

**Observations upon sixteen ancient skulls found in excavations made on the Kirkhill, St. Andrews, 1860 / by Joseph Barnard Davis.**

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To Professor Geo. Rolleston, M.D.  
 with the compliments of  
 J. Barnard Davis.

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*Observations upon Sixteen Ancient Human Skulls found in  
 Excavations made on the Kirkhill, St Andrews, 1860.*  
 By JOSEPH BARNARD DAVIS, F.S.A., &c. (With a Table  
 of Measurements). Communicated to the Literary and  
 Philosophical Society, St Andrews.

This series of fine skulls is of considerable interest from their unquestionable antiquity, the district in which they have been obtained, and from the peculiar aboriginal, or commonly named Celtic, air which pervades one section of them. This latter aspect it may be difficult to describe, but it will be at



once apparent to the eye of an anatomist who has been accustomed to the examination of ancient British crania, and perhaps may be made obvious to others by reference to accurate figures of well-authenticated examples. The series divides itself into *two sections*—viz., those skulls derived from *cistic tombs*, and those found in *graves and other tombs*. Of the former, there are four specimens, Nos. 4, 8, 9, and 13; of the latter twelve, Nos. 1, 2, 3, 5, 6, 7, 10, 11, 12, 14, 15, and 16. Being requested by Mr Robert Walker of the University Museum, St Andrews, to make a few observations upon this series of skulls,—which it affords me much pleasure to do,—I will take a somewhat particular survey of them, making a note on any peculiarity I may observe, and add an enumeration of the sex, age, measurements, &c., of each in a table; and then proceed to any more general remarks that may suggest themselves; premising, *in limine*, that objects of this kind, discovered under circumstances which evince the period to which they have belonged to be uncertain, do not admit of that definiteness which imparts such special value and interest to some antiquities. The skulls may go some way towards determining the era and the race to which they have appertained; but the evidence they afford is to be taken cautiously, and not estimated at more than it is worth. Therefore more must not be expected from the proposed observations than approximate results. If approximate results can be attained with any degree of assurance, they will have a certain amount of interest, but they cannot fully satisfy a keen curiosity. To begin with the crania derived from *cists*.

No. 4 found on the north-west of the foundations of the church, in a cist the full length of the skeleton, and with the head to the west. One of the covering stones of this cist, that above the head, was thought to have some sculpture on its lower surface.

This is the globular skull of a man of advanced age, probably as much as seventy years, as the principal sutures are almost obliterated, and the bones are thin, notwithstanding the teeth have all been present, although considerably worn. It is a very decidedly *brachycephalic* skull, and exhibits



considerable breadth both of face and calvarium. Its principal difference from the aboriginal series consists in its being more regular and equable, not so uneven and nodular; for instance, the frontal sinuses are not so prominent, and the nose does not descend so abruptly from a deep depression, as is usual in the aboriginal series.

No. 8 belongs to a skeleton which was found extended on the bottom of a rude cist, formed of undressed flags, on the southern side of the church. This skull is that of a man of about fifty-five years of age, and just enters into the *brachycephalic* series.\* It is a thick heavy skull, with a particularly short and massive lower jaw, which is in some places eight-tenths of an inch in thickness; and it is remarkable for its small internal capacity—in truth, in this respect, it is the smallest of the sixteen skulls, although there is no doubt of its being the relic of a man. It presents that perpendicularity of the occipital region, common among the aboriginal skulls of these islands. It does not agree closely with any of the skulls figured in the “*Crania Britannica*,” but somewhat resembles both that from the Caedegai Barrow in Denbyshire, plate 23, and that from Norton, in Yorkshire, plate 37.

No. 9, also derived from a skeleton lying in a rude stone cist near the last. This skull is that of a man about 75 years of age, and likewise just enters the *brachycephalic* series, although it presents much of the low swoln-out, discoid form which I have named *platycephalic*. The frontal sinus is prominent, and the nasal bones rise abruptly from a rather deep depression; the occipital region is also flat—all aboriginal forms. The cheek depressions are so unusually deep, that the cavities of the *antra* are encroached upon to a considerable degree. This no doubt is an indication of the great age of the individual. The skull closely resembles an ancient British specimen, derived from a barrow on Wetton Hill, Staffordshire, and figured in the “*Crania Britannica*,” plate 12.

\* It is desirable to state that I use this term to express the form, in a vertical aspect, of all crania in which the extreme transverse diameter is to the extreme longitudinal, as 4, or more, is to 5; or as 80, or more, is to 100.



No. 13, from a rude cist, is probably the skull of a woman of about forty-five years of age. It presents a good deal of resemblance to No. 8, but the face has apparently had pretensions to womanly beauty, and the nose has been aquiline.

In describing these skulls as having an aboriginal or Pictish air, it is not to be understood that they present *precisely* the same peculiarities of form as the skulls which are derived from the *short stone cists* of Scotland, belonging to the primeval period, one of which, from Kinaldy, in Banffshire, is figured in the "*Crania Britannica*," plate 25, and others in plates 15 and 16; but they appear, in the eyes of the writer, to have a tendency towards those peculiarities of form, whilst they are not precisely the same, and not so rude in their traits; indeed, they certainly do not differ from them materially. The average measurements of the three skulls of men, Nos. 4, 8, and 9, will be found to be slightly below the averages of twenty male skulls of the aboriginal series of the "*Crania Britannica*," which I have added to the table for comparison.

In approaching the *second section* of the skulls, or those derived from *graves or tombs*, of which Nos. 1, 3, 5, 6, 10, 11, 12, and 15, are all those of men, we are at once struck with their fine capacious appearance. This will be clearly apparent by an examination of their average measurements.

Nos. 5 and 12 are decidedly *brachycephalic*; No. 3 just comes within the *brachycephalic* category; and all the rest are *dolichocephalic*; No. 6, the largest skull of the whole series, deserving the name of *platycephalic*. It will thus be at once apparent, that, in this section of the skulls, the brachycephalic character is much less prevalent; so it is also with the other peculiarities which appertain to aboriginal crania. The boss over the frontal sinuses is not very prominent; the nasal bones do not descend very abruptly from a great depression; the forehead is of good size and elevation; the occipital region well developed and generally prominent; the entire calvarium is well and equally swollen out and smooth, a peculiarity mostly strange to the skulls of all aboriginal people; and the ovoid outline, when viewed vertically,



greatly prevails among them. In the cases of the old men, Nos. 11 and 15, the cheek depressions are deep. The crania in this section approximate more to the form of the modern Scottish skull than those of the first section; indeed, we believe they resemble this form closely.

This section of the skulls does not lend any support to a doctrine maintained by phrenologists, and still more generally received, that the cranium undergoes a development or enlargement in the progress of society and the advancement of civilization—a doctrine which the examination of ancient skulls in general does not tend to confirm. I am persuaded that differences in size and form in human crania are more deeply rooted and more unchangeable, and that they depend on difference of race. The skulls of this section may be regarded as fine “domes of thought,” and are equal in development to those of many modern Scotchmen. No. 6 is a cranium of even unusual capacity, which may be easily tested by applying to it the hats which fit the generality of heads; although denuded of soft parts, it will be found to fill them, or more than fill them. If an attempt were made to trace out the resemblances which may be detected among individual skulls of this section and those depicted in the plates of the “*Crania Britannica*,” it would be found that these likenesses are apparent between them and the *Anglo-Saxon* series of the work, not the aboriginal series. Sometimes such resemblances are even striking, as between No. 10 and the Anglo-Saxon skull, derived from the cemetery at Firle, in Sussex, forming the subject of plate 29.

No. 5 presents a very unusual development of the lateral portions of the inferior semicircular ridge of the occiput, indicating the vigour of the *recti postici majores*, and other muscles which extend and turn the head upon the spinal column. The femur of this skeleton measured  $19\frac{1}{2}$  inches, so that the man must have been tall and powerful.

No. 12, a fine large brachycephalic skull of a young man, of probably about thirty-five, appears to have received a severe injury on the left side of the upper part of the frontal bone during life, producing a fracture five inches long,



and a considerable loss of substance, with depression on one side.

No. 15 presents a certain degree of obliquity in the calvarium, most apparent on the right side of the occiput, which is flattened. I believe this is a *posthumous* distortion. It will be seen to have occasioned a slightly greater prominence on the right side of the frontal bone. It is this very kind of distortion which has been noticed so frequently in the skulls lately exhumed from the ruins of the Roman city of *Uriconium* (Wroxeter), and which has given rise to so much that is truly absurd, both in speaking and writing, respecting the monstrous barbarians, with one eye before the other, and with frightfully misshapen heads, supposed to have been engaged in the destruction of this city. As it is probable that the famous Picts and Scots effected the overthrow of the city of *Uriconium*, and as we are now engaged with ancient skulls, which show their relationship to the former people, and were excavated in their own land, there only needs a knowledge of the fact that a skull so deformed has been met with in a Pictish cemetery, to hatch in the brains of some antiquaries "confirmations strong as proofs of holy writ" in behalf of these fictions of the imagination, truly *monstrous* in absurdity.

So far, I have spoken of the skulls and the appearances they present on an anatomical examination only; and I have wished, in what I have said, expressly to avoid anything presumptive and dogmatical. A still more generally interesting subject remains, on which I shall only venture a few words. Many persons much more thoroughly acquainted with Scottish history than I can be, especially those versed in the history of the district and city from which these crania are derived, possess, I am persuaded, better information and ability than I do to arrive at any conclusion as to the antiquity of these interments, and the particular period to which they appertain.

All the interments apparently belong to Christian times, the bodies not having been placed in the pagan contracted position. There seems no ground for implicating any battle or any plague to account for their presence; on the contrary,



they appear to be the usual burials of the people inhabiting St Andrews, who had come to their deaths by ordinary causes, and were brought by sympathizing friends to be laid in the grave, on a spot rendered sacred by the erection of a Christian church, and the supposed presence of the relics of St Andrew; as we know that it was the custom of this early age to inter bodies around, not within, places dedicated to religion. The fact that six of the persons interred are about or above seventy years of age, is decisively against either plague or battle, when we recollect that these occur in sixteen only. Many of the graves have contained the bodies of women, not warriors; and it appears, from what was observed in some cases, that a practice prevailed of interring the husband and wife in one tomb, which ever might die the first. We know that Christianity was propagated at an early age among the Picts; and also, that in this very district it was professed. It has been thought probable that near, if not upon, this hill, called the Kirkheugh, the first humble building dedicated to Christian service in Scotland was constructed.\* Columba of Iona converted the Picts under their king, Bridei, before the middle of the latter half of the sixth century, a period at which this ancient aboriginal people may be considered to have received very small, if any, mixture of alien blood.† There does not appear to be any certain authority for determining the date of the foundation of a Culdee church at St Andrews; and it is believed that about, or at least, 250 years elapsed before such church was founded. Whether this were the earliest church or place of worship erected on the Kirkhill seems very doubtful. There is, however, no reason to suppose that even this building would be anything more than a structure of the simplest and rudest character,—perhaps scarcely better than those formed of wattles and mire in previous use,—for of such materials the best houses were built in the time of Columba, whose monks

\* Martine, "Reliq. Div. Andr.," 1683, p. 24.

† "From this epoch, the Picts may be considered as Christians, a circumstance which seems not to have much changed their principles or much altered their customs."—*Chalmers's Caledonia*, i. 209.



were clothed in the skins of animals. The legend is, that Hungus, the king of the Picts, whose death is placed in the year 833, was the founder of the religious house of Kil-rule, or the Church of Regulus, who brought the relics of St Andrew to this spot.\* How soon after this time the Christian people, who have so long occupied the rude cists in the Kirk-hill, were placed in them, as their last resting place, it is impossible to tell. From the inartificial character of these cists, which, I am informed on good authority, were constructed of undressed flags of the natural stone of the district, piled at the sides, with other stones of the same description covered over the top, but without any pavement at the bottom, and which seem to be only one stage in advance of the scarcely less rude, short, primeval cists of the unconverted Picts,—a step in advance taken in obedience to ecclesiastical rule for extending the body, with the face regarding the east,—I am inclined to conclude, that the interval of time to that at which these cists were constructed could not have been long, possibly not more than one hundred years. If we might rely with unhesitating confidence on the cranial relics of the cists, it is likely that the period of their formation was at least as early as that we have mentioned, when the Pictish blood was still pure, and that the relics of the cists belong to the ninth century, if not earlier. Those derived from the tombs and the graves are probably of a later age. In support of this view, we have both the superior construction of the tomb, with a further departure from the primeval cist, and the more modern aspect of the skulls. This latter seems to me to indicate an admixture of extraneous blood with that of the Picts. Judging from cranial evidence alone, and with the little knowledge I possess of the skulls of the Scandinavian nations, I am inclined to think that the mixture is not derived from a northern source—the Danes—but, more likely, from a *Saxon* source. Still this, like all the rest that I have said, I wish to be taken, not as by any means definite, but merely for as much as it may be worth. I fear that it may be

\* Chalmers's *Caledonia*, i. 429.



thought that mine is but "a judgment maimed and most imperfect." I shall, however, be very happy if some one better informed will "amplify my judgment in other conclusions."

*P.S.*—On a revision of what I have previously written relative to the skulls from the Kirkhill of St Andrews, there are a few points which appear to stand out rather more strongly than I at first thought, and which afford a little more definiteness to the conclusions we may arrive at respecting both the period and people to which these crania have belonged.

In the first place, there seems to be good ground for considering this spot to have been used for funeral purposes from great antiquity, and during pre-Christian times. Three small places on the hill were found to be distinctly marked as the positions of fires, by ashes scattered about. One of them was surrounded with stones. These are probable indications of the rite of cremation. The want of orientation in some of the interments is a like indication of pre-Christian times. And the fact of one of the interments, *in a rude cist*, being situated within the foundations of the nave of the ancient church, brought to light by the recent excavations, proves that the site was used for sepulchral purposes before the erection of this church, the foundations of which alone now exist.

Upon the whole, it seems very probable that some of the cistic interments belong to *pre-Christian times*, and may date from the sixth century; others are clearly the sepulchral relics of *the early Culdees*, or the first Pictish converts to Christianity; whilst a third series of remains, or some of them, it is fair to infer may be those of *Anglo-Saxon or other Teutonic settlers*.\*

\* The Flemings, the great commercial people of that age, visited this eastern coast of Scotland much in the twelfth and thirteenth centuries, and settled in the towns. In the reign of William the Lion (1165–1214), St Andrews was inhabited by Scots, French, *English*, and *Flandrenses*.



Table of Measurements of Sixteen Human Skulls found in Excavations on the Kirlhill, St Andrews, 1860.

Number of Skull.	Grave or Cist.	Sex.	Age.	Internal Capacity.*	Circumference.	Length.	Breadth.	Frontal Region.			Parietal Region.			Occipital Region.			Face.		Inter-mas-toid Arch.	Length of Femur.
								len.	bre.	hei.	len.	bre.	hei.	len.	bre.	hei.	len.	bre.		
1	Gr.	♂	c 35	86.5	21.5	7.3	5.8	5.1	4.9	4.9	5.2	5.6	5.2	4.6	4.5	4.5	5.2	5.3	15.8	18.5
2	Gr.	♀	c 45	67.0	20.2	7.0	5.5	4.8	4.7	4.7	5.1	5.2	4.6	4.6	4.6	3.7	4.3	5.1	14.9	16.5
3	Gr.	♂	c 40	73.0	20.7	7.1	5.8	5.0	4.9	4.5	5.0	5.5	4.5	4.6	4.4	4.0	4.5	5.4	15.0	18.1
4	Cl.	♂	c 70	78.0	20.4	6.8	6.0	4.9	4.8	4.5	4.8	5.5	4.7	4.7	4.4	4.0	4.5	5.3	15.0	18.2
5	Gr.	♂	c 35	85.0	21.2	7.2	6.0	5.0	c	4.7	5.1	6.0	4.9	5.0	4.4	4.0	4.8	c	15.7	19.5
6	Gr.	♂	c 70	92.5	22.6	7.9	6.2	5.6	5.2	4.9	5.7	6.1	4.9	4.8	4.8	4.3	4.8	5.2	15.2	18.8
7	Gr.	♀	c 70	63.0	19.7	6.7	5.6	4.9	4.6	4.2	4.6	4.9	4.5	4.4	4.4	4.0	c	c	14.0	15.8
8	Cl.	♂	c 55	62.5	20.3	7.0	5.7	4.8	4.4	4.6	5.0	5.3	4.6	4.6	4.4	3.9	4.1	5.0	14.7	18.0
9	Cl.	♂	c 75	74.0	21.5	7.3	6.0	4.9	5.0	4.6	5.0	5.8	4.8	5.1	4.5	4.0	4.8	5.2	15.4	18.3
10	Gr.	♂	c 55	86.0	21.8	7.6	5.7	5.4	5.2	5.0	5.0	5.6	5.1	5.0	4.5	4.3	4.8	5.3	15.6	19.2
11	Gr.	♂	c 80	76.5	20.6	7.1	5.6	5.0	4.7	4.6	4.8	5.3	4.8	4.7	4.7	4.1	4.6	5.4	15.0	c
12	Gr.	♂	c 35	77.5	21.0	7.1	6.0	5.0	4.8	4.8	5.0	5.7	5.0	4.8	4.7	4.2	5.1	5.6	15.6	19.8
13	Cl.	♀	c 45	67.5	20.2	7.2	5.4	4.8	4.4	4.5	4.6	5.0	4.7	5.0	4.1	4.1	4.5	5.0	14.5	17.6
14	Gr.	♀	c 55	80.0	21.5	7.6	5.7	5.1	4.5	4.7	5.5	5.1	4.8	4.6	4.6	4.3	5.0	c	14.5	c
15	Gr.	♂	c 70	81.5	21.2	7.3	5.8	5.0	5.0	4.7	5.5	5.5	5.1	4.9	4.3	4.4	4.7	5.2	15.1	c
16	Gr.	♀	c 30	72.0	20.1	7.0	5.4	4.8	4.6	4.5	4.8	5.0	4.6	4.6	4.1	3.7	4.6	5.0	14.4	17.5
Averages of 4, 8, 9.	Cl.	♂		71.5	20.7	7.0	5.9	4.8	4.7	4.6	4.9	5.5	4.7	4.8	4.4	4.0	4.5	5.2	15.0	18.2
Aver. of 1, 3, 5, 6, 10, 11, 12, 15.	Gr.	♂		82.3	21.3	7.3	5.9	5.1	5.0	4.8	5.2	5.7	4.9	4.8	4.4	4.5	4.8	5.3	15.4	19.0
Aver. of both sections.		♂		76.9	21.0	7.1	5.9	4.9	4.8	4.7	5.0	5.6	4.8	4.8	4.4	4.2	4.7	5.2	15.2	18.8
Aver. of 20 aborig. skulls in Cr. Br.		♂		71.2	20.9	7.3	c	5.1	4.7	4.8	5.0	5.6	4.9	4.7	5.0	4.0	4.7	5.3	15.2	18.4

Averages of 20 male skulls of aborigines of British Islands depicted in the "Crania Britannica."

\* Internal capacity is given in ounces and tenths, avoirdupois. All the other measurements are given in inches and tenths.