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AVIS AUX LECTEURS

Le fascicule 2 du *Bulletin de correspondance hellénique* a achevé en 2017 sa mutation. On y lisait depuis 1920 la chronique des travaux archéologiques réalisés en Grèce et à Chypre. Pour mieux faire circuler une documentation toujours plus importante et en permettre une meilleure utilisation, l'EFA a décidé en 2009, en collaboration avec la British School at Athens, de faire de la *Chronique* une publication en ligne, sur une page dédiée (*chronique.efa.gr*). Les chiffres de la fréquentation de cette page (en 2017, 5470 visiteurs et plus de 46 000 consultations) montrent que ce choix a satisfait les attentes d'un public toujours plus mobile et plus demandeur de documentation en ligne.

Forte de cette première expérience positive, l'École veut aujourd'hui améliorer la diffusion des « Rapports sur les travaux de l'École française d'Athènes ». Une partie du fascicule 2 du *Bulletin de correspondance hellénique* est traditionnellement consacrée à la présentation de l'activité archéologique de l'École française d'Athènes. On trouve encore dans la livraison de 2016 ce rapport composé des textes proposés par les responsables de missions ou de programmes. Il sera prochainement mis en ligne sur une page dédiée, dans un format éditorial spécifique et associé au réseau des Écoles françaises à l'étranger. Ce changement de support permettra une plus grande rapidité de publication, une visibilité accrue de l'institution et la mise à disposition d'une documentation plus abondante et en couleurs. Par ce choix, l'École a la volonté de toucher un plus grand nombre de lecteurs et de mieux faire circuler l'information scientifique à une époque où les supports (blogs, cahiers numériques etc.) se multiplient.

Le basculement des *Rapports* vers un support numérique permet de consacrer désormais les deux fascicules de la revue aux articles de fond et de synthèse. Il renouvelle ainsi, en lui donnant une nouvelle dimension, la vocation première du *Bulletin de correspondance hellénique*.

Sommaire de la livraison

Human Skeletons from a Late Minoan IIIA2-B Chamber Tomb at Galia in the Messara

Photini J. P. McGeorge

SUMMARY The burials in this tomb provided evidence of physical adaptation to the environment in which the people lived, of tuberculosis or brucellosis probably contracted through consumption of produce from infected animals, of professional intervention for the healing of a broken limb, of living conditions on Crete perhaps better than on the mainland reflected by the tall stature of burial III, of burial IV's diminished stature and dental hypoplasia that reflect an increasingly stratified society adversely affecting the social gender of women.

RÉSUMÉ *Squelettes humains provenant d'une tombe à chambre Minoen Récent IIIA2-B de Galia, Messara*
Les enterrements dans cette tombe ont fourni une série d'indications sur l'adaptation physique à l'environnement dans lequel vivaient les personnes, la tuberculose ou brucellose probablement contractée par la consommation de produits provenant d'animaux infectés, les interventions professionnelles pour guérir un membre brisé, les conditions de vie en Crète meilleures peut-être que sur le continent reflétées par la stature, une stature diminuée et une hypoplasie dentaire de la femme (IV) reflet d'une société de plus en plus stratifiée, qui a également affecté négativement la femme.

ΠΕΡΙΛΗΨΗ *Ανθρώπινοι σκελετοί σε Υστερομινωϊκό ΙΙΙ Α2-Β θαλαμωτό τάφο στη Γαλιά Μεσαράς*
Οι ταφές παρείχαν ενδείξεις για φυσική προσαρμογή στο περιβάλλον στο οποίο ζούσαν οι άνθρωποι, για φυματίωση ή βρουκέλλωση που πιθανώς προσέβαλλε τον πληθυσμό μέσω της κατανάλωσης προϊόντων από μολυσμένα ζώα, και για επαγγελματική παρέμβαση για την επούλωση ενός σπασμένου άκρου. Οι πιθανόν καλύτερες συνθήκες διαβίωσης στην Κρήτη από ότι στη Στερεά Ελλάδα αντανακλώνται στο υψηλό ανάστημα της ταφής ΙΙΙ. Το χαμηλό ανάστημα και η οδοντική υποπλασία της γυναικείας ταφής IV ίσως αντανακλούν την αυξημένη διαστρωμάτωση της κοινωνίας με πιθανώς αρνητική επιρροή στο κοινωνικό φύλο των γυναικών.

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Introduction

The LM IIIA2-IIIB rock-cut chamber tomb excavated in 1975 at Stavros, east of the village of Galia and north of Moirès, was originally probably part of a cemetery.[1] Burials I, II (**Pl. 1-2**) and III (**Pl. 3**) lay on wooden biers, fragments of which survived mingled with the bones and adhering to ribs (**Pl. 2**), on either side of burial IV, which was in a plain clay sarcophagus. The skeletal material was studied and written up in 1975 when preliminary reports on the tomb initially appeared.[2] Efforts to locate the skeletons, to take digital photographs and check the 1975 report, were able to trace only one box of material from burial IV. Its condition had deteriorated significantly (**Pl. 4-5**).[3]

Individual I ♂

The burial consists of fragments of a skull and incomplete post-cranial remains.

Sex — No single criterion conclusively determined sex, but evaluation of several features: the large size of the acetabulum and femoral head, noticeable muscular development of the humerus and thickness of the cranial table, determined that this is a male.

Age — All the long bone epiphyses are fused indicating adulthood. Obliteration of the coronal and sagittal sutures on the endocranium, which usually begins after the age of 26, had not been initiated.[4] The cusps of the first molar had been reduced by wear, but dentine exposure is negligible, whilst there is none at all on the second molar. Data standards that correlate the amount of tooth attrition with age, place this individual within the range of 17-25 years.[5]

Pathology — Though not an unambiguous indicator of age, it is pertinent to take into account pathology that is to some extent age-related. Rough irregular spicules of bone or osteophytes, caused by repetitive trauma or overuse, appear on the posterior surface of the ulna olecranon (elbow joint) and on the anterior surfaces of the patellae (knees). There is also evidence of an inflammatory reaction on the posterior/articular surface of the right knee (**Pl. 1a**).

1. Four LMIII chamber tombs had already been excavated by Davaras in the same locality, see: *CretChron* 12 (1963), p. 405; *AD* 19 (1964), p. 441; *AR* 13 (1966-67), p. 20.
2. See A. Karetsou's reports in: *Ergon* 1975, p. 195; *AD* 30 B2 (1975), p. 342; *PAAH* 1975, B pp. 522-526, fig. 1-3 Pl. 335.
3. In the interval between 1975 and 2015, reorganization and renovation of Heraklion Museum necessitated transfers of material to different storage areas. Digital photographs of skeleton IV have been taken, while the black and white photographs taken in 1975 have been included to show the original condition of the material and to illustrate the material that could not be found and re-photographed.
4. F. E. Camps, J. M. Cameron, D. Lanham, *Practical Forensic Medicine* (1934).
5. D. R. Brothwell, *Digging up Bones* (1972), p. 59.

Minor vertebral osteophytosis seen in the spinal column was probably asymptomatic. However, pain or other symptoms would certainly have been caused by the collapse of the first lumbar centrum, which had fused with the 12th thoracic, and by the peripheral exostoses that were formed on the lower lumbar vertebral bodies. Destruction of the intervertebral disc space between adjacent vertebral bodies (Th12/ L1) and the formation of an abscess (perhaps cold) around the lesion is a characteristic feature of spinal tuberculosis.[6] The progress of spinal tuberculosis or brucellosis is slow and can last from months to years. Tuberculosis and brucellosis could have been contracted through eating infected food products from domestic animals. Mycobacterium tuberculosis can be transmitted through air from humans living in poor conditions.

Dental Pathology — A fragment of the left maxilla including the second and first molars, premolars and the socket of the canine, is preserved. There is no evidence of caries, abscesses or ante-mortem tooth loss. However, there are traces of calculus and enamel hypoplasia.

Stature — All measurements are presented in **Table 1**. Stature was estimated as 163.416 cm.

Variation — Indices calculated for the femur and tibia fall into the categories platymeric and platycnemic. There is no consensus of opinion to explain these phenomena. Some authorities suggest pathological factors: association with osteoarthritis or with calcium deficiency, implying a shortage of bone,[7] others suggest muscular factors related to persistent squatting, or support of the body and gait adopted when walking in hilly country.[8] It has been noted that platymeria and platycnemia are not necessarily always associated and that they occur more frequently in modern primitive groups and early man.

Individual II ?

The existence of a second individual was proven by the duplication of parts of the anatomy mixed with burial I that were recovered by sieving. There are a few fragments of the cranium (**Pl. 1b**), which is very light, lacking density, has a smooth contour and lacks marked nuchal crest development. The absence of masculine traits warrants the suggestion that this could be a female, but the identification is tentative. The distal femoral epiphysis is fused, indicating a biologically mature individual. The coronal and

6. R. K. Garg, D. P. Somvanshi, "Spinal tuberculosis: A review", *The Journal of Spinal Cord Medicine* 34 (2011), pp. 440-454.
7. L. H. D. Buxton, "Platymeria and Platycnemia", *Journal of Anatomy* 73 (1938), pp. 31-36.
8. W. Townsley, "Platymeria", *The Journal of Pathology and Bacteriology* 58 (1946), pp. 85-89; J. Cameron, *The Skeleton of British Neolithic Man* (1934).

lambdoid sutures are entirely open, suggesting a young adult. The remains were too damaged and incomplete to yield any metrical data.

Individual III ♂

Sex — The skeleton was incomplete and the pelvis too fragmentary to be of use diagnostically for determination of sex. The right temporal bone could not be restored to the rest of the skull (**Pl. 3a-d**), which is in a very friable condition, but the size of the mastoid process suggests it is male. This is corroborated by the robust appearance of the long bones, which are those of a stocky muscular individual. The pronounced development of the femur *linea aspera*, the popliteal line of the tibia and the humerus deltoid ridge are particularly noticeable. Finally, the measurement of the right femoral head (>49 mm) exceeds the means for males, 45.5 mm and 47 mm respectively, published by Pearson[9] and Camps *et al.*[10]

Age — Fusion of all the long bone epiphyses, normally achieved by the age of 25, had occurred. Synostosis of the cranial sutures on their inner aspect, a process normally believed to take place between the ages of 26 and 36, was complete.[11] On the ectocranium, the section of the sagittal suture that is usually the first to be erased between the ages of 20-30 was obliterated.[12] Despite reservations about cranial suture synostosis, which is susceptible to variation and thus not the most reliable method for determining age, in default of any other criterion, based on the condition of the sutures a tentative age estimate for this individual is 30 ±6 years.

Pathology — Evidence of an inflammatory reaction on the articular surface of the right patella, or knee (**Pl. 3e**) may have been caused by a limping gait, owing to excessive weight bearing on the right leg due to the injury to the left tibia. Just below the mid-shaft of the tibia, there is definitive callus, extra bone tissue, on the medio-posterior surface (**Pl. 4a**). Bone callus to bridge and repair fractures typically requires about twelve weeks to form. This was probably not a displaced fracture but would nevertheless have required immobilization, which implies therapeutic care. The tibia healed apparently without further complications from infection, because there is no evidence of periostitis.

Variation — The measurements for this skeleton appear in **Table 1**. The dimensions of the cranium are estimates. However the cranial index probably falls into the category

9. K. Pearson, J. Bell, *A study of the long bones of the English skeleton, pt. 1-pt. 1, section 2: The femur of the Primates*, *Drapers' Company Research Memoirs*, *Biometric Series* X (1919).
10. F. E. Camps, J. M. Cameron, D. Lanham (n. 4).
11. *Ibid.*
12. H. V. Vallois, "La durée de la vie chez l'homme fossile", *L'Anthropologie* 47 (1937), pp. 499-532.

bracycephalic/sub-bracycephalic. The femur is platymeric while the tibia is eurycnemic. There are no complete long bones from which stature could be calculated.

Individual IV ♀

Sex — Sex was determined as female from the diagnostic characteristics of the skull (**Pl. 4b-d**, **Pl. 5a-e**) with smooth contours and small mastoid processes (**Pl. 5f**), from the pelvis with an auricular sulcus, usually associated with pregnancy and childbirth[13] and the absence of muscular tuberosities in the post-cranial skeleton, which is remarkably petite.

Age — Synostosis of the cranial sutures on the inner aspect of the skull had not been initiated, nor had sutures been obliterated from the ecto-cranium. The basi-occipital synchondrosis had fused prior to death; the line of fusion is faintly visible (**Pl. 6a**). Normally, this occurs between the ages of 17 and 23 years.[14] Apart from incomplete fusion of the sternal ends of the clavicles (**Pl. 6b-c**), which usually takes place between the ages of 20-25 years, all other post-cranial epiphyses are fused. Also the fusion line of the femur proximal epiphysis was still visible (**Pl. 6e**). Minor dentine exposure on the occlusal surface of the first molar (**Pl. 6f**), places this individual within the 17-25-year age group. Overall, the criteria suggest an age estimate of about 23 years.

Pathology — Bilateral occurrence of cribra orbitalia was observed. The lesions appear more severe in the left orbit (**Pl. 6d**), whereas bone remodeling had decreased the severity of the lesions in the right orbit. These lesions, believed to be caused by anaemia, which is common in menstruating and pregnant women, could also be caused by poor nutrition, parasites, or chronic diarrhea (coeliac disease caused by gluten intolerance). However, anaemia is also a symptom of a variety of diseases, including the haemolytic anaemias (thalassaemia, sickle cell anaemia or the enzyme deficiency G6PD, all conferring protection against malaria) that are common in Mediterranean populations. The remodeling of the orbital lesions in this case suggests that the cause was not a systemic disease but one acquired through living conditions.

Dental Pathology — Only nine teeth from the whole mouth were available for examination. Six of them bore traces of calculus (**Pl. 7a-b**). Two of the molars, left upper M2 and right lower M2 had caries lesions on their occlusal surfaces (**Pl. 6f**, **7e**). The lower right M1 and left M2 had been lost before death (**Pl. 7e-f**). Sponginess of the surrounding bone suggests an infection. Of orthodontic interest is the rotation of the upper left pm^2

13. H. Ullrich, "Estimation of fertility by means of pregnancy and childbirth alterations at the pubis, the ilium and the sacrum", *Ossa* 2 (1975), pp. 23-39.
14. T. W. McKern, T. D. Stewart, *Skeletal Changes in Young American Males*, Technical Report. Headquarters Quartermaster Research and Development Command (1957).

socket through an angle of 90° (**Pl. 6f**). This caused an unusual oval contact facet on the buccal surface of the tooth (**Pl. 6g**). Several teeth had traces of enamel hypoplasia in varying degrees of severity, affecting the second molars but most noticeably the upper left central incisor (**Pl. 7c**). The hypoplastic growth arrest lines in the enamel indicate that the formation of the enamel was interrupted periodically either by illness or nutritional stress in infancy or early childhood. The incisor crown develops between the ages of 3-4 months and 5 years.

Post-cranial pathology — **Plates 8-10** illustrate the long bones, shoulder and pelvic girdles, patellae, cervical vertebrae and extremities. A bone nodule that can be seen on the medial margin of the hallux distal phalange (**Pl. 10 c-d**) was probably caused by trauma to the foot tendons, from an accident sustained while running or walking barefoot.[15] Such lesions are rarely seen today because footwear provides protection.

Variation — The skeleton from the sarcophagus was, for obvious reasons, the most fully represented anatomically, but because it was fragmentary only a few measurements presented in **Table 1** could be taken. The cranial module provides a numerical value for the size of the skull that is smaller than average. The cranial index falls into the category mesocephalic. The indices expressing the ratio of cranial length: height and cranial breadth: height, fall into the categories orthocranic and metriocranic. The fronto-parietal index is metrometopic. The femurs are platymeric but the tibias are eurycnemic and the stature estimate 145.49 cm. **Table 2** presents additional measurements of the tarsals, metatarsals and pedal phalanges.

Measurements/Indices[16] mm	**Skeleton I** ♂		**Skeleton III** ♂		**Skeleton IV** ♀	
Cranial						
Parietal Arc			129		118	
Frontal Thickness[17]					7	
Parietal Thickness			6		6	
Max. Horizontal Circumference					494	
Max Cranial Length			182		175	
Max. Cranial Breadth			147		135	
Basion-Bregma Height					124.5	
Min. Frontal Breadth					95	

15. For a similar lesion caused through injury sustained by a teenager running barefoot downstairs see: M. J. R. Kent, C. Harding, S. Walsh, « Soft tissue 'mallet' injury to the hallux », *Journal of Surgical Case Reports* (2015).
16. R. Martin, K. Saller, *Lehrbuch der Anthropologie* (1959).
17. J. L. Angel, *The People of Lerna* (1971).

Measurements/Indices mm	**Skeleton I** ♂		**Skeleton III** ♂		**Skeleton IV** ♀	
Cranial						
Biasterionic Breadth					94.5	
Cranial Module					144.8	
Cranial Index					77.14	
Cranial Length-Height Index					71.14	
Cranial Breadth-Height Index					92.22	
Fronto-Parietal Index					67.77	
Mandibular						
Jaw Bicondylar Breadth					116.2	
Condyle Length					18.1	
Jowl Breadth Bigonial					89.5	
Min Ramus Breadth					27.6	
Height at 2nd Molar					23.1	
Foramen Mentalia Breadth					42.1	
Chin Height					27.6	
Jaw Length Condyle-Symphysis					88	
Ramus Projection Angle					117°	
Post-Cranial	**Left**	**Right**	**Left**	**Right**	**Left**	**Right**
Clavicle Maximum Length					[120]	[115]
Humerus Vertical Head D.				43.5	36	36.6
Humerus Biepicondylar Bdth					46.1	
Humerus Least Shaft Circum	53.5		60	60		48
Radius Maximum Length	225					
Femur Maximum Length	426	418				370
Mid-Shaft A-P Diameter	27.5					
Mid-Shaft Tranverse Diameter	25.2					
Sub-tochanteric A-P Diameter	22.2	21.5	25		19.8	19
Sub-tochanteric Transverse D.	31	30.8	35.5		26.5	25.7
Maximum Femur Head Diameter	46.4	46		[49]	38.1	
Tibia Nutrient Foramen A-P D.	37	32	33.6		25,5	27.2
Tibia Nutrient Foramen Trans D.	22	19.6	24.8		18.1	21.2
Platymeric Index	71.61	69.81	70.42		74.71	73.92
Cnemic Index	59.46	61.25	73.80		70.98	77.94
Stature Estimate cm[18]	163.416				145.49	

Table 1 — Cranial and post-cranial measurements of skeletons I, III & IV.

18. M. Trotter, G. C. Gleser, "A re-evaluation of estimation of stature based on measurements of stature taken during life and of long bones after death", *American Journal of Physical Anthropology* 16 (1958), pp. 79-123.

Skeleton IV ♀ (fig. 1)		
Patellas	**Left**	**Right**
Patella Ht	34.4	34.0
Patella W	35.6	35.3
Tarsals		
Calcaneus Ht [A]		62.2
Calcaneus W [A]		35.5
Talus Max. Length [B]		45.8
Cuboid Ht [C]	31.0	31.0
Navicular Ht [D]		×
1st Cuneiform Ht [G]		27.8
3rd Cuneiform [E]		×
Metatarsals Lengths*		
1st	51.5	51.8
2nd	×	×
3rd	57.8	58.0
4th	56.2	56.7
5th	16.2	×
Pedal Phalanges Lengths*		
Proximal ray 1	25.5	
Proximal ray 2	22.2	
Proximal ray 3	×	17.9
Proximal ray 4	18.9	16.9
Proximal ray 5		14.5
Distal ray 1	21.1	
Distal ray 5		18.2
* Measurement along centre axis of bone.		

Table 2 — Skeleton IV: Additional measurements in mm.

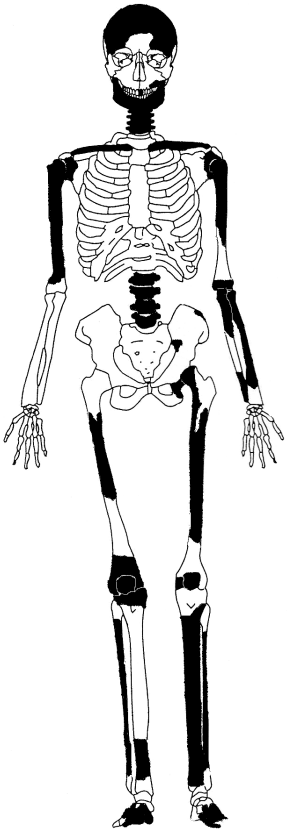


Fig. 1 — Skeleton IV ♀: shaded areas are preserved.

Environmental Adaptation – Morbidity – Healers – Wellbeing – Gender Roles

Platymeria, believed to be a mechanical adaptation needed to support body weight on the inclined femur neck, was noted in all femurs. It correlates with the terrain of Galia in the foothills of Mount Ida, on the periphery of the Messara plain. The young woman, burial IV, may have sustained her toe injury running or walking barefoot in this terrain.

The case of tuberculosis or brucellosis of burial I was very likely contracted through consumption of infected foods such as milk, cheese and meat from domestic animals. Most households must have kept animals for subsistence, so contact with animals at a domestic level would have been inevitable. The risk of contagion within families would have been great, while denser human population clusters would have aided the spread of epidemic diseases like tuberculosis.

The disease must have been common and recognizable from the characteristic appearance of patients,[19] although the source of contagion and the mechanism by which infectious diseases spread, would not have been understood in the 14th-13th centuries BC. Prevalence of tuberculosis or brucellosis was noted in a contemporary population at LMIIIA2-IIIB Armenoi, where loom weights and spindle whorls commonly placed in the tombs imply that the economy was centered on animal husbandry.[20]

Immobilization of burial III's tibia fracture, typically requiring twelve weeks, would have been imperative for the effective treatment of the fracture implying that the invalid had received the care of an expert healer. Moreover, impaired mobility would have made him dependent on others for several months.

The burials in the Galia tomb are probably a family group similar to the burials in LMIII A-B chamber tombs at Armenoi. **Table 3** compares the mean lengths of femurs, tibias and stature data for male populations from LMIII Armenoi near Rethymnon, Middle Helladic Lerna, Shaft Grave Circle B and Late Helladic burials studied by Angel.[21]

Long bones	Lerna MBA	Sample	Shaft Graves	Sample	LHIII	Sample	Armenoi LMIII	Sample
Femur means	434.5	30	456.1	7	435.6	25	430.1	82
Tibia means	357.3	25	373.4	5	354.2	19	357.6	68
Stature means	166.8	38	171.5	14	161.1	49	167.6	107

Table 3 — Secular trends in stature data.

19. It was known to physicians in the classical era as *phthisis* meaning *wasting*; P. J. P. McGeorge, "Morbidity and Medical Practice in Minoan Crete", in M. Andreadaki-Vlazaki, G. Rethemiotakis, N. Dimopoulou-Rethemiotaki, *From the Land of the Labyrinth: Minoan Crete 3000-1100 B.C.* (2008), chapter 15, pp. 118-127.
20. *Ibid.*, pp. 123-4; P. J. P. McGeorge, "Έγκλημα στην Υστερομινωϊκή ΙΙΙ Περίοδο", *Αρχαιολογία* 11 (1984), pp. 12-16.
21. J. L. Angel (n. 17), tables 6-7, pp. 86-88: averages for femurs and tibias combine left and right bones in table 6; J. L. Angel in G. E. Mylonas, *Ταφικός Κύκλος Β των Μυκηνών* (1973), p. 385 table 2; P. J P. McGeorge, *The Minoans: Demography, Physical Variation and Affinities*, I (1983), Univ. London PhD, p. 138.

These comparisons offer a perspective on social circumstances because stature mirrors the standard of living.[22] Stature correlates directly with nutritional status, since the more calories and proteins available for physical growth, the more likely it is that people will be able to reach their genetic potential and also remain healthy. Stature is also affected by disease and factors such as population density, hygiene and medicine.

The trends in the stature data reflect differences in living and social conditions, indicating shifts between the Middle and the Late Helladic periods. The population samples in both periods contrast appreciably with the tall Shaft Grave aristocrats, whose high social status ensured a high nutritional status, safeguarding their health and enabling them to realize their stature potential. Late Bronze Age Cretans were evidently taller than ordinary people on the mainland, where a reduction in stature between the Middle and the Late Bronze Age suggests a deterioration in wellbeing.

Although Galia burial I's 163.4 cm stature is 8.1 cm shorter than the Shaft Grave burials and 4.2 cm shorter than the stature average for the Late Minoan burials, it is, nonetheless, 2.3 cm *taller* than the average for the Late Helladic burials, from which it may be inferred that diet was better in resource-abundant Crete than on the mainland.

The 11% (18 cm) difference in stature between male burial I (163.4 cm), and female burial IV (145.5 cm), exceeds the normal 8% difference between males and females in populations worldwide.[23] This deviation from the norm has implications for social gender and the relative status of men and women at this period. Moreover, burial IV's anaemia and enamel hypoplasia suggests that the woman was chronically less adequately nourished than her male companion in the tomb. The logical inference here is that the man habitually took priority over the woman where access to food was concerned, an inference that seems to be confirmed by data from other sites of this period.[24]

The appearance of burials with weapons at Knossos in LMII heralds the rise of a warrior caste in Crete. This ostentatious behaviour was probably being mimicked at Galia, where burial I's tutelary equipment (: bronze dagger, spear, knife, razor), followed this élite Knossos fashion, and was intended to declare either his status, loyalty, or ethnic

22. J. M. Tanner, "Growth in height as a mirror of the standard of living" in J. Komlos (ed.), *Stature, Living Standards, and Economic Development: Essays in Anthropometric History* (1994), pp.1-6.

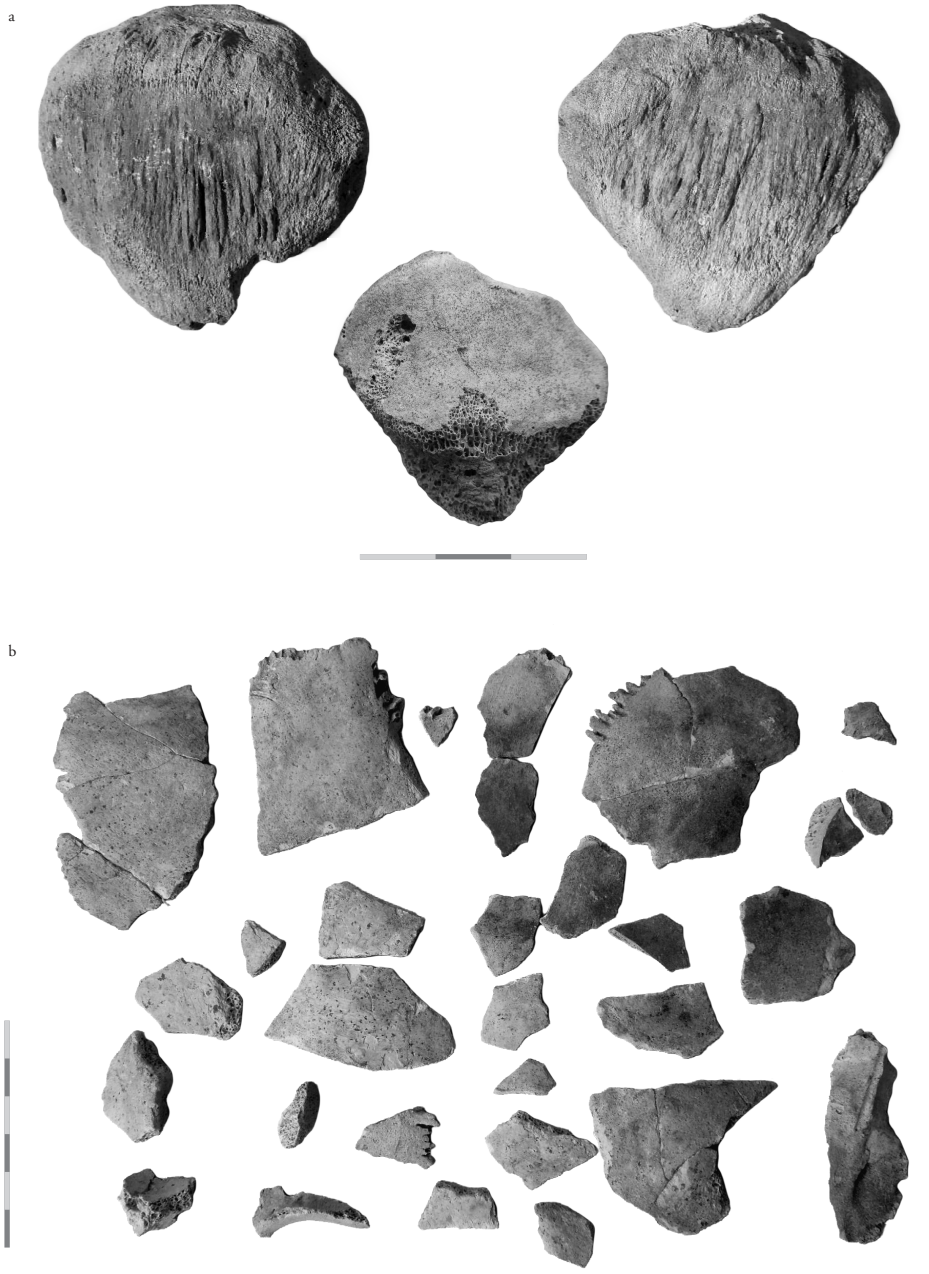
23. G. Stulp, B. Kuijper, A. P. Buunk, T. V. Pollet, S. Verhulst, "Intralocus sexual conflict over human height" (2012), *Biology Letter*.

24. The stature difference at Galia is supported by data from elsewhere: B. P. Hallager, P. J. P. McGeorge, '*Late Minoan III Burials at Khania*', *SIMA* XCIII (1992), p. 38; P. J. P. McGeorge, "Μυθικοί Πυγμαίοι και Γίγαντες Νέα στοιχεία για το ύψος των Μινωίτων", *Κρητική Εστία* 2 (1988), pp. 9-18; P. J. P. McGeorge, "Health and Diet in Minoan Times" in R. E. Jones, H. W. Catling (eds), *New Aspects of Archaeological Science in Greece*, *BSA Occ. Paper No* 3 (1988), pp. 47-54; P. J. P. McGeorge, "Νέα Στοιχεία για το Μέσο όρο Ζωής στη Μινωική Κρήτη", *CretEstia* 1 (1987), pp. 9-15.

origin. It is worth pondering on the woman's status since her burial equipment (needle, small knife and fibula) seems very modest by comparison with the glamorous trappings of the warrior. Was a message being delivered by her burial equipment and undecorated clay coffin?

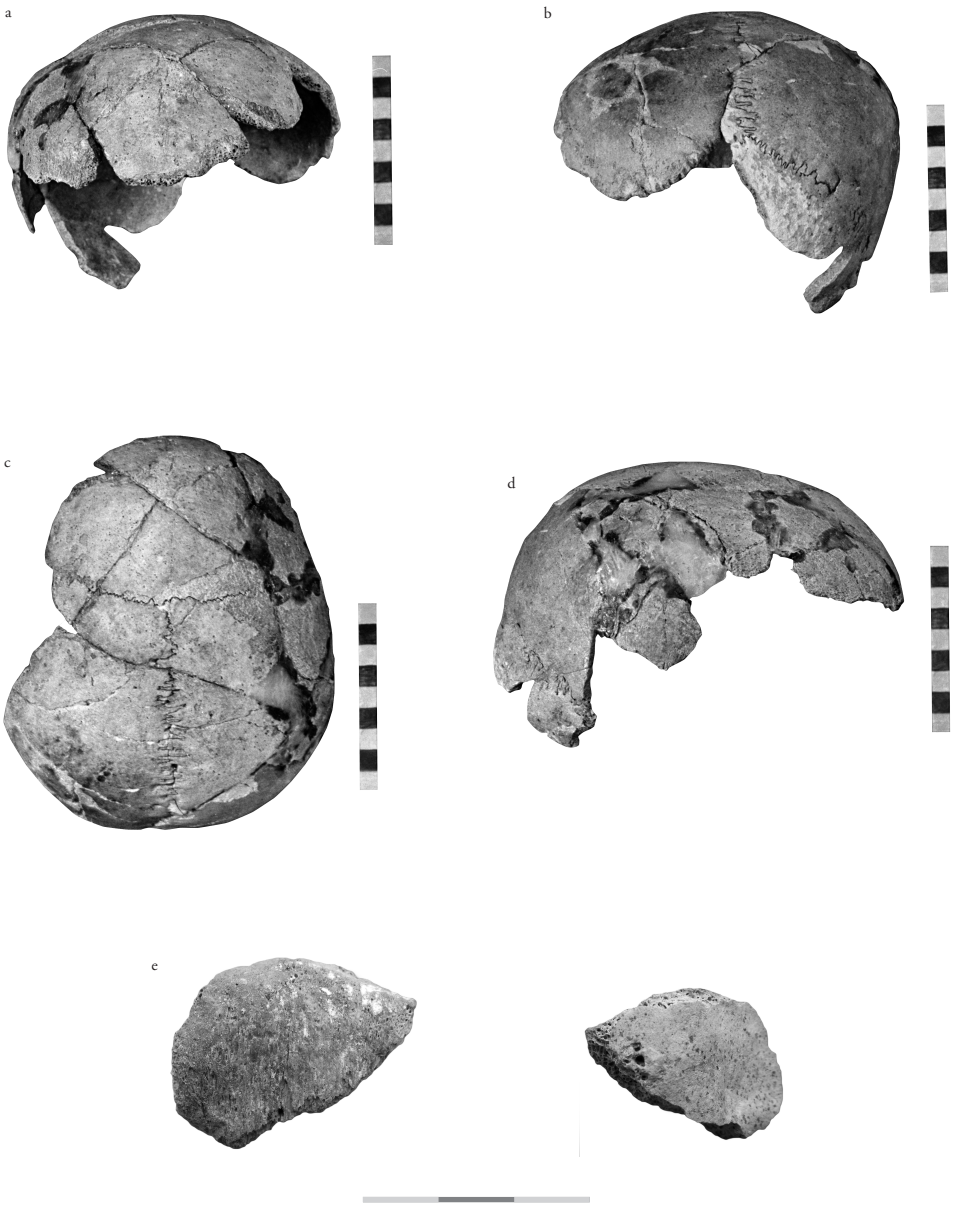
Skeletal remains are artifacts of nature that store an impartial and enduring record of one's life experiences. The woman's small stature and health issues that began in early childhood reveal that growing up she was chronically undernourished. This fact suggests that her social status was less prestigious than the man's. Moreover, when considered with male and female skeletal data from other sites such as Armenoi and Odos Palama, the human remains consistently furnish subtle clues that in Crete, Late Bronze Age society under Mycenaean influence was increasingly stratified and gender differentiated.

In conclusion, human skeletons form a biological archive that stores a reservoir of information about past lives. The burials from this tomb provided indications of physical adaptation to the environment in which the people lived. Diseases such as tuberculosis or brucellosis were probably contracted through consumption of produce from infected animals. Medical treatment was indicated by the healing of a broken limb. Compared with other samples, the tall stature of the male burial suggested that living conditions on Crete may have been better than on the mainland. By contrast, the stunted growth and dental hypoplasia of the female burial suggested that the social status of this woman was adversely affected by an increasingly stratified society.



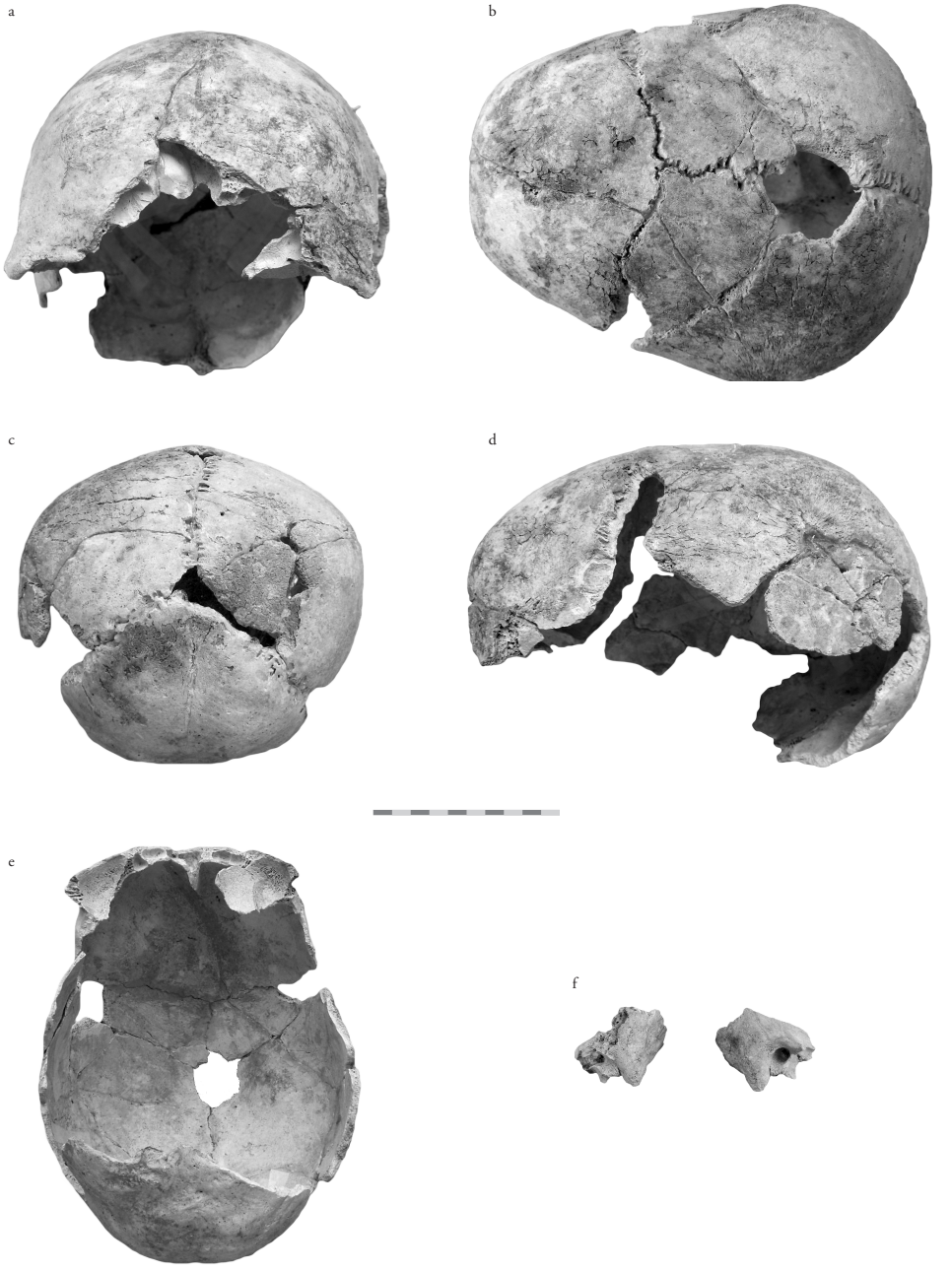
Pl. I — a. Skeleton I: anterior views of right and left patellae, showing alterations to the bone surface due to mechanical stresses, and the articular surface of the right patella with osteomyelitis; **b.** Skeleton II: cranial fragments.

Pl. 2 — Skeletons I and II: **a**. Wood fragments from the biers mingled with the bones; **b**. A wood fragment and organic material adhering to ribs.

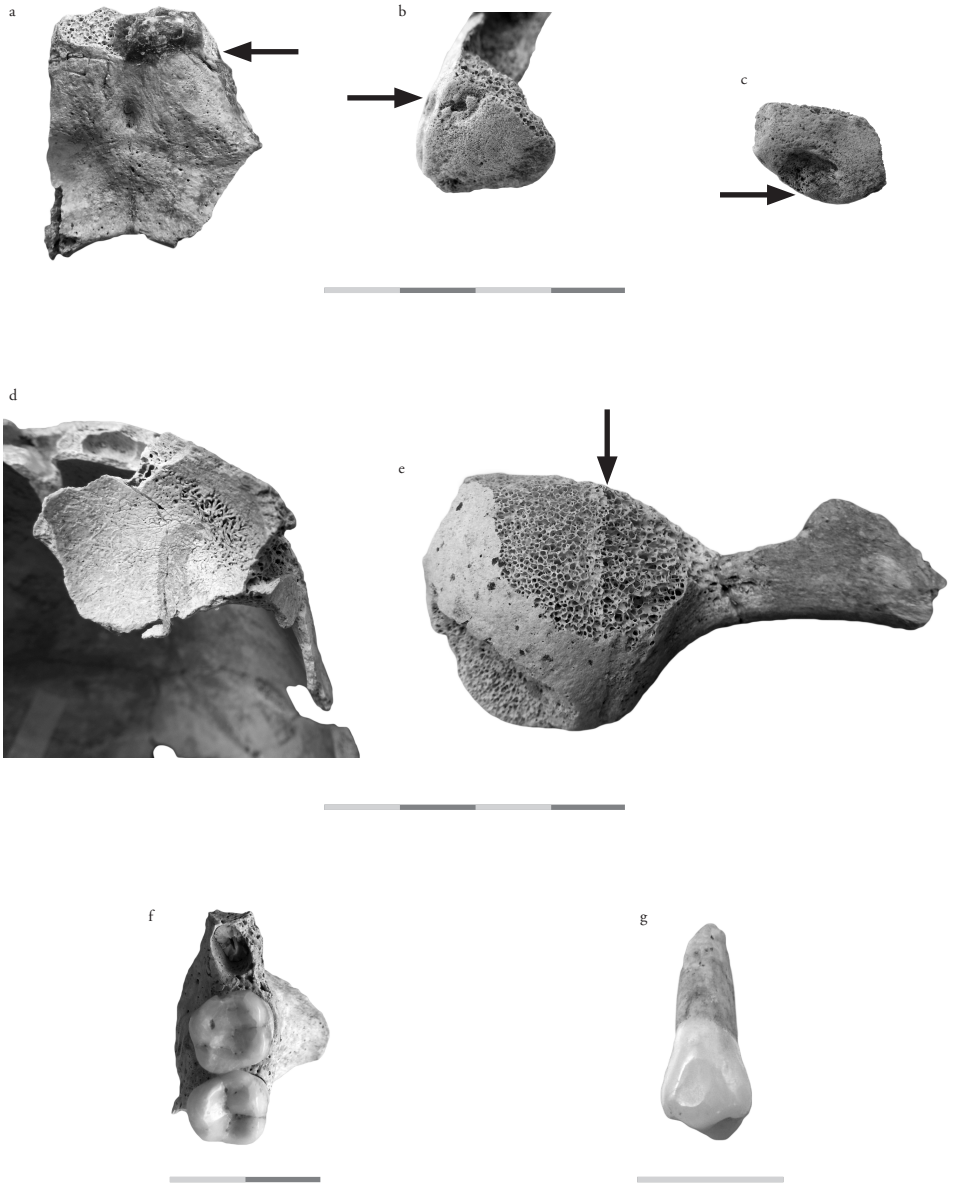


Pl. 3 — Cranium III: **a**. Frontal view; **b**. Occipital view; **c**. Vertical view; **d**. Profile view. Skeleton III; **e**. Right patella anterior aspect (left) and posterior aspect (right), with inflammatory changes to the articular surface, perhaps caused by over-reliance on the right leg owing to injury to the left tibia (**Pl. 4a**) that impaired his mobility.

Pl. 4 — Skeleton III: **a**. Left tibia, bone callus. Cranium IV (1975): **b**. Frontal view; **c**. Occipital view; **d**. Profile view.



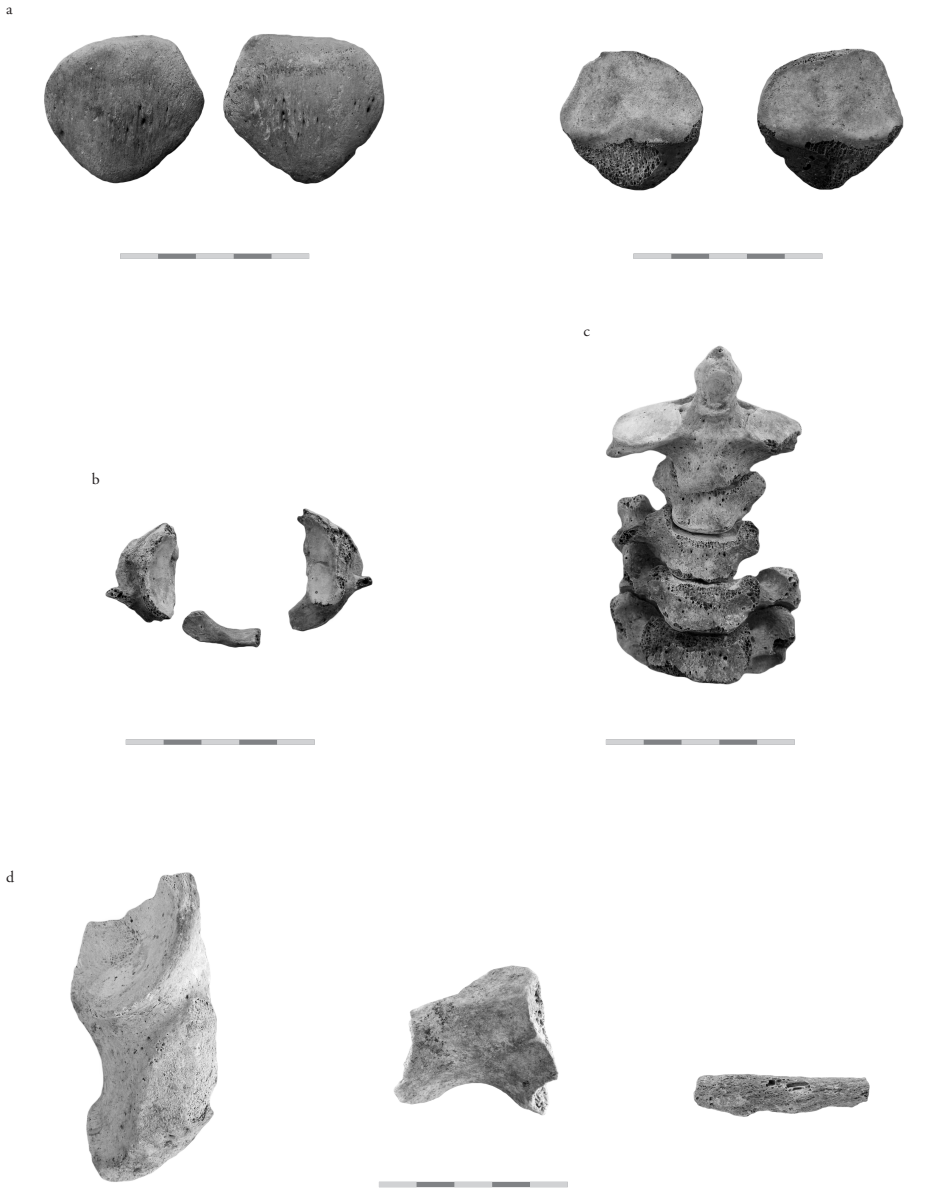
Pl. 5 — Cranium IV (2015): **a**. Frontal view; **b**. Vertical view; **c**. Occipital view; **d**. Profile view; **e**. Base view; **f**. Mastoid processes.



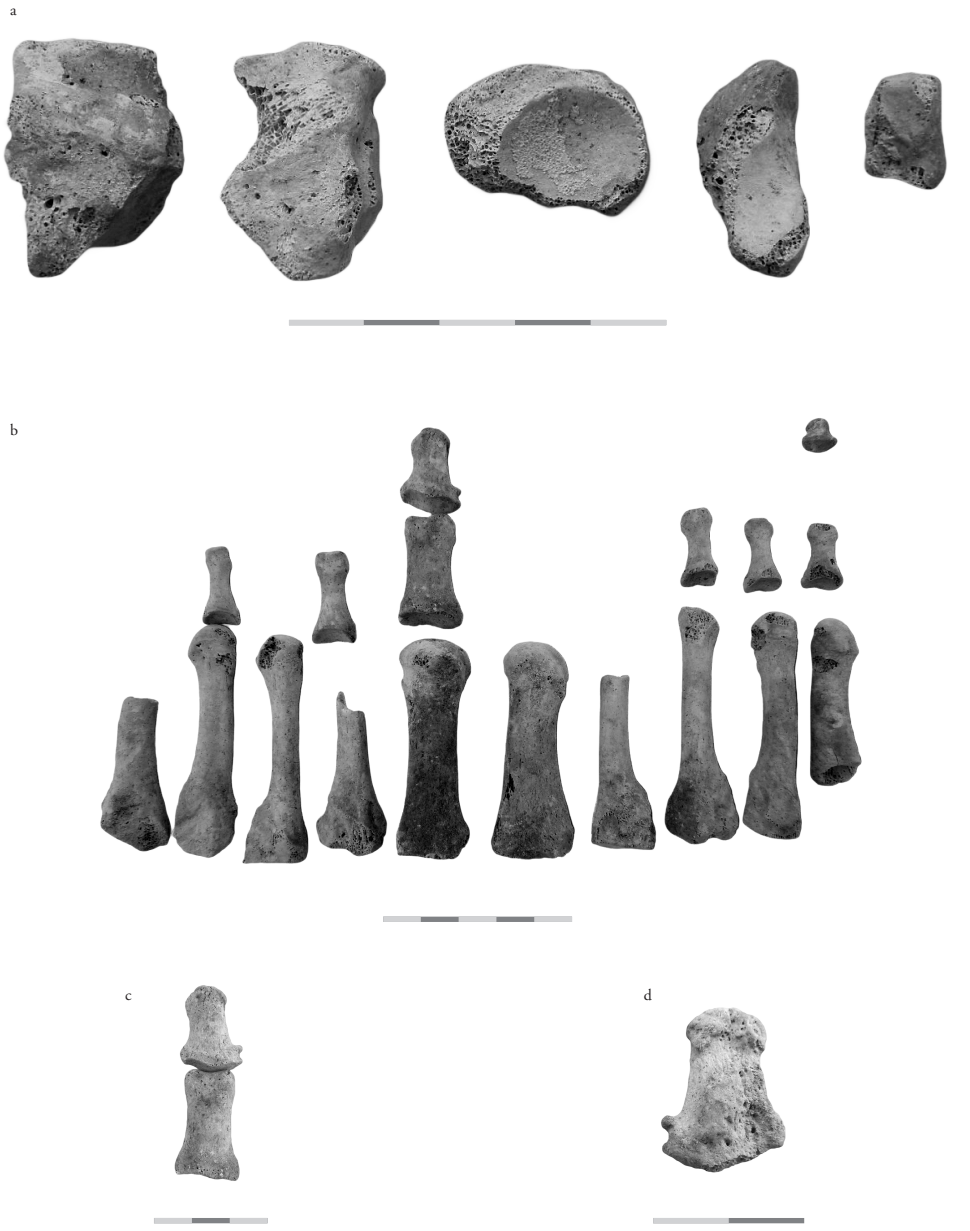
Pl. 6 — Skeleton IV, age indicators: **a**. Basi-occipital synchondrosis fused; **b**. Left clavicle, medial end, incompletely fused epiphyseal cap; **c**. Right clavicle, medial end, incompletely fused epiphyseal cap; **d**. Left orbit, criba orbitalia; **e**. Left femur, capitis, epiphyseal fusion line still visible; **f**. Rotation of the premolar socket and dentine exposure on the adjacent 1st molar; **g**. Upper left pm^2, flat oval contact facet on buccal surface.

Pl. 7 — Skeleton IV, teeth: **a**. Dental plaque on maxillary molars; **b**. Dental plaque over the cingulum; **c**. Severe enamel hypoplasia on upper left central incisor; **d**. Mandible; **e**. Mandible (right ramus): caries and partially healed alveolus after tooth loss, shortly before death; **f**. Mandible (left ramus): carious molar and partially healed alveolus after loss of the adjacent tooth.

Pl. 8 — Skeleton IV, post-cranium: **a**. Clavicles; **b**. Scapulae; **c**. Femurs; **d**. Tibiae and fibulae.



Pl. 9 — Skeleton IV, post-cranium: **a**. Right and left patellas, anterior and posterior views; **b**. 1st cervical vertebra, atlas; **c**. Cervical vertebrae, C2-6; **d**. Pelvis fragments: acetabulum and ischial tuberosity (left), sciatic notch, ilium border.



Pl. 10 — Skeleton IV, post-cranium: **a**. Left and right cuboids, right navicular, 1st and 3rd right cuneiforms; **b**. Metatarsals and pedal phalanges; **c**. Pedal phalange, ray 1 left foot, dorsal view with bone nodule; **d**. Ray1distal phalange, left foot enlarged plantar view of bone nodule on the medial surface.