horned variety (or both) which is represented is yet to be determined. The presence of a dwarf form is also being explored. The faunal and archaeological evidence so far indicates that the bulk of the cattle meat was apparently brought in from outside the immediate area, but there may also have been some local rearing of cattle, particularly in the last years of the village's decline. The distribution of skeletal elements in the sample and the ages at which the animals were killed suggest that most of them were probably slaughtered elsewhere and transported to the village in sections.

This argument is further supported by the fact that the largest number of cleaver-chopped (as opposed to knife-cut) bones and the highest proportion (12 out of 18) of multi-articulated bones [8] come from cattle, and nine of these were hind-quarters. These findings, then, offer independent confirmation of the butchering scenes so often depicted in tomb wall paintings, in which the entire ox limb is removed from the carcass as a unit. The so-called meat

[7] It may not be an accident that the one ox horn core fragment identified so far also comes from the X1 site.

[8] Three or more contiguous bones in their correct configuration in the skeleton and all from the same individual.

jars [9] found at the site may have been used to transship these cuts of meat. The meat may then have been allocated to the workmen as state employees (Peet and Woolley 1923: 65) or purchased by them for their own consumption.

In addition, some of the cattle remains found in the midden deposits of the village may have come from locally reared cattle. Peet and Woolley (1923: 54, 55, 74, 75) report finding mangers, stone troughs and tethering-stones in several of the houses for the purposes of stabling the family's ox, donkey or horse. [10] However, the improvised nature of the "stables" and the supposed cattle enclosure in the south-west corner of the walled village (Figure 1.3) [11] suggest that these structures date to the final phase of the occupation of the village after the death of Akhenaten and when state support had been reduced or completely withdrawn. They may well be the handiwork of the last remaining occupants who used the houses only in the final stages of the village's history (cf. the discussion in Chapter 1). Ecological considerations also make it unlikely that cattle were raised during the early phases of the village occupation, because the difficulty and expense of providing sufficient fodder and particularly water in an area where neither was easily or immediately available would have made cattle-raising an uneconomic proposition.

11.5 Preliminary observations

While the analysis of the el-Amarna faunal assemblage is still in progress the following observations can be made with reasonable reliability at this point.

1. First in importance is that the sheer abundance of pig remains found in the midden deposits of the village suggests both that pig was eaten by the lower classes, and that it was probably a regular and important component of their diet. Egyptologists' findings of increasing numbers of literary references

[9] Frankfort and Pendlebury 1933: 112, Type XII; cf. Chapter 10, group 13. These jars could also have been used for storing or pickling, though they were too small to accommodate a whole intact ox limb. Being, at most, only 30cms. wide at the mouth and 66 cms. deep, it would have been necessary not only to disarticulate or dismember the major limb elements one from the other, but also perhaps to break them into smaller more useable chunks. This was most certainly the case if this meat, while still on the bone, was cooked in the much smaller and shallower cooking jars (Types 502 and 542). Thus at either of these stages (i.e. transshipment, storing, pickling or cooking) cleaver-type chopping of the cattle bones would have been carried out.

[10] In most cases we would be hard pressed to identify which of these animals was in fact kept in these makeshift stables or stalls. I am more inclined to think they housed a donkey used for transportation and for haulage.

[11] This enclosure had breast-high walls of unhewn cobbles and was built, according to the excavators, after the population had dwindled (Peet and Woolley 1923: 54).

to and artistic representations of pig during the New Kingdom [12] provide further confirmation of the heightened economic importance of pig at this time, while the identification of a pork-related *Trichinella* cyst in a Twentieth Dynasty mummy of lower-class status (Millet, et al. 1980) provides additional support for the proposition that pork was consumed by that class. However, whether this can be interpreted to mean pork was a regular part of the diet of the population as a whole is another question.

By the fifth century B.C., as reported by Herodotus (II.47), the pig was regarded as unclean, but pork was nevertheless eaten on certain ritual occasions (cf. Lloyd 1976: 216-219). Could this have been the case at el-Amarna as well? The location of the proposed pig pens outside the Walled Village and adjacent to the chapels might be used as evidence to support such an argument, but the relative paucity of pig remains in this immediate area argues against such a conclusion. The chapel area is, in fact, the only part of the site where pig remains do *not* predominate, and goat bones are at least twice as common as pig (though the bone sample as a whole is very small: N=90; cf. Table 11.1). Indeed, the only animal remains from the entire site that could possibly be interpreted as having a "ritual" significance was the intact hind limb of a young goat found "encased" between two chapel walls. [13] A superficial examination of these bones did not reveal any cut- or burn-marks, however, so it is difficult to tell how or for what they were used.

2. If the workmen were raising predominantly pig and goat, rather than cattle or sheep, as I have argued above, this shows a judicious and sound use of this desert environment five kilometres away from the Nile. Because this is a region of very low rainfall, with long dry summers, the vegetation is sparse and composed primarily of tough xerophytic species that only goats, as grazers and browsers, (along with camels) could subsist on it. Goats will also eat "scraps" from the household table. Thus providing "fodder" for these animals would not have posed much of a burden on their handlers as long as the herd size was not too large. However, this is not the case for either sheep or cattle, which require more lush vegetation and are more finicky in their food preferences. In addition, their need for water is even greater than that of goats. This is why the el-Amarna region, in general, does not make good sheep or cattle grazing country.

[12] For a fine review of the literature on this subject see Darby, Ghalioungui and Grivetti (1977): 186-190. Lanny Bell, of the Chicago Oriental Institute, has also kindly supplied (via Kemp) the following reference: *Urk.* IV: 1797.2 = Petrie (1913), Plate 80, line 24; p. 34 (Gardiner) = Hayes (1938): 21: benefactions to the Memphite temple of Ptah, temp. Amenophis III: 1000 boars (*rrī/š3i*) and 1000 gilts (?) (*rrut/š3t w3dt*). Previous translations have rendered the latter as "1000 young pigs", their female gender not having been noted. This is apparently a reference to breeding stock.

[13] This find was made late in the 1983 excavation season in a space between Chapels 570 and 571, see Figure 3.2.

Raising pigs at the Workmen's Village was ecologically sound for essentially the same reasons. Pigs, as omnivores, could be fed from the same stores as were the humans who tended them. Furthermore, "table scraps" and other household garbage are readily eaten by pigs, which are scavengers as well as omnivores.

The only real problem confronting the workmen was providing for the water needs of their animals, especially those of pig, since the latter require a lot of water for cooling as well as to assuage thirst. [14] Since no wells were found in this part of el-Amarna it meant transporting water to the village both for human and animal needs (cf. Chapter 5). [15]

3. Sheep do not appear to be present at the site. Thus far only two bones have been identified that may come from sheep. This absence (or near absence) of sheep is all the more significant when one realizes that they were present in the more densely settled areas of el-Amarna (Jackson 1951). [16] While it is not at all surprising that sheep were not raised at the Workmen's Village for the reasons noted above, it is noteworthy that cuts of mutton were not brought in as were, apparently, sections of beef. This may point to social or status differences in meat consumption practices (perhaps a result of beef rather than sheep being included in government rations distributions), or indicate the absence or scarcity of sheep in this region.

4. While the evidence is limited so far, there are strong indications that the workmen augmented their domestic meat supply with the occasional hunting of moderate- to large-sized game animals. However, the small contribution to their diet from this source suggests that it was an opportunistic affair rather than a regularly recurrent activity. On the other

[14] Regarding the pig's special needs Devendra and Fuller (1979: 80) advise that "in the tropics water should be available *ad libitum* whenever possible." For pigs of various body weights they give the following daily requirements for water (Devendra and Fuller 1979: Table 6.4): pigs weighing 10-45 pounds, one litre daily; 45-110 pounds, three litres; 110-200 pounds, five litres; pregnant sows, eight litres and lactating sows require twenty litres daily. A present-day pig farmer in the village of el-Bayadiya, only 14 kilometres north of el-Amarna and beside the Nile, claimed to fill a large metal dish, holding approximately twenty litres of water, four times a day and more often in the summer months. This particular farmer had forty or so pigs (sows) and piglets. In the summer the pigs are routinely doused or brought to the nearby Nile to cool off.

[15] Regularly driving the pigs to the Nile to cool them off would not have been a viable alternative to hauling water. Pigs are difficult to drive, and the high summer heat would have required leaving them by the riverside all day, which might not have been convenient or accepted by the inhabitants of residential areas near to the Nile.

[16] Peet and Woolley (1923: 86) claim that they found a sheep skull in one of the workmen's houses. This specimen, however, was not mentioned in Jackson's (1951) report, and its identification has yet to be confirmed.

hand, the trapping of small game was probably more important, as it would have been more compatible with their other duties and responsibilities. The traps could be made after the day's work and could be set in their places and checked on the way to and from their quarrying activities. But a full appreciation of both the hunting and trapping at the Workmen's Village must wait until the analysis of the entire sample, including the fish, bird and reptile remains, is completed.

5. The canid remains consist mainly of domestic dog. Though small in absolute numbers they are distributed unevenly throughout the site, i.e. more than 50% were found at the XI site alone. Since the multiroomed structure found there may have served administrative or possible police functions, the dogs may have been used to protect its occupants and assist their control of access to the site by outsiders.

11.6 Conclusions

The results of the preliminary analysis of the faunal assemblage from the Workmen's Village and its immediate environs show that the workmen were raising pig and goat. A limited amount of hunting and probably trapping was also practised to augment their meat diet. Finally, when perhaps increasingly isolated as the main city was abandoned, some inhabitants may have turned to raising cattle in order to sustain themselves and their families.

While the findings so far have been illuminating, they are really only a small part of what could be learned by the study of all the faunal material from all the different localities at el-Amarna. Because it was a large and complex city composed of palaces and temples along with residential, religious, administrative and industrial quarters or districts, a comparison of the remains of different animal species found in these different localities within the city would allow for the investigation of a wide variety of important questions relating to social and/or class differences in their exploitation and consumption. One could also trace the flow of animal products into, through and out of the city and examine the utilization of particular skeletal elements for the manufacture of status and utilitarian objects.

In sum, there is much work yet to be done if the full potential of el-Amarna to enlighten us about life in ancient Egypt during New Kingdom times is to be realised. It would be unfortunate if this opportunity were not exploited to its fullest.

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CHAPTER 12

POTTERY CULT VESSELS FROM THE WORKMEN'S VILLAGE

by

LINDA C. HULIN

12.1 Introduction

Since the current series of excavations began at the Workmen's Village at el-Amarna in 1979, sherds and large pieces from several tall cult stands and pieces from fenestrated lids have been found. This report focusses on the six most complete of the stands, and the fenestrated lid which is the better preserved of the two.

12.2 Description of the pieces

The fabric of all the following pieces is soft Nile silt-ware, with no pre-firing surface treatment.

(a) 42695 (Figure 12.1), a lid pierced by a row of fenestrations around its base. The lower part comprises a group of sherds of which three (43722, 42695, and 45963) fit together and have been drawn, although all have broken along the line of the fenestrations. The bottoms of the fenestrations are straight, and their sides appear to have risen similarly, so that their original form may well have been trapezoidal, corresponding to the diminishing surface area of the lid. The diameter of the lower rim varied between 17 and 18 cms. A fourth sherd (51109) represents the top of a lid of the same kind, but nowhere does it join directly with the other sherds. It comes from the same context (unit [247] of the "chapel dump", see below) as the sherds from the lower part, and sherds from a far more fragmentary example of a lid. It has thus been used to complete the drawing of the whole shape. The straight edge and corner of a fenestration are preserved, strengthening the interpretation that the fenestrations were trapezoidal. In the course of manufacture, a hole had been left in the top of the lid, and into it a cylindrical plug of clay had been inserted prior to firing. This provided a solid handle by which the lid could be lifted from the top. Traces remained of an original coating of gypsum over the lid, but there were no signs of blackening from smoke. The original total height of the lid is estimated to have been about 15 cms.

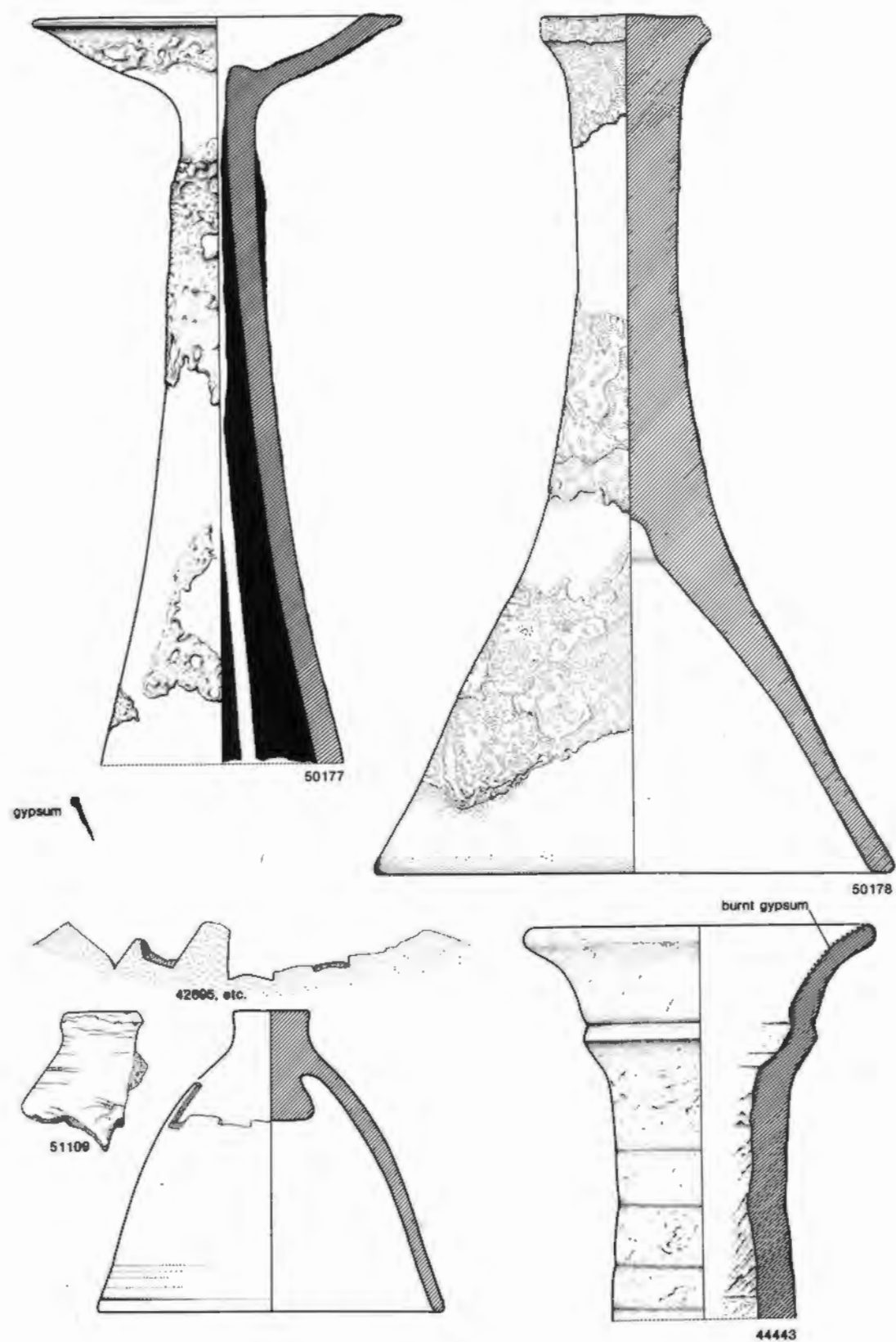
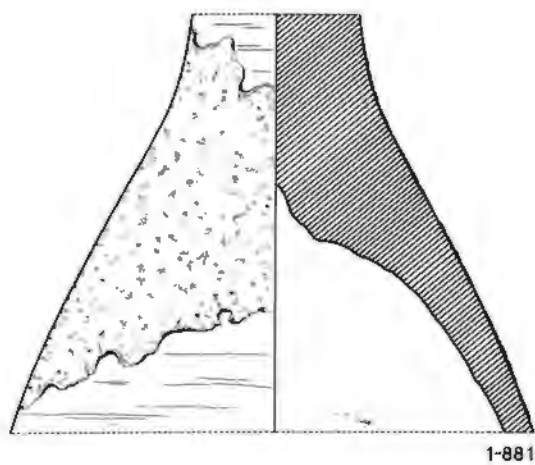
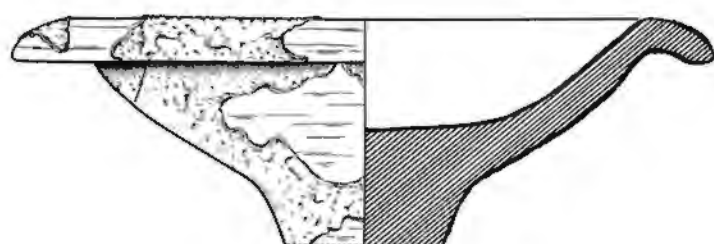
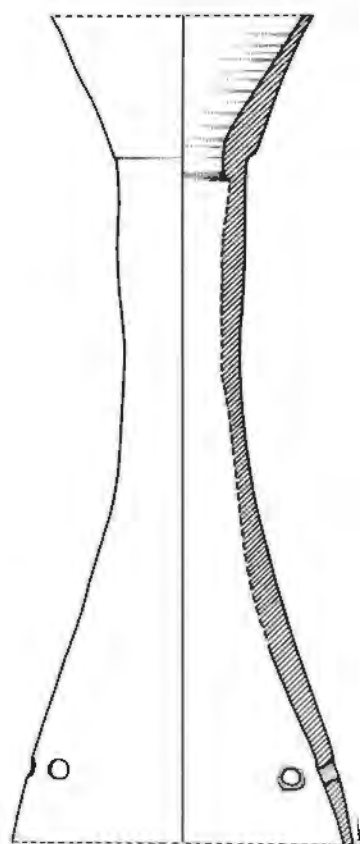


Figure 12.1. Fenestrated lid and stands. Scale 1:3.



1-881



51973;

Figure 12.2. Pottery stands. Scale 1:3 (1-881); 1:6 (51973).



Figure 12.3. Pottery stand **51973**. Scale is 1 metre.

(b) **51973** (Figures 12.2 and 12.3), a tall hollow stand with lotus-shaped neck, flaring towards the base. Part of the base is missing (as is the rim), but the preserved part is pierced by two small circular fenestrations. It remains uncertain whether matching circular fenestrations occurred on the missing part as well. Patches of a coating of gypsum survive over the outside surface, and on the interior of the flaring neck. The maximum preserved height is 88.5 cms.



Figure 12.4. Pottery stand **44443**.

(c) **44443** (Figures 12.1 and 12.4), the upper part of a cylindrical stand with flaring rim, and a ridge around the upper neck. The exterior and the inside of the flaring mouth were originally coated with gypsum. Part of the gypsum on the interior has been burnt. The maximum rim diameter is 17.5 cms., and the total preserved height 19.5 cms.

(d) **50177** (Figures 12.1 and 12.5), a tall, gently flaring stand with a wide bowl attached; the bowl is pierced at its centre and has a flattened, everted rim. The base is missing. A thick coating of gypsum has been added to the exterior, and to the inside of the bowl. Gypsum has also been poured into the hollow stem to fill it, except for a narrow hole from top to bottom, apparently formed around a stick, or caused by a stick being forced into the gypsum before it dried. When first found, a short length of stick still remained in the main upper sherd forming the stem. The total preserved height is 37 cms., the maximum rim diameter 18.4 cms.



Figure 12.5. Pottery stand 50177.

(e) 50178 (Figure 12.1), a tall slender stand with widely flaring base; the upper part of the stem is solid, indicating that the now missing top part of the stand probably terminated in a wide bowl. A thick coating of gypsum has been added to the exterior, and runs over the solid upper surface, which formed part of the interior of the bowl. The height is 42.7 cms., the maximum base diameter 25.8 cms.

(f) 1-881 (Figure 12.2), two parts of a tall stand with widely flaring base, and a bowl attached, with everted rim. The central part of the stand, which must have been solid, is missing. The lower rim is also broken away. A thick coating of gypsum has been added to the exterior, and over the interior of the bowl. The maximum rim diameter is 25.1 cms.

12.3 Comments

The fenestrated lid (42695) appears to be unusually decorated. Fenestrated lids, presumed to cover incense burners, are known from as early as the Old Kingdom (Petrie 1900: Plate XVI.6). This example is pierced by small circular holes, blurring the distinction between function and decoration, for, in order to function properly - to allow smoke to escape - holes of some kind are needed, which could most simply be made by puncturing the surface by a stick during manufacture. Lids with circular holes continued to be made in the New Kingdom (e.g. Petrie 1890: Plate XX.34, from Gurob; Nagel 1938: 91, Figure 14A, B). An unusual variant is a Middle Kingdom lid from el-Haraga pierced by long and short narrow slits (Engelbach 1923: Plate XLI, Type 92M, from tomb 312; cf. *Lexikon* II: 484-487, Abb. 1.32). In the case of our Amarna example, function was combined with decoration for it was pierced by a row of what appear to be trapezoidal fenestrations, bases downwards: a shape whose existence in Egypt is not previously documented, and is equally unknown in Palestine, an area which provides possible parallels to other Amarna pieces (see below).

Stand 51973 is also an unusual piece by virtue of the two holes in the lower part. A closely similar example can be cited from the New Kingdom at Gurob (Loat 1905: Plate II.39, drawn upside down), whilst one of the tall stands found in 1921 in Chapel 524 probably also had at least one (just visible in Figure 12.7, just below the upper edge of the break in stand no. 2). Deir el-Medina probably supplies an example of a stand with incorporated bowl in which the stand portion has been pierced (Nagel 1938: 39, Figure 25.126). Circular fenestrations also appear on squat stands (e.g. Peet and Woolley 1923: Plate XLVI, 1/86), a practice common to Syro-Palestinian tradition. [1] It should be noted, however, that the tall stand 2904 from the Fosse Temple III at Lachish (Tufnell 1940: Plates LIIIA.331; LIIIB.331; LVIIIB), which is a unique piece in Palestine (although the ware is local) is decorated in the same manner as stand 51973; the fenestrations are, however, placed just a little higher. Normally the rims and bases of Palestinian stands conform to the prevailing local tradition, but stand 2904 is clearly Egyptian in style (cf. 11/251 from el-Amarna, Peet and Woolley 1923: Plate XLVI; Figure 12.7). This is not unexpected, because Lachish was in a strategic position in Egypt's empire, and Egyptian presence there was strong. The city may even have had its own Egyptian governor. Fosse Temple III is dated to the reign of Ramesses III, a

[1] The apparent scarcity of parallel examples of tall stands could well be a result of poor pot drawing in the case of older excavation reports, and also loss of examples through breakage, since the holes represent a weak spot in the vessel.

little over 150 years after the reign of Akhenaten. Although there is no evidence in Egypt proper of a continuing tradition of stands with two circular fenestrations, stand 2904 probably indicates that such a tradition nevertheless existed.

Only the upper portion of stand 44443 survived the destruction of Chapel 571. While excavating a major building at Tel Jemmeh in Palestine, Petrie (1928: 21, Plate LII.30f) found a tall stand of the same type, with very similar dimensions:

Tel Jemmeh example	el-Amarna 44443
diameter at rim 17.6 cm.	16.5 cm.
diameter at ridge 13.2 cm.	11.6 cm.

Petrie noted that the surface of the stand had been "whitened", probably an example of the apparent Egyptian practice of applying gypsum plaster to vessels to be used in a religious context, presumably to consecrate them. Although this is not usually found in Palestine, practices of a similar nature are known from Mesopotamia. Cylindrical stands from a foundation deposit in the Setaba temple (dated to the reign of Sulgi, 2095-2048 B.C.) were covered with bitumen on the outside, and lime on the inside (Ellis 1968: 35ff). The date of the building in which the stand from Tel Jemmeh was found is disputed: Petrie maintained that it belonged to the Eighteenth Dynasty (Petrie 1928: 5), which would be pleasing for for this study, but more recent evaluations have brought the date down to the Iron Age I Period (1200-1000 B.C.) (Amiran and van Beek 1976). Like Lachish, Tel Jemmeh was of great strategic importance to the Egyptians, and one would expect Egyptian cultural influence to be strong there. However, the loss of the base in both cases, and the difference in date, serve to reduce the value of the comparison.

Stand 50177 affords an insight into cultic practice of the Amarna age on a practical, rather than a theoretical level. In common with all pottery from cultic contexts, stand 50177 was covered in gypsum plaster, as noted above. The attached wide bowl is pierced at the centre, through to the originally hollow stand. This had been packed with gypsum, and a stick inserted through the entire height of the vessel, presumably before the gypsum had set. A thin and broken wooden rod was actually found lodged in the hole in the upper portion of the stem of the vessel. Moreover, tiny fragments of blue and turquoise faience were found in and around the bowl and upper part of the stand. This suggests some use other than the one usually portrayed in New Kingdom scenes, namely the bearing of incense or food offerings.

The stands from the Workmen's Village present a unique group for study, coming as they do from precisely documented contexts. Although no two are alike, they fall into two broad structural categories: "true" stands, designed to support another vessel (51973 and 44443), and stands in which the vessel itself (a shallow bowl) is incorporated (1-881 and 50177; probably also 50178). The whole group can also, however, be divided into two categories by size. As Figure 12.6 reveals (it includes cult stands from the 1921-22 excavations as well), although the smaller stands cover a range of sizes, there is a major step between the largest of the smaller ones (group A in Figure 12.6), and the stands which are the largest of all (group B in Figure 12.6). The difference can be expressed by saying that the smaller ones, when stood on the floor, would

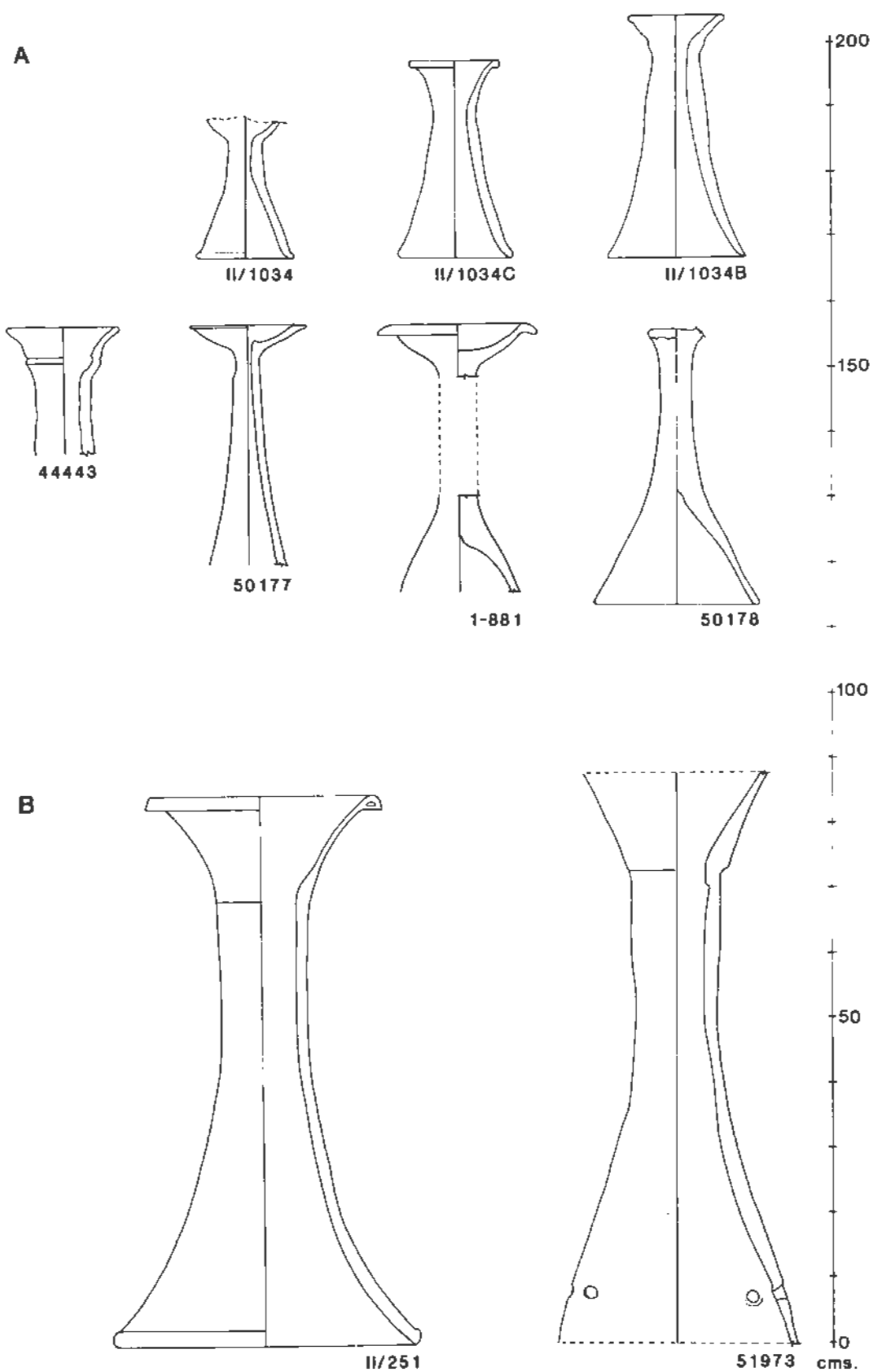


Figure 12.6. Pottery stands from the Workmen's Village, from the 1921-22 excavations, and from the current work.

be knee-high or slightly lower, whereas the large ones would be roughly waist high. The former would be relatively easy to move, and in the case of those with solid stem could be hand-held, whereas the large ones would be moved with difficulty. This broad distinction matches ancient depictions of cult stands, which are hand-held and relatively small, or taller and standing on the floor (Wreszinski 1915-23: 189-90, Tomb of Khaemhet, is an example of both; cf. Nagel 1938: 176-78).



Figure 12.7. Chapel 524, excavated in 1921. The three pottery stands are numbered 1 to 3. Cf. Peet and Woolley (1923), Plate XXVII.1.

The stands may also be grouped according to original location: (a) 50177, 50178, and 44443 from Chapel 571; [2] (b) 51873 from the inner court of Chapel 561/450; (c) 42695 from unit [247], the "chapel dump" (technically an

[2] As noted in Chapter 10, section 2, if one includes sherds and less complete specimens, a total of probably seven tall stands occurred in Chapel 571.

unprovenanced piece, but from the dump left by Peet, [3] probably after the excavation of Chapels 523 and 524 in 1921); (d) 1-881, found in Long Wall Street, house no. 6 (inside the Walled Village).

The small size of the sample precludes any analysis of the vessels according to type or function within or between the above groups. But the sample can be increased with material from the 1921-22 excavations. Cult stands (all of the hollow type) were found in the chapel area, in three different localities: 1) Chapel 524 (Peet and Woolley 1923: 103). Two examples are listed, but the photograph of the chapel itself seems to show three. The relevant part of the photograph is here reproduced as Figure 12.7 (= Peet and Woolley 1923: Plate XXVII.1), with the vessels numbered 1 to 3. Nos. 1 and 3 are apparently types II/251 and II/1034C respectively; no. 2 does not seem to be listed, but was evidently another very large hollow stand; 2) Chapel 527 (*ibid.*: 105), type II/1034B; 3) Chapel 552 (*ibid.*: 108), where three examples of "II/?" are said to have occurred. Although chapels are the anticipated context for cult stands, not least from the pictures of them on tomb and temple walls, direct archaeological confirmation as supplied from the Workmen's Village is always welcome. For one thing, it provides a clear reference point for finds of cult stands in different or ambiguous contexts.

This conclusion leads immediately to a question: were cult stands used also in houses, presumably for household cults? One of the stands from the current excavations, 1-881, was found in house debris within the Walled Village (specifically debris from the illicit digging of house Long Wall Street 5, cast into the adjacent sector of Main Street). Since the context was disturbed the value of the find is reduced. But the earlier excavations also brought to light examples of tall hollow stands within the village. One type is II/1034 (Peet and Woolley 1923: Plate XLVI [drawn upside down] = type XXII.3 of the later Amarna corpus). The illustrated specimen was found in house Gate Street 11; a further example typed by reference to it was found in the house Main Street no. 3. From Main Street house 8 came also a vessel described simply as "of pot type II" (from the living-room), by which is presumably meant a straightforward tall hollow stand. Although this earlier evidence is also somewhat unsatisfactory, it must be considered a serious possibility that pottery stands also had a place in the home. The objection can be raised that not all tall narrow stands need have had cult use. Example 1-881 was thickly coated with gypsum, which is a likely sign of cult use. With the others, however, from the older excavations, no description of appearance is given.

The discussion does not end here, however. Ancient pictures of cult stands in use often show incense burning in a bowl on the top. Yet none of the three stands with attached bowls shows signs of actual burning. How were they used? One answer is that they could have been used to contain small food offerings, such as pigeons, which are sometimes shown in the bowls in ancient scenes of offering (e.g. Davies 1923: Plate XXXIII; Wreszinski 1915-23: 189-190, Tomb of Khaemhet). The two preserved bowls attached to their stands might

[3] The same deposit produced, as well, sherds from a second fenestrated lid, but even more fragmentary than the one published here.

well be just large enough for this. In the report on the pottery analysis (Chapter 10), in the section on pottery from Chapel 571, it is pointed out that the rim sherds from cult stands with bowls attached resemble rim sherds from group 6 bowls, and that at least four of the latter were present. Two of these had burnt interiors. We know from contemporary tomb scenes at el-Amarna that incense was burnt not only in bowls on stands, but also in bowls of just this type used on their own (Nagel 1938: 177-78, with references). It is thus possible that when incense was burnt it was normally done in separate group 6 bowls. [4] The stands with attached bowls may therefore have been used for containing small food offerings directly, or as well for supporting incense burning in a separate bowl which would have left the gypsum unmarked. If this was the case, the functional difference between the two types of stand - with attached bowl and without - may have been slight. Those with bowl attached have a narrower support and would have been more easily carried, and this may have been the sole reason for the difference. This explanation, it should be noted, applies only to the smaller cult stands. Normal group 6 bowls are too small to rest on the mouths of the large cult stands. One possibility is that group 11 "hearths" were used. As reported in Chapter 10, at least eight were present in Chapel 571, one showing traces of burning on the interior, and three thickly coated with gypsum.

The relevance of this to the question of the use of cult stands in households is that examples of group 6 bowls with signs of interior burning, and sometimes pieces of incense adhering to the inner surface, have been found in other contexts than Chapel 571, including village rubbish. These are most likely to have come from within the village itself, and if so would greatly strengthen the case for cult stands having been used within the houses. This is one of many specific questions which can only be answered by extending the current excavations within the Walled Village on a larger scale than was attempted in 1979.

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[4] At Deir el-Medina incense was also burnt in a special type of bowl not encountered at el-Amarna. It is essentially a group 6 bowl with a separate inner container, in which the incense was burnt, rising from the centre of the base. These bowls were covered on both outside and inside with a thick coating of gypsum (Nagel 1938: 171-72, Plate IX).

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