

**Description of the tumulus opened at Gristhorpe, near Scarborough : with engravings of the coffin, weapons, &c.; / by W.C. Williamson.**

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**Publication/Creation**

Scarborough : S.W. Theakston, 1872.

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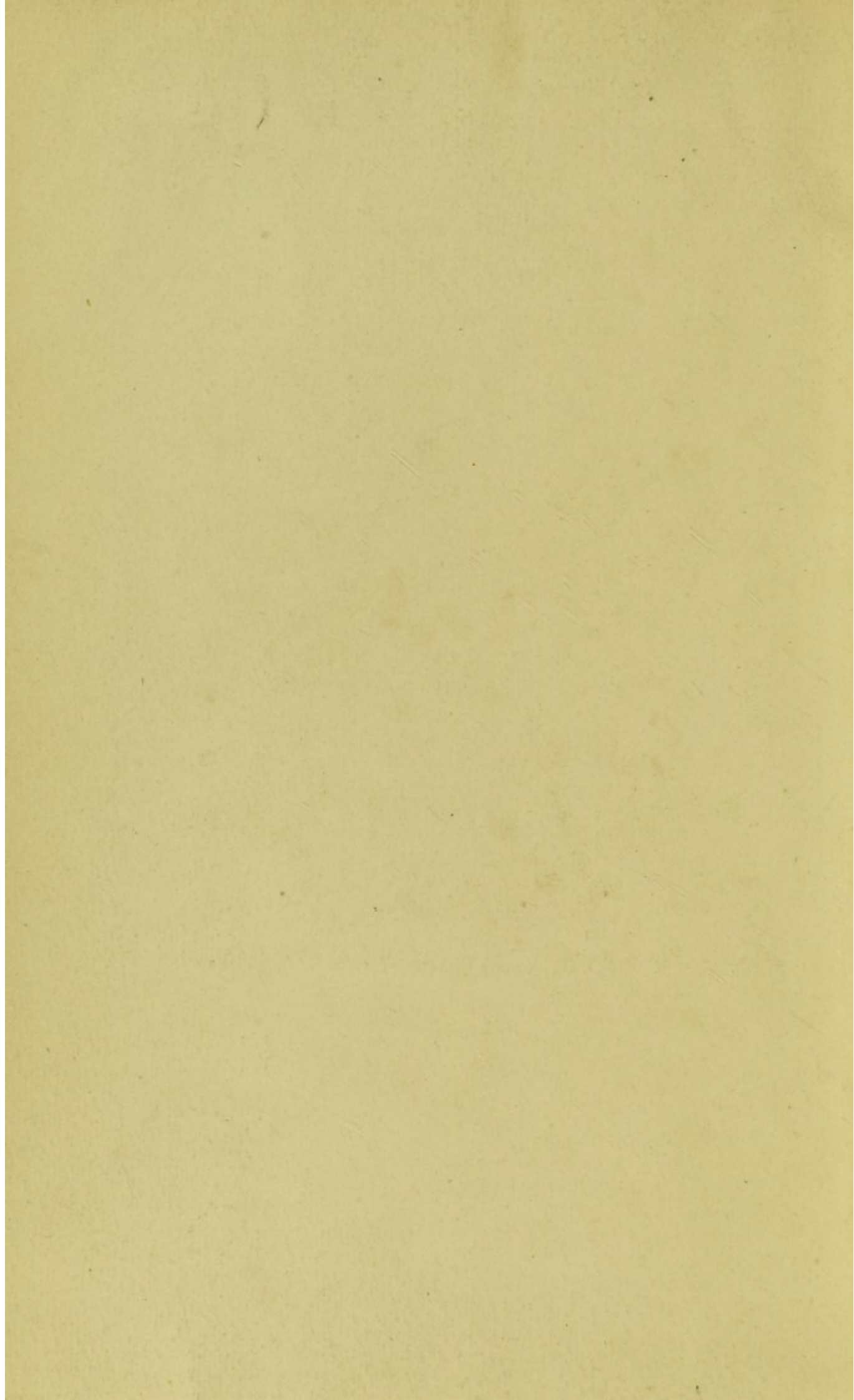
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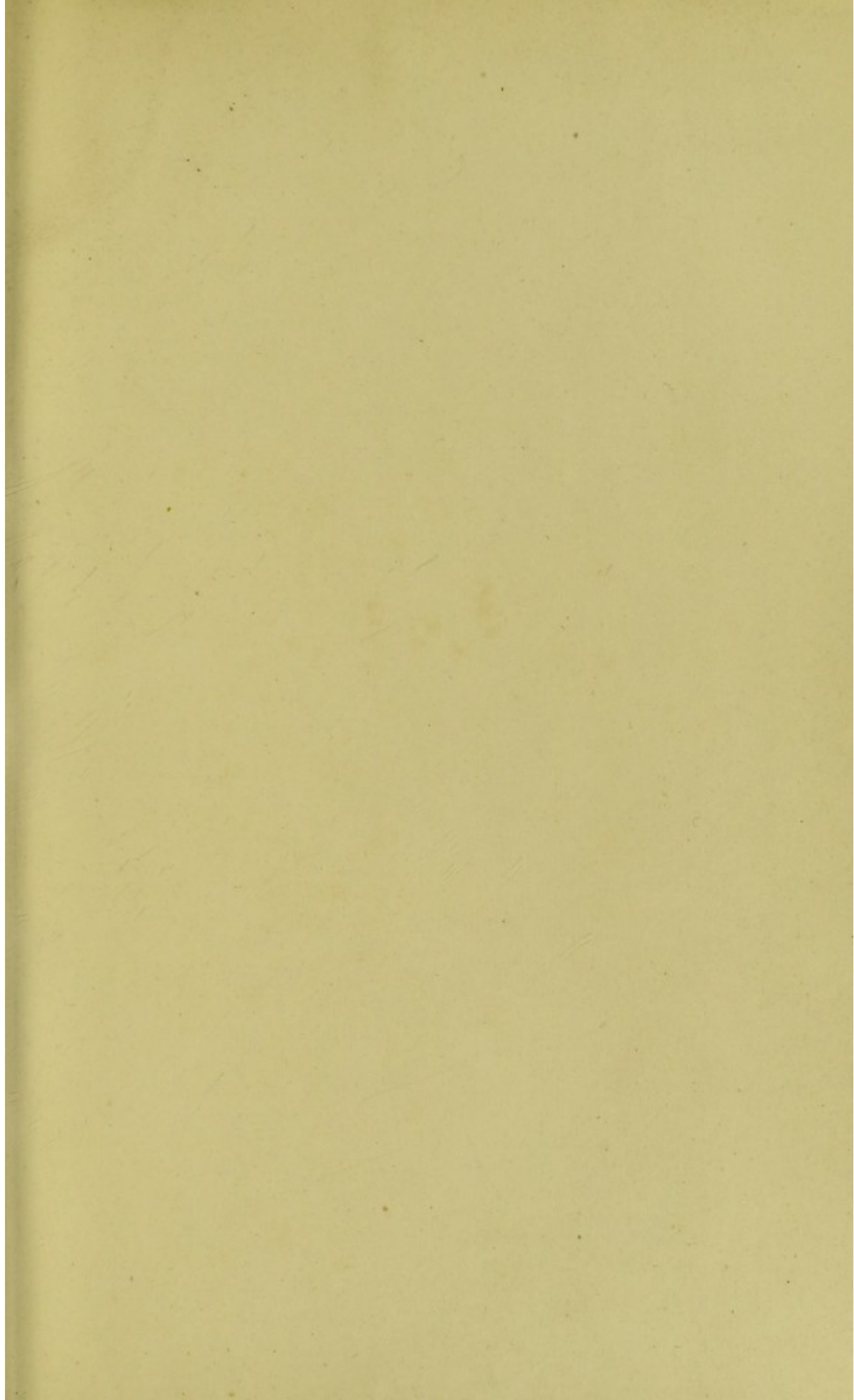


# Description of the Tumulus

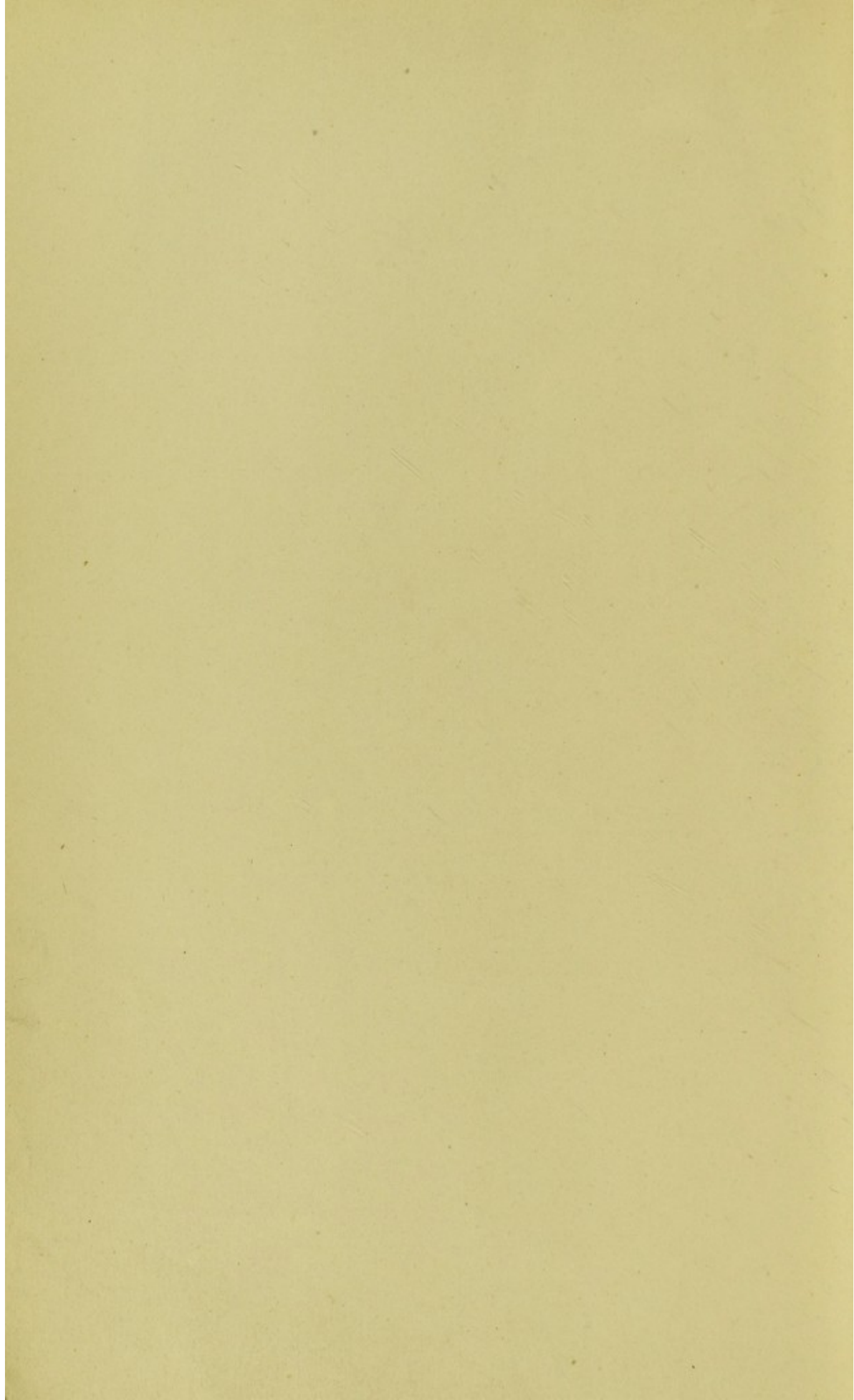
OPENED AT GRISTHORPE, NEAR SCARBOROUGH.

By W. C. WILLIAMSON, F.R.S.



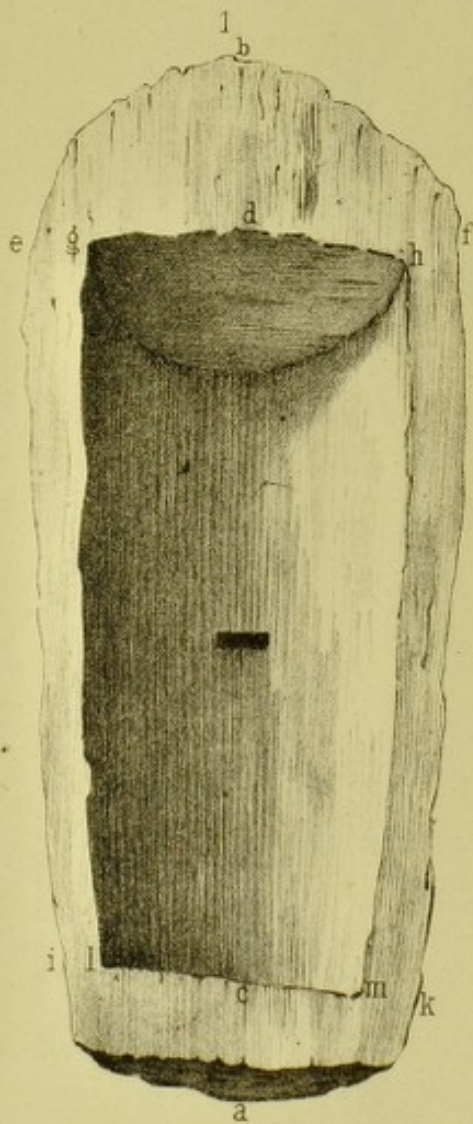
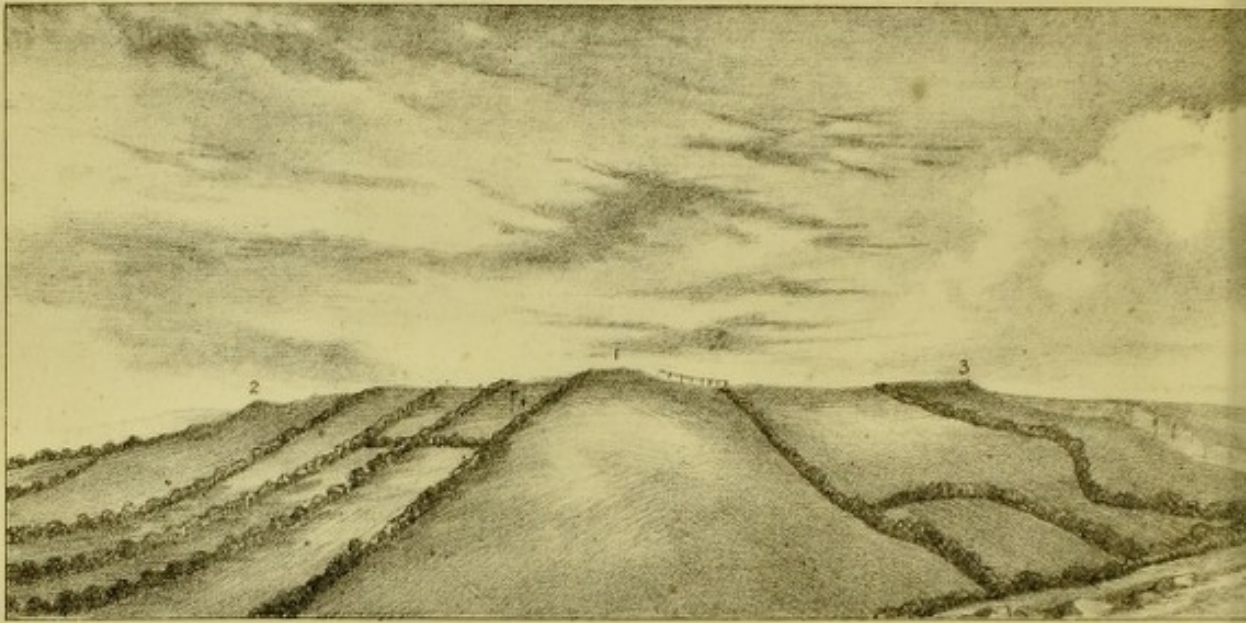




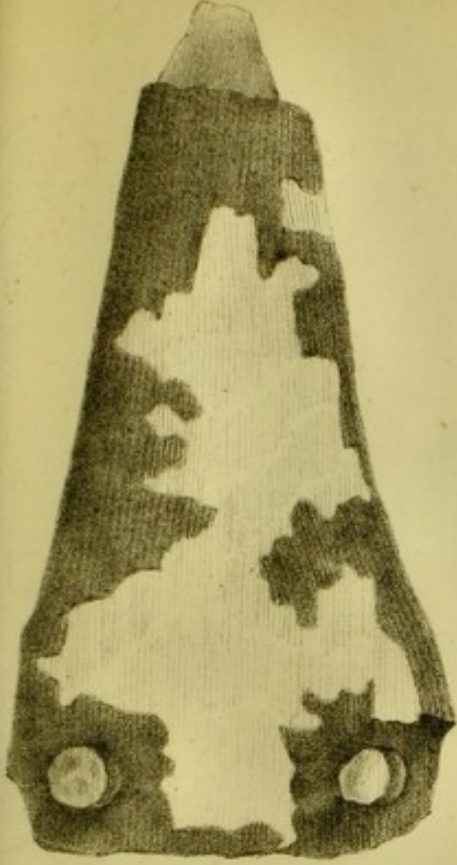




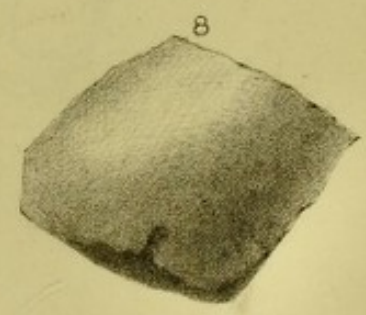
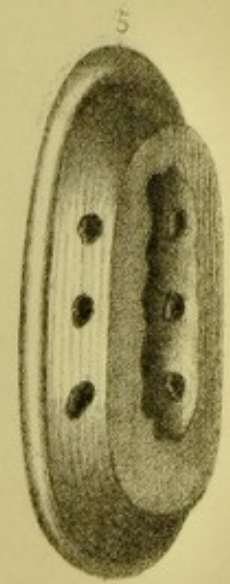
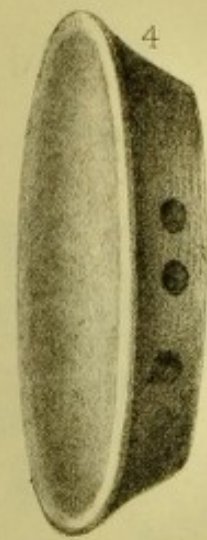
Gristhorp Cliff with the three Tumuli.



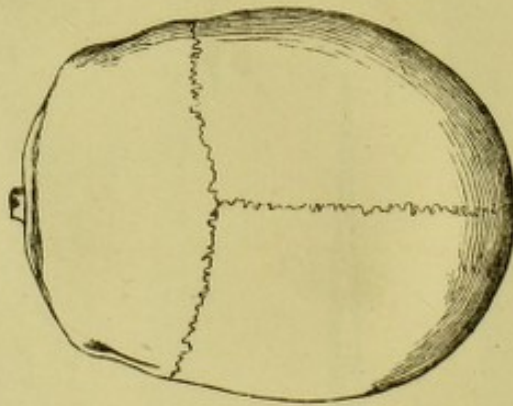
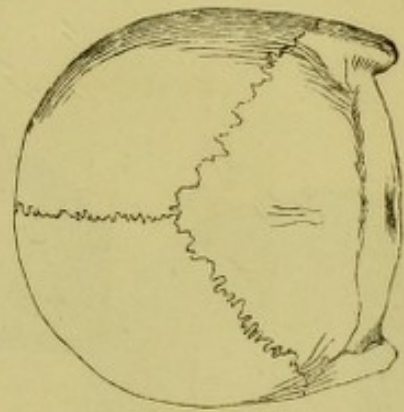
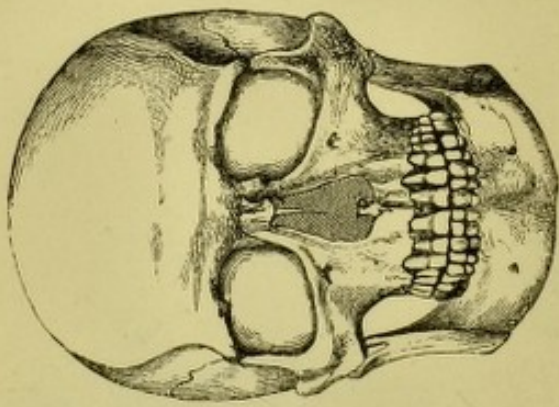
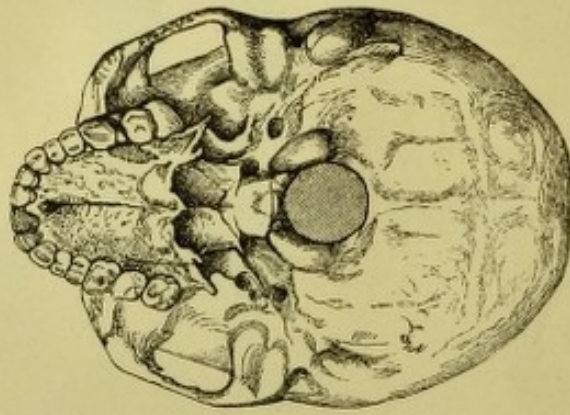




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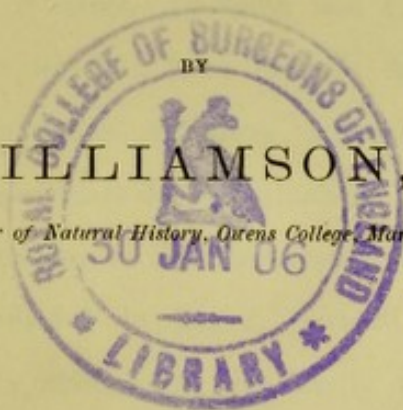
DESCRIPTION  
OF  
THE TUMULUS

OPENED AT  
GRISTHORPE, NEAR SCARBOROUGH,

WITH  
Engravings of the Coffin, Weapons, &c.

BY  
W. C. WILLIAMSON, F.R.S.,

*Professor of Natural History, Queens College, Manchester.*



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THIRD EDITION, REVISED AND RE-WRITTEN.

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SCARBOROUGH:  
PRINTED AND PUBLISHED BY S. W. THEAKSTON, 31, ST. NICHOLAS STREET.

1872.

DEPARTMENT OF

THE TUMBLE

GRANTING THE PATENT

OFFICE OF THE COMMISSIONER

U. S. PATENT OFFICE

WASHINGTON, D. C.

1870



## P R E F A C E.

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When I was informed by the Antiquarians of East Yorkshire that there was a demand for a third edition of my description of the Gristhorpe Tumulus, I felt in some perplexity. No department of Science has advanced more rapidly than Archæology has done during the last thirty years; and it was obvious to me that the crude production of a youth of seventeen, published in 1834, was altogether unfit for republication in 1871. I decided, therefore, entirely to re-write the greater portion of the Memoir, and thus bring it into harmony with the present state of our knowledge on the subjects to which it refers. In doing this I have to acknowledge the friendly assistance which I have received from the Rev. Canon Greenwell, of Durham, whose extensive experience in archæological researches makes that assistance doubly valuable; and from J. W. Teale, Esq., the energetic Secretary of the Scarborough Philosophical Society. I am also greatly indebted to Dr. J. Barnard Davis, one of the authors of the *Crania Britannica*, who kindly volunteered the loan of the wood block employed in that magnificent work to represent the four aspects of the cranium of the Skeleton. The result of these changes is the reappearance of an old friend, but emphatically with a new face.

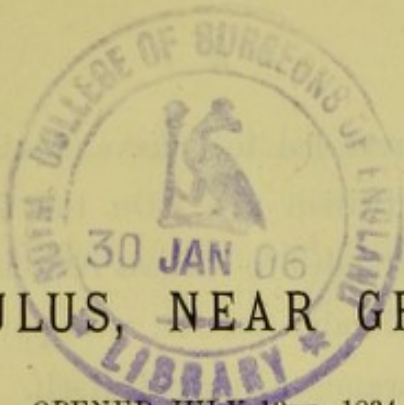
*Owens College, Manchester, October 9th, 1871.*

# PREFACE

What I was intended by the Department of the Interior  
to do was a document for a third edition of my description of  
the Gila Woodpecker. I felt in some respects. No department  
of Science has advanced more rapidly than Anthropology has done  
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the subjects to which it refers. In doing this I have to acknowledge  
the kindly assistance which I have received from the Rev. Canon  
Francis of Tucson, who has kindly examined the manuscript  
and has made many valuable suggestions; and from J. W. Jones,  
of the University of the Southwest, who has kindly examined  
I am also greatly indebted to Dr. A. J. Rehn, one of the  
experts of the United States, who kindly examined the text  
of the work and suggested in that connection what to remove  
the more recent of the changes of the text. The result of this  
change is the appearance of an old friend, but respectively with  
a new face.

THE UNIVERSITY OF THE SOUTHWEST, TUCSON, ARIZONA, 1911





## THE TUMULUS, NEAR GRISTHORPE;

OPENED JULY 10<sup>TH</sup>, 1834.

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*“Ingentem quercum decisis undique ramis*

*Constituit tumulo, fulgentiaque induit arma.”—VIRG. ÆN.*

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ON Thursday, July 10th, 1834, a large Barrow or Tumulus was opened at the Village of Gristhorpe, near Scarborough, by W. Beswick, Esq., the owner of that estate: this gentleman, some years ago, opened two others near the same site; in both of them, Urns, with imperfect remains of bones and ashes, probably of burnt wood, were found, which were pronounced to be of Anglo-Saxon or Roman origin, but from what has transpired since, they more probably belonged to the age of Ancient Britons.

The previous year Mr. Beswick proceeded to examine the tumulus which forms the subject of this memoir, but after sinking to some depth, fruitlessly, he discontinued it. Afterwards, however, in company with E. Alexander, Esq., of Halifax, and other friends, he recommenced his search, and at the depth of about six feet from the surface, the spades struck against hard substances, which proved to be a quantity of Oak Branches, loosely laid together; these being removed, an immense log of wood, pointing north and south, seven feet long by three broad, shortly afterwards presented itself, to the great satisfaction of these antiquarians. At one end of the log was a rude figure vaguely resembling a human face, from which circum-



stance the excavators were led to believe, that they had discovered some relic of ancient British art. On the following morning, a number of gentlemen attended to witness its removal from its bed of clay; this, after considerable labour, was partly effected, when a most remarkable appearance displayed itself. The log seemed to have been broken by the force employed; but on the fractured portion being lifted up, it was found to be the lid of a Coffin, the lower part of which still remained in the clay, containing a quantity of water, in which a human skull was visible; on the water being thrown out, it was soon found that the coffin contained a perfect Skeleton. The bones were carefully removed, the other contents of the coffin examined, the lower part taken up, and the whole, through the liberality of its discoverer, conveyed to the Scarborough Museum.

#### THE COFFIN.

The coffin has been made from the trunk of an Oak, roughly hewn at the extremities, and split, most probably by wedges. The external bark is still in good preservation, and on it is carved the rude figure before alluded to. This object was sculptured at the end of the coffin occupied by the feet of the skeleton. Unfortunately it was much damaged by the feet of the workmen, rendering it difficult to say what it was designed to signify.

The following are the dimensions of the bottom of the coffin: the letters referring to *Fig. 1* of the *Plate*:

	<i>Ft. In.</i>		<i>Ft. In.</i>	
From..... <i>a</i> to <i>b</i> .....	7 6		From..... <i>i</i> to <i>k</i> .....	2 10
From..... <i>c</i> to <i>d</i> .....	5 4		From..... <i>l</i> to <i>m</i> .....	2 3
From..... <i>e</i> to <i>f</i> .....	3 3		Depth of the Head..	1 3
From..... <i>g</i> to <i>h</i> .....	2 7½		Ditto at the Feet ...	1 1

At the bottom, near the centre, is an oblong hole about three inches long by one wide, which passes through the coffin, and has most probably been intended to carry off the fluids arising from the decomposition of the body. The bark of the exterior of the coffin



still retained attached to it some of the lichens that had grown upon it when a living tree.

There is little difference in size and general appearance between the lid and the body of the coffin: the following are the dimensions where differences do occur:

	<i>Ft.</i>	<i>In.</i>
<i>Fig. 2.</i> —Circumference from <i>a</i> to <i>b</i> .....	4	8
————— <i>c</i> to <i>d</i> .....	3	10
Depth of hollowed centre at head .....	1	0
————— at feet .....	0	9

The fractured surfaces of the wood have not been planed or smoothed.

I cannot perceive the least trace of anything having been used to fix the lid to the coffin: it appears to have been laid loosely on, and only held in its place by the uneven fracture of the wood of the two surfaces, which corresponded when brought into proper juxtaposition.

### THE SKELETON.

As already mentioned, it was soon found that the coffin contained the detached bones of a perfect Skeleton of more than average dimensions. The bones were very rotten and of an ink-black colour. The former condition was obviously the result of their prolonged maceration in water, leading to the disappearance of the animal tissues which should have given coherence to their inorganic elements. Notwithstanding this, great care being exercised, they were removed without serious accident, and a plan adopted for their preservation which was decidedly successful. When Mr. Layard brought home some friable ivories from his Eastern excavations, the late Dr. Buckland obtained some applause—if I mistake not—for his ingenious recommendation that they should be boiled in a solution of gelatine. This is exactly what we did with the Gristhorpe Skeleton many years previously. The separated bones were placed in a large laundry boiler filled with a thin solution of glue, and the author watched them through many weary hours, guarding lest the ebullition should become too violent for the brittle bones. After simmering for about eight hours the bones were removed from the boiler, exposed for some days to currents of air, and then articulated with little difficulty. The black



colour of the skeleton was probably due to a chemical cause. The clay of the district in which the tumulus was found contains iron, which might be expected to permeate the water that filtered into the interior of the coffin. There it would encounter the tannic acid dissolved out of the bark or wood of the oaken coffin, and the combination of the two chemical elements would give the contents of the coffin, especially the porous mineral substance of the bones, the black colour which they exhibited when disinterred.\*

The water contained in the coffin was examined by the late Dr. Murray, of Scarborough, who found it to be identical with the ordinary spring waters of the district. It contained much sulphate of lime but no appreciable animal matters or tannin; but floating in the water, and penetrating the fissures of the decaying wood, adipocere occurred in a pulverulent form of a white colour.

The following are the dimensions of some of the principal bones of the skeleton, as given in the previous editions of this memoir:

	<i>In.</i>
Extreme length of Humerus .....	11 $\frac{1}{2}$
————— Radius .....	10 $\frac{1}{2}$
————— Ulna ... ..	11 $\frac{1}{4}$
————— Clavicle .....	6
————— Scapula.....	8 $\frac{1}{4}$
————— Sternum and Ensiform Cartilage .....	9
————— Femur .....	19 $\frac{1}{2}$
————— Tibia .....	19 $\frac{1}{4}$
————— Fibula .....	16

\* Dr. J. Barnard Davis states: "I have the relics of an ancient Briton from the bottom of a moss or peatbog in Cumberland, who appears to have lost his life in this bog; and also the skull of a woman, if such an object can still be called a skull which has no remnant of bone in it, who also perished in a like manner in a bog in Ireland. These are both black, and may be said to be in perfect preservation so far as form goes, but have been converted into leather, as well as dyed by the ink produced in the bogs, and hence are flexible. The earthly part of the bones has been dissolved by the acid of the bog, at the same time that its gallic acid and tannin have transformed the animal or glutinous part into leather, which has been dyed black by the sulphate of iron, probably derived from the decomposition of the soil at the bottom of the moss."—*The Reliquary*, vol. 6, p. 7. —The Rev. Canon Greenwell also informs me that he found in a split and hollowed oak trunk, near Featherstone Castle, Northumberland, the skeleton of a woman, in which the bones had, in like manner, assumed the appearance of leather. The interment in this case had also taken place in a wet spot. The difference between the action of the water in the above examples and in the Gristhorpe bones, doubtless arose from the circumstance that the absence of bog vegetable soil, in the latter case, prevented the generation of such acids as were capable of dissolving the phosphate of lime.



	<i>In.</i>
Width of Sacrum.....	4½
Greatest width of Lumbar Vertebrae, including the transverse processes .....	4
Circumference from the Foramen Magnum to the Alveolar process of the upper Jaw .....	17¼
From the Alveolar process to the commencement of the Sagittal Suture .....	7
Length of Sagittal Suture .....	5½
From the Sagittal to the Temporal Suture .....	4¾
From the Temporal Suture to the Styloid Process.....	3¾
Breadth of the Forehead above the superciliary arches between the temporal ridges .....	4½
Entire circumference of the head above the superciliary arches crossing the occipital bone.....	21¼
Transverse circumference of the upper portion of the head from the two Mastoid processes.....	16
Base of head between the Mastoid processes .....	5
From the Sagittal Suture to the base of the lower Jaw.....	10
From the Coronoid to the Condylod processes .....	1½
From the Condylod process to the angle of the lower Jaw .....	2¾

Since the time when the above measurements were made new questions, relative especially to the skull, have arisen, leading to new modes of measurement. But, unfortunately, nearly every distinguished ethnologist adopts a system of his own. The following are the dimensions recorded by Dr. Thurnam in his description of the skull of our Skeleton, published in the *Crania Britannica* :—

Horizontal circumference .....	22 0 inches.
Longitudinal diameter .....	7 5 „
Frontal region.....	5 3 „
——— breadth .....	5 3 „
——— height.....	5 3 „
Parietal region, length .....	5 5 „
——— breadth .....	6 1 „
——— height.....	5 2 „
Occipital region, length.....	5 0 „
——— breadth .....	5 7 „
——— height .....	4 5 „



Inter-mastoid arch .....	16 0 inches.
Internal capacity .....	84 $\frac{1}{2}$ ounces.
Face, length .....	4 7 inches.
—— breadth .....	5 7 „
Weight of Skull with lower Jaw .....	28 9 ounces.

In addition to the above my friend Mr. J. W. Teale, of Scarborough, has kindly taken the measurements of the skull in the several directions suggested by Dr. Thurnam in his important paper on Ancient British and Gaulish Skulls, published in vol. 1 of the Memoirs read before the Anthropological Society of London :—

	<i>Inches.</i>
1 Horizontal circumference, taken with a tape passed above the orbits and over the most prominent part of the Occiput.....	21 37
2 The length, measured with callipers, from the Glabella, about an inch above the Naso-frontal Suture, to the most prominent part of the Occiput.....	7 5
3 The greatest breadth between the most prominent parts whether of the Parietal or Temporal bones .....	6 25
4 The height, measured from the plane of the Occipital Foramen to the most elevated part of the Vertex, near the junction of the Sagittal and Coronal Sutures.....	5 37
5 Length of the face from the Naso-frontal Suture to the point of the chin .....	5 25
6 Breadth of the face from the most prominent points of the Zygomata .....	5 82

An elaborate description of the skull was published by the late Professor Retzius, in 1849, of which the following condensation is given in the *Crania Britannica* :—

“ The form of the outline is a broad oval ; the length exceeds the breadth by about a sixth. The upper surface rounded. The forehead slightly arched, low, and broad ; the sides of the skull almost perpendicular. The occiput, seen from behind, nearly square, and, as in the Finns, rounded ; it is not so abrupt and short as in most brachycephalic skulls : the superior semicircular lines and the occipital protuberance strongly developed. The mastoid processes large ; the auditory passages much behind the middle of the long



axis. The superciliary arches and part of the glabella project strongly from the frontal region. The nasal bones directed upwards. The orbital cavities large. The malar eminences small. The zygomatic arches but little prominent. The teeth have a slight projection forwards, and are much worn away horizontally. The jaws tolerably large and well proportioned, and the hollow of the cheeks much depressed."

Dr. Thurnam, commenting upon the above description, very correctly observes "that the forehead, though a little flat and receding in the centre, can scarcely be called low: it is much higher than in most ancient British skulls, and absolutely high in the coronal region." Dr. Thurnam also points out that the projection of the upper jaw is such as to give "a marked appearance of prognathism."

The following table of the Phrenological features of the skull was furnished by Dr. Elliotson, from an examination of an excellent cast. I attach no importance to the table psychologically, but it may assist in conveying to others some idea of the general aspects of the skull.

Self-esteem— <i>fully developed.</i>	Perseverance— <i>large.</i>
Combativeness— <i>very large.</i>	Causality— <i>do.</i>
Destructiveness— <i>do.</i>	Comparison— <i>do.</i>
Secretiveness— <i>moderate.</i>	Individuality— <i>do.</i>
Acquisitiveness— <i>do.</i>	Philoprogenitiveness— <i>very large.</i>
Approbativeness— <i>very large.</i>	Constructiveness— <i>small.</i>
Benevolence— <i>full.</i>	Wit— <i>large.</i>
Veneration— <i>do.</i>	Imitation— <i>small.</i>
Firmness— <i>do.</i>	

The Thyroid cartilages of the Larynx, the ensiform process of the Sternum, and the teeth are in excellent preservation. The two former appear ossified; the latter are extremely regular, but much worn and flattened by mastication, from which, together with other circumstances, we may infer that he had been advanced in years. Two of the vertebræ of the neck are anchylosed, which some consider as another proof of his great age, although this phenomenon may have resulted from disease.

The body was laid on its right side with the head to the south. Owing to the limited space afforded by the interior of the coffin the



legs were necessarily drawn up, as is almost invariably the case in pre-Roman interments. The Rev. Canon Greenwell informs me that out of about two hundred pre-Roman burials he has but once found the body extended at full length. The body had evidently been wrapped in the skin of some animal with soft fine hair, but the investment fell in pieces during removal, a few fragments alone being preserved. There were indications of its having been fastened at the breast by the pin of bone, *Fig. 10*. It is not very easy to say what has been the original height of the skeleton. Since its articulation, it measures rather more than six feet two inches; but we cannot be quite sure that the artificial inter-vertebral substances used in the process are exactly of their original thickness; we may, however, form some estimate on the point by comparing the bones of the limbs with those of other skeletons whose height is known. The average proportion which the length of the Femur bears to that of the entire Skeleton appears to be about 27·5 to 100. Since that bone in the Skeleton under consideration is  $19\frac{1}{2}$  inches in length, the above proportion would give a Skeleton of 5 feet 11 inches; but this is certainly less than the reality in the present instance. I have no doubt whatever that the original stood about six feet in height. Humphrey, in his "Treatise on the Human Skeleton," records the relative proportions of the chief bones of several skeletons of giants to the total height of their bodies. The femur of a woman whose height was 6 feet 1 inch was 19·8; our specimen being, as we have seen, 19·5. These proportions support the conclusion just enunciated. In the case of the thigh bones of dolichocephalic male skeletons taken from long barrows, Dr. Thurnam found an average length of  $17\frac{3}{4}$  inches, and of those of the same number of brachycephalic skeletons from round barrows he obtained a mean length of 19 inches. Of the entire series only two were  $19\frac{1}{2}$  inches long, or equal to that of our Skeleton; two others were  $20\frac{1}{2}$  inches. Thus it appears that whilst the brachycephalic people to whom our Briton originally belonged were a somewhat tall race, he was superior to most and inferior to few of those by whom he was surrounded. When we compare the capacity of his cerebral cavity with those of other British skulls, we also learn how pre-eminent he was above his fellows. The skull is, as Dr. Thurnam remarks, "equal for elevation and for breadth, the latter being ·85 of the length, a degree of brachycephalism only



exceeded in one out of thirty-five of the ancient British skulls figured in this work" (*Crania Britannica*).\*

We have already seen that the cubic area of the cranial cavity was equal to  $84\frac{1}{2}$  ounces of sand, reducible by calculation to one of 102 cubic inches. The average of 55 skulls from long barrows was found by Dr. Thurnam to be 99 inches, and of a corresponding number from round barrows to be 98 inches. Professor Morton states that the average capacity of the skull of his Teutonic family was 93.5, his largest example being but 114. The skulls of 357 individuals, male and female, from the Parisian Cemeteries, afforded a mean of 87 inches, from which series Dr. Thurnam estimates the recent French male skull as having an average of about 91. Whichever of the preceding measurements we adopt as our standard of comparison, we find that the Gristhorpe skull occupies a high position in the scale of cerebral development.

#### THE WEAPONS, &c.

All the *Figures* of these objects, from 3 to 11 inclusive, represent them of their natural size.

*Fig. 3* is the head of a Dagger or Knife, formed of bronze, on which time appears to have exerted considerable influence, as it is much corroded and has evidently lost a considerable quantity of metal at the point. At the broad end are two small rivets, which have doubtless been used to attach the weapon to a shaft, which from the shortness of the rivets, still remaining, must have been broad and thin. In Sir R. C. Hoare's "Ancient Wiltshire" is an account of a similar weapon, with a short handle of about the same length as the bronze head or point. If this be of the same type, it will doubtless have been employed as a Dagger or a Knife, as occasion

\* The various modes of measuring these skulls, as well as the terms employed to indicate the results, are somewhat confusing to the uninitiated student. Taking 100 as representing the standard of length from back to front, Professor Welcker regards them as dolicho-cephalic when their breadth is not more than 70 or 71, ortho-cephalic when the latter is about 75, and brachy-cephalic when it is 80 or more. Professor Huxley arrives practically at a similar conclusion when he defines a dolicho-cephalic or oblong skull as one whose breadth is less than 7-10ths of the length; the oval as being 7-10ths to 8-10ths; and the brachy-cephalic, or round, as being more than 8-10ths of the length. The internal capacity was measured by Sir Wm. Hamilton and Thurnam by means of dried sand; by Morton and Broca, with lead-shot; by Tiedman, with millet seed; and by Welcker, with pearly wheat.—See Thurnam on Ancient British and Gaulish Skulls—*ut supra*.



required. The late Mr. Woodward, of Norwich, informed me that in a Tumulus opened near that place, the remains of a similar instrument were found: the weapon was much oxydised and was accompanied by a piece of wood, in all probability the handle, and by some fragments of skin. The interment was one by cremation. Objects of this class do not appear to be uncommon. Canon Greenwell informs me that he has met with five such.

*Fig. 4* represents the upper, and 5 the under, surface of an object carved out of bone. The under surface has been carefully hollowed to receive some other appendage to which the three lateral perforations have obviously enabled it to fastened by means of pins. There appears to be no doubt that this has terminated the handle of the Dagger or Knife of which No. 3 was the blade. Unfortunately no notice was taken, when the coffin was opened, of the relative positions of the two objects, or we might have obtained a clue to the length of the intermediate handle. The Rev. Canon Greenwell informs me that he possesses a bone article, very similar to that just described, and which formed the handle-termination of a similar bronze knife.

*Fig. 6* is a well-formed implement of flint, of a common type. The upper surface exhibits virtually three surfaces, marked by the usual conchoidal fractures. The under surface is flat. These implements were probably used as knives, or occasionally as scrapers for cleaning skins.

*Figs. 7 and 8* are flint-flakes of the class frequently found in connection with ancient British interments. The use to which they were applied appears very doubtful.

*Fig. 9* is a curious object made of wood, like a miniature spatula with a round handle. The darkly-shaded surface on the right hand, occupying nearly half the length and terminating at a thin rounded extremity, is quite flat. The object is one inch and three quarters long. I can form no idea of the use to which it has been applied, neither can I find a record of the discovery of any similar object in the works of either British or continental archæologists.

*Fig. 10* is a pin of bone nearly four inches in length. It was laid upon the breast of the skeleton, where it appeared to have been used to fasten the skin in which the body was enveloped.



*Fig. 11* is a portion of a ring, the remainder of which is in fragments. It has consisted of two circles apparently connected at both sides, as represented in the figure. It appears to be formed of horn. It seems to have been too large to be worn on the finger; yet it is difficult to say to what other use it can have been applied.

By the side of the Skeleton was placed a kind of dish composed of pieces of bark, stitched together with strips of skin or of animal sinews. It was of a round form, and rather more than six inches in diameter. The bottom was composed of a single flat piece of bark, round the edges of which the stitches used for holding the whole together can yet be traced, though the object soon fell in pieces when exposed to the air. Still attached to the interior of the dish is a quantity of decomposed matter, which has not been analysed. The probability is that the structure corresponded to the earthenware objects known as "Food vessels," frequently found associated with ancient interments.

Laid upon the lower part of the breast of the Skeleton was a very singular ornament, in the form of a double rose of riband with two loose ends, but of what it is composed I am not able to say; it may have been an appendage of some belt or girdle, but, like the basket, it fell into small fragments immediately on removal. Its composition is exceedingly brittle, somewhat resembling thin horn, but it is more opaque and not elastic: the surface has been simply though curiously ornamented with small elevated lines.

A quantity of a vegetable substance, which was at first believed to be dried rushes, was also found in the Coffin; some of it has since been macerated, and though the greater portion of it is so much decomposed that nothing but the fibre remains, in one or two instances we have been so far successful as clearly to distinguish a long lanceolate leaf. A few dried fruits or seeds were amongst the vegetable mass; they were very tender, and most of them soon crumbled to dust: they are about the size of small peas, and probably belonged to some leguminous plant. Amongst this vegetable debris a few small phalangeal bones, which the late Dr. Buckland considered to belong to the Weasel, were met with.



## THE TUMULUS.

I will now give a description of the Tumulus itself, before I attempt to draw any inferences from the facts already described. In the little vignette, are represented the three Tumuli, viewed from the land side, with Flamborough Cliff on the right hand.

*Fig. 1* forms the subject of the Pamphlet: *Figs. 2 and 3* are two others previously opened. The artificial elevation of the one under notice does not appear to have been very great, as a rising ground has been chosen to work upon: the diameter of the artificial part is about forty feet, but at its greatest height the soil raised above the original surface has not been above three feet in thickness. The following is a section of the interior of the barrow, descending from the surface:—

	<i>Feet.</i>		<i>Feet.</i>
Vegetable soil . . . . .	1	Puddle of blue clay . . . .	1
Loose stones . . . . .	2	Oak branches . . . . (about)	1
Clay, &c. . . . .	1	The Coffin . . . . .	3
Loose stones . . . . .	1	Solid clay . . . . .	

I should say that the greater part, if not the whole, of the uppermost soil has come there naturally from vegetable decomposition and the action of worms; [because it precisely resembles the soil in other portions of the same and adjacent fields. Both the layers of stones have been loosely thrown in, without any appearance of paving or regular deposition. In the lower seam the clay beneath has been soft, as some of the stones have sunk into it, and it has been either mixed with some substance to give it a different colour, or brought from some other place, as there is nothing in the immediate neighbourhood resembling it. The stones were all of them bouldered, were principally sandstone, and were most probably collected from the neighbouring lands. The oak branches have been carelessly thrown over the Coffin; they are from five to eight inches in diameter, and, like the Coffin, are still covered with their rough bark. One only was placed perpendicularly at the foot of the coffin, apparently to steady it. The sides and bottom of the pit were formed of the boulder clay of the district, which had not been disturbed.

Such are the facts connected with this interesting interment. We naturally ask who or what was the object of it, and when did he live?



But before attempting to answer these questions, it may be desirable to notice some similar interments that have been discovered elsewhere. When the previous editions of this memoir were published, only two examples of tree interments had been recorded, one of which was in a Tumulus opened by Sir R. C. Hoare, I think in the neighbourhood of Stonehenge, where the body was deposited in the trunk of an elm; the other is recorded in the Chronicle of the *Annual Register*, of March 12, 1767. It was in a barrow opened at Stoborough, near Wareham, in Dorsetshire. The coffin was formed of a very large and rudely excavated trunk of an oak, 10 feet long and 4 in diameter. It contained the bones of a human body, wrapped in a large covering of several skins of the deer neatly sewed together, a part of which investment was ornamented with a piece of gold lace, four inches long; under the covering was found a small vessel of oak of a dark colour, somewhat in the shape of an urn. The top of the coffin was level with the natural surface of the ground, the barrow being raised over it.

In 1864 the Rev. Canon Greenwell opened a barrow at Scale House, near Skipton, in Yorkshire. The structure was 30 feet in diameter by 5 feet high. Under this pile was found an oaken coffin: A hole had first been dug in the natural surface, and filled in with soil and a few stones, upon which a coffin—consisting of the trunk of an oak tree—was laid. Over this was piled the covering of soil, mixed with some fragments of charcoal, and with a few flat stones, near the summit of the mound. The coffin was 7 feet 3 inches long by 1 foot 11 inches broad. The body was wholly decayed, nothing being left of it but a quantity of adipocere; fragments of a woven woollen garment, however, presented themselves in sufficient quantities to prove that the body had been clothed in woollen vestments. No weapons or other objects were found in the coffin. A similar coffin was found at Sunderlandwick, near Driffield, in Yorkshire; and another was disinterred by the Rev. W. Lukis, from a barrow near Thornborough, in the North Riding of Yorkshire.\*

Important light is thrown upon the above interments by some

\* Notice of the Opening of a Barrow at Scale House, in the West Riding of Yorkshire; and a Comparison of that Barrow, with certain others in Jutland. By J. Barnard Davis, Esq., M.D., F.S.A. —*The Reliquary*, vol. 6, p. 1.



discoveries made in the South of Jutland, and described by Lieutenant A. P. Madsen.\*

It appears that in the districts of Ribe, in South Jutland, there are four large barrows, one of which is known as the *Treenhoi*, or tree barrow—the terminal syllable of the Danish name at once reminding us of the English word “How,” by which these interment-hills were once so well known amongst us. About 1839 an oaken coffin was found at one side of the above barrow; in the summer of 1861 two others were discovered, and in October of the same year a fourth, and still more important one, was brought to light. The second and third of these coffins were laid side by side in the south-east part of the barrow, in a north-east and south-west direction. One of these was 9 feet 5 inches in length—the other was smaller. It appears from Lieutenant Madsen’s account that at one end of the larger coffin was a capacious cavity, from which was extracted a number of metallic objects, chiefly of bronze, including a bronze sword 20 inches long, a small double stud of tin, and a little spear-head of flint.

The coffin discovered in October was 9 feet 8 inches long externally, by 2 feet 2 inches in breadth. Internally the cavity was 7 feet 6 long, by 1 foot 8 broad. The above dimensions are according to Danish measure, which is nearly the same as, though slightly in excess of, English standards. This coffin lay east and west, with a slight inclination southward. But the features of highest interest connected with this interment lay in the contents of the coffin. Nothing was left of the soft parts of the body but a brown sticky mass, whilst the bones were almost wholly reduced to a blue powder, which on analysis proved to be phosphate of iron. This was obviously the result of chemical reaction between the phosphate of lime—the original mineral matter of the bones—and some salt of iron contained in the surrounding soil,—another instance, in addition to those already given, of the remarkable changes undergone by skeletons, in the course of ages, when buried in the ground. In the Gristhorpe example the animal matter alone disappeared, leaving the phosphate of lime undisturbed. In Dr. Davis’s specimens this action was reversed; but, in both, tannic or gallic acids had combined with iron to dye the remains black. In the case before us we have a yet

\* *Afbildninger Danske Oldsager og Mindesmærker.*



different change, worth being remembered in its application to some well-known geological phenomena.

Though the Skeleton had thus disappeared, the garments were preserved in a remarkable manner. These consisted, first, of a thick inner woollen cap, of a semi-conical shape, covering the head. On its exterior surface was a kind of rough nap, composed of woollen threads knotted at the ends. Investing this was a second oblong cap of thinner material, but also of woven wool, and stitched up to obtain the requisite form. Around the upper part of the body was a cloak or mantle of coarse woollen material, hollowed out at its upper part to fit the neck. Below this was a short tunic of wool, with two woollen bands encircling the waist, and tied in front. Two oblong woollen shawls, and a pair of what appear to have been woollen leggings, complete this unique example of the costume of the Bronze age. Of other objects associated with those just described was a fine bronze sword in a wooden sheath, a comb, a short crescent-shaped bronze razor, and two boxes made of bark.

The first conclusion at which we are justified in arriving at is, that most of all of the tree-interments belong to the Bronze age. The fact of bronze implements, unmixed with any traces of iron ones, occurring in connection with three of the most important ones, appears conclusive on this point. Sir John Lubbock, as it appears to me very correctly, assigns the Jutland interments to the later Bronze period. - This conclusion is, I think, justified by the obvious wealth of these ancient Jutlanders in bronze weapons. Had such not abounded amongst them, they would scarcely have been so lavish in the burial of them, even in the case of leading chieftains,—a lavishness which contrasts strongly with the solitary knife of the Gristhorpe interment. Such articles of luxury as combs, bronze razors, and swords with wooden sheaths, indicate a higher civilisation than the few flint-flakes of the Ancient Britons. We are further led in the same direction by the nature of the garments in which the bodies were shrouded. The skins of the Ancient Briton, even though adorned with a few tassels supplied by the legs of weasles, afford a poor substitute for the caps and cloaks, the tunics, shawls, and leggings of the Jutlanders. We may safely conclude that the Gristhorpe interment took place early in the Bronze age, whilst the Jutland one approached nearer to its decline,



the beginning of which decline is placed by Sir John Lubbock in the fifth century before Christ. The rude carpentry of the coffin suggests a similar conclusion. The marks of the tools by which the Gristhorpe oak tree was cut down and hollowed out still remain, and attests that both these objects were effected by means of chisels and hatchets of stone. Aided only by such tools, the interior must have cost them much trouble in excavating, both from the size of the tree, and the hardness of the wood. The following appears to have been the most probable mode of effecting it: a chisel of flint, which from the length of the marks has been about two inches in width, has been firmly fixed into a short handle of wood, and produced an instrument something resembling, but of course more clumsy than, the joiner's chisel of the present day, and worked by means of a mallet in a similar manner; if there had not been a wooden handle to strengthen the upper part of the flint, repeated strokes of the mallet must have soon destroyed it by knocking off small pieces, on account of the brittle structure of the stone. The tree itself has been cut down with some much larger tool, as the marks of its strokes are three inches in length, but they still indicate the extreme thickness found in stone instruments of any size: from the depth to which each blow has entered, a much greater force must have been employed than in hollowing out the interior, and the flint axe has doubtless been fixed on a long handle, to give it more power. Metal has been too scarce with them to be employed in felling trees of such large dimensions as the present one, but hatchets of flint and other stones were sufficiently common during this age, and proved very effective in the hands of Ancient Britons.

The reasons leading to the system of tree-interment, instead of the more ordinary methods seen in the long and round barrows, are not easily ascertained. The questions obviously suggested by the fact are, did the method indicate some peculiarity of race or of period? did it indicate some special rank on the part of the individual interred? or, was it merely the result of some passing caprice on the part of individual families, anxious to do special honour to their departed relatives. Dr. Davis says: "In turning to this remarkable identity of interments on the opposite shores of the German Ocean, it is quite impossible to regard it as a coincidence; it can scarcely be looked upon otherwise than as resulting from the



funeral customs of one and the same tribe. Whether this tribe invariably, and at all periods of its existence, adopted precisely the same mode of burial is more than can be considered even probable. Whether this particular mode might not be restricted to departed chiefs seems more likely"—(*ut supra*, p. 10). But Dr. Davis's conclusion involves an admission either that branches of the British tribe had found their way across the German Ocean and established colonies in Jutland—a migration of which we have no evidence—or the yet more improbable suggestion that a reverse movement had taken place. I should be more inclined to believe that to a people who were surrounded on every hand by forests of timber, and who, though their tools were imperfect, were nevertheless constantly using them upon wood as a material out of which to construct various necessary objects, the idea of enclosing a corpse in a wooden coffin instead of a stone kistvaen might occur independently or without concert. At all events, the known instances in which this method has been adopted, are too few to justify our building upon it any sweeping hypothesis. Dr. Davis very correctly throws out his suggestion as being "mainly hypothetical." At present I am more inclined to believe that this system of interment was a sporadic one, arising out of the whim and fancy of individual families.

At the same time, there can be little doubt that the vast labour necessary to prepare such a coffin as that found at Gristhorpe would not usually be undergone for any ordinary individual.\* It is essentially suggestive of wealth and rank on the part of the honoured dead; but who was he, and to what race did he belong?

No writer who has commented on this interment disputes that the Skeleton was that of an Ancient Briton. His tall and manly figure reminds us of the fact recorded by Strabo, that even the Britons of his day exceeded the Gauls in stature; "for," says he, "I saw some young Britons in Rome who were half a foot taller than the tallest men." His physical conformation indicates an individual fitted to command. Savage and half savage tribes almost always worship physical strength; and, in addition to the general features of the Skeleton, the prominent lines on its bones, to which the muscles

\* It may, however, be noted that, as Canon Greenwell informs me, these hollowed trunks were found at Featherstone Castle in such numbers as to leave no doubt that they had been used for the interment of ordinary men.



were attached, unmistakeably indicate a man of unusual muscular power. The capacity and contour of the skull afford indications that, in addition to great physical strength, he possessed the mental attributes fitting him for a position of authority and rule. The size of his brain would be remarkable even at the present day; and whilst its magnitude suggests vigour, its form indicates something yet higher. That he was an aged man is shewn by the ossification of several of the cartilages, and possibly also by the way in which all the cusps have been worn off the surfaces of his superb set of teeth, the condition of which latter is eminently suggestive of a good constitution and an active digestion. The question of what he was thus appears to receive the constructive answer that he was an ancient and venerable British chief.

How far back into the past the Brigantes existed as a distinct native tribe we have no means of knowing. History only becomes acquainted with them during the Roman occupation; but there is little doubt that whatever were the political divisions of the country during the life of our subject, he resided upon what was subsequently Brigantian territory, if he was not actually a Brigantian. In his day the inhabitants of these islands possessed domesticated animals. Mr. Boyd Dawkins informs me that they had the short-horned ox, the horned sheep, the goat, the dog, and the horse. But whilst these animals were doubtless in some measure objects of his care, he would also engage in war and the chase,—two pursuits which in all ages have occupied those who, though not wholly savage, nevertheless stand low in the scale of civilisation. Centuries after his epoch the neighbouring vale of Pickering was a marshy woodland, on the borders of which *hospitia* were needed to aid the travellers who crossed its dangerous swamps. These jungles were doubtless the dwelling places of the wild boar and the wolf, the red deer and the roe. Imagination, restoring life to the blackened Skeleton, can picture our ancient Briton leading his skin-clad followers down the slopes of Gristhorpe, penetrating the forests of the valley, and pursuing the startled game over the undulating uplands of the Yorkshire wolds. The great natural features of the sea-cliff, on the verge of which his bones reposed so long, were doubtless the same then as now; and his feet must oft have trodden the ravine which, dividing the precipices of Redcliff from those of Gristhorpe, still afford the



only access to the shore available between Cayton Bay and Filey Brigg. But when did he do these things? The enquiry must suggest itself to everyone who now gazes upon his blackened bones.

No archæologist questions the conclusion that he belonged to the Bronze age, and the general impression is that he lived about five centuries before the Christian era, when Greece was in her highest glory, and Rome in the infancy of her consular reign. Though the great physical features of the surrounding country remain what they were when his eyes rested upon them; how changed are all the accessories of the scene! It is needless to enumerate the differences between his age and ours; they comprehend nearly everything that distinguishes savage from civilised life. Memory is tempted to dwell upon the historic events that have transpired in the interval; to recount the nations, races, and dynasties that have arisen and passed away; yet the fragile bones of this unknown pre-Celtic savage remain nearly as perfect as on the day of interment. Yet more mysterious is the thought that, whilst we are gazing upon these dark emblems of his mortality, the spirit which once tenanted them still lives in the presence of its Maker.

