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ARTIFACTS FROM TURKANA, NORTHERN KENYA

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During a Durham University expedition to Turkana in 1959, a number of artifacts was recovered from the Pleistocene lake beds at Kabua, situated about 11 miles west of Lake Rudolf (approximate position 35° 47' E., 3° 27' N.). There the Pleistocene lake sediments are principally of littoral facies (passing eastward into off-shore deposits) and rest unconformably upon eroded Miocene volcanics at the eastern flank of the Lothidok range of hills. Fuchs (1934) and Arambourg *et al* (1943) consider that the age of these lake beds is probably late Pleistocene, an opinion which is, broadly speaking, confirmed by a study of the fossilized mollusca and mammalia which they contain.

The implements recovered at Kabua by the Durham party were all surface finds. None was *in situ* and very little can be deduced with certainty about their stratigraphical distributions; but they are largely un-abraded and it is assumed that they had weathered out of the lake beds on which they reposed. The artifacts fall into five clear-cut groups, ranging from Kenya Stillbay chert points to uniserially barbed points of Ishangian type in bone and ivory.

DESCRIPTION OF MATERIAL

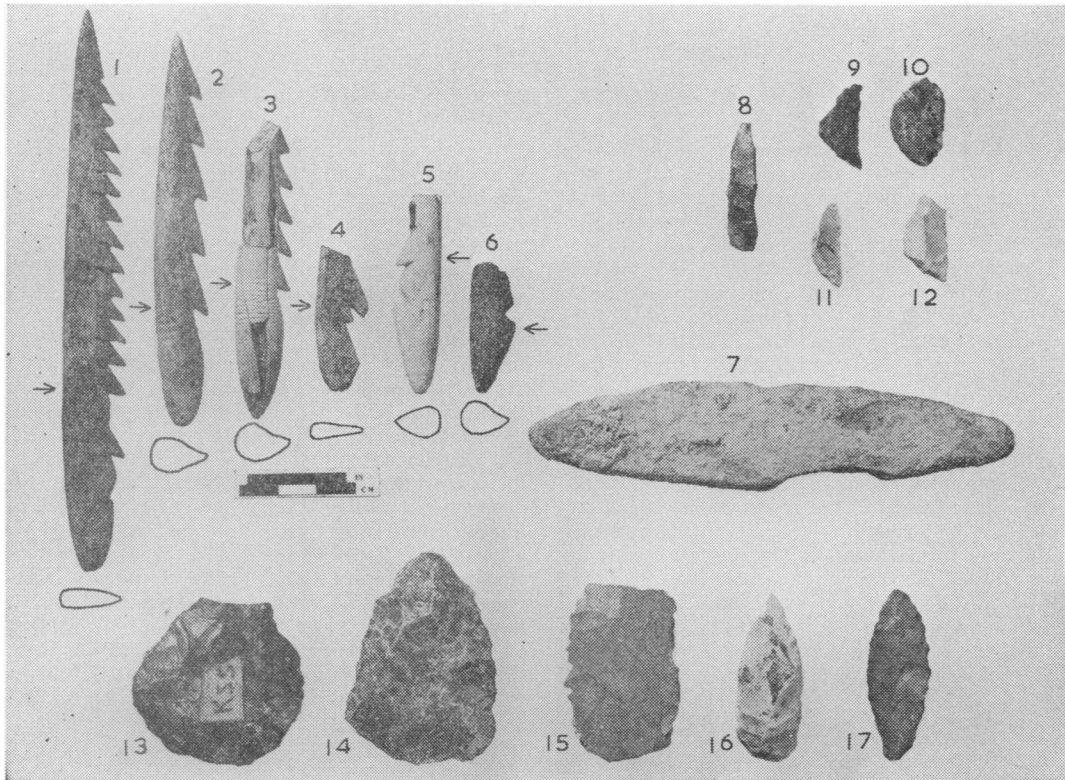
Kenya Stillbay

The first of these groups (Pl. I, figs. 13–15) is a collection of tools exhibiting Levalloisoid—Kenya Stillbay affinities. There are rather small to medium-sized flakes and flake tools in the form of triangular Kenya Stillbay-type points, which are all based essentially on a faceted platform technique. These tools were rather numerous, and almost all the examples collected were found about 200 feet above existing lake level, and very close to the site which also yielded a fossilized human skull of distinctly acromegaloid aspect (Whitworth, 1960). They lay exposed on a surface of recent erosion, invariably near the base of the inshore succession of Pleistocene lake beds and, judging by their totally unrolled and usually unweathered appearance, had not travelled far. One flake shows surface frosting, but this is presumed to have resulted from natural sand-blasting effects *in situ*. It seems likely that all these Levalloisoid—Stillbay implements were derived from the lower beds of the Kubua Pleistocene. The majority are fashioned in chert, usually of a brown or yellowish-brown colour and often speckled or streaked with milky-white to pale blue chalcedony. These varieties of chert are probably local materials, chips and fragments of which have been collected in considerable quantities by the present-day natives and stacked, in accordance with local superstition, to form appreciable mounds at numerous places in the neighbouring Lothidok region. During a geological survey of the Lothidok

Hills, frequent outcrops of a similar brown siliceous substance, apparently occupying fault planes, were encountered. Another source was probably provided by detrital conglomerates of Miocene age, the so-called 'Turkana Grits', which flank the Lothidok range. In addition, one prepared flake is made of banded, dark brown and milky-blue agate which may also be a local material; another (Fig. 1, no. 15) is composed of a dense, drab green rock which looks like an acid lava, but may be another species of chert. No outcrop of this latter material was discovered in the Lothidok Hills, but it may have been taken from an inclusion in the Miocene agglomerates of the range. Yet another flake tool is of a pale yellow to buff material which is possibly another acid lava, not encountered *in situ* in the area; and one typical Kenya Stillbay point (Fig. 1, No. 13) is composed of greyish-brown 'flint'. This collection of artifacts suggests a date for the source beds which corresponds rather closely to Leakey's Upper Gamblian zone of Central Kenya, although it might be prudent, in view of recurrent criticisms levelled at this pluvial chronology (Solomon, 1939; Fuchs, 1950; Cooke, 1957; Flint, 1959A and B; Bishop, 1962), to employ the phrase 'late Pleistocene'. A slightly earlier phase is not entirely ruled out.

Upper Kenya Capsian

Loosely associated on the surface with some members of the first group is a second group of implements, representing a microlithic culture of blades and lunates (Fig. 1, Nos. 8–12). Again these are unweathered, and their occurrence suggests that they too were probably derived from the lower part of the Kabua lake bed sequence. Morphologically, the lunates might equally well belong to an Upper Kenya Capsian or a Magosian industry, to a Mesolithic industry of Elmenteitan affinities, or even to a Neolithic Wilton-type industry. The most likely alternative would seem to be the Stillbay-derived Magosian, the type site for which is at Magosi on the Uganda escarpment, only 80 miles west-south-west of Kabua. Nevertheless, the complete absence of thumbnail scrapers and *lames écaillées* from this Kabua suite tends to rule out the Magosian, Elmenteitan and Wilton cultures. This, and the crudeness of the small blades, favours the assignment of this second group of tools to an Upper Kenya Capsian industry which is more in keeping with its apparent overlap at Kabua of a Kenya Stillbay assemblage, presumed to be of 'Gamblian age'. Stillbay and Upper Kenya Capsian occupation levels alternate at Gamble's Caves near Lake Elmenteita in the Kenya Rift, and the two cultures seem to have co-existed at Little Gilgil River, twenty miles east of the caves. It would be unwise, however, to be dogmatic



Figs. 1-5 and 7-17. Artifacts from the lake beds of Kabua, Turkana: 1-5, Bone and ivory harpoon heads and barbed points; 7, Bone spatula; 8-12, Upper Kenya Capsian microliths; 13-15, Kenya Stillbay flake tools; 16-17, Evolved Lupemban laurel-leaf points.

Fig. 6. Cast of a bone harpoon head from the upper horizons of Gamble's Cave 2, Central Kenya. Supplied by Dr. K. P. Oakley. The cross-sections of harpoons, drawn beneath the corresponding artifacts, were taken at the positions indicated by arrows. All approximately $\times \frac{1}{4}$.

about this rather poorly represented microlithic industry from Turkana.

Most of the Kabua microliths are made in reddish-brown and light brown chert or in quartzite, the former material being flecked sometimes with small blebs of pale chalcedony. Some lunates are fashioned in white or pale buff chalcedony. These are probably local materials derived from the light coloured Miocene conglomerates which crop out on the flanks of the Lothidok range; but one small, double-edged flake of obsidian was also recovered at Kabua. No obsidian was observed *in situ* in the Lothidok region, and the material was probably imported. If the implements of this second group are genuinely an Upper Kenya Capsian suite, then they indicate that the beds from which they have been derived might be equated with the latter part of the Gamblian episode of Central Kenya.

Sangoan

A third group consists of large and rather crudely

executed Sangoan hand-axes, usually made of basaltic lavas similar to those occurring in Miocene flows of the neighbouring Lothidok Hills. These were found in considerable numbers on the surface, near the base of the Kabua Pleistocene, most frequently at the same localities as the two preceding groups of implements; but it was suspected that these hand-axes were derived from an horizon in the littoral facies of the Kubua lake beds, stratigraphically about twenty feet above the level which yielded the fossilized human skull mentioned previously. It is interesting to record that, on the basis of their typology, these tools have been variously ascribed to Early, Late, and Middle Sangoan industries by different specialists, consulted independently. Since it has been recognized (Janmart, 1953) that the cruder types of Sangoan tools may have been a facies industry which persisted throughout most of the Upper Pleistocene in some parts of Africa, this disagreement is not surprising; and it would be ill-advised to attempt to place an independent date on this third group of artifacts.

Evolved Lupemban

A fourth group of implements (Fig. 1, Nos. 16–17) is represented by two small, beautifully fashioned, pressure-flaked, bifaced points of slender, almond-like shape and measuring about 45 mm. in length. One is executed in a light yellowish-brown chert, and its surface flaking has been polished, particularly on one face, by natural sand-blasting which has imparted an appearance reminiscent of 'desert varnish'. The other point is of very pale, translucent grey chalcedony with, in places, a patina that looks like natural frosting by sand-blast. In both, the original flake butt has been largely removed by retouching, so that the points are double-ended. They were recovered from the top surface of the lake beds just west of Kabua Water-hole, at a level about 300 feet above the existing lake. From their apparent lack of travel, it was presumed that they had weathered out of the rudaceous sediments which cap the lake bed succession there. These points are perhaps too fine and slender to be referred to an advanced Stillbay tradition but might well belong to a Stillbay-derived Magosian or Magosian—Doian industry. On the other hand, a Sangoan industry appears to characterize lower beds in the Kabua sequence, and these two small, laurel-leaf points may be part of an evolved Lupemban tradition. There is thus some indication that the uppermost lake beds at Kabua could be of Mesolithic age.

Bone and Ivory Harpoons

Finally, scattered upon the eroded surface of the Kabua Pleistocene a short distance east of the Stillbay group, about 200 feet above present lake level, were found various fragments of harpoon heads bearing a single row of barbs and fashioned in bone and ? elephant ivory, and also a solitary bone spatula (Fig. 1, No. 7). Another fragment of a similar bone harpoon was recovered from the surface of an ancient lake beach at topographically lower level than the Kabua lake beds and much nearer to the present western shoreline of Lake Rudolf. There, the harpoon occurred in a surface gravel which also contained fossilized mammalian teeth, and overlay coarse sands and grits containing mammalian bones. Despite their occurrence on the denuded surface of basal members of the Kabua lake bed succession, in rather close company with derived artifacts of Kenya Stillbay facies, these harpoon heads may have been deposited on the surface of already exposed and eroded Pleistocene lake beds at Kabua during a late phase in the retreat of the ancient Lake Rudolf, perhaps even as recently as Neolithic times.

One of the most perfectly preserved of the harpoon heads from Kabua (Fig. 1, No. 1) is long and slender, measuring 147 mm. in length with a maximum diameter of 16 mm., and is manufactured in bone. The cross-section of the head is a very flattened oval, with almost parallel sides. There are fourteen large, backward-pointing barbs (a fifteenth has been broken off) arranged along one edge of the harpoon head in a graded series. At the rear there is a reversed or forward-pointing small barb for secure attachment. In this

example, the barbs seem to have been cut with a sharp instrument which produced much the same effect as a tenon-saw. Each barb is an eccentric pyramid, being bounded in front and behind by plane surfaces which meet the lateral walls of the barb in sharp angles. These angles at the lateral margins of the barbs were never smoothed off by artificial abrasion. On some of the cut faces of the barbs, the fine striations left by the cutting instrument can still be distinguished.

Another complete point from Kabua (Fig. 1, No. 2) is shorter, stouter, and of more nearly rounded transverse section, with the five uniserially disposed barbs smoothed off after being cut, as if with a fine file. The material of this specimen is probably ivory. The head measures 103 mm. in length and its maximum diameter is 13.5 mm. Towards the rear, the neck of the implement is encircled by five shallow grooves to receive the lashing with which it was secured to the shaft. Yet another, less complete, ivory point (Fig. 1, No. 3) has somewhat angular barbs like the bone example described in the preceding paragraph, but is of rather more rounded section, and has grooving only for attachment. A third ivory harpoon head (Fig. 1, No. 5) does, however, have the reversed posterior barb, as in the first bone specimen, and also rather angular barbs, but possesses a more inflated transverse section than the bone point.

A fragment of a fifth point (Fig. 1, No. 4) is fashioned in bone and possesses a cross-section which is almost an acute triangle, the apex of the triangle forming the cutting edge of the head. It differs from all the others by the possession of a small, posterior attachment barb and notch, with the barb backward-pointing. This specimen was found on an old strand-line, situated four miles south-east of Kabua Water-hole and standing about 140 feet above existing lake level.

It is virtually impossible to date these bone and ivory implements with any precision, since similar types are little known elsewhere in Kenya, and their occurrence in other parts of Africa is rather restricted. Heinzelin (1957) has described a suite of roughly comparable bone harpoon heads and barbed points from the deposits of a lake terrace at Ishango near the Semliki River, now raised nine metres above the level of neighbouring Lake Edward. He assigns these deposits to the Makalian stage, and refers the artifacts to a Mesolithic industry. His collection includes both biserially and uniserially barbed points, and Heinzelin claims that the former preceded the latter culturally. In general appearance the Turkana points and the uniserial types from Ishango are similar, although those from Kenya are perhaps better finished, with a bilaterally symmetrical transverse section which is seldom encountered at Ishango. In addition, they probably tended to have rather more numerous barbs. At Ishango the uniserials possess from two to eight barbs. Only two complete points were found at Kabua, but one had fourteen barbs, the other had five; and even a broken remnant of

another point still retained six barbs, while a very small fragment carried four. One feature characterizes the Ishango material, that is the presence of a posterior, reversed barb for attachment. Often, this is accompanied by a deep notch placed directly opposite at the other edge of the harpoon blade, to guarantee secure connection with the line. Some of the bone and ivory implements from Turkana also possess this characteristic reversed barb, but none of them carries the well defined, opposed attachment notch. On the other hand, many of the Turkana specimens possess for their articulation only a slight constriction of the butt end of the implement, encircled by a few shallow grooves. Heinzelin quotes other occurrences of larger, but essentially similar, bone points at Khartoum and Es Shaheinab in the Sudan; and bone harpoons have also occurred sporadically in a roughly defined belt extending westward from the Tchad area as far as Senegal. All these Heinzelin regards as later and more evolved than the Ishango assemblage, and representing a slow northward spread of the culture.

The solitary bone harpoon collected 4 miles south-east of Kabua Water-hole was recovered from a well developed and little dissected beach situated 160 feet below the top of the Kabua lake beds. There is some indication, therefore, that the bone and ivory implements may be younger than the ? Lupemban laurel-leaf points which capped the Kabua lake bed sequence. Arambourg (see Arambourg *et al.*, 1943) recovered from the six metres alluvial terrace near Nanoropus at the northern end of Lake Rudolf, a single bone harpoon head which he regarded as Neolithic. The head (which is damaged and perhaps a trifle rolled) is rather short and broad with four or five uniserially disposed barbs, and is more crudely fashioned than the bone tools from Kabua. The total length of the Nanoropus head is 82.5 mm. and its breadth is 16.0 mm. It possesses a reversed barb at the rear, and lacks an opposed attachment notch, just like the third ivory head from Kabua; but in general pattern it is more strongly reminiscent of

the bone implements from Ishango than the Kabua specimens.

The only other comparable Kenyan example with which I am familiar comes from Gamble's Cave 2, and appears to be a small fragment of the proximal portion of a uniserially barbed harpoon head, with roughly reversed posterior barb, but no opposed notch (Fig. 1, No. 6; see also Oakley, 1961). Again, the nearest approximation at Kabua is found in the third ivory specimen (Fig. 1, No. 5) described above, although the resemblance is not very precise. The bone fragment from Gamble's Cave 2 seems to have coincided roughly with the last stage of the Upper Kenya Capsian there. This may establish an end-Pleistocene age for the bone point from Gamble's Cave; but Oakley (1961) prefers to deduce, from the associations at Gamble's Cave, a persistence of an Upper Kenya Capsian industry into post-Pleistocene times. It is, of course, true that superficially similar Magdalenian harpoon heads characterize latest Pleistocene deposits in Europe, and it is within the bounds of possibility that there are bone points of comparable antiquity in Kenya. Nevertheless, the most likely supposition is that the harpoons found near Kabua are post-Pleistocene; and I suspect that at least some of the Turkana harpoons may be of very late date indeed. One occurred in stratigraphical circumstances which strongly suggest a late Mesolithic, or even Neolithic, dating: all of them show a more sophisticated construction than Mesolithic and ?Neolithic harpoon heads from Ishango and Nanoropus, respectively.

SUMMARY

Several groups of artifacts have been recovered from ancient lake beds at Kabua on the west side of Lake Rudolf which now stand between 200 and 300 feet above present lake level. The artifacts range from Kenya Stillbay chert points to uniserially barbed points of Ishangian type in bone and ivory. The evidence of the implements suggests that, whereas the bulk of the lacustrine sediments at Kabua is of late Pleistocene age, the topmost part of the 100 feet of lake beds there may be Mesolithic.

REFERENCES

- ARAMBOURG, C., LESTER, P. and ROGER, J. (1943). Mission scientifique de l'Omo, 1932-33, Géologie et Anthropologie. *Bull. Mus. Hist. nat., Paris*, tome 1, fasc. 2, 61-230, figs. 1-37, pls. 1-14.
- BISHOP, W. W. (1962). Pleistocene chronology in East Africa. *Advanc. Sci., Lond.*, **18**, 491-494.
- COOKE, H. B. S. (1957). Observations relating to Quaternary environments in East and Southern Africa. *Du Toit Mem. Lect. annex. Trans. geol. Soc. S. Afr.*, **60**, 1-73, figs. 1-11, pls. 1-4.
- FLINT, R. F. (1959A). Pleistocene climates in Eastern and Southern Africa. *Bull. geol. Soc. Amer.*, **70**, 343-373, figs. 1-8.
- IDEM. (1959B). On the basis of Pleistocene correlation in East Africa. *Geol. Mag.*, **96**, 265-284, fig. 1.
- FUCHS, V. E. (1934). The geological work of the Cambridge expedition to the East African Lakes, 1930-31. *Geol. Mag.*, **71**, 97-112, figs. 1-5, pls. 5-6.
- IDEM. (1950). Pleistocene events in the Baringo Basin, Kenya Colony. *Geol. Mag.*, **87**, 149-174, figs. 1-7, pls. 9-11.
- HEINZELIN, J. DE (1957). Exploration du Parc national Albert, fasc. 2. Les Fouilles d'Ishango. *Mem. Inst. Sci. nat. Belg.*, 1-128, figs. 1-23, pls. 1-2.
- JANMART, J. (1953). The Kalahari Sands of the Lunda (N.E. Angola), their earlier redistributions and the Sangoan culture. *Museo do Dundo*, Lisboa, 1-65, figs. 1-30, pls. 1-4.
- OAKLEY, K. P. (1961). Bone harpoon from Gamble's Cave, Kenya. *J. Soc. Antiq. Lond.*, **41**, 86-87, fig. 1.
- SOLOMON, J. D. (1939). The Pleistocene succession in Uganda. In O'BRIEN, T. P., *The Prehistory of Uganda Protectorate*. Cambridge.
- WHITWORTH, T. (1960). Fossilized human remains from northern Kenya. *Nature, Lond.*, 4717, 947-948, fig. 1.