



The Late Helladic IIIC Intramural Burials at Lefkandi, Euboea

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THE LATE HELLADIC IIIC INTRAMURAL BURIALS AT LEFKANDI, EUBOEAE

(PLATES 58–61)

Fifteen intramural burials were discovered during the excavation by the British School at Athens of the Late Helladic IIIC levels on Xeropolis in 1965–6. Stratigraphically all belong to the Phase II occupation and probably to the earlier of the two stages in that phase, though in several cases firm evidence for this was not obtained.¹

The burials had been placed in pits dug through the floors of the rooms, and in nearly all instances large pieces of pithoi or of large storage jars had been laid over the bodies. The positions of the graves are plotted on the plan of the Phase II structures at FIG. 1,² from which it is apparent that the general practice was to bury the dead close to the walls of the rooms, Burial 4 in Room 2 being the only obvious exception.³

In only three cases were there any burial offerings, a small jug (PLATE 58:1) and probably three stone ‘buttons’ with Burial 5, a stone amulet (PLATE 58:2) with Burial 2, and a conical bowl (PLATE 58:3) with Burial 12: it is possible that a conical bowl was also associated with Burial 5.

In most instances the pressure of the earth above had crushed the skeleton making observation and clearing of the bones difficult. Such information as was recorded in the excavation note-books at the time is given below. Usually, if not always, the body was set in a contracted position with no obvious regard for orientation.

Burial 1; in N. baulk of Room 6 and only partially cleared. It was lying under pithos sherds.

Burial 2 in Room 7. Covered by pithos sherds. Skull to N. Bones much disturbed by an ants nest. Skull crushed by weight of pithos. Posture uncertain but probably on its side with knees drawn up, arms folded across the body. Stone amulet found near wrist.

Burial 3 in Room 1. Presence of skull only reported.

Burial 4 in Room 2. Covered by fragments of a large jar.

Burial 5 in Room 2. Position roughly E–W on back, left arm straight along body, right lying across; wrist and hand bent back. Accompanied by small jug.

Burial 6 in Room 2. Contracted on left side; oriented roughly E–W with head to NW lying among pithos sherds and partly dislocated. Femur cut through. Some associated animal bones.

Acknowledgements: I should like to thank Mr Mervyn Popham and Mr Hugh Sackett for inviting me to study these remains; Mr Gordon Purdy for assisting me on my first visit to Eretria; Dr Juliet Rogers, Dr Ian Watt, the late Dr C.J. Hackett and the late Dr Calvin Wells for palaeopathological diagnoses; Dr Don Evelyn for editorial assistance; and the Calouste Gulbenkian Foundation, The Royal Society and the National Hellenic Research Foundation for financing two visits to Eretria, in 1972 and 1974.

¹ An account of the two building phases I and II in Late Helladic IIIC is given in *Excavations at Lefkandi, Euboea 1964–6* edited by M.R. Popham and L.H. Sackett (1968) pp. 11–14.

² Two photographs of these burials are given in op.cit. Figs. 23 and 24. Some further burials have been added to the plan given at the time of Fig. 12.

³ Numbers allotted to rooms are provisional and have been given here to aid identification of the location of the burials.

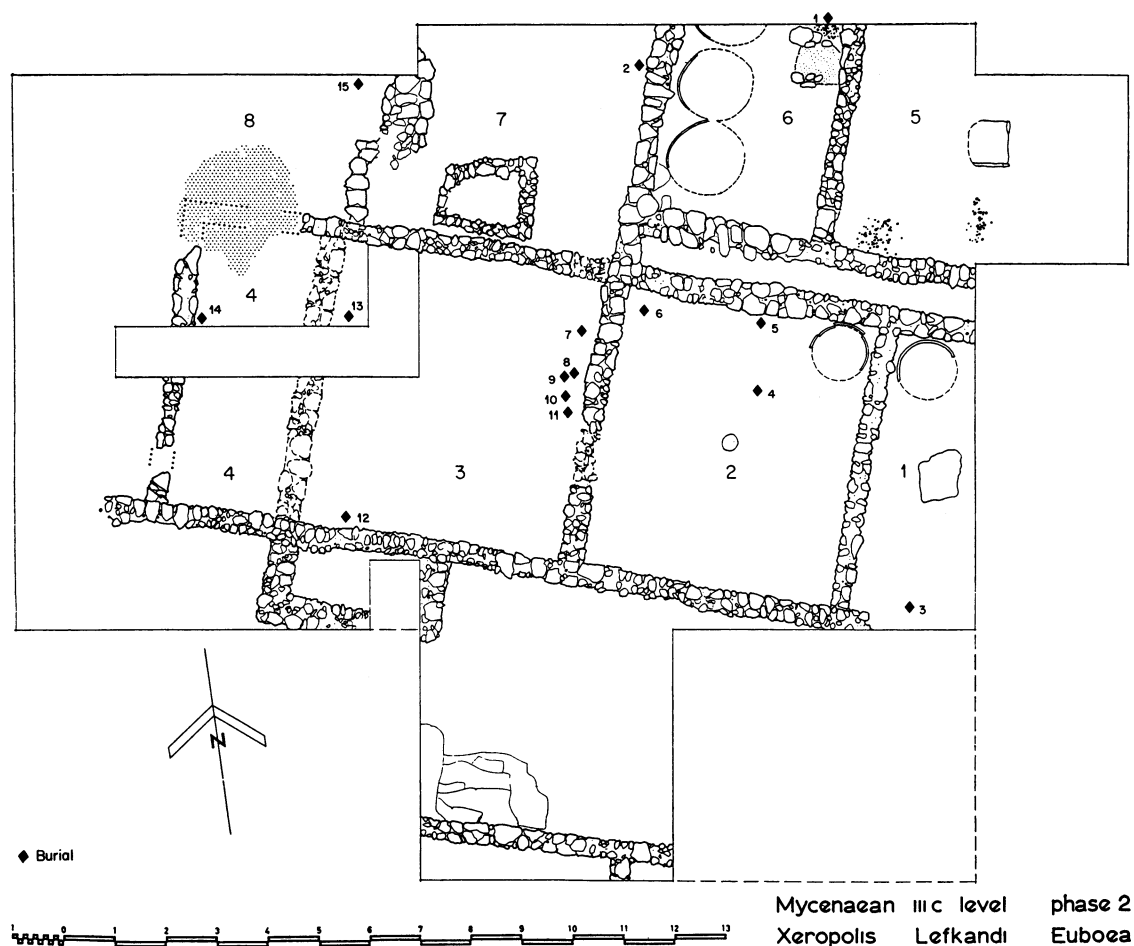


FIG. 1. Plan of the Phase II structures within the Settlement on Xeropolis.

Burial 7 in Room 3. Under pithos fragments. Contracted on its right side; left hand under chin. Oriented N–S.

Burials 8 and 9 in Room 3. Covered by fragments of a storage jar in crouching position on its right side. Oriented NE–SW.

Burial 10 in Room 3. Under fragments of storage jar. On right side, roughly E–W.

Burial 11 in Room 3. Under fragments of a large storage jar. Oriented W–E; knees appear to be drawn up.

(Burials 8–11 were positioned very close to each other and could have been buried in the same pit).

Burial 12 in Room 3. A small depression containing a possible child burial with a conical bowl set on the top. Possibly a secondary interment.

Burial 13 in Room 3. Covered with a double layer of pithos fragments. Oriented roughly S–N.

Burial 14 in Room 4. Slightly contracted and oriented N–S. On its left side with the left arm bent at the elbow and across the body.

Burial 15 in Area 8. Covered by pithos sherds. The body on its back, left arm under hips. Legs crossed below the knees.

A further five burials, the bones from which are included in this report (Burials 16–20) were found below the area of Rooms 4 and 5 in early Mycenaean levels, two at least being Late Helladic II. Further study is required to decide whether these too were intramural or were made in part of the settlement temporarily unoccupied.

No subsequent Late Helladic IIIA or IIIB burials were found in the same area or in tests elsewhere. Nor were any encountered in the Phase I buildings of Late Helladic IIIC, though they could exist below the floors which, in most cases, were not excavated.

The likelihood, however, is that the Late Helladic IIIC practice of intramural burial is a Phase II innovation, as is the architecture of this stage. Though graves of this period are known elsewhere made in deserted buildings, there would appear to be no exact parallel for this seemingly frequent practice of burials within occupied rooms at Lefkandi at this time.

M.R. POPHAM

AN ANTHROPOLOGICAL ASSESSMENT OF THE BURIALS

INTRODUCTION

The aim of this study was to determine the sex, age and, where possible, stature of the occupant(s) of each of the graves inside Xeropolis. From the information gathered an attempt was then made to say a little more about such topics as sex ratios, relatedness, infant and child mortality, and the general state of health of this community. The composition of the sample is unusual: young individuals outnumbered adults. Moreover the fact that they were all buried inside the settlement is interesting in its own right.

Most of the standard anthropological and anatomical works consulted in the course of preparing this document have already been cited in previous reports and papers by one of us on other ancient Greek human remains⁴ and need not be cited in full again here. Other relevant sources will however be cited where appropriate.

One of the biggest problems has been determining the age of the children. The fetuses⁵ – or, more likely, neonates – presented fewer problems as it was possible to apply to the lengths of their limb bone shafts a number of regression equations computed by my colleagues Louise Scheuer, Suzanne Evans and myself.⁶ The children on the other hand were troublesome in that repeatedly a wide disparity was found between their dental age and their skeletal age. Their age as indicated by the stage of eruption of their teeth did not correspond very closely with that derived from a comparison of their limb bone lengths with modern paediatric data. Where necessary dental age and skeletal age are given side by side in the text.⁷ Reference to Sundick's comparative data yielded the closest

⁴ E.g. Musgrave (1976a, 1976b); Musgrave and Evans (1981). See especially Krogman (1962), Bass (1979), Stewart (1979), Brothwell (1981) and Ubelaker (1984).

⁵ For a discussion of the spelling 'fetus' and 'fetal' see Appendix 3.

⁶ See Scheuer *et al.*

⁷ For dental age see van Beek (1983); for skeletal age Ghantus (1951), Maresh (1955, 1970), Johnston (1962), Sundick (1979) and Buschang (1982).

correspondence between dental age and skeletal age. His method for estimating skeletal age for ancient children from their bones can therefore be said to be the most reliable. This is not surprising as he devised it from his extensive study of ancient material. A possible explanation for these discrepancies is the strong possibility that the prehistoric children of Lefkandi were far less healthy than modern children. Their normal growth was probably interrupted constantly by a wide range of childhood illnesses not often seen today. As a result they may have been small for their age. Whereas limb bone development is known to be affected by disease and malnutrition it is thought that tooth eruption is less prone to interruption by such factors. It should also be borne in mind that bones shrink slightly when macerated and dried. Consequently the limb bones of the children that I measured may have been very slightly longer in life.

It should not however be assumed that this is the sole explanation. Growth studies among present-day underprivileged communities suggest that illness may affect growth less adversely than might be expected.⁸ Nor should it be forgotten that any given disease need not be longlasting to kill an otherwise healthy child. In other words it could kill swiftly, before growth was affected. Furthermore Maresh's data were 'reported as medians rather than means which might further distort comparisons which could be made'.⁹

Adult stature was estimated from the limb bone length wherever possible by means of Trotter's regression equations.¹⁰ When no complete long bone had been recovered, stature was regressed from metacarpal bone length.¹¹

In the following section the teeth were charted according to a modified version of the system recommended by Brothwell for use on ancient material.¹² A key to the symbols is given below in Appendix 1. They were chosen because they are available on many PC keyboards and thus more easily convertible into print than the more idiosyncratic ones we enjoyed using in the past.

To save space abbreviations have been used in the catalogue section. These are listed in Appendix 2.

Burial 1

BD: This grave contained much of the PC skeleton of a F 162.38 ± 4.30 cm (5'4") tall and prob. more than 35 years old.

Sex: PAS; wide SN; hum. bicond. br. (R 58.4 mm; L 57.9 mm).

Age: DJD on several vert. bodies and R navicular.

Stature: From her L ulna, 24.5 cm long.

MPOI: Cran., mand. and majority of C verts not recovered.

ROS: Well represented, inc. both ulnae (lengths: R 24.9 cm; L 24.5 cm).

Burial 2

BD: The fragmentary remains from this grave have been ascribed to an 8–9 yr old child.

Age: SA (from R clav.) and DA v. similar.

Cran.: V. friable and warped; inner and outer tables becoming detached from each other.

⁸ According to Sundick (1979).

⁹ Sundick (1979, pp. 239–240).

¹⁰ See Trotter (1970).

¹¹ See Musgrave and Harneja (1978).

¹² See Brothwell (1981).

J & T: Only R half of mand. preserved intact. Many loose teeth. DC given below.

ROS: Most regions represented, albeit in small frs. R. clav. recovered intact (length 83.0 mm).

DC:

Right							Left						
[$\bar{7}$ $\bar{5}$ $\bar{4}$ $\bar{3}$]							[$\bar{3}$ $\bar{4}$ $\bar{5}$ $\bar{7}$]						
[$\bar{6}$ $\bar{?e}$ $\bar{?d}$ $\bar{c}$ $\bar{2}$ $\bar{1}$]							[$\bar{1}$ $\bar{2}$ $\bar{c}$ $\bar{?d}$ $\bar{6}$]						
6 e d c 2 1							[$\bar{1}$ $\bar{2}$ $\bar{c}$ $\bar{d}$ $\bar{e}$ $\bar{6}$]						
7 3							[$\bar{?3}$ $\bar{?4}$ $\bar{?5}$ $\bar{7}$]						

Notes:

1. All the teeth above the upper and below the lower dotted lines were un-erupted.
2. Both upper central incisors were shovel-shaped.
3. All the teeth were in GC.

Burial 3

BD: These remains comprised only 105 g of bones of the cranial vault of a child. The bones were eroded and thin and the sutures finely serrated. Several small holes, perhaps cribra orbitalia, were observed in the roof of the R orbit; and the R temporal fossa bore a hole measuring approximately 4.0 x 5.0 mm (PLATE 59:1). A small lip on the outer rim indicated that some healing had taken place before death. According to Dr C.J. Hackett 'This is a pathological change, probably from a pyogenic infection introduced by a small penetrating wound.' (Hackett: personal communication). It is interesting to note that one of the adult crania from the Toumba cemetery (Toumba T. 12B) was similarly perforated.

Burial 4

BD: The remains from this grave belonged to a M 174.8 ± 5.8 cm (5'8 $\frac{3}{4}$ "') tall and probably more than 45 yrs old.

Sex: From the robustness of some cran. frs. See below.

Age: Assessed from the degree of wear apparent on the preserved teeth, and the presence of moderate lipping on some verts.

Stature: Estimated from the length of his R thumb metacarpal (length 47.3 mm).¹³ An estimate of stature obtained from the length of a metacarpal is less accurate than one obtained from the length of, say, a femur but is a useful indicator for all that.

Cran.: The large size of his frontal sinus and brow ridges and the ruggedness of the EOP and nuchal region indicated that he was a large man. The following measurements were taken on his fragmentary skull:

¹³ By means of a regression equation computed and published by Musgrave and Harneja (1978).

Supraorbital projection	9.0 mm
Glabella projection	3.0 mm
Minimum frontal breadth	106.0 mm
Lambda-asterion arc (R)	90.0 mm
Lambda-asterion chord (R)	?83.0 mm
Thickness at lambda	7.0 mm

J & T: The jaws likewise were poorly preserved. Most of the maxillary cheek teeth were lost sufficiently long before death for their sockets to have healed. Of the mand. only the L half was preserved, in part, with a small portion of the socket of $\bar{1}$. DC given below.
ROS: Poorly and fragmentarily represented.
DC:

Right								Left							
$\bar{8}$	$\bar{7}$	$\bar{6}$	$\bar{5}$	$\bar{4}$	$\bar{3}$	$\bar{2}$	$\bar{1}$	$\bar{1}$	$\bar{2}$	$\bar{3}$	$\bar{4}$	$\bar{5}$	$\bar{6}$	$\bar{7}$	$\bar{8}$
$[\bar{8}$								$\bar{1}$	$\bar{2}$	C	C	C	$\bar{6}$	$\bar{7}$	$\bar{8}$
$\bar{5}$								$\bar{3}$	$\bar{4}$	$\bar{5}$					
$\bar{4}$															
$]\bar{1}$															

Notes:
1. Roots of $\bar{2}$, $\bar{3}$ and $\bar{4}$ were still in their sockets. The crowns were apparently broken after death.
2. Caries was observed distally on $\bar{3}$ (extensively), and mesially on $\bar{4}$ and $\bar{5}$.

Burial 5

BD: These bones belonged to a M prob. more than 167.84 ± 4.32 cm (5'6") tall and 25-35 yrs old.
Sex: Nuchal region and SMC.
Age: WS on teeth.
Stature: From his almost complete R rad., 23.5 cm long.
Cran.: Much of vault recovered but accurate restoration impossible.
J & T: Maxilla absent. Mand. lacked only its ASR. DC given below.
ROS: QWR; many frs; few complete bones. L clav. complete (length 142.4 mm). Strange that frs of both patellae and some small H&F bones were recovered but pelvic girdle was not.
Path.: Fr. of R tib. with a hole that looked pathological.
AF: One potsherd; 125 g of animal bones.
DC:

Right								Left							
$\bar{8}$	C	C		$\bar{4}$	$\bar{2}$	$\bar{1}$		$\bar{1}$	$\bar{2}$	$\bar{3}$		$\bar{6}$		$\bar{8}$	
(8)	$\bar{7}$	$\bar{6}$	5	4	3	2	1	1	2	3	4	5	6	$\bar{7}$	(8)

Notes

1. $\overline{8}$ and $\overline{8}$ apparently congenitally absent: *cf.* Burial 5; and (from the Lefkandi Cemeteries) Toumba T.26 and PP T.47.
2. $\overline{6}$ and $\overline{7}$ both lost *ante mortem*. Sockets healed.
3. Interproximal caries between $\overline{6}$ and $\overline{7}$
4. Wear stages of 1 to 3+ indicated an age of 25–35 years at death.

Burial 6

BD: These bones belonged to a child more than 3 years old.

Age: DA 3–5. SA from R rad.: 3+ (Sundick); 1–2 (Ghantus; Maresh; Johnston). The lengths of the claws (R 65.6 mm; L 63.6 mm) yielded a similar assessment of *c.*3.

Cran.: Much of L side, inc. zygomatic and pet. temp. bones, recovered. But warping made restoration of whole cran. impossible.

J & T: Distal two thirds of L half of maxilla. Trace of a cusp of Carabelli on mesio-palatal corner of $\overline{6}$. Mand. complete. DC given below.

ROS: Skeleton far from complete but most regions represented. Remains of at least 11 verts (showing absence of neurocentral fusion); and of 12 pairs of ribs. The following bones were recovered intact: R clav. (length 65.6 mm), L clav. (length 63.6 mm), and R rad. (length 85.9 mm).

MPOI: A R femoral shaft fr., 130 mm long (PLATE 5) appears to have been cut in two. It is never easy to distinguish between deliberate and accidental damage. However my co-author, who excavated it, believes that the break was caused by a sword slash.¹⁴

DC:

Right						Left					
$\overline{6}$	$\overline{e}$	$\overline{d}$	$\overline{c}$	$\overline{b}$	$\overline{a}$	$\overline{a}$	$\overline{b}$	c	d	e	6
6	e	d	c	b	a	a	b	c	d	e	6

Burial 7

BD: The quite extensive remains from this grave belonged to a child *c.*8 yrs old.

Age: DA 7 $\frac{3}{4}$. SA from R hum., L rad., L ulna and R & L claws: 7–8 (Sundick); 4–5 $\frac{1}{2}$ (Maresh; Johnston).

Cran.: Not reconstructed.

J & T: GC. DC given below.

ROS: Well represented. R hum. (length 164.7 mm); L rad. (length 123.9 mm); L ulna (length 133.5 mm); R & L claws (lengths: 80.1 mm; 79.2 mm). Lumbar verts, most showing neurocentral fusion. More frs of upper limb recovered than of lower, which may or may not be significant.

DC:

¹⁴ See p. 13 and Fig. 24 in Popham and Sackett (1968).

Right						Left						
7		4		2			2					
	C	A							C			
6	e	d	c	b	i	i	b	c	d	e	6	
	6	e	d	c	b	a	a	b	c	d	e	6
7					i		i		4	5	7	

Notes:

1. All the teeth above the upper and below the lower dotted lines were un-erupted.
2. Upper right: i = erupting; b = present; 2 = peeping through; c = present; d = missing; 4 = visible beneath alveolar margin; e and 6 = present; 7 = visible in its crypt beneath alveolar margin. Caries on e.
3. Upper left: i = erupting; b = missing; 2 = peeping through; c = present; d = missing; e and 6 present; caries on e.
4. All teeth in VGC except for (i) caries on mesial surfaces of both right and left upper e; and (ii) signs of an abscess in region of d.

Burials 8 and 9

BD: The remains from this grave were particularly difficult to interpret as they clearly belonged to two children: (i) c.5 yrs old; and (ii) the other only 2 yrs old. These remains were v. fragile and fragmentary. Consequently it was not possible to assign the v. small pieces to either individual. Accordingly the identifiable remains have been described in greater detail to indicate why it was thought that the grave contained two bodies.

Burial 8: The 5 year-old child

Age: Determined from the length of the almost complete ?R hum. (>136.0 mm). According to Sundick this would have given an age of c.5 years; to Johnston $3\frac{1}{2}$ to $4\frac{1}{2}$; to Maresh $3\frac{1}{2}$. The TW (36.7 mm) of the distal epiphysis of an unsided femur also yielded an age of 5 yrs (Sundick).

Cran.: Fr of L zygomatic bone.

J & T: Lower L deciduous second molar ($\bar{e}$).

ROS: Vertebral column: 3 complete lumbar verts; neural arch of a fourth; bodies of 9 others; frs of others. *Ribs:* 16 frs. *Shoulder girdle:* medial ends of both clav (lengths of frs 36.6 and 35.9 mm). *Sternum:* manubrium with first sternebra; a lower sternebra. *Upper limb:* almost complete ?R hum. (length >136.0 mm); proximal two-thirds of a ?R Rad. (length 71.0 mm); proximal ends of both ulnae (length of R 63.5 mm; L 74.2 mm). *Pelvic girdle:* 5 frs. *Lower limb:* distal epiphysis of an un-sided fem. (TW 36.7 mm); a large portion of the ?L tib. was also preserved (length of fragment 152.5 mm). *H&F:* c.33 bones.

Path.: Several apparently pathological lesions were observed on these bones. The L ulna was perforated by three small holes: (1) on its anterior surface 51.0 mm from the proximal end; (2) and (3) on its lateral surface 30.5 mm and 43.0 mm respectively from its proximal end (PLATES 60:1 and 2). A similar hole was observed on the posterior surface of the R rad. 33.0 mm from its proximal end (PLATE 61:1). Because of the friable condition of these

bones it was very difficult to provide a reliable diagnosis of the cause of these holes. With great reservation Dr C.J. Hackett suggested that they might have resulted from a 'poly-focal pyogenic osteomyelitis' (Hackett: personal communication). Dr Calvin Wells believed that they were not caused by disease or trauma and suggested that they were the 'canine tooth marks of some small carnivore . . . animal tooth marks are very common on early bones' (Wells: personal communication).

The other unusual bone was a piece identified as the distal epiphysis of an un-sided femur, which was covered with crater-like growths on its articular surface (PLATE 61:2). According to Dr Juliet Rogers and Dr Ian Watt they were caused by irregular ossification.

Burial 9: The 2 year-old child

BD: The suggestion that this grave contained the remains of a younger as well as an older child is based on the recovery of a number of bones thought to be too small to have belonged to the latter. They comprised: 5 limb bone shaft frs; a distal epiphysis of a ?L femur (TW 24.2 mm); c.15 rib frs; and c.20 small unidentified frs.

Age: Assessed from the TW of the distal femoral epiphysis (Sundick).

Burial 10

BD: The remains in this pithos belonged to a child of 2 to 2½ yrs old.

Age: Assessed from the lengths of the R rad. (82.1 mm), ulna (90.6 mm) and clav. (62.5 mm); and a collection of poorly preserved J & T (van Beek; Sundick).

J & T: Maxilla was represented only by frs. Of the mand. the R half was almost complete; the L lacked the whole of the body mesial to the crypt for $\bar{6}$. The angle between the body and the ASR was v. obtuse, as in the mands of v. young children. DC given below.

ROS: Fragmentary although the R rad., ulna and clav. (mentioned above) were recovered intact.

DC:

Right					Left				
[$\bar{6}$					$\bar{1}$	]			
[$\bar{e}$ $\bar{d}$					$\bar{a}$	]			
$\bar{e}$ d $\bar{c}$ b $\bar{a}$					[$\bar{a}$	]			
$\bar{6}$					[$\bar{1}$	]			
$?_3$ $?_2$ 1					[$\bar{1}$	]			

Note:

1. All the teeth above the upper and below the lower dotted lines were un-erupted.

Burial 11

BD: The fragmentary remains from this pithos belonged to an adolescent, prob. F, aged 14–15 yrs.

Sex & Age: Difficult to determine on account of the fragmentary condition of much of the

skeleton. They were based on the state of eruption on the mandib. teeth and on the degree of fusion of the distal epiphyses of the right first metac. and metat. bones. Epiphyses are not usually found on the distal ends of these bones although their occurrence on the thumb is perhaps more frequent than was previously supposed.¹⁵ The apparent immaturity of the mand., coupled with the observation that fusion of the epiphyses of the hand start earlier in females, suggests that these remains belonged to a girl.

Cran.: The almost complete skull proved to be too friable to repair.

J & T: No upper teeth were found, which is rather strange in view of their final confined resting place. The mand. was in better condition. DC given below.

ROS: In fact well represented but in a v. fragmentary condition. In view of the absence of any upper teeth and the fragmentary condition of the rest of the skeleton, it is possible that the bones were placed in the pithos after maceration and perhaps pounding.

DC:

Right															Left
[															]
{8}	7	6	5	4	3	2	1	1	2	3	4	5	6	7	{8}

Notes:

1. $\overline{3}$: crown lost, root preserved.
2. $\overline{4}$: crown only preserved.
3. Both lower 8s unerupted. $\overline{8}$ exposed in its crypt; crown only; + 4 cusp pattern.
4. All teeth in VGC; no caries.

Burial 12

The remains from this grave comprised 227 g of assorted bones, of which 12 g *might* be human.

Burial 13

BD: The incomplete skeleton from this grave seems to have belonged to an adult M 163.44 ± 3.29 cm (5'4 $\frac{1}{2}$ ") tall.

Sex: Determined from diam. of a R femoral hd (47.5 mm).¹⁶

Age: ITD: no cranial or dental remains recovered.

Stature: From his R fibula, 34.2 cm long.

ROS: In fact of the upper part of his body only one isolated vert. fr., the distal two thirds of his R rad. and c.15 bones of his R hand were all that was recovered.

That so much of the R hand was preserved is understandable in that part of the R half of his pelvis was recovered. In an extended burial hands and pelvis lie close to each other.

¹⁵ Joseph (1951).

Pearson and Bell (1919) and Thieme and Schull (1957).

¹⁶ A score close of the mean for male samples studied by

Consequently it is not so surprising that his L hand and the L half of his pelvis were missing.

In contrast to his deficient upper limb the long bones of both legs were well represented and included a complete R fib. (length 34.2 cm).

Path.: One foot PP and the squat scaphoid of the R hand had pathological lesions.

Burial 14

BD: The remains from this burial belonged to a F 147.83 ± 4.24 cm ($4'10\frac{1}{4}''$) tall and *c.* 30 yrs old.

Age: Assessment tentative: degree of wear on teeth indicated a lower estimate; traces of slight degenerative lipping on several verts suggested a higher one.

Stature: From her L radius, 19.6 cm long.

Cran.: NVI

J & T: Of maxilla only a fr. of L half recovered. Mand. almost intact. Dentition almost complete. DC given below.

ROS: All parts represented exc. lower ends of both legs and both feet. Were they left beneath the baulk? *Cf.* Burial 1. Remains incl.: a complete L clav. (length 129.9 mm); a fr. L hum. (VDH 38.5 mm); L rad. (length 19.6 cm); R & L ilia, each possessing a PAS (a F trait).

Path.: Crib. orb in roof of L orbit.

AF: 120 g of animal bones.

DC:

Right								Left									
C			C												C		
[8	7		6	5	4	3	2	1							8]		
(8)	7	6	[		]	3	2	1		1	2	3	4	5	6	7	(8)

Notes:

1. Upper teeth generally in GC. Some interproximal caries on 6] and both upper 8s.
2. 8] and 8] apparently congenitally absent. *Cf.* Burial 5; and (from the Lefkandi Cemeteries) Toumba T.26 and PP T.47.
3. 2] : stump only visible; crown snapped off at neck (before death?).

Burial 15

BD: The remains from this grave belonged to a fetus or neonate.

Age: IU age was determined from the lengths of a L fem. (72.5 mm) and a L tib. (63.6 mm) by means of regression equations computed and published by Scheuer *et al.* Equation 2.02 yielded a male age of 38.03 ± 1.70 wks; equation 3.02 a female one of 39.03 ± 1.90 wks.

Cran.: No attempt was made to reconstruct the skull.

J & T: The teeth were poorly represented. The maxilla was missing: the mand., complete and having a bicond. br. of 68.3 mm, contained 12 empty sockets.

The developing crown of one molar was preserved separately.

ROS: Well represented.

MPOI: The remains were v. carefully excavated: among the skull fragments was found a malleus, one of the small and easily lost bones of the middle ear.

AF: 2 small animal bone frs.

Burial 16

BD: The scanty remains from this grave, weighing only 88 g in all, belonged to a child dentally as old as 4–5 yrs but skeletally much younger, perhaps 2–3.

Age: DA (from loose teeth and therefore only tentative) 4–5. SA from R hum., L rad. and L ulna: 2–3+ (Sundick); 2–2½ (Maresh; Johnston).

Cran.: 4 frs

J & T: All the teeth recovered were loose and lacked their sockets. DC given below.

ROS: Poorly represented and included: 2 vert. frs; 24 rib frs; frs of both scapulae; 1 pelvic fr.; R hum. (length ? 114.3 mm); L rad. (length 86.9 mm); L ulna (length 95.3 mm); remains of shafts of all six lower limb long bones; and remains of 5 metacs or metats.

AF: 1 potsherd; 2 animal bones; 3 shells.

DC:

Right						Left	
					{?1}		
26̄	ē	d̄	b̄	ā		ā	c̄
						{?1}	

Notes:

1. All these teeth were loose and lacked their sockets.
2. Developing crowns of three permanent teeth were recovered and identified as: (i) an upper right central incisor (I) which showed vague traces of shovelling; (ii) a lower left central incisor (ī); and the tip of a permanent canine (not charted).
3. VGC; no caries.

Burial 17

BD: The remains from this grave also belonged to a fetus or premature neonate.

Age: From the lengths of the L fem. (66.4 mm) and L tib. (57.1 mm) were obtained an estimate of M age of 35.71 ± 1.70 IU wks; and a F one of 35.47 ± 1.90 wks.

Cran.: Virtually complete.

J & T: No teeth were found though a small fr. of the L half of the mand. showed crypts for two developing molars.

ROS: Well represented.

Burial 18

BD: The extensive remains from this grave belonged to a baby with a DA of 5–6 mo. and a SA of 2–4 mo. (Ghantus; Maresh).

J & T: Sufficient teeth and alveolar bone were preserved to make an assessment of DA possible. The teeth themselves were not all fully formed and the age assessment was based on the state of eruption and the macroscopically visible degree of calcification of each tooth. DC given below.

ROS: Particularly well represented. Included: L rad. (length 60.0 mm); L ulna (length 67.5 mm) R fem. (length 93.0 mm); and R tib (length 76.0 mm), on which SA was based.

AF: 6 animal bones, one of them 54.0 mm long.

DC:

Right					Left		
{e}	{d}	ḥ	b̄	ḡ	{c̄}	{d̄}	{ē}
{e}	{d}	{c}	b̄	ḡ	{ā}	{d̄}	

Burial 19

BD: The remains from this grave belonged to a baby with a DA of c.6 mo.

Cran.: Recovered but not reconstructed.

J & T: Maxilla missing. Mand. quite well preserved; lacked only its ASR. DC given below.

ROS: QWR but in v. poor condition. For example it was not possible to measure any of the long bones of the upper limb and it was not clear how many of the misc. frs, if any, belonged to the lower limb. The only measurement recorded was the estimated length of the damaged R clav. (?50.5 mm).

Path.: 3 mysterious rib frs, each from the sternal end of a rib and each damaged (PLATE 61:3). Two bore signs of a compression fracture on the outer surface; the third had been broken near the costochondral joint long enough before death to allow some healing to take place. These rib frs were too large to have belonged to so young a child. Who they belonged to, how they were injured and indeed whether they were human is still not clear. They certainly looked human and, according to Dr C.J. Hackett, the lesions may indicate 'pyogenic osteomyelitis following penetrating wounds or compound fractures' (Hackett: personal communication).

AF: One animal bone.

DC:

Right					Left				
{c̄}				ḡ	{ḡ}				
{ḡ}	{e}	{d}	{c}	{b}	ḡ	{b}	{c}	{d}	{e}

Notes:

1. The visible degree of calcification of $\underline{a}$ and $\overline{a}$ and the morphology of the socket for $\overline{a}$ suggested an age of c.6 mo.

2. The recovery of the developing crown of $\overline{6}$ and the alveolar crypt for $\overline{6}$ is interesting but not unusual; permanent teeth and their sockets develop over a v. long period before eruption takes place.

Burial 20

BD: The remarkably well preserved remains from this grave belonged to a fetus or premature neonate.

Age: From the lengths of the L fem. (67.5 mm) and L tib. (57.5 mm) were obtained an estimate of M age of 36.01 ± 1.70 IU wks; and a F one of 35.80 ± 1.90 wks.

Cran.: Almost complete but too fragile to restore fully.

J & T: The R half of the maxilla and most of both halves of the mand. were recovered. Crowns of the following tiny, developing teeth were preserved: $\overline{a}$ and $\overline{b}$ (in their crypts); $?\overline{a}$; $?\overline{b}$; $?\underline{a}$; a ?canine and two fragmentary molars.

ROS: Well represented and included, in addition to the L fem. and tib. mentioned above, the L hum. (length 59.0 mm) and L ulna (length 54.6 mm).

AF: A limb bone epiphysis of a sheep or goat.

DISCUSSION

It was not easy to discover the *number* of individuals interred in the Lefkandi settlement (Xeropolis). The following figures may represent a fairly reliable estimate of the total number of burials therein:

Adult males:	3
Adult females:	2
Adolescent female:	1
Children of 8–9 years:	2
Children of 3–6 years:	2
Children of 2–3 years:	3
Child of unknown age:	1
Babies of 0–1 year:	2
Fetuses/neonates:	3
TOTAL number of individuals	20

Adult age had to be assessed from not very reliable features: tooth wear and supposedly degenerative changes to incomplete skeletons. I did not have the time, expertise or the facilities to attempt any histological techniques.¹⁷ Nevertheless it was possible to obtain a modest amount of information. Of the males one was between 25 and 35 years old at death (Burial 5) and another was considerably older, more than 45 years (Burial 4). The females apparently died younger: Burial 14 at about 30; Burial 1 at more than 35; and Burial 11 at

¹⁷ About which by now there is an extensive bibliography. For an overview see: Ubelaker (1984, 1986), Uyt-

terschaut (1985) and Stout (1989).

14–15 (if indeed these bones belonged to a girl, which is far from certain). The ages of the children are given above. The interesting point about the *child mortality* figures is that they reached small peaks at birth and shortly afterwards and again between 2 and 3 years. A high death rate during the first few months of life is not surprising given the low standards of hygiene that almost certainly prevailed.

It is interesting to recall that a growth study of children in a rural village in Gambia revealed an increase in mortality between 3 and 4.¹⁸ Is it an echo of the small peak between 2 and 3 at Lefkandi mentioned above? The slight increase in mortality between 2 and 3 may have coincided with the time when these children, after weaning, were being given food 'of relatively poor nutritive value and heavily contaminated with pathogenic organisms.'¹⁹ These are the years when until recently the young child was an easy prey to a long list of illnesses and infections: for example, measles, pneumonia, mumps, diphtheria, scarlet fever, otitis, meningitis, dysentery and many more that are seldom seen today. Those that did not succumb to these pestilences were presumably tough; hence perhaps the absence of older children. Similar peaks have been observed among the occupants of two ancient Cretan cemeteries: Armenoi (Minoan) and Fortetsa (Early Christian).²⁰ However it should be borne in mind that, as Xeropolis was not a regular cemetery, one should not necessarily expect to find a significant pattern in the age-distribution of its occupants.

Too few complete skeletons were recovered to make sensible comments about *sex ratios*

TABLE 1. *Male stature in ancient Greece (mainland)*

<i>Sample</i>	<i>n</i>	<i>x(cm)</i>
Lefkandi Burial 1 (female)	1	162.38 (5'4")
Lefkandi Burial 5 (male)	1	167.84 (5'6")
Lefkandi Burial 13 (male)	1	163.44 (5'4½")
Lefkandi Burial 14 (female)	1	147.83 (4'10¼")
Torone Tomb 11 ²¹	1	173.1 (5'8¼")
Torone Tomb 15	1	178.8 (5'10½")
Lerna (Middle Bronze Age) ²²	65	166.6 (5'5½")
Mycenae Royal Graves ²³	18	171.5 (5'7½")
Late Bronze Age ²⁴	89	166.3 (5'5½")
Sindos (6th–5th century Macedonia) ²⁵	24	170.2 (5'7")
Classical–Hellenistic ²⁶	10	165.4 (5'5")
Roman–Late Roman ²⁷	3	164.9 (5'5")
Byzantine–Medieval ²⁸	5	165.6 (5'5¼")
Living Greeks ²⁹	37	165.5 (5'5¼")
Modern Chalkidiki ³⁰	24	169.4 (5'6¾")
Modern Greek Macedonians ³¹	200	167.3 (5'5¾")

¹⁸ See McGregor *et al* (1961, 1968); and Sundick (1979).

¹⁹ McGregor *et al.* (1968, 351).

²⁰ See McGeorge (1983) and Musgrave (1976a).

²¹ It was possible to estimate the stature of the inhumed male occupants of Tombs 11 and 15 from, respectively, a left radius and a right ulna: Tomb 11 = 173.13 ± 4.32 cm (5'8¼"); Tomb 15 = 178.76 ± 4.32 (5'10½"). Derived from regression equations computed by Trotter (1970). Data taken from my forthcoming report on the Torone bones.

²² Angel (1971).

²³ Angel (1971).

²⁴ Angel (1971).

²⁵ Musgrave (1987: unpublished data).

²⁶ Angel (1944a).

²⁷ Angel (1944a).

²⁸ Angel (1944a).

²⁹ Angel (1944a).

³⁰ Angel (1942).

³¹ Hasluck & Morant (1929).

possible. It may or may not be significant that both men and women were buried within the settlement. It was not possible to sex any of the juveniles.

Concerning the adult *stature* of these people it is likewise difficult to say very much, except that they were not very tall, as a glance at TABLE 1 will confirm. Only two male skeletons yielded any moderately reliable information about their stature: Burial 5 (1.68 m or 5'6"); and Burial 13 (1.63 m or 5'4½"). Similarly we only know the height of two females: Burial 1 (1.62 or 5'4") and Burial 14 (1.48 m or 4'10¼").

Even though their remains were poorly preserved, sufficient bones with seemingly *pathological lesions* of several kinds were recovered to indicate that the community at large was not particularly healthy. The most striking of course were the bones with holes in them: Burial 3 (right frontal of a child); Burial 5 (?pathological hole in right tibia); Burial 8 (left ulna and right radius of a 5 year old child); Burial 19 (3 ribs); and, from the Cemeteries, Toumba T. 12B (right frontal of an adult). It has already been explained in the descriptions of these bones that it is now almost impossible to diagnose the cause of these lesions. See PLATES 59:1, 60:1 & 2, 61:1 and 62.

Arthropathies also afflicted these people but apparently without crippling them. The traces detected on most of the vertebrae affected were fairly slight. Such lesions were observed on bones of Burial 1; Burial 4; Burial 14; and – from the Cemeteries – Toumba T 14, 1.^{32, 33} For many years anthropologists have been interested in the presence of *anaemia* in ancient communities. Anaemia can be either *acquired* or *congenital*. If it was *acquired* its presence may offer some idea of standards of nutrition and hygiene prevalent in the community under examination. Among peoples occupying malarial areas the possibility that one of the congenital anaemias – sickle-cell anaemia or thalassaemia – was involved also has to be borne in mind. Why? Because it has been known for a long time that each of them can afford a degree of protection against the worse ravages of *malaria* as the plasmodial parasite is unable to prosper in the already damaged red blood cells of those suffering from milder forms of both these anaemias.³⁴

Whereas it would be interesting and useful to know whether the people of Lefkandi were afflicted with *malaria*, it has to be admitted that it is impossible to state confidently that they did. That is because it is almost impossible to determine whether the anaemia from which they may or may not have suffered was congenital or acquired. A few years ago, simply because Greece was known to be a malarial area in antiquity, it was assumed that congenital anaemia was more prevalent than acquired. Recent work however suggests that

³² Angel (1971) has drawn attention to the early onset of osteoarthritis among the Lernaean.

³³ Not long ago most of us tended to apply the blanket term 'arthritis' to every manifestation of change whether to the articular surface or to the periarticular bone. As interest in palaeopathology grew among practising rheumatologists it became clear that the range of joint pathology manifested in ancient bones was as wide as it is in the living, but much more difficult to diagnose precisely for very obvious reasons. Non-clinical anthropologists like myself then recognised this problem and adopted less specific terms such as 'degenerative joint disease' (DJD). Even this cautious approach is not entirely satisfactory as non-degenerative conditions can be mistaken for degenerative on dry, ancient bone. In due course we may

be well advised to refer to undiagnosable pathological changes to joints as 'non-specific articular/periarticular arthropathies'. We are also exhorted to keep in mind the wise words of Rogers, Waldron, Dieppe and Watt (1987): 'It is important to consider the skeleton in its entirety, and a valid classification cannot be made from the examination of single sets of joints or single elements of the skeleton.'

³⁴ Readers interested in this subject should consult Moseley (1965), Satinoff (1972), Steinbock (1976), Hillson (1980), Musgrave (1980), Ortner and Putschar (1985), McGeorge (1983) and, especially, Grmek (1989). Grmek's encyclopaedic account contains references to many classic papers on the subject, including those of Haldane, Allison and Angel.

acquired anaemia, in particular iron-deficiency anaemia, may have brought about more of the associated skeletal changes than the congenital form.³⁵

It is worthwhile to record that five subjects from Lefkandi did exhibit a few signs, all of them equivocal, of some form of *blood disorder*. They were: Burial 14 (cribra orbitalia in roof of left orbit); and Burial 3 (perforated right frontal bone with small cribra orbitalia in orbital roof), from Xeropolis. And from the Cemeteries: Toumba T. 14, 1 (traces of cribra orbitalia); PP Pyre 14A (increased trabeculation in the cranial diplöe); and Toumba Pyre 5 (thickened diplöe of cranial vault). I have already mentioned four of these cases in my report on the cremations from the Cemeteries.³⁶

In the section on palaeopathology reference has been made to signs visible on the bones. It should not be forgotten that the majority of diseases and localised infections do not leave their mark on the skeleton and that the prevalence of degenerative diseases would be low among people who died before such changes took place. This is an important point that should be borne in mind by all those engaged in the study of ancient peoples. The widespread use of antibiotics today cures many people suffering from diseases that were once lethal. Improved standards of hygiene combined with ambitious inoculation programmes have lowered the incidence of others to almost zero. The high standards of preventive and therapeutic medicine and of surgery that we take for granted would seem miraculous to the Lefkandians. These people, in addition to coping with the blood and bone diseases mentioned above, might at any time have been afflicted with any of the following: bladder stones, cirrhosis of the liver, cholecystitis, dysentery, erysipelas, gangrene, hookworm, lobar pneumonia, mumps, puerperal fever, relapsing fever, small pox, streptococcal septicaemia, tetanus, tuberculosis and variola, to name but a few of the everyday afflictions rampant in Hippocrates' day.³⁷ It should not be thought that all prehistoric peoples lived squalid and unhealthy lives: the Israelites, especially during their wanderings in the wilderness, formulated strict laws of hygiene that undoubtedly saved many lives during that difficult period.

The *oral hygiene* of the Lefkandians was higher than expected, in spite of, or perhaps because, of the high level of infant mortality and the low age at which the few adults studied died. It is certainly true that the oldest subject (Burial 4) had the worst mouth. The total prevalence of *dental caries* among adults – from both the Settlement and the Cemeteries – was 9.7% (11 out of 113 teeth examined). This sum does not compare too unfavourably with the comparative data reproduced in TABLE 2.

It should of course always be remembered that frequencies such as these may not reflect the total prevalence in the population very closely as they are often derived from fragmentary and incomplete material.

The teeth of the children buried in the Settlement, all under 9 years old, were remarkably healthy. Only 3.2% of their deciduous teeth (2 out of 62) were carious. This compares with a prevalence of 11.5% (22 out of 192) among a group of Mediaeval English

³⁵ For an excellent discussion of current thinking on congenital vs acquired anaemia see Stuart-Macadam (1988, 1989). See too Carlson *et al.* (1974).

³⁶ Musgrave (1980, p. 440).

³⁷ See Smout (1964); Patrick (1967); Angel (1971).

TABLE 2. *Some statistics on the prevalence of dental caries in ancient Greece.*³⁸

	<i>Actual number examined</i>	<i>Number caries</i>	<i>% of actual number</i>
Neolithic	267	32	12.0
Middle Bronze Age	601	34	5.7
Middle Minoan	1498	135	9.0
Myrtos Pyrgos	434	45	10.4
Subminoan Knossos	74	8	10.8
Mycenean	356	22	6.2
Mycenae Shaft Graves	556	16	2.9
Lefkandi (Settlement & Cemeteries)	113	11	9.7
Torone inhumations (incomplete)	146	8	5.5
Early Iron Age	724	40	5.5
Classical	724	36	5.0
Roman	363	29	8.0
Early Christian Cretans	282	14	5.0
Byzantine	419	26	6.2
Turkish – recent	3801	1008	26.5
Modern males (Central Greece)	932	148	15.9
Modern males (Chalkidiki)	676	146	21.6

children.³⁹ None of the permanent teeth in either the Lefkandian or in the Mediaeval English children were carious.

Evidence of the *congenital absence of teeth*, especially third molars, was collected and examined. Such evidence is traditionally collected by anthropologists because dental agenesis is largely hereditary and some interesting information concerning family connexions can sometimes be gleaned from a careful scrutiny of all the jaws excavated in one burial ground. The data from Lefkandi were not very helpful as very few complete adult dentitions were available for study. Direct evidence was found for the congenital absence of both lower third molars in two adults (Burial 5; and Burial 14). There were also other much less reliable indications of third molar agenesis in Toumba T.26 and Palaia Perivolia T.47. Both upper lateral incisors may have been absent in Toumba T.26. If all four of these individuals lacked any of their third molars then the prevalence would accord with Angel's observation that 'the ancient Greeks are notable for suppression of one or more third molars (generally all four) in as much as one fifth of the population.'⁴⁰

Another dental trait, *shovel-shaped incisors*, was also investigated. This may also be hereditary.⁴¹ Only two individuals, and young ones at that, exhibited traces of it (Burial 2; and Burial 16). A frequency of between 12% and 16% (3 or 4 out of 25) is rather lower than that cited for other ancient Greek populations.⁴² Again sampling error may well be responsible for these low scores.

The extra *cusp of Carabelli* situated mesio-palatally on the upper first permanent molar

³⁸ Comparative data taken from Angel (1944b, 1971), Carr (1960) and Musgrave (1976a; and unpublished data on Myrtos Pyrgos, Subminoan Knossos and Lefkandi). See too Hillson (1986).

³⁹ Studied by James and Miller (1970).

⁴⁰ Angel (1944b). More data on dental agenesis have

been published by Brothwell, Carbonell and Goose (1963), Tattersall (1968), Angel (1971) and Musgrave (1976a). See too Hillson (1986) and Lukacs (1989).

⁴¹ See Portin and Alvesalo (1974); and Blanco and Chakraborty (1976). See too Hillson (1986).

⁴² By Angel (1944b and 1971) and Carr (1960).

tooth is also under genetic influence. One such cusp was observed on the upper left 6 of Burial 6, a child of 3 to 5 years. A prevalence of 11% (1 out of 9) among Lefkandian children was much lower than the 22% observed by Angel among his Lernaean children.⁴³ It is not very different however from the prevalence among the adults of Lerna (19% for males; 11% for females), and among other Caucasoid populations.⁴⁴

One of the prime aims of an anthropologist invited to study the occupants of ancient cemeteries is to seek *evidence of consanguinity*. The study of skeletal remains from large cemeteries, and especially chambered tombs or long barrows, offers an opportunity to seek family relationships among the occupants.⁴⁵

These are sought in metrical similarities, and also in the presence or absence of a wide range on non-metric traits in the skull, the dentition and the postcranial skeleton.⁴⁶ Angel made a bold attempt in his study of the Lerna material.⁴⁷ As far as the Lefkandians were concerned it was impossible to detect any unequivocal signs of family relationships. Some of the evidence has already been introduced: dental agenesis, shovel-shaped incisors and the presence of a Carabelli cusp. The prevalence of these traits was low, mainly because the dentitions were fragmentary and complete ones scarce. The same statement applies to the rest of the skeleton and, in particular, to the skull. The failure of the metopic suture to close completely may be under genetic control.⁴⁸ However it was possible to detect only two cases of *metopism* (Toumba T 14.2; and Palaia Perivolia P 45). All that can be said is that the young bearers of shovel-shaped incisors (Burial 2; and Burial 16) may have been related. The two adult subjects who exhibited a degree of metopism were buried in different cemeteries and need not have been particularly closely related.

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APPENDIX I

Key to dental charts:

- 8 tooth present in socket
- 3 socket present but tooth missing
- [] area of bone missing
- 7 tooth present but socket missing; a loose tooth
- 4 tooth lost before death
- (8) tooth not erupted: congenitally absent?
- 3 tooth probably erupting
- {3} developing tooth present but unerupted
- A abscessed socket
- C carious lesion present on tooth

⁴³ Angel (1971).

⁴⁴ Listed by Kraus (1959). See too Hillson (1986).

⁴⁵ Brothwell (1981); Scarre (1984).

⁴⁶ See for example: Berry (1979); Berry and Berry (1967, 1972); Berry, Berry and Ucko (1967); Rightmire (1972); Corrucini (1974, 1976); Sjøvold (1975, 1976–77); Finnegan (1978); Trinkaus (1978); Cheverud, Buikstra and Twichell

(1979); Molto (1979); Perizonius (1979); Musgrave and Evans (1980); Brothwell (1981); Kaul and Pathak (1984); Rothammer, Quevedo, Cocilovo and Llop (1984); Czarnetzki (1985); and, above all, Powell (1989).

⁴⁷ See Angel (1971); and also Williams (1973) and Musgrave (1976a).

⁴⁸ According to Torgersen (1951).

Key to Zsigmond tooth-sided identification system

┐	= upper right
┌	= upper left
└	= lower right
┘	= lower left

Individual tooth identification(i) *Deciduous*

- a = central incisor
- b = lateral incisor
- c = canine
- d = first molar
- e = second molar

(ii) *Permanent*

- 1 = central incisor
- 2 = lateral incisor
- 3 = canine
- 4 = first premolar
- 5 = second premolar
- 6 = first molar
- 7 = second molar
- 8 = third molar ('wisdom tooth')

APPENDIX 2

ABBREVIATIONS AND CONTRACTIONS

AF	associated find(s)
ASR	ascending ramus
BD	brief description
bicond.	bicondylar
br.	breadth
C	cranial; or cervical if immediately followed by number of vertebra in question
c.	<i>circa</i> ; approximately
clav.	clavicle; pl. clav
cran.	cranial
crib. orb.	cribra orbitalia
DA	dental age
DC	dental chart
diam.	diameter
DJD	degenerative joint disease
exc.	except

F	female
fem.	femur; femoral
fib.	fibula; fibular
fr.	fragment
frs	fragments
GC	good condition
H&F	hands and feet
hd	head
hum.	humerus; humeral
incl.	including
ITD	impossible to determine
IU	intrauterine
J&T	jaws and teeth
L	left; or lumbar if immediately followed by number of vertebra in question
M	male
mand.	mandible
mandib.	mandibular
metac.	metacarpal; pl. metacs
metat.	metatarsal; pl. metats
misc.	miscellaneous
mo	month(s)
MPOI	miscellaneous points of interest
NVI	not very interesting
PAS	preauricular sulcus
Path.	pathology
PC	postcranial
pet. temp.	petrous temporal
PP	proximal phalanx
prob.	probably
QWR	quite well represented
R	right
rad.	radius; (-ial)
ROS	rest of skeleton
SA	skeletal age
SMC	supramastoid crest
SN	sciatic notch
tib.	tibia (-al)
TW	transverse width
v.	very
VDH	vertical diameter of head
vert.	vertebra; pl verts
VGC	very good condition
wk	week; pl wks
WS	wear stage(s)
yr	year; pl. yrs

APPENDIX 3

ON THE SPELLING OF 'FETUS'

I have adopted the spelling 'fetus' after reading a letter to the Editor of the British Medical Journal (BMJ, 18.2.67, p. 425) by J.D. Boyd and W.J. Hamilton in which they claimed that etymologically it is probably more correct. A.B. Cook had pointed out to them that the word could be derived more convincingly from **feo* (I beget) than from *foveo* (I cherish); and that other words derived from **feo* are commonly spelt with 'e' rather than 'oe' in their stems, e.g. *femina*, *fecundus*, and *fetura*.⁴⁹

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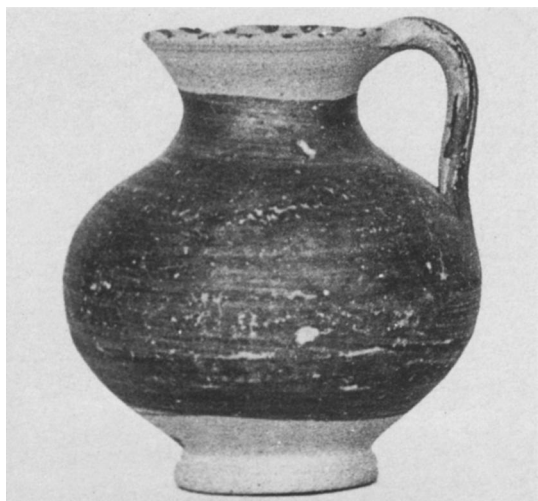
⁴⁹ See too the amusing poem entitled *Childbirth* by William Nixon (London: Duckworth) reprinted in a letter

to the Biochemistry Society Bulletin by Keith Snell (Vol. 3, No. 5, December 1981, p. 15).

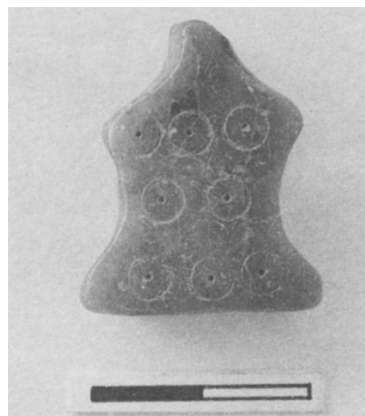
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PLATE 58



Small jug found with Burial 5.

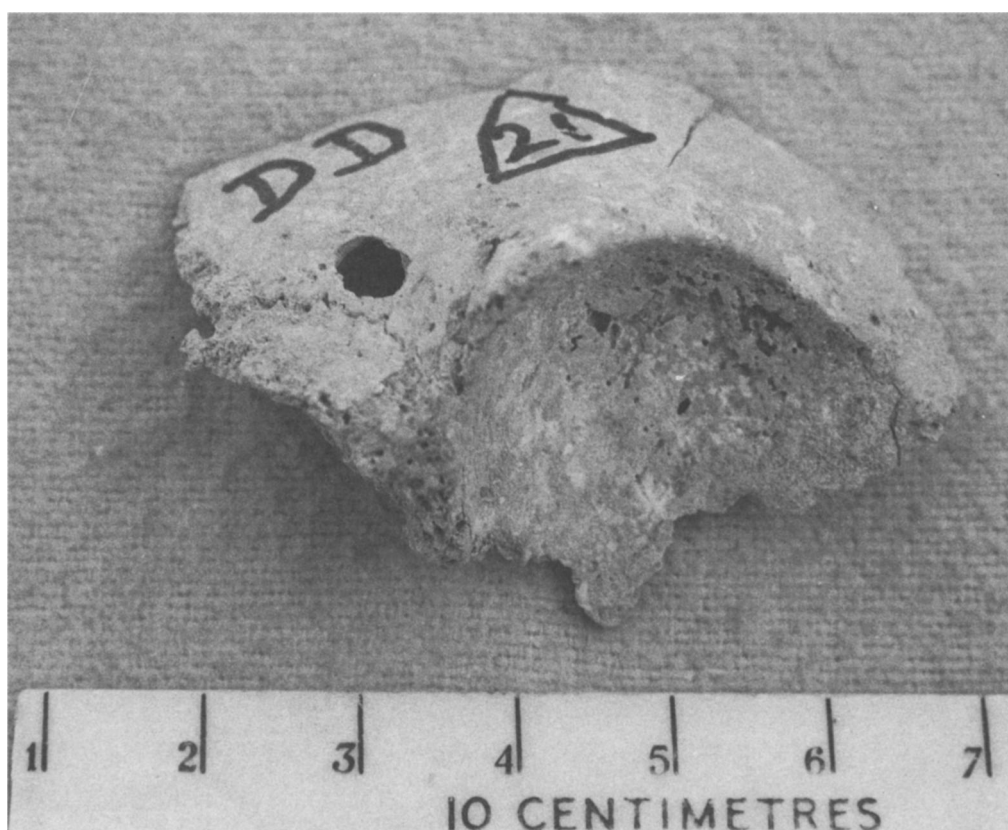


Stone amulet found with Burial 2.

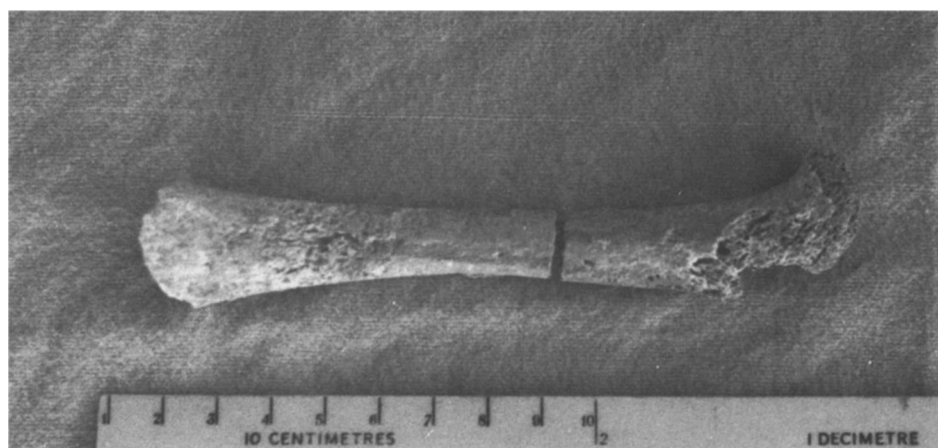


Conical bowl found with Burial 12.

THE LATE HELLADIC IIIC INTRAMURAL BURIALS AT LEFKANDI

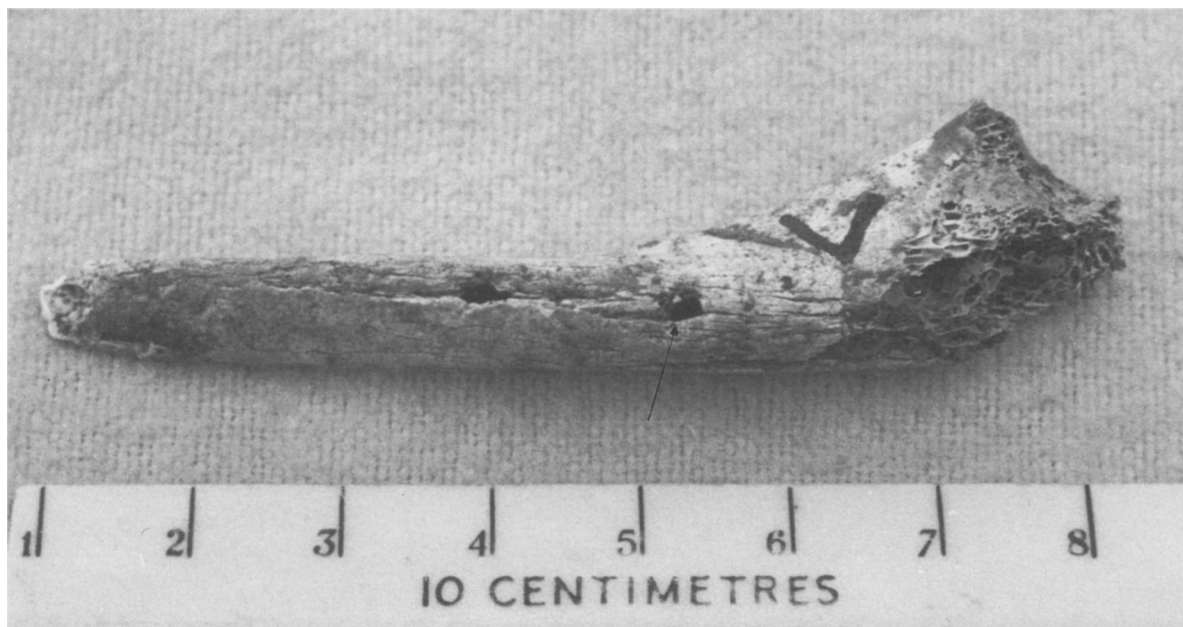


Burial 3. Child of unknown age. Right frontal bone showing cribra orbitalia and a pathological hole in temporal fossa.

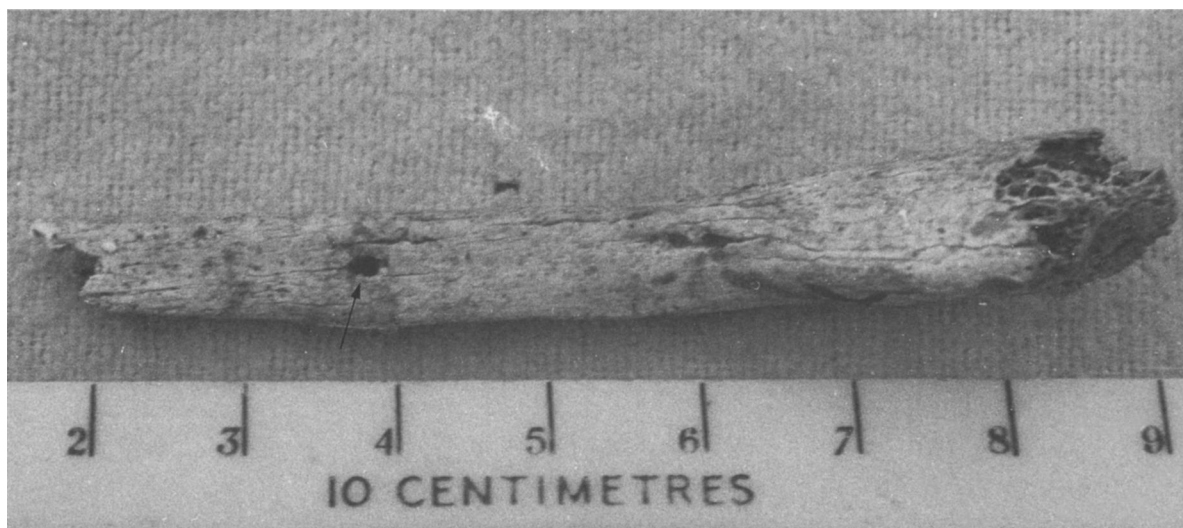


Burial 6. Child of 3–5 years. Right femoral shaft fragment (length 130 mm) thought to have been cut in two in antiquity.

THE LATE HELLADIC IIIC INTRAMURAL BURIALS AT LEFKANDI



Burial 8. Child of 5 years. Medial aspect of left ulna showing supposedly pathological holes.



Burial 8. Child of 5 years. Anterior aspect of left ulna showing a supposedly pathological hole.

THE LATE HELLADIC IIIC INTRAMURAL BURIALS AT LEFKANDI



Burial 8. Child of 5 years. Posterior aspect of right radius showing a supposedly pathological hole.



Burial 8. Child of 5 years. Distal epiphysis of an un-sided femur showing carter-like growths, the products of irregular ossification.



Burial 19. Compressed fractures near costo-chondral junction on three ribs.

THE LATE HELLADIC IIIC INTRAMURAL BURIALS AT LEFKANDI