# Human Remains from Flint Jack's Cave, Cheddar, Somerset

#### By

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Although the name of Flint Jack's Cave may breed suspicion, there is good evidence that the cave was occupied by Late Palæolithic or Epipalæolithic man (references in Oakley, 1952). It is therefore quite possible that the human remains found in this cave about the year 1893 date back to this period.

These remains comprise portion of two skulls, registered in the British Museum (Natural History) under the numbers M. 16796 and M. 16797. For convenience, M. 16796 will be referred to as Skull 1 and M. 16797 as Skull 2.

# DESCRIPTION OF THE REMAINS

Skull 1 is represented by the greater part of the braincase, comprising the frontal bone, both parietals, the supra-occipital (including approximately the hindmost quarter of the foramen magnum), the right temporal and right alisphenoid, and a small portion of the right nasal bone (*Plate 8, B* and *Plate 9, B*). Both the coronal and sagittal sutures are largely obliterated on their internal aspect; the lambdoid suture however is still patent. This condition implies full maturity but at most early middle age.

The braincase is robustly built but of small dimensions (Table 1). In certain British populations, such as that of south-east Scotland during the Dark Ages, such measurements might be found in a male, but the modelling of the frontal, temporal, and occipital bones shows this skull to be probably female.

In vertical view the strongly dolichocranial braincase has an ovoid outline. Viewed from the side (*Plate* 8, B) the glabella and supraciliary eminences project slightly from the low, almost vertical forehead. The forehead passes by a very gradual curve into the flattened vault, which slopes gently downwards to the protruding occiput. The mastoid process is slender, and the supra-mastoid crest well developed. In facial view (*Plate* 9, B) the

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vault is slightly peaked, due to a faint ridge along the anterior half of the coronal suture. The glabella and superciliary eminences are slightly convex; the lateral supra-orbital margin is rounded and thickens appreciably towards its lateral end; the zygomatic process is directed downwards rather than laterally.

Skull 2 is represented only by the hinder portions of both parietal bones and most of the supra-occipital. The sutures are open, and the character of the bones indicates that they belong to an immature (probably pre-adolescent) individual. No inference as to sex is possible. The fragments are somewhat warped, but appear to have belonged to a narrow and relatively high-vaulted skull.

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### COMPARATIVE OBSERVATIONS

Britain. By its measurements Skull I could be included without difficulty in an Iron Age female series, such as that from the Danes' Graves, Driffield, Yorkshire (Morant, 1926), or in several series of later date. Its robust build would however cause remark in any such series. Though below the average size of Neolithic female skulls, it is within their recorded range of variation. Morphologically, therefore, it is possible that these remains could be either of Neolithic or of Iron Age or later date.

So few authenticated British pre-Neolithic skulls of either sex are known (Oakley, 1952) that they must be compared as individuals. The range of comparisons can be extended by considering what characters a male counterpart to the skull from Flint Jack's Cave would present. Such a skull, it may be estimated, would be 187–190 mm. long and 132–135 mm. wide; the cranial vault would be relatively low, and the supra-orbital ridges strongly developed.

Nearest neighbours to the skulls from Flint Jack's Cave, and certainly of Late Palæolithic Age, are the remains from Gough's Cave, Cheddar. The two adult skulls, Gough's Cave 1 and 2, have the appropriate morphological characters for a male counterpart of Flint Jack's Cave 1, but they are several millimetres too large in both diameters. It may also be noted that the fragments of Flint Jack's Cave 2 seem to be similar in form to the occipital region of the juvenile skull from Gough's Cave (Keith, 1931).

The male skull obtained by Buckland more than a century ago from Aveline's Hole, Burrington Combe (Aveline O) has length and breadth measurements appropriate to a male counterpart of Skull 1 (Table 1). It is however somewhat higher vaulted (*Plate 8, A*), and the supra-orbital ridges are only moderately developed (*Plate 9, A*). Since this skull was embedded in stalagmite, its antiquity seems assured. Aveline O has been described by Buxton (1925); in view of its importance as the only skull from this site still surviving, it has been thought worth while to include figures and measurements of it in this study.\*

Three skulls subsequently obtained from Aveline's Hole have been described by Sir Arthur Keith (1924). These present problems which cannot be finally solved now that the specimens are destroyed. Sir Arthur Keith regarded skulls A and C as probably male, B as a female; nevertheless, he retained some doubt as to the sex of skull A. Considered as a male, Aveline A would fall into the same size group as Gough's Cave 1 and 2. From the published illustrations it appears very much more effeminate than the Gough's Cave skulls. The possibility that it was in reality a female skull deserves serious consideration. If it were female, its male counterpart must have had a length of at least 200 mm., and would therefore have been similar in proportions to skull B from the MacArthur Cave, Oban (Turner, 1895); such a skull could still be considered an extreme specimen of the same group as the Gough's Cave skulls. Whether male or female, Aveline A represents a type larger than the Flint Jack's Cave skull, though similar in its proportions.

Aveline B, on the contrary, is even shorter and at the same time very much wider than the skull from Flint Jack's Cave, so that instead of being strongly dolichocranial it is just brachycranial. The supposed male skull Aveline C is almost identical in length and breadth with Aveline B; it is thus sharply contrasted with the Gough's Cave skulls and even with Aveline O.

The Late Palæolithic female skull from Whaley, Derbyshire, has not yet been fully described. From a cursory inspection it appears to be considerably larger than the skull from Flint Jack's Cave. Furthermore, the Whaley skull resembles Keith's illustrations of Aveline A sufficiently to support the speculation that Aveline A is also female. The Late Palæolithic age of the male skull from Langwith, Derbyshire, is still open to question. Morphologically and metrically it agrees with the Gough's Cave skulls.

The upshot of this inquiry is that the skull from Flint Jack's Cave does not agree closely with any Late Palæolithic or Epipalæolithic female skull from Britain. It may however be linked with Aveline O, which appears to be a smaller than average member of the Late Palæolithic male group. A consideration of other Late Palæolithic crania from Western Europe may serve to amplify these findings.

Western Europe. The picture presented by the Late Palæolithic (Magdalenian) skulls from Western Europe has been unnecessarily blurred

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<sup>\*</sup> Another skull from Aveline's Hole has recently been found in the Wells Museum (L. S. Palmer, 1957, *Man's Journey Through Time*, p. 62, *Fig.* 24). According to Professor Palmer the skull is brachycephalic, but no measurements are recorded. The skull was labelled "The Cave, Burrington", which was the description of Aveline's Hole prior to that name being given to it by Boyd Dawkins.—EDITOR.

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because so many authors have insisted on treating them in conjunction with those of earlier Upper Palæolithic age. It is much more helpful to consider the Magdalenian skulls by themselves, as suggested by Keith (1931).

Seligman and Parsons (1914) justly commented on the resemblance between Gough's Cave 1 and the Late Palæolithic male skulls from Chancelade and Laugerie-Basse, Dordogne. To the same group may be added the skulls from Obercassel near Bonn and from Veyrier, Haute-Savoie. The male skull from Le Roc, Charente, stands a little away from these and nearer to Aveline O. These continental skulls form a compact group into which the English skulls fall naturally except for Aveline C.

The Late Palæolithic female skulls from the Continent show a greater range of variation. The skulls from Cap-Blanc, Dordogne, and from Le Roc form an appropriate counterpart to the males from Obercassel and Laugerie-Basse, but are proportionately broader, in which respect they come nearest to Gough's Cave 2. The female skull from Obercassel is strikingly shorter and narrower; it finds its nearest male counterpart in the Veyrier and Le Roc skulls. In length and breadth the Obercassel woman's skull is very close to Flint Jack's Cave 1, but it is higher vaulted. The skull from Placard, Charente, is even shorter and very much broader than the Obercassel skull, coming close to Aveline B and C. A female skull from Laugerie-Basse falls almost midway between the Obercassel and Placard skulls. Similarly the skull from Bruniquel, Dordogne, formerly considered male but stated by Vallois (1952) to be female, is almost midway between the Laugerie-Basse skull and those from Cap-Blanc and Le Roc.

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The later pre-Neolithic populations from Ofnet Cave, Kaufertsberg and Hohlestein in Bavaria and from Teviec and Hoëdic in Brittany span the range of the Late Palæolithic series. The Bavarian series includes an element with even shorter and wider heads than the Placard and Aveline's Hole skulls; it does not contain any skulls as narrow as those from Obercassel and Flint Jack's Cave.

# DISCUSSION

It seems quite possible that the skull from Flint Jack's Cave can be attached to a group of small, narrow-headed Late Palæolithic specimens represented by the Obercassel and Laugerie-Basse women, and by Aveline O and the Le Roc and Veyrier men. The problem will then be to relate this type of skull to the short broad skulls of the Aveline-Placard group as well as to the main mass of larger skulls.

In later populations it would be natural to account for such variations by postulating hybridization between types with contrasting trends in cranial length and breadth. Some of the consequences of such hybridization have been worked out by Dreyer, Meiring and Hoffman (1938). These consequences appear to be illustrated in the Dark Age population of south-east Scotland, where the short and broad Bronze Age cranial type has been modified by the intrusion of the longer and narrower Iron Age and Anglo-Saxon types. Similar results would probably follow, however, if the primary types were different in absolute size rather than in cranial index.

The Late Palæolithic population may however represent a stage at which distinct varieties of the fundamental European type had not yet emerged or were only in process of emerging. Since this population was very sparsely distributed, isolated local groups might well come into existence. Inbreeding in these groups could give rise to types departing appreciably from the general character of the population. How these temporary or tentative types would behave when crossed with one another would depend on the extent to which they had attained a distinct genetic identity. The variations within the Late Palæolithic group may therefore represent a plastic state which at the later stage represented by the Ofnet Cave and allied populations has hardened into the definitely contrasted longheaded and short-headed types.

It is only rarely that an individual skull can be confidently assigned on morphological grounds to a particular period. The skull from Flint Jack's Cave could conceivably belong to either a Neolithic or an Iron Age or even later population. On the other hand it agrees well with certain specimens known to be Late Palæolithic or Epipalæolithic; it need not therefore have been an intruder in an occupation deposit of that age.

	Flint Jack's Cave 1	Aveline's Hole O
Maximum cranial length (L) Maximum cranial breadth (B) Minimum frontal breadth (B <sup>1</sup> ) External biorbital breadth (EOW) Frontal chord $(S_1^{1})$ Parietal chord $(S_2^{1})$ Occipital chord $(S_3^{1})$ Auricular height (OH <sup>1</sup> ) Frontal arc $(S_1)$ Parietal arc $(S_2)$ Occipital chord $(S_3^{1})$	mm. 180 129 97 104 105 113? 97? 105 122 123? 110?	mm. 188 136 92? 
Total sagittal arc (S) Horizontal circumference (U) Interorbital breadth (DC) Cranial index (100 B/L) Auricular height index (100 OH <sup>1</sup> /L)	364 500 26 ? 71.7 58.3	517 ? 23 ? 72·3 61·2 ?

Table 1.—MEASUREMENTS OF SKULLS FROM FLINT JACK'S CAVE AND AVELINE'S HOLE

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[Photographs by British Museum (Nat. Hist.), London.]

PLATE 8A and B A, Lateral view of Aveline's Hole skull o. B, Lateral view of Flint Jack's Cave skull 1.



PLATE 9A and B

[Photographs by British Museum (Nat. Hist.), London.]

A, Facial view of Aveline's Hole skull o.

B, Facial view of Flint Jack's Cave skull 1.