



Notes on Skeleton Found at Cissbury, April, 1878.

Author(s): George Rolleston

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characters, especially as shown by their skulls. The single specimen exhibited was not sufficient to draw any general conclusions from with safety, but as far as it went, it was of importance, as it showed (as might be expected from the evidence), somewhat mixed characters, though on the whole, most inclining to the Melanesian type, so much so that he would have no hesitation in saying (even before he had seen the photographs exhibited) that the individual to whom it belonged had hair of a frizzy, if not quite frizzly character.

Mr. A. R. WALLACE said, that he had seen much of the Papuans of the north-west of New Guinea, and had read almost all that had been written about the natives of the south-east part of the island, and he considered it proved that the latter were a mixed race; intrusions of brown Polynesians, and perhaps of the natives of some of the Melanesian islands, having occurred in successive waves, probably from a remote antiquity, thus producing the various mixtures of type, and relics of Polynesian and other customs. There was also said to be an undoubted Polynesian element in the language of the Motu and other coast tribes. With regard to the Papuans themselves, he believed they formed a very well marked and distinct, though variable race, occupying the greater part of New Guinea; and that the failure of Professor Flower in his search after a Papuan type of skull arose from paucity of materials.

Captain HAROLD DILLON, F.S.A., exhibited some flint implements from Canada and the United States of America.

NOTES on SKELETON found at CISSBURY, April, 1878.

By GEORGE ROLLESTON, M.D., F.R.S., V.P.A.I., &c.

AT page 431 of Vol. vii of the "Journal of the Anthropological Institute," May, 1878, will be found a short account by Mr. J. Park Harrison of the discovery of a second skeleton in the Cissbury Flint-works. This discovery was made at the end of March of that year, and having myself been engaged in the investigations carried on at Cissbury in 1875 (See "Journal Anthropological Institute," Vol. v, Jan., 1876, General Lane Fox, "Excavations in Cissbury Camp," pp. 357 to 390, and Vol. vi, 1876, pp. 20 to 36), I was sufficiently interested in Mr. Harrison's discovery to visit the scene of his operations on April 5, 1878.

On arriving I found that the skeleton had been carefully removed and committed to the guardianship of Dr. C. Kelly, the Officer of Health for the District, and now Professor of Medical Jurisprudence at King's College. To him, as to Mr. Harrison, my best thanks are due, for the information



SKELETON FOUND AT CISSBURY, APRIL, 1878.

18 feet deep in shaft 30 feet deep: as seen when uncovered.

which they most kindly supplied me with as to the details of the “find;” and to Dr. Kelly’s professional knowledge and supervision the almost perfect recovery of the bones is to be ascribed.

The view which, partly from the data furnished to me by these gentlemen, partly from my own observations on the spot, I have come to entertain as to the history of this interment may be briefly stated thus:—One of the “cave-pits” or shafts of the Cissbury flint mines* having been disused by the flint workers for some time, had got filled up to about one-half of its depth, just as several of these pits have got filled up since *our* opening of them, by the scaling off and tumbling down of the more loosely compacted strata of the chalk forming its wall on to such rubble as its excavators had left on its bottom to save trouble. When this process had been arrested, owing to the less firmly compacted and coherent parts of the walls having been all removed under the influence of frost and rain, sufficiently long to allow of the formation of a layer half mortar half red mud at the bottom of the downward pointing conical depression which the desquamation of these *débris* had formed, we may, with the aid of the annexed heliotype from a photograph taken by Messrs. Russell, of Worthing, under the superintendence of Mr. Harrison and Dr. Kelly, reproduce in imagination the flint workers in the act of depositing on the smooth surface thus formed the dead body which the skeleton represents. The corpse was laid upon its right side, with its face to the East, with its knees within less than half a foot from its chin, with its lower legs bent back upon the upper, and with its forearms similarly at right angles to the long axis of its trunk; in one word, that is, in the “contracted” position. In front of its knees a large flint hatchet of oval contour† was placed, and the body was then surrounded by blocks of chalk and some large unworked flints ranged in greatest prominence round the back aspect of the trunk, head, and limbs, but forming also what is in the heliotype, a less conspicuously marked fence in front of the dead body. Some eight shells of

* For a ground plan showing the particular shaft in its relation to the other shafts in its immediate neighbourhood, see Mr. Park Harrison’s paper in “*Journ. Anthropol. Inst.*,” Vol. vi, Pl. X, p. 413, May, 1878, where it is numbered Shaft vi.

For a figure of one of these shafts as they appear when cleared out of the rubble which till recently filled them up, and as it may be supposed to have appeared, if we add by imagination a quantity of rubble to the bottom of it, when the flint workers had finished it, see Mr. Park Harrison’s paper, *Ibid.*, vi, Pl. XXIV, p. 432, May, 1877.

† The implement is shown in the annexed heliotype at *c*, and is the one spoken of by Mr. Park Harrison, *l.c.*, p. 431, as lying “near the head in front.” There was only an interval of seven inches between the patellæ and the skull. The heliotype shows that some few worked flints were found, as was also reported to me by Dr. Kelly, around and on a level with the skeleton

Helix nemoralis and a fire-marked pebble appear to have been placed with the body, and after this had been done, the flint workers must have piled chalk rubble over their deceased comrade to a height of about a couple of feet, and having thrown or put in some half-dozen flint implements a little above and behind the spot occupied by the shoulders of the corpse and just outside the line occupied by the line of chalk blocks, they must, so far as the relics left to our inspection can show us, be supposed to have considered the interment completed.

Subsequently to the interment, the history of the filling up of the pit must have been very much the same as has been the history of the filling up of the pits excavated and observed during the last half-dozen years by ourselves. In a section of such of the contents or filling in of the pit as Mr. Harrison had left in the position which they had assumed in falling into it, two other red streaks, besides the one on which the skeleton had been placed, were visible. The first of these describes a somewhat conical contour with the apex of the cone reaching downwards to the level of the couple of feet of chalk which we suppose to have been heaped over the body as deposited, and with the base prolonged upwards to a place more than half-way from its apex to the surface of the ground. And we must suppose this red streak to have been formed simply by the deposition of the lowly soluble alum- and iron- silicates, the rain carrying away with it to lower levels the more soluble calcareous element of the chalk it fell upon. This red streak is, to the eye, just like the red layer found capping the natural surface of the Downs, and the two layers may therefore, with considerable probability, be considered to have been both formed in the same way.

The former, however, of the two layers contained traces of lime and magnesia, and may have been deposited in a comparatively short time, as the square surface of chalk made up firstly by the walls of the pit, and secondly by the heaps of excavated rubble which no doubt surrounded its mouth, must have been comparatively great. Within the boundary, constituted by this red streak, were contained alternately strata of fine chalk and of medium sized rubble, more or less interpenetrated and agglutinated by still finer water-deposited chalk.

These contents of this upper crateriform cavity we may reasonably suppose to have fallen into it under the influences of rain and frost acting upon the exposed chalk surfaces just mentioned. Above them a second red streak was to be seen at about the level of natural surface stretching more or less horizontally across the section. It appears to have been continuous at the walls with the other downward dipping red streak, very

much as the upper or anterior of the two conical sacs forming the surface net used for catching sea animals is continuous with the lower.

The more thorough washing which its longer exposure had given this uppermost streak of red mud had washed out of it all the traces of lime and magnesia which were found in the lower streak when examined chemically in Oxford.

Two more layers were visible above this red streak; the lower of them was made up of chalk blocks, forming a structure of from $1\frac{1}{2}$ feet to 2 feet thickness. These blocks may obviously be supposed to have been some of the blocks which had been taken out of the pit whilst it was being excavated, and which after a long sojourn outside of it—long enough to allow of the formation of this second red streak—had finally, either by man's aid or that of some other motor force, been returned "into the hole of the pit whence they were digged." The upper of the two layers was made up of the black mould from vegetable *débris* which forms the bottom of so many of the cup-shaped depressions so characteristic of Cissbury.

The 14 or 15 feet which intervened between the red streak, about 5 feet long, upon which the body had been laid, and the natural chalk at the bottom of the pit were occupied with large blocks of chalk and smaller *débris*, which being of much the same character as the contents of the horizontal galleries in their neighbourhood may reasonably be supposed to have been left at the bottom of the pit to save the miners the trouble of carrying them up. They were much agglutinated by fine infiltrated chalk which had been deposited as the downward passing rain lost more and more of its carbonic acid.

It was in this deeper portion of the shaft that the following animal remains were found; a horn of goat (*Capra hircus*) which came from a level 23 feet from the surface; some horns of red deer (*Cervus elaphus*) which came from a level 20 feet from the surface; and some others from the galleries which branched off from the bottom of the pit some 7 feet lower. In one of those galleries an ox's scapula was found, April 8th.*

Stone implements were found in considerable abundance in this portion as in the rest of the filling up of the shaft. Some of them were also of considerable beauty, as notably one found 6 feet from the bottom of the cave, April 6th. It is worthy of notice that four lumps of iron pyrites were found near the mouth of one of the galleries, and about 4 feet to 5 feet from the bottom of the pit; and near them were found from 300 to 400 flint chips in a heap. In this collection we have an indication as to the place where the flints were worked

* For use of scapula of ox as a shovel, see Gen. Lane Fox, *l.c.*, p 383.

up into weapons; and the marks of fire which have been supposed to have been found there may indicate that the presence of a fire was found desirable and secured by the workmen of those early days. I do not, however lay much weight upon this latter suggestion, chiefly because I think that the marks of fire would have been more obvious and less ambiguous* than they are if the lighting of a fire had been a very common practice with the flint-miners.

Part of the lower jaw of an ox (*Bos longifrons*) has come into my hands from those of Mr. Park Harrison, with the note "16 feet," *i.e.*, that of the level at which it lay in the pit, upon it; and a fragment of the femur of a tame pig (*Sus scrofa*, var. *domestica*), appears, though the labelling is a little indistinct, to have come from a higher level, viz.: that of 11 feet.

The further history of this shaft has been obtained from the postscript to Mr. Park Harrison's paper, "Journ. Anthrop. Instit.," vii, May 4th, 1878, p. 424 and pp. 431–433, and from additional information furnished to me by that gentleman and by Dr. Kelly. In following up the excavation of Shaft vi (shown on the plan, Pl. X, *l.c.*), the workmen came first at a little distance above the level of the skeleton, and, as was afterwards made out, over its left shoulder, upon six flint implements of about 4 or 5 inches long, and subsequently upon the cist round the skeleton, and then upon the skeleton itself. This skeleton is that of a man between twenty-five and thirty, who had suffered from hemiplegia when a child, but had sufficiently recovered to take an efficient share as a flint-miner in the labours of the surroundings in which his remains were found. His had been a formal, that of the female from Cissbury, already described by me ("Journ. Anthrop. Inst.," vi, 1876), an accidental interment; but the bones of the two skeletons and the relics found in company with them, show that their owners lived probably about the same time, were themselves of about the same age, though not of the same sex, and followed the same avocations.

I spoke (*l.c.* p. 32) of the skeleton previously found in one of the Cissbury flint-mine-shafts as having belonged to a "woman of about twenty-five years of age, of low stature, 4 feet 9 inches," and very much the same words might be used for describing the male skeleton now before me. Some little doubt might have arisen as to the question of the sex of this skeleton in the mind of anybody who might have chanced to put his hand upon the

* Some of the black deposits which in other shafts had been supposed to have been due to fire, turned out, when examined microscopically, to be of a vegetable nature, and to be, possibly enough, identical with the *Protococcus lugubris* of Prof. Leidy, of Philadelphia.

long bones of the left arm on first seeing the skeleton. For these bones are disproportionately short as compared with ordinary male humeri, radii, and ulnæ, as their measurements will show; and it is only when they are compared with the corresponding bones of the other side of the body, and found to be much shorter than those of ordinary male bones, that we see that this shortness has a pathological, not a sexual significance, and is to be explained as having been caused by infantile paralysis which was partially recovered from. There is, however—when we examine the other bones of the skeleton, happily through Dr. Kelly's help, nearly all available for this purpose—no doubt as to the sex of the owner of this skeleton. As regards the limb bones even of the left arm, their markings for the insertions of muscles are much better defined, and their absolute dimensions are larger than those of the skeleton already described, and the same applies, *mutatis mutandis*, to all the other bones. The orbital ridges, the mastoid processes, the parieto-occipital and the frontal slopes in the cranium, the lower jaw and the pelvis, all alike possess the characters which are held to indicate the male sex.

I spoke of the age of the Cissbury female as having been "about twenty-five years," and I think, as this phrase may be taken to cover the quinquennial period from twenty-five to thirty, it may be considered to have been scientifically as well as otherwise justifiable. It is difficult to pronounce definitely as to whether the male skeleton now before us belonged or did not belong to an older individual than the female already described. In both, the epiphyses of the movable vertebræ have coalesced with the centra, those of the ossa innominata and those of the ribs and clavicles with the rest of those bones, whilst in neither have the first and second sacral vertebræ coalesced, which they usually do about the thirtieth year. On the other hand, the lines of junction of these epiphyses are a little more evident in the male than the female skeleton, and the teeth are not quite so much worn down, so that the male may be supposed to have belonged to a somewhat younger individual. In the male skeleton, again, the manubrium sterni is not ankylosed to the body; but this ankylosis, as visible in the female skeleton, must be considered an abnormality, explicable, possibly, by some peculiarity of diet, as it does not usually supervene till advanced life.

That the owners of the two skeletons under comparison were really workers in the flint mines in which they were found, is rendered probable by the markings of their long bones, of which mention has already been made in the description of the female skeleton (*l.c.* p. 35). The insertion of the deltoid, a muscle greatly employed in climbing, is very prominent in both humeri

of the male skeleton, but especially in the right; the insertions of the greater pectoral and of the latissimus dorsi, which take such a large share in pulling the body after the upwardly extended and grasping arms takes, as in the gorilla, the shape of long, roughly undulated, depressions, the anterior border of the bones, from the upper end of the insertion of the pectoral down to that of the deltoid, describes a curve convex forward to an extent which I have not noted in other human humeri, but which is very similar to that described by the anterior border of the platycnemic tibiæ. The musculo-spiral grooves are poorly marked; but the flat lower part of the posterior surface shows much more signs of the implantation of muscular fibres than is usual even in much more powerful humeri. All the four ulnæ of the two skeletons now before us resemble each other, in having the lesser sigmoid notch for the cylindrical head of the radius shallow and poorly defined, whilst the lower edge of the bone describes a much more marked carinated curve, extending over a distance of $2\frac{1}{2}$ inches by $3\frac{1}{2}$ inches, from the level of that notch forward, than is usual in human ulnæ. These peculiarities are, according to M. Broca, noticeable in certain anthropoid apes (see his "*Mémoires*," tom. ii, p. 181); but like the somewhat similar tibial platycnemy, they are more pronounced in the human than the simian bones.

Setting aside the sexual disparity, which is so often observable in an exaggerated degree in the limb bones of uncivilised races (see "*British Barrows*," p. 659, *ibique citata*), the lower limb bones are, like the upper, curiously similar in the two skeletons, and may have their similarity similarly explained by reference to the climbing which must have formed a considerable part of the labour of the flint workers. The femora in both have the same third-trochanter-like facets for the insertion of the gluteus maximus; in both the right femur has its linea aspera much more prominent than has the left, though the bones of the two opposite sides are in both of the same length; in both alike is the bone flattened or flanged out in the region of the insertion of the gluteus maximus. In both alike the tibiæ are platycnemic; though by the much greater development in the male tibiæ of the oblique "soleal" or "popliteal" line, and its prolongation on to the internal aspect of the bone which thus gives insertion or origin to more or less of three muscles, the soleus, the popliteus, and the flexor communis digitorum which do not encroach upon it in normal tibiæ, this platycnemy is made much more striking. The platycnemy, it may be remarked, even of the gorilla, *Trogodylis gorilla*, never proceeds so far as this; though the tibialis posticus takes origin from the outer, the flexor takes origin from the posterior, not from the internal aspect of the tibia. As

regards the pathological peculiarities of the male skeleton, it is observable from the annexed measurements, that the femora have not suffered at all from the right hemiplegia, which we may suppose to have been the cause of the diminution of size of the following left side bones; the left tibia and fibula being $\frac{3}{10}$ -inch less in length, measured from astragalar articulating surface in contact with fibula than the right; and the left humerus $\frac{5}{10}$ -inch, the left radius $\frac{8}{10}$ -inch shorter than the right. With the exception of the shortening, the left limbs do not appear to be inferior in development to the right, in any degree exceeding that which is ordinarily observable in individuals who are, as savage races usually, and civilized very generally, right-handed. The difference which exists between the extent to which this shortening has affected the lower and upper limbs respectively, is an instructive commentary on the following generalisations which Sir Thomas Watson has based upon his experience and studies ("Principles of Medicine," 5th edition, 1871, p. 469): "Supposing the patient to recover wholly or partially from the paralysis, it is the leg, in nine cases out of ten, aye, and in a much larger proportion than that, which recovers first and fastest; sooner and quicker than the *arm*, I mean. And another fact, quite analogous with this, is that when one of the extremities alone is affected with paralysis it is, in nineteen cases out of twenty, the arm that is so affected. In general hemiplegia from cerebral lesion, the palsy of the leg is commonly less complete, and is sooner recovered from than the palsy of the arm."

An abnormal depression, $\frac{4}{10}$ -inch long, of the shape of a segment of the lateral sinus in the cranium, exists immediately internally to the rough oblique line corresponding with part of the upper and outer limit of the origin of the solens for the posterior surface of the fibula of the left side. This may possibly have been produced by the malnutrition caused by the temporary hemiplegia. But no other lesions of this kind, if such it be, have presented themselves to me elsewhere in this skeleton.

The cranium of the male skeleton contrasts with the female, already described, *i.e.*, in the following particulars:—

When placed on a horizontal plane, and viewed in the *norma lateralis*, without the lower jaw, the skull rests on the occipital condyles and the first molar and the teeth anterior to it, whilst the female skull, when similarly placed, rests on the conceptacula cerebelli and the first and second molars, showing thus at once a greater cranial curvature, which is a sign of elevation, and a greater convexity downwards of the upper alveolar line, which is rather a sign of the reverse. The male skull is more orthognathous than the female, whilst the slope of the forehead is

more oblique, as is usual in male skulls. The same applies to the obliquity in the parieto-occipital region. The frontal and parietal regions are, as the measurements of their absolute widths show, less well filled out and globose than those of the female skeleton;* the muscular impressions show the large development to be expected in a male subject. The ear is seen, as the low antero-posterior index (·48) indicates, to be placed far forward in the skull. The origin of the temporal muscle from the frontal, and of the masseter from the malar bone are marked by rugged lines; there is a large foramen emissarium in each temporal bone posteriorly to the digastric fossa, in compensation, as it were, for the existence of but a single small one in the place of the normally present pair in the parietal region. Viewed from behind, the parietal tubera are so faintly marked as to mask somewhat the pentagonal contour which the falling away of the parietals from the middle line of the skull on either side, together with the comparative flatness of the temporal regions, would otherwise give. Viewed in the *norma verticalis*, the skull is seen to be phœnozygous; to have the denticulations of the sagittal suture somewhat coarse where present, and to have the fused halves of the frontals sloping away from the middle line. When the skull is viewed from the front, the lowness of the orbital, and the height of the nasal indices are very obvious; the end interzygomatic diameter forms the base of a triangle with its apex at the middle line of the frontal; but inferiorly, the flanging out of the lower jaw at its angles diminishes the relative superiority of this transverse measurement. The malar portion of the orbit has its edges everted. The supra-orbital portion is strongly developed, and bridges over the supra-orbital foramen. The supra-ciliary ridges are distinct from the supra-orbital, and meet across the middle line. The frontal sinuses are far from being co-extensive with them.

The lower jaw of this skull contrasts in very many important particulars with the lower jaw of the other skull from Cissbury (already described in this *Journal*, *l.c.*, p. 34). The body of the bone, instead of having its symphysis separated by a wide interval from a horizontal plane upon which itself rests, has an all but perfectly horizontal boundary line inferiorly, upon which would rest in its entire length but for a small downward growth in the region of the symphysis, and a slight rounding off of its angle, the general contour of which is quadrangular; when thus resting on a horizontal plane, it has its coronoid process projecting considerably above the level of the articular surface of the condyle, and when placed in its normal relation with the skull it has this

* The minimum frontal width of the female Cissbury is given (*l.c.*, p. 36) erroneously as 3·1; it should be 3·9; it is in this male skull 3·7.

same process prolonged a considerable way into the zygomatic fossa; a line drawn along the lower margin of the body of the bone makes an angle of but 103° with one drawn along the posterior aspect of its ascending ramus as opposed to the angle of 133° made by the same lines in the other lower jaw from Cissbury; and the teeth are less worn and of smaller size, and the body of the jaw less tumid, though the age was about the same and the sex male as opposed to female. If the regions of the symphysis of the lower jaws differ very much when looked at from the front, they differ even more when looked at from behind. The posterior aspect of the symphysis of the lower jaw can be naturally divided into two segments, one anterior, the other posterior to the tubercles for the geniohyoglossi and the vascular foramen just in front of them. If we place the point of one arm of a pair of compasses in this pretty constant foramen, and take with the other, first, the distance to the alveolar, and secondly, the distance to the mental edge of the symphysis, we shall very rarely fail in the lower races of mankind to find the former of these distances much exceed the latter; and it is certainly only in the lower jaws of the higher races that we find the opposite proportion to prevail. So that if it were not wearisome to add to the list of indices, an antero-posterior index might be established for comparing the relative proportions of the two segments of the usually curved line described by the posterior surface of the symphysis.

The length from the foramen specified to the alveolar edge of the symphysis is in the female jaw 1.1 inch as against .85 inch in the male, whilst the distance from the same foramen to the mental border of the symphysis is in the female jaw .6 inch as against .7 inch in the male.

The following general conclusions appear to be deducible from the foregoing descriptions and comparison of the two Cissbury skeletons:—

Firstly, that from the osteological peculiarities either of the cranium or of the lower jaw, or of the trunk and limbs, or of the skeleton as a whole, arguments of considerable cogency may be drawn for or against the “priscan” date of a human skeleton, independently of the arguments to be drawn from its archaeological surroundings.

Secondly, that in skeletons proved to be priscan by both the above lines of argumentation, points of difference will still be found to exist, independent on the one hand of points of sexual difference, and in spite, on the other, of any tendencies to uniformity, which the supposed uniformity of priscan life may be thought likely to produce.

MEASUREMENTS OF MALE SKELETON FROM CISSBURY, APRIL, 1878.

MEASUREMENTS OF SKULL, FACE, AND LOWER JAW.			MEASUREMENTS OF TRUNK AND LIMB- BONES.		
		inches.			inches.
Extreme length	7·3		Length of right femur	15·7	
Fronto-inial length	7·25		" left	15·7	
Extreme breadth	5·2		" right tibia	12·2	
Upright height	5·7		" left	11·9	
Absolute height	5·6		" right fibula	12·4	
Circumference	20·5		" left	12·1	
Basiscranial axis approximately,	4·0		" right humerus	12·8	
Cubic capacity not taken			" left	11·5	
Minimum frontal width	3·7		" right radius	8·9	
Maximum frontal width	4·5		" left	8·1	
" occipital width	4·5		Right clavicle	5·1	
Frontal arc	5·		Left	5·2	
Parietal arc	5·1		Distance from upper limit of		
Occipital arc	4·6		glenoid fossa to posterior in-		
Basiosubnasal line approximately	3·7		ferior angle of right scapula†	6·6	
Basio-alveolar line approximately	3·7		Distance between the widest		
Length of face	2·3		apart points of ilia	10·0	
Breadth of face	4·9		Distance between front of sym-		
Height of orbit	1·3		physis pubis and the sacral		
Width of orbit	1·6		spines	6·3	
Length of nose	1·85		Angle at symphysis	35°	
Width of nose	1·0		Antero posterior diameter of true		
Depth of lower jaw at symphysis	1·3		pelvis	4·8	
Width of ramus	1·5		Transverse diameter of true pelvis	4·6	
Interangular width	4·		Oblique	4·7	
Mandibular angle	103°				
INDICES.			<i>Stature as calculated from lengths of femur 4' 9". The entire skele- ton as laid out with spacing between vertebræ occupied a length of 4' 10''·5, to which an inch should be added for scalp and plantar soft parts, making in all a stature of 4' 11''·5.</i>		
Length-Breadth Cranial	·71				
Length-Height Cranial	·76				
* Antero-posterior	·48				
ANGLES.					
Basilar	30°				
Facial at alveolar border	74°				
Facial at nasal spine	76°				

Description of Heliotype.

The skeleton is seen to be lying on its right side; in the contracted position the left side of the skull has been much damaged, as seen at *a*.

* For this Index, see "British Barrows" 1877, pp. 563, 667.

† This measurement only admits of being approximately obtained in the female skeleton with which we have been comparing it, it is however, about an inch less, a significant fact not without parallel in prehistoric skeletons.

Large chalk blocks *b* are arranged round the skeleton, they are seen very plainly round the back of the skeleton; the rubble, &c., which filled the pit up for an extent of 16 feet above the skeleton has not been so largely removed from the front of the skeleton, hence the chalk blocks there are not seen so plainly as they are behind it.

A beautiful flint implement *c* is seen in front of the bent knees.

d, the pelvis.

e, the left foot.

DISCUSSION.

Professor FLOWER, F.R.S., said that having only had the bones in his hands for a few minutes he was unable to add anything of importance to Professor Rolleston's able and exhaustive description of them. He could only corroborate the statement as to sex, as both pelvis and skull presented in a marked manner the masculine characters, and the age was probably not far below thirty. The face was remarkable for the lowness of the orbital index, and in this character and the form of the malar bones it showed no mongoloid affinities.

Lord ROSEHILL, speaking on the great interest attached to the skeleton just described, thought it right to mention that he had in his possession a skull, wanting only the lower jaw, which came to him with the collection of the late Mr. J. P. Tindale, marked "Cissbury Camp." Lord Rosehill had worked with that gentleman at the shaft now called "Tindale's Pit," but unfortunately was away during the latter part of the excavation, shortly after which Mr. Tindale died. Consequently he was not certain whether the skull in question came from that Pit, or from some other part of the Camp or neighbourhood, possibly Professor Rolleston might know more of the matter; and the skull would be sent to him for his examination.

Mr. R. B. MARTIN wished to ask Professor Rolleston and Mr. Park Harrison as to the position in which the skeleton was found: whether it appeared to have been carefully buried or to have been thrown in and hastily covered up? The position of the figure in the drawing differed considerably from that in the photograph.

Mr. PARK HARRISON thought it was quite possible that the cripple that had been so scientifically restored by Dr. Rolleston may have met with an accident whilst climbing up or descending the shaft, and that he was interred there owing to the difficulty of removing his remains. Dr. Kelly, hearing on the day after that on which the discovery was made, late in the afternoon, that there was a skeleton, or a portion of one, underneath the chalk *débris*, accompanied Mr. Harrison to the spot; and they spent about two hours in removing the chalk, piece by piece, to prevent the position of the bones as they lay in the shaft from being disturbed.

Subsequently, after the skeleton had been photographed, more of the chalk was removed, and then the blocks in front were rendered more conspicuous.

As regards the composition of the red seams, Dr. Kelly analysed some of the material from above the skeleton, and also part of the browner earth from the level bed on which it lay. He obtained alumina and much oxide of iron from both samples. There was least chalk in the clay from *beneath* the skeleton.

Some pieces of stags' horn found on the north side at the same level as the flint chips on the opposite side of the shaft were undoubtedly charred.

The photograph has been mounted upside down. The face should look to the right, as in the drawing.

Illustrations of the MODE of preserving the DEAD in DARNLEY ISLAND and in SOUTH AUSTRALIA. By WILLIAM HENRY FLOWER, LL.D., F.R.S., V.P.A.I., &c.

THE Museum of the Royal College of Surgeons has lately acquired a dried body of a man, fastened to a kind of hurdle or framework of wood, brought in 1872 from Darnley Island or Erroob in Torres Strait, by Mr. Charles Lemaistre, Captain of the French barque "Victorine." According to the statement of Mr. Lemaistre, "the mummy was found in its grave, which consisted of a high straw and bamboo hut of a round form; it was not lying down, but standing up on the stretcher. Round it and on the ground were some broken shells, bones of fishes, and a few human skulls."

The framework, or stretcher, is composed of two nearly parallel pieces of cylindrical branches of a tree with the bark on, each 6 feet in length, and about an inch and a-half in diameter, fixed at a distance of from 16 to 18 inches apart, by ten cross pieces of similar wood of smaller calibre, bound to the longitudinal lateral pieces by cord of native manufacture, formed of plaited grass or other vegetable fibre. The disposition of these pieces in relation to the longitudinal pieces and to the body is seen in the accompanying photograph (Pl. XI). At each end there are two pieces, one in front of, and one behind the longitudinal bars, as if for greater security. The rest are all tied on to the front side or that to which the body is attached. All these pieces of wood are smoothly cut at the ends, as if with a saw.

The body has evidently been fastened on to this frame, and placed in the upright position while it was fresh, and before drying. The principal points of suspension have been the