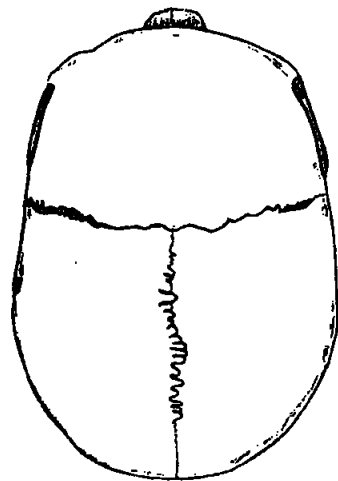




To face p. 43]

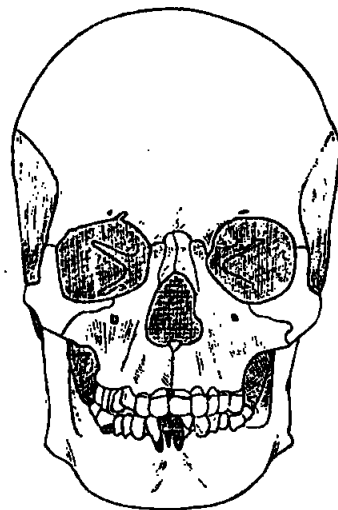
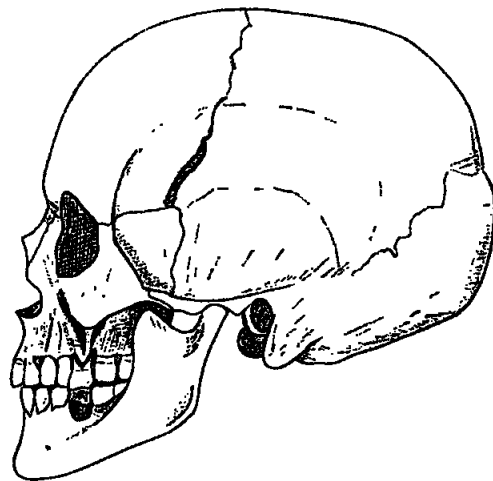


PLATE I.

Bury Hill Skeleton I, Cranial Features.

Fig. 1, Norma verticalis; Fig. 2, Norma lateralis sinistra; Fig. 3, Norma frontalis. Scale, just under $\frac{1}{4}$.

REPORT ON THE HUMAN REMAINS FROM THE BURY HILL EXCAVATIONS; 1939.

By PROFESSOR A. J. E. CAVE.
(Royal College of Surgeons of England).

THE human osteological material herein reported on was excavated in 1939 by Christopher Hawkes, Esq., M.A., F.S.A., on behalf of the Hampshire Field Club, and by him submitted to the writer for anatomical opinion. The material comprises two imperfect skeletons (Nos. I and II *infra*), the second of which is represented however by little more than a mass of very small osseous fragments, so imperfect and comminuted that the restoration of any single bone proved impossible. Skeleton No. I is dated on archaeological evidence (the sole trustworthy criterion of age in ancient human remains) to the period of Iron Age A 2 (most probably about, or soon after, the middle of the 3rd century B.C.): Skeleton No. II is less definitely dated, but is not likely to be earlier than the middle of the 1st century B.C. or much later than the Roman Conquest.

Figs. 1, 2 and 3, Plate I, which represent the cranial features of Specimen I, are reductions of natural-size dioptographic drawings of the skull orientated in the Frankfort plane.

Skeleton No. I. Iron Age A 2. From Bury Hill Grave I (*Proceedings*, xiv, pt. 3, 300-1, 321-3). The imperfect skeletal remains of a young adult woman, about 25 years old at the time of death, and some 4ft. 11½ins. (1513 mm.) in stature.

Parts present:—Skull (damaged), mandible, all the vertebrae, numerous ribs of the two sides, the sacrum and innominate bones, both clavicles, the sternum, the scapula, humerus, radius, ulna and hand bones of the right side, the proximal three-fourths or so of each femur and various unimportant small fragments. The cranial and pelvic characters unequivocally indicate a female, and as do the remaining though less diagnostic skeletal features.

Skull. The vault is dolicocephalic (ceph. index 72.1) with fairly vertical lateral walls and a somewhat protuberant occipital "boss": it is evenly arched from side to side and exhibits some flattening in the median pre-lambdoid region. The brow is low and vertical, with minimal supra-orbital and frontal eminences: temporal ridges are almost indistinguishable: the mastoid processes are small and pneumatic, and the planum occipitale is almost wholly devoid of secondary muscular and ligamentous markings. The coronal, sagittal and lambdoid sutures are all unclosed, as is the synchondrosis on the basis cranii between basi-occipital and basi-sphenoid. The facial skeleton is rather "square-cut" and orthognathous, with orbits tending to the circular in outline and with a fairly wide interorbital septum. The bony nose is short and gently projectile: the nasal fossa (apertura pyriformis) is moderately wide: the anterior nasal spine is greatly pronounced and there exists a slight degree of subnasal prognathism, so that the upper dental arch protrudes somewhat beyond the lower. The infra-orbital portion of the face is flattish, with but moderate development of canine fossae. The malar bones are laterally compressed, and the zygomatic arches are delicate and slender. The palate is moderately broad, of good height and well formed. A full complement of maxillary teeth was

retained at the time of death: their crowns manifest but moderate wear (most obvious in the incisors), and save for a small spot of enamel caries in each first molar, all the teeth, like their circumscribing alveolar bone, are singularly healthy and well-shaped. The mandible is built on slender lines: its ascending ramus is shortish and the two halves of its body meet rather sharply at the pointed, narrow and prominent chin region. Secondary markings on the bone are again minimal, being confined to faint ridges made by the masseter and the internal pterygoid (masticatory) muscles. A full complement of mandibular teeth remained *in situ* at death, since when both first molars and the central incisors have been lost. Both third molars exhibit tiny areas of caries of the enamel, and the anterior teeth manifest some crown-wear: otherwise the lower dentition is perfectly healthy, as is its surrounding alveolar bone. Note has already been made of the superior protrusion so obvious upon articulation of the cranium and mandible. (Osteometrical data concerning the skull are given below.)

Axial Skeleton. The vertebral formula is normal—C. 7, D. 12, L. 5, S. 5—the coccyx is lost: individual vertebrae are small and characteristically fashioned: there remains still some trace of the intervertebral disc between the first two sacral vertebrae: the sacral canal is completely roofed. In the lower thoracic region, some of the costal articular facets manifest that type of pitting and pathological change conveniently designated "articular rheumatism" (osteo-arthritis), whilst the capitular and tubercular articular facets on the corresponding ribs are likewise affected. It is not probable that any appreciable degree of either discomfort or loss of function resulted from these lower thoracic costo-vertebral changes. The available ribs manifest all the characters normally associated with the female skeleton. The sternum is complete save for its xiphoid process: its manubrium and gladiolus are completely and adventitiously synostosed, to form a single osseous element. Commonly such synostosis does not occur before the age of 40 years or so. The customary seven pairs of ribs had sternal articulation.

Appendicular Skeleton. The clavicles lack their sternal epiphyses. The right bone, possibly a trifle the shorter, displays much more emphatic imprints for the attachments of the major pectoral, deltoid and subclavius muscles than does its fellow, and is therefore suggestive of right-handedness. The (right) humerus, radius and ulna are gracile, delicate bones, bearing healthy articular surfaces and largely devoid of secondary markings. The bones of the right hand are small and of typically female configuration. The pelvis is represented by the complete left innominate bone and the right innominate lacking its pubic element. An epiphyseal line is visible on the left pubo-ischial conjoint ramus, but the epiphyses for the iliac crests appear to have already fused, for no trace of their original independence remains. In every respect the pelvic bones are unequivocally those of a woman, but their anatomical features call for no special comment here. The lower limbs are represented by two femoral shafts only—each comprising the proximal three-fourths or so of the bone. Each femur manifests a small head, a salient small trochanter, a well-marked gluteal ridge bearing a distinct third trochanter, below and lateral to which occurs a hypotrochanteric fossa. This fossa presents a prominent lateral boundary—a stout ridge, convex laterally, which here forms the lateral limit of the shaft. The proximal third or more of the femoral shaft is strongly platymeric, the secondary markings of the femoral neck and trochanteric region suggest an habitual full-ranged activity of the hip joint and pelvis during life.

Remarks. The parts of this skeleton available reveal no evidence of ante-mortem fracture or injury. Save for the punctate enamel caries of certain teeth, and for the relatively unimportant lower dorsal "rheumatic" arthritis, there is no hint of pathological change in either bones or joints.

The specimen is preserved in the Human Osteological Series of the Royal College of Surgeons' Museum.

TABLE OF OSTEOMETRICAL DATA

Bury Hill Skeleton No. I.

	mm.
Max. length	186
Biparietal breadth	134
Min. frontal breadth	97.5
Basion-bregma height	139
Auricular height	120
Basion-prosthion	96
Facial height (G, H)	66
" width (G, B)	93.5
Nasal height (NH, R)	48.2
" width	24.0
Orbital height	33.4
Orbital breadth	42.1
Nasion-basion	103
Palatal breadth	39.4
" length	47.7
Bizygomatic breadth	123

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Cephalic	72.1	Dolichocephalic.
" height	74.6	Orthocephalic.
Facial	70.5	Chamaecephalic.
Orbital	80.5	Mesoconch.
Nasal	49.4	Mesorhine.
Palatal	82.5	Mesostaphyline.

Length of right humerus 290 mm.

Estimated stature 1513 mm. (4ft. 11½in.)

The mutilation of Skeleton No. I.

This skeleton was found lacking the entire left upper limb and scapula (though the left clavicle persisted), as also both legs together with the distal portions of the two thighs. Inspection of the broken femora reveals no mark of any cutting instrument and no hint of any pathological condition which might have resulted in post-mortem fracture. Moreover, the complete absence of the distal parts of the lower limbs has to be accounted for, and the most likely supposition is that such absence is due to the activity of carnivorous animals of some sort, breaking into the grave and mutilating the corpse. It is true that no obvious tooth marks can be detected on the broken femoral shafts, but the absence of such marks is in no wise contradictory to the notion of animal activity. And there are no anatomical grounds whatever for attributing the mutilation of the lower limbs to human agency.

The fact that the left upper limb had been removed from the grave again suggests the activity of a prowling carnivore after decomposition of the body had been established, for the clavicle of that side remains, whilst the corresponding scapula has gone with the arm bones. The inference is that the normally stout claviculo-scapular ligaments had become decomposed and the two pectoral girdle elements naturally detached (or detachable) by the time the grave was violated. Had such decomposition not set in, the avulsion of the left upper limb would have either carried away the left clavicle also, or would have resulted in a fracture of that bone. Amputation of the limb by human agency is discounted on similar grounds. Quite apart from motive, disarticulation at the sterno-clavicular joint or at the shoulder (humero-scapular) joint would have proved a much more facile business than the severance of the extremely resistant claviculo-scapular ligamentous connexions, and one or other method would almost certainly have been adopted.

The conclusion reached therefore is that the corpse from which Skeleton I derives was partially devoured by some carnivore or other whilst in a state of partial decomposition.

Skeleton No. II. Probably Iron Age AB, or else Belgic (Iron Age C). From Bury Hill Grave II (*Proceedings*, xiv, pt. 3, 322-4).

An exceedingly comminuted and very imperfect human skeleton—little more than a heap of cranial and other fragments, most of which defy restoration.

Parts present :—Skull (50 fragments), body of mandible, ribs (31 chips and pieces), the ends of the left clavicle, 12 vertebral fragments, the heads of both scapulae, portions of the humeri, ulnae and radii ; 1 incomplete metacarpal shaft, 3 portions of the left innominate bone, the proximal third of the right femur (restored), and acetabular fragment of the right innominate, and various indeterminate chips and splinters of bone. These remains are devoid of animal matter through long inhumation : there is nowhere any evidence of disease, of ante-mortem trauma, or of burning.

Skull. The vault, restored from some 20-odd fragments, is dolicocephalic, with a maximum length of 183 mm., an estimated maximum breadth of about 144 mm., and a cephalic index of about 78·7. Its morphological features are those of the female. The sutures are closed, and the sagittal almost wholly obliterated. The nasal bone (persisting independently) agrees in form with that of Skeleton I, and further agreement in morphological form is exhibited by a right mastoid fragment and a left temporal fragment present in No. II. The (restored) mandibular body retains the right canine and third molar—both teeth excessively crown worn from attrition but otherwise normal and healthy : the right mandibular second molar and possibly the left incisors were lost before death.

Pelvis. The pelvic fragment (left innominate) displays a pronounced pre-aicular groove and a typically female form of sacro-sciatic notch.

Femur. The right femoral fragment is platymeric : it lacks both trochanters, but the head is relatively small and secondary markings on the shaft are minimal—all strongly suggestive female characters.

Other bones. The remaining long bones are all of female character—i.e., they manifest the lightness of build and lack of pronounced secondary markings usually associated with the female skeleton. The clavicle is a slender, delicate bone, and the ribs are likewise of slender and graceful conformation.

Summary. The available anatomical evidence indicates clearly enough that Skeleton No. II represents a fairly long-skulled, adult woman, certainly more than 35 years old at the time of death and possibly as old as 50 years. The extremely comminuted condition of the specimen renders it useless for conservation.

Comparative Observations.

An attempt has been made to compare the Bury Hill finds (Skeleton No. I chiefly) with other human remains from known Early Iron Age localities. Very little material is, however, available in this Museum for such comparison. Three skeletons, of Early Iron Age date, from Yarnbury Castle, Wilts (see M. L. Tildesley, 1933, *Wilts Archaeological Magazine*, XLVI, 214-7), supposed to be preserved here were apparently never catalogued and cannot now be found. Two of these Yarnbury Castle skeletons were those of women, 4ft. 11in. and 4ft. 11½in. in stature respectively, thus agreeing with the present skeleton No. I (4ft. 11½in.) : the third was that of a man, some 5ft. 5in. in stature, somewhat curiously regarded, upon osteometric grounds only, as being of an alien stock to the two females.

Available for direct comparison with the Bury Hill remains, however, are two Early Iron Age skulls—that of a woman from Fifield Bavant, Wilts (see

A. Keith, 1924, *Wilts Archaeological Magazine*, XLII, 494-6), and that of a man from Worthy Down, Hants (see A. Keith, 1929, *Proceedings*, Hants Field Club, X (ii), 181-2). The Wiltshire skull, though lacking much of the base and facial parts, yet agrees extraordinarily well in general morphological characters with Bury Hill No. I. In the configuration of the brow, the cranial outline in norma lateralis, the peculiarities of the hinder end of the cranial vault (pre-lambdoid flattening and the characteristic formation of the supra-inial occiput) the Bury Hill and Wiltshire crania manifest so striking a parallelism and agreement, that there can be no doubt concerning their identity of racial type. The Worthy Down skull, that of an elderly male, agrees in some morphological respects with Bury Hill Skeleton I. Allowing for the differences due to its rather emphatic sexual characters, the upper facial parts of the Worthy Down specimen reveal an anatomical pattern which is in general agreement with that of the Bury Hill skull: the orbital outline, the prominence and set of the bony nose, the salient nasal spine, the slant of the maxillary elements and the alignment of the zygomatic buttresses are all points of similarity between the two. The vault of the Worthy Down specimen, however, manifests certain differences, the precise value of which must remain a matter of opinion. Compared with Bury Hill No. I, the hinder part of the vault tapers less to the occiput from a line transfixing the parietal eminences, and the occiput itself is fuller, broader and less "bossed": flattening of the vault above the inion is likewise much less pronounced. Nevertheless, there appears no anatomical justification for regarding the Worthy Down skull as other than an emphatically male specimen of Early Iron Age period. Like the Wiltshire and the Bury Hill specimens, it reveals certain features strongly suggestive of the persistence of the osteological characters met with in British crania of Neolithic period, with which indeed the Iron Age specimens under discussion manifest a considerable, though not perfect, similarity. On anatomical grounds therefore one must regard the Bury Hill, Worthy Down and Fifield Bavant crania as genuinely "Ancient British," i.e., as representing the native population of this country in late pre-Roman times.

REPORT ON THE ANIMAL REMAINS FROM THE BURY HILL EXCAVATIONS, 1939.

By J. WILFRID JACKSON, D.S.C., F.S.A., F.G.S.
(Manchester Museum).

THE mammalian remains found during the 1939 excavations at Bury Hill Camp and submitted to me for report by Mr. Christopher Hawkes, M.A., F.S.A., form an interesting series. They comprise fragmentary limb-bones, jaws and teeth of various domestic animals slaughtered for food by the inhabitants of the camp. The species represented are the horse, ox, sheep and pig. In addition there are some scanty remains of dog and a few of fox. One point of interest is that the remains range in date from Iron Age A 2, through Iron Age A.B, and Belgic, to Roman. They are dealt with below under the various headings. The page-references are to Mr. Hawkes's Report on the excavations in these *Proceedings* XIV, Pt. 3 (1940), 291 ff.

BURY HILL I: IRON AGE A2.

The following bone is from Section 2, in chalk rubble of Rampart I (p. 299):—

Sheep.—A fragmentary radius with both ends broken off.

BURY HILL II: IRON AGE A.B.

From Section 6, in Ditch II, at 8ft.-13ft. 9in. (p. 309):—

Small Horse.—One neck vertebra (atlas).

Sheep.—Imperfect humerus.

Pig.—Few teeth and fragmentary tibia.

BURY HILL III: BELGIC TO EARLY ROMANO-BRITISH.

From occupation-layer in Sections 9 and 10 (p. 320):—

Small Horse.—Of this animal there are three lower teeth, one incisor, two astragali, a calcaneum, a coronet, the distal end of a radius, the distal two-thirds of a hind cannon-bone (metatarsal), a splint fragment, a pastern, coronet and hoof-core, which fit together, and a perfect fore cannon-bone (metacarpal). The latter bone measures:—Length, 186 mm.; mid-shaft, 26 mm.; distal condyles, 39 mm. It suggests a small horse about 11 hands high. All the other bones are small.

Ox.—Two lower molars, part of a pelvis, a nearly perfect humerus, and many broken limb-bones belong to a small type of ox of the *Bos longifrons* breed.

Sheep.—Several lower molars, a fragment of an ulna, the distal end of a humerus, the proximal half of a very slender shank-bone (metatarsal) of Romano-British type, with a small perforation in the centre of the articulation, and a fragmentary right mandible with young teeth.

Pig.—Represented by two fragmentary left mandibles with teeth, two imperfect ulnae, and a fragment of a scapula.

Dog.—Of this animal there is a fragment of a robust left mandible with three teeth.

From occupation-layer in Section 8 and adjoining trench, behind Rampart II Inner (p. 316) :—

Small Horse.—Distal fragment of scapula, splint bone and a fragment of a tooth.

Ox.—Bone-fragments and an upper premolar.

Sheep.—Last lower molar.

From occupation-layer in Section 7, behind Rampart II Inner (p. 313) :—

Small Horse.—Four lower molars and the proximal end of a radius.

Ox.—Various broken bones.

Sheep.—Fragment of lower mandible with two teeth.

From Section 2, in Ditch I, dark humus, with Romano-British pottery (p. 299) :—

Sheep.—Last lower molar.

From Section 6, in Ditch I, at 3ft. 8in.-6ft. 6in. (p. 308) :—

Small Horse.—Broken right mandible with four teeth, two lower molars, two incisors, two canines (male); distal end of a hind cannon-bone, distal end of a fore cannon-bone, proximal end of radius and distal end of radius.

Ox.—Two upper molars.

Sheep.—Two fragments of mandibles with young teeth.

Pig.—Proximal end of ulna and fragment of upper jaw with two molars.

Fox.—Fragments of limb-bones and lower jaw.

From Section 6, in Ditch II, at 5ft.-7ft. (p. 310) :—

Ox.—Bone fragments and one upper premolar.

Sheep.—Bone fragments and loose teeth.

Dog.—Fragment of right mandible and one loose carnassial tooth.

In addition to the above there is a lower molar of Sheep from edge of cobble metalling on entrance causeway in line of Ditch I (p. 321).

REMARKS.

Although the above remains come from various levels, there is no apparent difference in the types of animals represented. They are all very similar and agree closely with those from Glastonbury Lake Village,¹ All Cannings Cross,² Fifield Bavant,³ Swallowcliffe Down,⁴ Meon Hill,⁵ Quarley Hill,⁶ etc. Though not so plentiful as at Colchester,⁷ they compare very favourably. There is the same type of small horse—the *Equus agilis* or "Plateau" type of Ewart⁸—a slender-limbed animal, doubtless used for drawing wheeled vehicles of some kind. We know from Caesar that such small horses were yoked to the British war-chariots and were very swift of foot. All the ox remains from Bury Hill belong to one type—the small Celtic shorthorn (*Bos longifrons* Owen). The few sheep remains suggest the small, slender-limbed breed, common in pre-Roman and Roman times.

1. Bülleid and Gray, *The Glastonbury Lake-Village*, vol. ii, 1917.

2. Cunnington, *Early Iron Age Inhabited Site at All Cannings Cross, Wiltshire*, 1924, 43-50.

3. *Wilt. Arch. Mag.*, xlii (1924), 90-93.

4. *Ibid.*, xliii (1925), 90-93.

5. *Proceedings Hants Field Club*, xii (1933), 156-7, and xiii (1935), 30-42.

6. *Ibid.*, xiv (1939), 191-2.

7. Publication by the Society of Antiquaries forthcoming.

8. *Proc. Zool. Soc.*, xxx (1910), 292-311.

REPORT ON SOIL SAMPLES FROM THE BURY HILL EXCAVATIONS, 1939.

By F. E. ZEUNER

(Department of Geochronology, London University Institute of Archaeology).

FIFTEEN samples were submitted to me by Mr. C. F. C. Hawkes from his excavations at Bury Hill (*Proceedings*, Vol. XIV, Part 3), together with seven questions regarding the age relations of certain layers. An attempt is made in the following report to answer at least a few of these questions, as far as this is possible on the evidence of the samples, without having studied the deposits in the field. These results have been incorporated by Mr. Hawkes in his Report just cited, to which this paper accordingly forms an Appendix. The references are to the pages of *Proceedings*, Vol. XIV, Part 3.

PROBLEM A.

In Section 2 (pp. 299-301, Fig. 4), a grave with a skeleton (Grave I) was found about 16ft. away from the rear foot of Rampart I (of Iron Age A 2 date). Between the grave and the rampart, the soil had been scooped out by the builders of the rampart into a quarry-hollow enlarged (but 6in. less deeply) when this was here reinforced in Belgic times. *Was the grave dug before or after the building of Rampart I and the accompanying first digging of the quarry-hollow?*

A sample of earth from inside the skull found in the grave (S 4), and another one (S 3) of soil directly above the edge of the grave, i.e., formed only after the burial, were investigated. In spite of their different appearance they proved to be essentially the same material, S 3 representing an ordinary brown-earth soil as normally found on chalk, and S 4 being the same substance in the shape of worm-castings. It is obvious that the grave must have been dug during the period of formation of the brown-earth which perhaps continued for some time thereafter. The higher levels of the section, formed of accumulated soil silted up against the rear of the rampart (Roman pottery level, medieval and modern), are all later than the grave.

If the quarry-hollow did not exist, one would not hesitate to identify the soil from the edge of the grave (S 3) with the soil found beneath the rampart (S 1). The two samples are exactly alike and resemble undisturbed natural soil. The grave would then be contemporary with, or earlier than, the rampart.

A complication seems to be introduced by the quarry-hollow's existence. A further sample (S 2), which comes from soil found filling the first 4in. above the original bottom of the hollow, i.e., 2in. below the level of the Belgic enlargement, again resembles S 1 and S 3. It appears, therefore (a) that the hollow was dug as described but earth was trodden down in it during the building of the rampart or was used to level it up afterwards, so that an artificial layer of soil derived from outside the hollow was deposited at the bottom of it. The alternative is (b) that after the building of the rampart and the digging of the hollow, sufficient time elapsed for the formation of a new soil on its exposed (chalk) bottom. Alternative (b) is, however, unlikely, since the sample in question is that of a decidedly mature soil in which particles of chalk are even rarer than in the original soil beneath the rampart. Time would not have been

available for the formation of such soil. I therefore regard the first alternative as the correct solution. The soil matter contained in the hollow was either brought in accidentally, or the hollow was filled in intentionally. It is therefore irrelevant to the age-relation of the rampart and grave.

The grave thus antedates, or is contemporary with, the building of Rampart I and the first digging of the quarry-hollow. It is certainly not later.

PROBLEM B.

In Section 5 (pp. 304-6, Fig. 6), Rampart II Outer converges with Rampart I and partly sits on the inner slope of the latter. In this zone of overlap, a thin layer of soil separates the materials of the two ramparts. *How much time elapsed between the building of Rampart I and that of Rampart II Outer?*

Sample S 9, from the supposed layer of soil on the surface of Rampart I beneath Rampart II, was compared with samples of pre-occupation soil from underneath Rampart I (S 7) and Rampart II (S 8), and also with earth formed in the angle between the slopes of the two ramparts when this space began to fill up. S 9 was further compared with samples from other sections, especially from those in Section 2 (see Problem A).

The chalk material of Rampart I culminates in a superficial layer of finely comminuted chalk which, according to Mr. Hawkes (p. 305), is presumably the weathering product of the underlying less comminuted chalk. The brown surface layer which, under the partial cover of Rampart II, was found resting on this finely comminuted chalk and from which S 9 was taken, is in the average only 1 inch thick. It is sprinkled with small pellets of chalk and contains an appreciable amount of chalk in the matrix. In other respects it agrees with samples of natural soil developed on chalk. It is therefore probable that S 9 is the result of loamification of the underlying comminuted chalk. This process requires some time, and judging from recent soils as they are developed on artificially created surfaces of chalk, in quarries, *I am inclined to estimate the minimum time required for the formation of the S 9 layer as about a hundred years. On the other hand, compared with ordinary soil sections, in which decalcification has proceeded much further, the S 9 soil is still in its initial stage, and its age cannot therefore exceed a very few hundred years.*

PROBLEM C.

On the basis of a study of the soils preserved underneath the various ramparts, *what can be said of the probable vegetation (a) before Camp I was built, and (b) in the period between the building of Camp I and that of Camp II?*

Samples were supplied from beneath Rampart I (S 1, Section 2, p. 300; S 5, Section 10, p. 319; S 7, Section 5, p. 306; S 12, Section 1, p. 297); from beneath Rampart II Outer (S 8, Section 5, p. 306); and from Rampart II Inner (S 13, Section 8, p. 314). All of them proved to be ordinary chalk-soils of the brown-earth type, and very slightly alkaline. The influence of the sub-soil is distinct and accounts for a certain variation in the character of the samples. S 7, S 8, and S 5, which come from the area of the hill covered with clay-with-flints over chalk, show no distinctive features. S 1, and particularly S 12, however, are unusually dark, and of a blackish or reddish brown, and rather clayey. Although they come from outside the limit of the clay-with-flints I am inclined to suspect the presence of vestiges of this material, especially in S 12. S 13, from the centre of the area of clay-with-flints, is light brown, and somewhat silty or loessy, though it contains stones. It is possible that a small remnant of loess is present here over the clay-with-flints.

As regards the possible vegetation on the hill before Camp I was built, the brown-earth type of the soil makes it probable that it was covered with woods, and the same may be assumed for the period between Camp I and Camp II, on the strength of the soil S 9. These conclusions are tentative and mainly based on observations in other localities where, when grassland covered the hill instead of woods, different types of soils developed.

PROBLEM D.

In Section 8 (pp. 314-7, Fig. 10) a section of Rampart II Inner is exposed resting on a soil formed on a substratum of clay-with-flints (S 13). At the edge of the rampart, this soil is mixed with burnt matter. A double post-hole was dug through this. *What can one say of the vegetation at the time the rampart was built? Could the burning be the result of a need to destroy trees and brush-wood by fire in order to build the fortifications?*

The burnt soil (S 14) nowhere underlies the rampart. On the other hand, the filling of the post-hole (S 15) contains burnt matter and fragments of charcoal and resembles S 14. It is therefore probable that the burning took place after the building of the rampart but before the post was extracted from the hole.

The charcoal consisted chiefly of oak. Two small specimens were either willow or poplar. These woods could have been used in the building of huts or fortifications. *There is no evidence of clearly natural vegetation, nor do these soils afford an indication of the vegetation previous to the building of the rampart* (see rather Problem C).

PROBLEM E.

Can anything be said of the post, or only the packing, of Post-hole 5 (S 15) in Section 8 (pp. 314-7, Fig. 10)?

The contents of the post-hole resemble the superficial soil of the neighbourhood, which is mixed with burnt matter and charcoal. It is therefore probable that the post was extracted and that the hole was then immediately filled from above, after the burning evidenced by S 14.

PROBLEM F.

A double post-hole (Post-holes 1-2) was found in Section 9 (pp. 319-21, Fig. 11). A burnt layer and material from the destroyed rampart cover the filling of the post-holes. Three samples from the fillings of the post-holes were available (S 6a, S 6b, S 6c). *Is there anything to suggest that the two parts of the hole are or are not contemporary? No.*

PROBLEM G.

Sample S 11, of a yellow substance found in rapid silt of Ditch II in Section 6 (p. 309, Fig. 8), which otherwise contains clean chalk rubble only. *This is yellow ochre, and it is most probably present through human agency.*