FOSSIL MAN IN THE LEBOMBO MOUNTAINS, SOUTH AFRICA: THE 'BORDER CAVE,' INGWAVUMA DISTRICT, ZULULAND.

By H. B. S. Cooke, B. D. Malan, and L. H. Wells. *Illustrated.*

3 This paper is intended as an interim record of a new discovery of human skeletal remains in probable association with industries belonging to the Middle Stone Age of South Africa. Moreover, this addition to the limited number of such discoveries has been made in a region almost unexplored archæologically. A detailed account of the evidence will be published as soon as circumstances permit.

The site of this discovery is a cave situated, as the name 'Border Cave' is intended to indicate, almost on the international boundary between Zululand and Swaziland. This boundary coincides approximately with the western scarp of the Lebombo range, which rises from a plain between 500 and 700 feet above sea-level, and in a horizontal distance of half a mile reaches an average altitude of more than 2,000 feet above sea-level. The cave is situated just below the crest of this scarp and lies some 400 yards on the Zululand side of the international boundary, its position being approximately 27°1′20″ S., 31°59′30″ E. Ingwavuma, the nearest European village and the headquarters of the magisterial district in which the cave is situated lies on the range about eight miles to the south but is separated from the cave by the gorge of the Ingwavuma River. Access to the cave through Zululand is possible only by a devious route over difficult country. On the Swaziland side motor vehicles can proceed as far as the homestead on the Canterbury Estate, which lies at the foot of the scarp directly below the cave.

The cave, eroded in an agglomeratic horizon within the thick Upper Stormberg (Jurassic) lavas of the scarp, is about 300 feet below the crest of the range and 1,300 feet above its base. It cuts back directly into the face of a perpendicular cliff and is visible only from below. The westward-facing mouth of the cave is about 130 feet wide, and its greatest depth is nearly 100 feet, the general plan being almost semi-circular (fig. 1). At the present time entrance is gained at the northern end of the cave mouth by traversing a narrow and exposed ledge on the face of the cliff. The occupants of the cave could, however, have gained direct access by climbing up the steep scree below the cave.

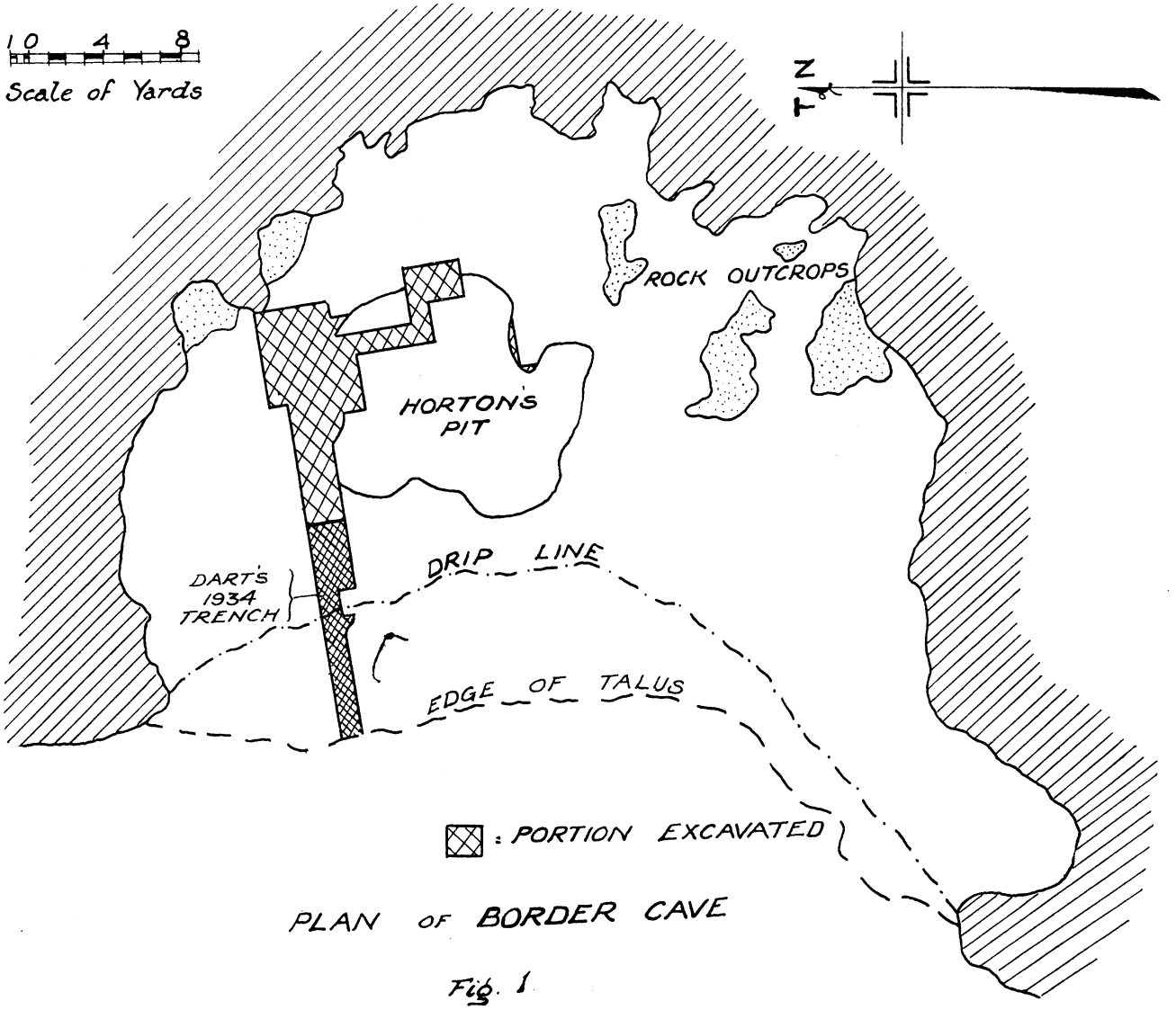
This site was first investigated in July 1934 by a party from the Department of Anatomy, University of the Witwatersrand, under the direction of Professor R. A. Dart. A trench 3 feet in width was commenced at the edge of the talus slope 30 feet from the north wall of the cave and carried inwards for 30 feet. This showed that the disturbed superficial stratum which included Bantu material, overlay a consolidated deposit containing Middle Stone Age artifacts, and continuing to bed-rock at a maximum depth of 5 feet 6 inches. The excavation was regarded as merely preliminary and therefore no account of it was published. Between 1934 and 1941, however, no opportunity presented itself for the continuation of this investigation during the short winter season imposed by climatic factors.

During 1940, Mr. W. E. Horton of Nsoko, Swaziland, dug up a considerable area of the cave floor in search of guano, removing a portion of the deposit to a depth of several feet. Some fossilized bones exhumed in the course of these activities came into the hands of Dr. D. Drew, Principal Medical Officer of Swaziland, by whom they were forwarded to Professor Dart in January 1941. These were found to include, in addition to animal remains, portions of human limb-bones and a nearly complete human frontal bone of very distinctive character. At Professor Dart's request, Dr. T. R. Jones of the staff of the Hlatikulu Hospital, Swaziland, then visited the site, and from a dump of material dug up and sieved by Mr. Horton recovered a human parietal fragment which articulated with the frontal bone. The information obtained by Dr. Jones indicated the possibility of securing both further human remains and more exact evidence as to their origin by a systematic excavation of the site. The Bureau of Archæology of the Department of the Interior and the University of the Witwatersrand therefore sponsored and financed such an investigation during July 1941 and July 1942.

Unfortunately neither Professor Dart nor any member of his 1934 party was available for this undertaking. The nucleus of the 1941 and 1942 parties comprised the authors of this note together with Mr. E. W. Williams, Senior Technical Assistant of the Department of Anatomy. Both parties were accompanied by senior students of the Departments of Anatomy and Geology.

The work on the site carried out by these parties during the two seasons occupied some five weeks in all and included: first, the complete sorting of the dump left by Mr. Horton, which yielded further human fragments as well as animal remains and a great wealth of artifacts; second, a grid excavation by which Professor Dart's trial trench was linked up with sections taken through the walls and floor of the pit dug by Mr. Horton (fig. 1), establishing the sequence of deposits in at least the northern half of the cave. In different parts of the excavated area of about 45 square yards, the depth to bed-rock varied from 5 feet 6 inches to approximately 9 feet.

This excavation showed that the consolidated cave-earth exposed by Professor Dart's trench towards the mouth of the cave merged, in the more sheltered inner portion, into soft earth interlaced with bands and



PLAN OF BORDER CAVE

Fig. 1

patches of ash, all more or less rich in artifacts. Over a large area these deposits were overlain by a great accumulation of sterile rubble due to a series of rock-falls from the cave-roof; in another part of the cave they were capped by a red earth band with a firmly cemented upper surface, apparently post-dating the principal part of the process of collapse. Above this band and overlapping the rubble accumulation is a complex series of deposits of earth, ash, and animal dung, varying in depth from a few inches to more than two feet. These superficial layers are almost wholly barren of stone artifacts, and apparently consist for the most part of Bantu occupational material together with roof chips and dust.

The material used for the manufacture of artifacts is predominantly the local trachytic suite of lavas, though to a lesser extent quartzite from the gravels of the Ingwavuma River and chert and quartz from amygdales in the lavas were also used.

All the artifacts recovered show a mastery of the Levallois technique and must be ascribed to the Middle Stone Age of South Africa. At bed-rock the industry is extremely simple in general character. Secondary trimming is rare, and where it occurs it is usually steep and crude. The technique is Levallois with many flakes showing convergent longitudinal flaking. The flakes are relatively large, and broad in proportion to their length; typical specimens are 8 to 9 cm. long and 4·5 to 5·5 cm. in maximum width. Striking platforms of the majority of specimens are plain or show a little crude preparation. Only a few cores were found near bed-rock and these are crude, with deep flake-scars and no preparation of striking platforms. A fragment of a bifaced point

of Still Bay type is a precursor of what was to follow.

Passing upwards through the deposit, this simple industry develops gradually and without intervals into a more complex and sophisticated one. The technique remains consistently Levalloisian; the primary flaking is more often of the convergent longitudinal than of the radial type. Flakes are generally more refined and often show elaborately facetted striking platforms. Numbers of points have been carefully trimmed, and in some instances the bulbs of percussion have been reduced by well controlled 'pressure' flaking. We find also a number of fragments of typical 'Still Bay' lanceheads flatly trimmed over the whole of both faces and symmetrically lenticular in cross-section. No specimen was recovered intact, but two halves found in successive 3-inch layers in the same square yard fit perfectly to form a complete lancehead. This is 9·6 cm. long and reaches its greatest width (3·8 cm.) at a distance of 3 cm. from the butt; the cross-section is lenticular and the greatest thickness is 1·1 cm. The butt in this and a number of less perfect specimens is carefully rounded, but it is impossible to say whether double-pointed lanceheads were also made.

This phase of the industry of the cave can with confidence be ascribed to the Pietersburg Culture which is found abundantly in the central area of the Transvaal. The Pietersburg Culture was first noted by Goodwin (1929) but still awaits fuller description.

In the history of the cave, there now followed a period when it was apparently less intensely inhabited. Flakes, markedly fewer and less characteristic, still occur and show that the site was not entirely deserted. After this partial interval intense occupation was resumed, and the latest phase of the industry shows a considerable advance on the 'normal' Pietersburg culture which preceded the interval. It is typified by an abundance of long, narrow, and slender ribbon-like blades with prepared striking platforms. The longest of these measures 11·2 cm. × 2·1 cm. × 0·8 cm. and many of them show no secondary trimming. No cores which could have yielded blades of this length were found, but a number of other cores are nevertheless present. They are very refined and tend to the triangular form.

Several highly developed and specialized tools occur, the most numerous of these being backed blades made on fragments of Levallois blades. The largest of these measures 8 cm. in length and 3 cm. at its greatest width; the smallest is 2·4 cm. × 1·1 cm. In most cases the secondary 'backing' was executed by using the main cleavage face of the flake as striking platform, though in some cases it has been done by flaking from both faces. The backing, in the majority of specimens, is confined to the extremities of the arcs, the widest portion of the tool being devoid of secondary trimming. In specimens trimmed from the main cleavage face only, the backing is somewhat oblique to the secondary axis of the flake, giving a bevelled effect. Very few of these tools show a chord either trimmed or damaged by use. These backed blades are closely similar to those which characterize the Still Bay Culture of the Cape (Malan 1939), the slight divergences being attributable to differences of material. One or two specimens retain vestiges of the bulbs of percussion and can be compared with Chatelperron types, but they are rare and not significant.

The next most numerous specialized tool in the final phase of the industry is a butt-end scraper of a type not previously noted elsewhere. The butt-ends of triangular advanced Levallois points have been secondarily trimmed to form endscrapers by blows on the main cleavage face, which have removed the striking platforms and, in most cases, the greater part of the bulbs of percussion. In most typical specimens the trimming is continued round the 'shoulder' so that the scraper edge is rounded in plan. A typical specimen is 7·2 cm. long and 2·3 cm. at its widest, while a smaller one measures 4·7 cm. × 2·3 cm. It should be noted that the term 'butt-end scraper' has been applied by Oakley and M. Leakey (1937) to tools which show secondary trimming of the striking platforms from the upper surface of the flake, and similar forms occur in the Still Bay and Modderpoort Cultures (Malan 1939 and 1942). These differ in principle from those found in the Border Cave.

The industry contains yet a third tool-type which demands special description. Small flakes exclusively of very fine-grained chert or cloudy quartz, have been trimmed to a triangular form by minute 'pressure' flaking over the whole of the upper surface as well as a considerable portion of the flake surface. One example is equilateral with sides 2·8 cm. and is 0·5 cm. thick; a second is isoscelene with equal sides 3·1 cm. and the third side 2·4 cm. and is 0·5 cm. thick, while a third is scalene with sides 3·4, 3·2, and 2·8 cm. and is 0·3 cm. thick. These very specialized points (possibly arrow-heads) are so refined as to appear out of place amongst the other elements of the industry, but their association is not open to any doubt. Moreover this very refined 'pressure' technique is not confined to such triangular tools, but occurs also on certain specimens which are anomalous in form and may be classed either as backed blades or as points.

The entire absence of burins from such an advanced blade industry which includes an abundance of backed blades is striking.

Although this final phase of the industry was apparently separated by a period of less intense occupation from the preceding phase on which it shows a

considerable technical and typological advance, it is clearly developed from the Pietersburg Culture, as expressed in the earlier deposits, and does not mark the intrusion of a new culture. This cave therefore sheds considerable new light on the Pietersburg Culture, showing as it does a continuous development from crude beginnings to a more refined final phase of that Culture than has hitherto been encountered.

A considerable number of identifiable animal fragments, principally teeth, have been recovered. These constitute the first Middle Stone Age fauna to be obtained in the eastern low-veld area; the faunas of this period hitherto described have come either from the central high-veld plateau or from the south-western part of the Cape Province. The majority of the forms represented belong to the modern low-veld fauna, including hippopotamus, bush-pig, wart-hog, Cape buffalo, roan or sable antelope, kudu, waterbuck, gnu, impala, reedbuck, duiker and steenbok, Burchell's zebra, hyrax, baboon, and various rodents. One definitely extinct species is an equine appreciably larger than any recent zebra, provisionally identified as *E. kuhni* Broom; there is also evidence of an extinct bovine distinct from the Cape buffalo. Thus the fauna, while clearly of low-veld facies, agreed with the known Middle Stone Age faunas of the high-veld and Cape regions in containing a minority of extinct types.

The human remains from this cave comprise (1) the partial cranium of an adult of about thirty years and many other adult skeletal fragments exhumed during Mr. Horton's operations, and (2) the skeleton of an infant of about three months *in situ* by us. Of these finds the most important is the adult cranium, to which belong the frontal bone first sent to us by Dr. Drew and a series of parietal, temporal, and occipital fragments, which articulate with that bone and with one another.

Careful consideration has been given to the probable position of the skull in the deposits. The only stratum exposed by Mr. Horton's excavations which agrees in character with the material filling the small crevices of the skull is a band of soft dark earth forming the upper part of the 'normal' Pietersburg occupation zone. Although the remains may have been buried into this layer from a higher level, it seems very unlikely that such a burial could have taken place after the accumulation of the rubble and red earth layers which together crown the Middle Stone Age deposit. It is therefore highly probable that this skull belongs at latest to the uppermost 'advanced' phase of the Middle Stone Age occupation, and quite possible that it dates back to the 'normal' Pietersburg phase.

The infant skeleton found by us lay in the same dark earth layer of the 'normal' Pietersburg zone. This was clearly a deliberate burial, but in a very shallow grave; it could not have come from a higher level than that indicated by an ash horizon at the very base of the overlying zone of 'advanced' industry. The skeleton therefore belongs within the Middle Stone Age, and is the youngest individual of that period yet recorded. The only object definitely associated with it was a single perforated *Conus* shell.

That the adult cranium belonged to an individual of about thirty years is shown by the condition of the vault sutures. Much of the posterior parietal region and the median part of the occiput, with the base of the brain-case, are still wanting, and no facial parts can be articulated with the brain-case. It is evident that the parieto-occipital region had been broken and somewhat warped before the skull was exhumed.

The general form of this specimen is clearly seen in figs. 2 and 3. Morphologically it is quite distinct from both the South African Negro and the Bushman type. In many respects it may be compared with the Springbok Flats skull, the only human fossil hitherto associated with the Pietersburg Culture, and also with the Fish Hoek skull which belongs to the closely related Still Bay Culture of the south-western Cape. The features of the frontal region, however, demand comparison also with the Florisbad skull, which may belong to an earlier horizon than either of these.

In length this skull cannot have been less than 195 mm. and may have reached or exceeded 200 mm.; its maximum breadth is 140–142 mm. and its auriculo-bregmatic height at least 115 mm. By the Lee-Pearson formula a minimum estimate of 1,450 ccs. for the cranial capacity is obtained. The bones of the vault vary between 5 and 9 mm. in thickness.

Parietal bosses of moderate (infantile) development give the dolichocephalic brain-case an ovoid outline in *norma verticalis*. That part of the nuchal surface which is preserved is boldly convex, with well-defined muscular impressions but no evidence of an occipital torus. The mastoid process though broad is of very small projection; a well-marked supra-mastoid groove separates it from the blunt up-curved supra-mastoid crest. In proportion to the general structure of the skull the tympanic plate of the temporal bone appears very slender; unfortunately the glenoid fossa is almost wholly destroyed. The parieto-squamous suture appears to have had a depressed course.

The forehead is of moderate height and merges by a gentle curve into the vault of the skull. Between the moderately developed frontal eminences there is a faint median metopic ridge, as in the Broken Hill, Florisbad, and Fish Hoek crania. The frontal region is unusually broad, the minimum frontal diameter

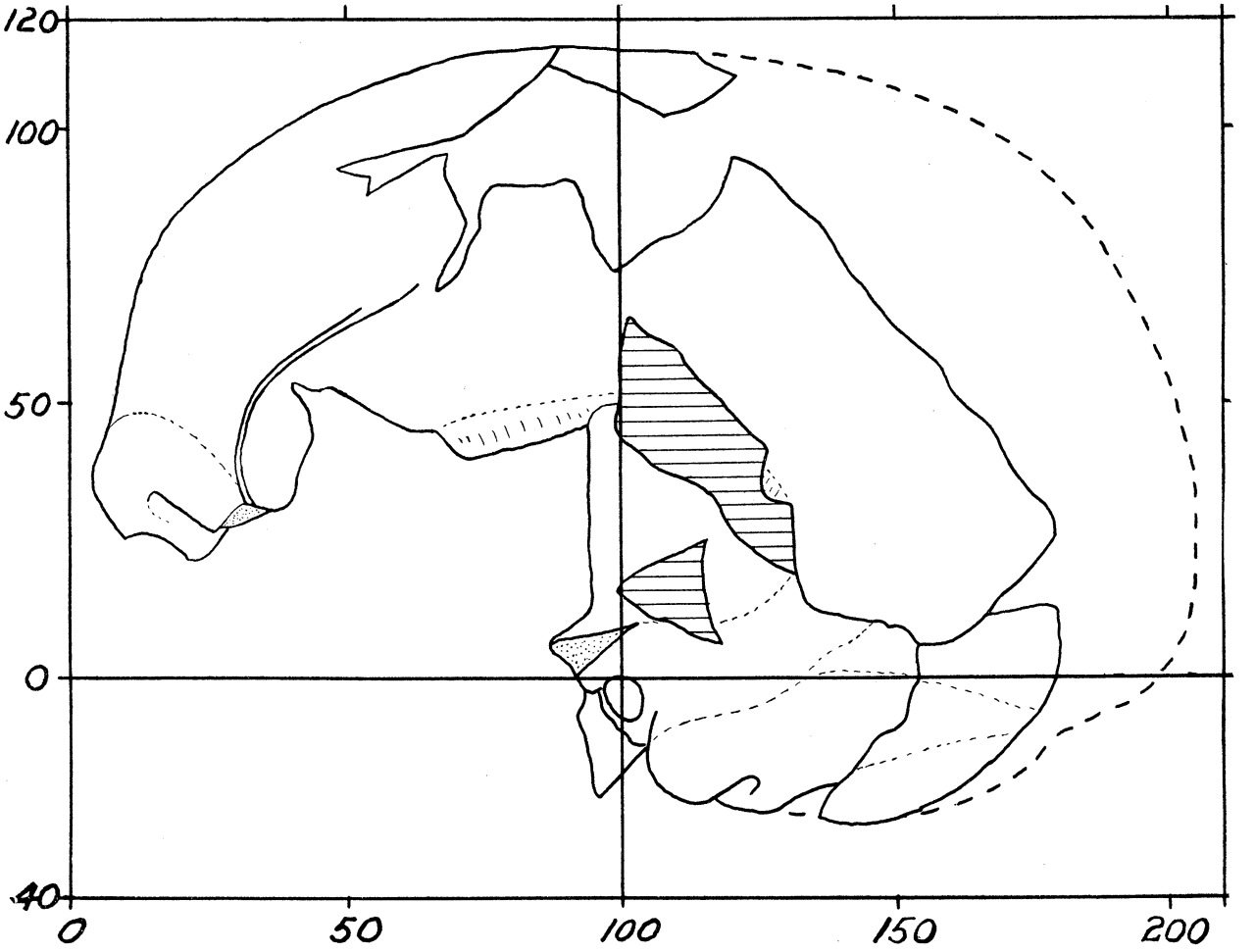


Fig. 2.

measuring 108 mm., while the supra-orbital diameter must have somewhat exceeded 120 mm. Such dimensions are at the extreme upper limit not only of our modern South African native crania but of modern human crania in general, and are well within the range of the European Neanderthal group (Keith 1931, McCown and Keith 1939). The Florisbad skull however presents measurements very much greater than these, its minimum frontal diameter being estimated at 120 mm. and its supra-orbital diameter at 136 mm.

Equally distinctive is the structure of the supra-orbital region. The glabella is of moderate projection, and encroached upon by the medial ends of the massive rugged superciliary eminences. Laterally these eminences merge with no obvious line of demarcation and very slight diminution in calibre into the greatly thickened lateral supra-orbital margins. Thus a genuine supra-orbital torus of Cunningham's (1908) Type III is formed, though it has not the forward salience displayed in Neanderthal or even some Australian crania.

Such a torus is not present in our collection of some four hundred South African Negro crania, and only once or twice, on a smaller scale, among more than two hundred Bush and Hottentot crania in our collection and those of the Cape Town and Port Elizabeth Museums. In the skulls described as 'Australoid' by Broom (1923) and Drennan (1929) the supra-orbital region is quite different in structure; the glabella and superciliaries are of bold projection, but the lateral supra-orbital margin is relatively slender and sharply demarcated from the superciliary eminence (Cunningham's Type II). This is the case also in the Springbok Flats skull. In the Fish Hoek skull the lateral supra-orbital margin is considerably thickened and confluent with the superciliary; the torus thus formed is however much less robust than in our specimen. The Florisbad skull has a torus very nearly identical in form with ours, but absolutely

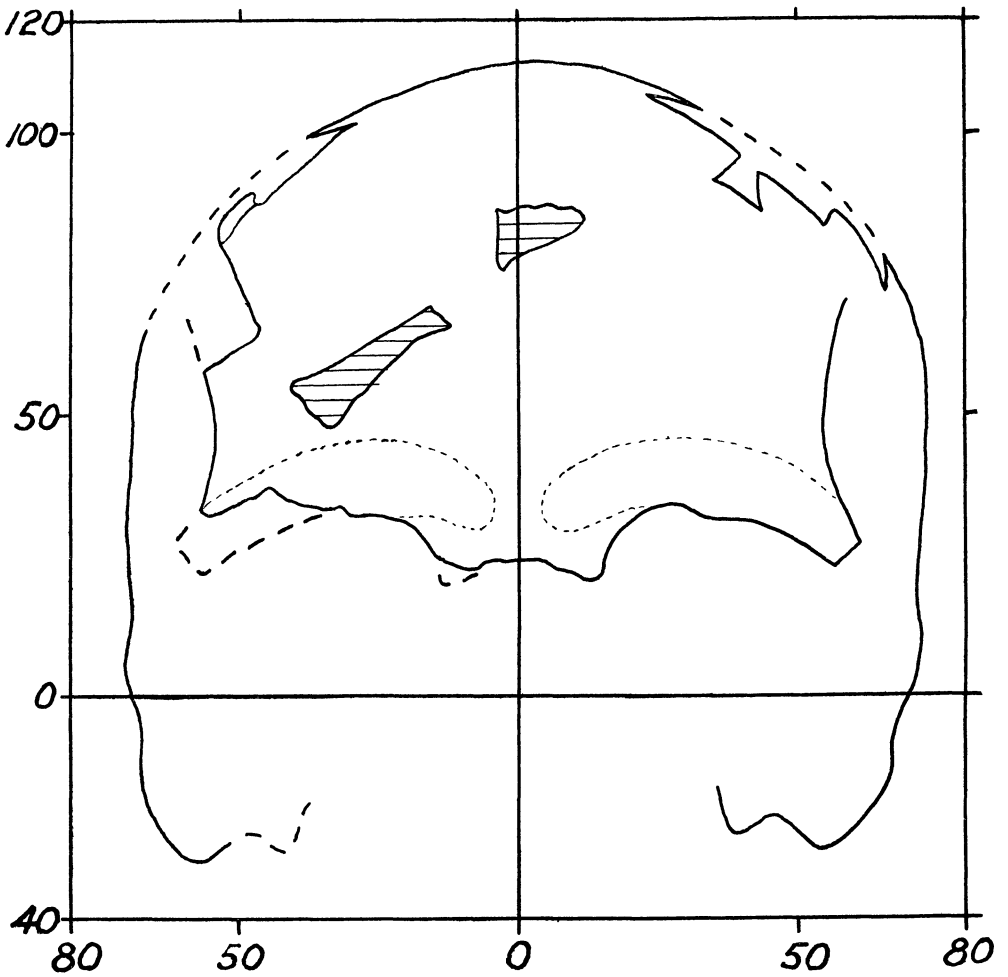


Fig 3.

larger in correspondence with the greater breadth of the frontal region. It shows also an indication of division between the superciliary and lateral supra-orbital elements. On this account Galloway (1938) assigned it to Cunningham's Type II ; in our opinion it corresponds rather with the state described by Cunningham as intermediate between his Types II and III.

Despite their resemblance in the supra-orbital region, the Florisbad skull and that from the Border Cave are very different in general appearance. This is due partly to the great breadth of the Florisbad frontal, and still more to the extraordinary degree of flattening in both the coronal and sagittal planes which it displays.

It is worthy of note also that in our specimen the frontal sinuses are not enlarged as is the case in the Cape Flats skull ; on the contrary they are of very small size.

A number of fragments correspond in preservation with this brain-case, but do not directly articulate with it and therefore cannot be certainly ascribed to the same individual. Of these the most noteworthy are a complete right zygoma and the greater part of a mandible. The zygoma is robust ; it is not at all Neanderthaloid in its proportions, but resembles more closely that of the Australian than those of most South African types. That of the Florisbad skull, however, so far as it is preserved appears to correspond with it. The mandible is considerably less massive than the Springbok Flats or even the Fish Hoek specimen (Schepers 1941) ; the relatively shallow symphysis and lack of alveolar prognathism distinguish it sharply from the typical Negro mandible. Its ascending ramus is incomplete, but appears to have been of moderate breadth and height. There is a massive blunt mental protuberance. All the teeth are missing.

Considerable portions of the shafts of a pair of femora and of tibiæ, included in the collection sent to us by Dr. Drew, agree very well in condition with the skull fragments, and may well have formed part of the same skeleton. The fragments are robust; the original length of the femur appears to have been between 46 and 48 cms., which is above the average for South African Negro males. The Springbok Flats femur is still longer (50·0 mm.), that of Fish Hoek not so long. There is definite platymeria (index 77·4) accompanied by strongly marked pilastering (index 128·0), a combination of characters unusual in the South African Negro but more common in prehistoric femora. The tibia shows a moderate degree of transverse flattening, the cnemic index being 67·3 (mesocnemic). A ' squatting facet ' is present on its distal end.

A large number of human fragments representing nearly all parts of the skeleton were retrieved from the dump left by Mr. Horton. These, however, belong to more than one individual. Some of them, including a few small cranial fragments as well as other skeletal parts, are appreciably different in preservation from the remains originally sent to us by Dr. Drew. They appear to be considerably more recent, and may well be of Bantu origin, but no significant morphological features can be identified in them.

The infant skeleton found by us possesses only fragments of the skull, but the mandible and most of the shafts of the long bones are well preserved. These bones are larger than those of infants from the Late Stone Age site at Oakhurst (Drennan 1937), suggesting that this individual belonged to a physical type larger than the Bushman or Hottentot. The mandible is quite different in form from that of the South African Negro infant, but almost identical with that of the Bushman (Wells 1931); it is, however, appreciably larger than Bush-Hottentot specimens of comparable age (Drennan 1937). Schepers (1941) has shown that the known mandibles of Middle Stone Age adults, especially that of Springbok Flats, are Bushman in form but of much larger dimensions. It is therefore quite conceivable that this infant mandible might have developed into a massive adult of the Springbok Flats type, but equally possible for it to have attained the less robust form seen in the adult mandible found in this same cave.

Of all these skeletal remains the adult cranium is in the present state of our knowledge the most significant. This Ingwavuma skull, as it may conveniently be named, agrees well in size with the probably nearly contemporaneous Springbok Flats and Fish Hoek crania. Its posterior portions, so far as they are preserved, correspond in most respects with those of the Springbok Flats skull, and to a less extent with that of Fish Hoek. The frontal bone, however, differs markedly from that of the Springbok Flats specimen. It is, in a sense, a larger and more massive version of that of the Fish Hoek cranium; however, both its increased breadth and the massive well-developed supra-orbital torus approach the condition seen in the Florisbad skull. The Ingwavuma skull may indeed be considered as occupying an intermediate position between the Florisbad fossil and those of Fish Hoek and Springbok Flats.

More than one interpretation of the relationship between these fossil types is available. One obvious suggestion is that the Ingwavuma skull represents a hybrid between the Florisbad type and that of Springbok Flats. On the other hand, Galloway (1938) finds so many correspondences between the Florisbad skull and the Springbok Flats—Fish Hoek group that he believes this group to have evolved from the Florisbad type. The Ingwavuma skull might therefore be considered either an intermediate stage in this development or a partial reversion of the Springbok Flats type to its Florisbad ancestor. There is still another possibility, viz. that the Ingwavuma cranium itself represents a more generalized type from which the Florisbad skull with its fantastically broad and flat frontal bone is an aberrant specialization. Further study of these specimens may enable us to choose between these alternatives.

Summary and Conclusions.

Preliminary excavations were commenced by Professor Raymond Dart in 1934 in the Border Cave. During the winter seasons of 1941 and 1942 further excavations were undertaken jointly by the University of the Witwatersrand and the Bureau of Archæology. These excavations yielded a rich industry of Middle Stone Age times (Pietersburg Culture), showing continuous development of the industry during a considerable period of time. The more advanced phase of the industry includes small triangular points, finely trimmed over both faces which strongly suggest the use of stone-tipped arrows even in this remote period.

A primitive adult human skull discovered during excavation of the deposit for agricultural purposes is described and is confidently associated with the lithic industry, and fragments of an infant skeleton were found *in situ*. The association of a rich fauna, including one or two extinct species, with the lithic industry and the fossil human remains was established.

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DIRECTIONAL CHANGES IN FUNERARY PRACTICES DURING 50,000 YEARS. *By Professor V. Gordon Childe, D.Litt., D.Sc., F.B.A., F.S.A.; cf. Summary,* MAN, 1943—91.

4 The aim of the present study is to see whether the archæologist can observe any cumulative tendencies, any trends in one direction in the manifestations of man's spiritual culture, comparable to those that are clearly manifest in his material culture over the long period comprised within the archæological record. Of course all the archæologist can study is Man's behaviour, the material expressions of his spiritual life. *Qua* archæologist, he cannot recapture Neandertal man's ideas about a future life nor the theory of Cro-Magnon magic. Indeed it may be questioned whether palæolithic 'men' had any articulate spoken language suitable for expressing in analytical words, 'ideas' or 'theories' at all. Their language may still have been 'kinetic'—gestures and grunts, capable of arousing in their fellows emotions and stimulating them to action, but not of formulating an idea as abstract as even 'bear.' We must not imagine early hominids elaborating an eschatology and then acting on it. The deep emotions aroused by the recurrent crises of life and death found expression in no abstract judgements, but in passionate acts. The acts were the ideas, not expressions of them. Certain types of act came to be recognized by societies as appropriate to certain situations, just as certain types of tool won approval as standard forms. Such patterns of behaviour became rites, but the rite did not necessarily express a theory, more probably it came to constitute one. Burial rites have been selected for study because the record of such, going back to middle palæolithic times, is peculiarly long and full.

I *Disposal of the corpse*

Palæolithic corpses were buried either extended (Cro-Magnon, Grimaldi) or contracted [1] (La Ferassie, etc., Mt. Carmel). Both positions are attested also in mesolithic times. In neolithic times extended burial was practised by the food-gathering Forest tribes of Siberia (till the Glazkovo stage), northern Europe and the Baltic, and in the 'transitional' collective burial place at Mariupol. Among food-producers it was normal among the northern farmers of the 'Mega-'lithic' group and in the Ground and Upper Graves of the Danish battle-axe folk (in the earlier Bottom Graves the bodies were usually contracted [2]), in the Danubian cemetery of Hinkelstein and some 'late 'Rössen graves,'[3] and in some Western graves in western Germany [3] (at Michelsberg and Altenburg), and France (Fort Harrouard [4]). In southern climes this attitude is rarer, but there are plenty of examples in the al'Ubaid culture. In all other early or neolithic cemeteries and cultures in Europe, North Africa and Hither Asia the bodies were buried flexed or contracted, and this was far the commonest practice in the Early Bronze Age too.

During the Bronze Age contracted gradually gave place to extended burial. In Egypt nobles were extended already in protodynastic times; by Dynasty IV 60 per cent. of the bodies in the Qau cemetery [5] were extended, and by Dynasty IX, 96 per cent., only the very poorest being contracted. In Cyprus contracted and extended bodies are alike found in Early Cypriote graves.[6] In Mesopotamia, where contracted burial came in by Jemdet Nasr times, extended burial was adopted much more slowly, at Kish [7] not till Neo-Babylonian times, though it was practised quite early in Elam, apparently even in tombs contemporary with Early Dynastic I. In Greece contracted burial remained normal till the Middle Helladic period, but during the latter extended burial gradually became fashionable; at Asine, Persson considers a gently flexed posture to be an intermediate stage in a slow process of change. Similarly in Sicily [8] the bodies in Siculan II tombs are less strictly contracted than in Siculan I while those in Siculan III are extended. In all these cases the change of position is not associated with concomitant changes in grave-goods that would denote the infiltration of a new 'culture' or people.

In Central Europe while contracted burial was the rule in the Early Bronze Age Aunjetitz culture, 'chieftains' were already buried extended, as at Leubingen, and this was the regular practice in the