On a Collection of Neolithic Axes and Celts from the Welle Basin, Belgian Congo.
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ON A COLLECTION OF NEOLITHIC AXES AND CELTS FROM THE WELLE BASIN, BELGIAN CONGO.

By R. F. Rakowski.

Being specially interested in the study of African stone implements, I have during a recent stay at Brussels solicited permission to examine the prehistoric section of the Belgian Colonial Museum at Tervueren. By the great kindness of Baron de Haulleville, the distinguished director of this splendid museum, and of Dr. Maes, chief of the ethnographical section, well known to the readers of *Man* by his valuable publications in this paper, I not only obtained admission to the separate rooms of the prehistoric collection, but was allowed also to examine the beautiful collection of neolithic stone implements from the Welle. With the authorization of the afore-named gentlemen I am glad to be able to publish drawings of the most characteristic specimens, with a brief record extracted from the Museum catalogue, and a map,
showing the localities where the specimens have been obtained. These localities are marked with black points containing the ciphers of each specimen corresponding with those in the illustrations. Different marks have been employed for the specimens made of hematite and those made of other material (mostly greenstone).

I am much indebted to Professor Daimeries of the University of Brussels, who most kindly allowed me to photograph three specimens of his own private collection.

On the following list, as far as no other special indication is made, all the localities are to be considered as situated within the Welle Basin:—

<table>
<thead>
<tr>
<th>Localities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (37) Bômakandi ... ... ... No statement.</td>
</tr>
<tr>
<td>2. (1251) No statement whatever.</td>
</tr>
<tr>
<td>3. (1691) Kilo ... ... ... ... Obtained from native.</td>
</tr>
<tr>
<td>4. (1254) Sili ... ... ... ... ... &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>5. (1259) Dakwa river ... ... ... &quot; &quot; &quot; &quot;</td>
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<tr>
<td>6. (1279) Mankusa river ... ... &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>7. (1336) Between Amadis and Poko ... No statement.</td>
</tr>
<tr>
<td>8. (1260) Sili (Neringa) ... ... Found on surface by native.</td>
</tr>
<tr>
<td>9. (1264) Bomu river ... ... ... Obtained from native.</td>
</tr>
<tr>
<td>10. (1252) No statement whatever.</td>
</tr>
<tr>
<td>11. (1272) Tao river, Mt. Lingua ... ... Found on surface of iron-ore hill by native.</td>
</tr>
<tr>
<td>12. (1335) Between Amadis and Poko ... No statement.</td>
</tr>
<tr>
<td>13. (1680) Bogoro, on Lake Albert (Ituri province) Found on the surface of a greenstone cliff by white official.</td>
</tr>
<tr>
<td>14. (1292a) Kabala plain (Mutombo Batubenge, Upper Sankuru) Found on surface by white official.</td>
</tr>
<tr>
<td>15. (1334) Between Amadis and Poko ... No statement.</td>
</tr>
<tr>
<td>16. (1261) Near Amadis ... ... ... Obtained from native.</td>
</tr>
<tr>
<td>17. (1333) Between rivers Roy and Bomu ... No statement.</td>
</tr>
<tr>
<td>18. (1266) Solo river, between Wô and Yaku-luku Obtained from native, who inherited it from his father.</td>
</tr>
<tr>
<td>19. (1253) Bekri (&quot;Les Figuiers&quot;), Sudan ... Obtained from native.</td>
</tr>
<tr>
<td>20. (1275) Road Sili-Doruma ... ... &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>21. (1271) Amadis ... ... ... &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>22. (1283) Road Poko-Niapu ... ... &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>23. (1280) Faradjé ... ... ... &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>24. (1268) Roy river ... ... ... Obtained from native, who inherited it from his father.</td>
</tr>
<tr>
<td>25. (1332) Between Amadis and Poko ... No statement.</td>
</tr>
<tr>
<td>26. (1276) Doruma (Gurba river) ... ... Obtained from native.</td>
</tr>
<tr>
<td>27. (1682) Avakubi (Ituri province) ... ... Found on surface by white official.</td>
</tr>
<tr>
<td>28. (1255) Between rivers Gada and Kibali ... Obtained from native.</td>
</tr>
<tr>
<td>29. (1281) Tali (road Rungu-Poko) ... ... &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>30. (1681) Bogoro, on Lake Albert (Ituri province) Found on the surface of a greenstone cliff by white official.</td>
</tr>
<tr>
<td>31. (1262) Mt. Lingua, Bakéré ... ... Obtained from native.</td>
</tr>
<tr>
<td>32. (1282) Teli, Bima river ... ... &quot; &quot; &quot; &quot;</td>
</tr>
</tbody>
</table>
**Locality—continued.**

33. (1679) Bogoro, on Lake Albert (Jturi province) Found on surface of greenstone cliff by white official.

34. (1684) Lubumbashi (Upper Luapula, near Elisabethville, Oriental province) Found in situ in alluvial drift, 13 ft. below surface, by white engineer.

35. (1267) Wô (Sudan) ... ... ... ... Obtained from native.

36. (1277) Gazengwa, between rivers Roy and Uéré

37. (1258) Between rivers Bomu and Solo ... Found in situ by native, embedded in the bank of a small tributary of Bomu river.

38. (1278) Mankusa river ... ... ... ... Found by native on surface of small hill.

39. (1269) Roy river ... ... ... ... Obtained from native.

40. (1263) Kibali (“Iron mountains”) ... ... " " "

41. (1265) Mt. Manikami (Buié river) ... ... " " "

42. (1270) Wô (Sudan), Mt. Pangî ... ... Found on surface by native.

43. (1273) Mt. Bangwé, Tao river ... ... Found by native in small rivulet, tributary of Tao river.

44. (1256) Sili ... ... ... ... Found on the surface by native, in forest between rivers Makonga and Poko.

45. (1274) Mt. Bangwé ... ... ... ... Found by native in small rivulet, tributary of Tao river.

46. (1257) Between rivers Bomu and Solo ... Found together with No. 37.

From the documents shown me by the museum officials it has been possible to establish the fact that only four of the forty-six specimens have been found in the earth, all the others having been collected on the surface. Of these four specimens three happen unluckily to have been found by natives, who discovered them in the beds of small rivers, or embedded in the banks of dry watercourses.

One specimen only has been found in situ by a white man, No. 34, from Lubumbashi on the Upper Luapula. It was extracted from alluvial drift 13 feet below the surface.

The material of the greater part of the specimens is hematite iron ore; that of Nos. 43, 44, 45 and probably also of No. 24 greenstone (diabase); that of Nos. 13, 27, 30, 33, a bright greenish rock, much weathered.

The specimens may be divided into seven different categories:—

**LONG CELTS OF ROUND SECTION WITH ELLIPSOIDAL EDGE (Fig. 1).**

The specimen No. 1 has already been described by Mr. X. Stainier¹; but as it is the most typical representative of this pattern I have given the figure here again, together with that of the four other yet undescribed specimens, merely for comparative purposes. No. 4 is the under half of a similar celt broken off at

the base of the shaft. No. 5 is much less regular in shape; the grinding of the surface has been rather superficial, although the cutting edge, worn entirely away, shows that the specimen has been employed for a long time. The most characteristic particular of this series is the different degree in which the surface of edge and hafting end has been worked, the surface of the former having been polished in the most perfect manner, the latter only ground over roughly, just sufficient to give the required shape and a smooth surface. No. 2 has its cutting edge fairly sharp; it bears no traces of use. The edges of Nos. 1 and 3 are slightly worn; those of Nos. 4 and 5 very considerably.

I cannot remember having seen records of this particular type of long stone celts from Central Africa except in the publication of Mr. Stainier.

**FIG. 1.**

**Big Pear-shaped Axes of Fusiform Section with Circular Edge**

(Figs. 2 and 2A).

The specimens Nos. 6 to 11, represented in Fig. 2 and No. 1 of Fig. 2A are flat axes with almost circular cutting edges and long pointed shaft. No. 6 (Fig. 2) has a small piece of its butt broken off. The cutting edge of this specimen is perfectly sharp. No. 7 is the butt of a very big specimen of this type, broken off at the base, approximately one-third of its entire length. The cutting edge of No. 8 is slightly worn away. Nos. 9, 10 and 11, notwithstanding their being only half the size of the three others, belong to this type. These three specimens have their cutting edges considerably worn.
The peculiar treatment of fine grinding and polishing of the slopes of the cutting edge, shown so distinctly by the celts of Fig. 1, is visible only in Nos. 8 and 9.
Smaller Axes, Pear-Shaped and of Ellipsoidal Section with Circular Edge (Fig. 3).

The specimens Nos. 12–20 are very similar to the big flat axes represented in Fig. 2, as much in their outline as in shape, although less broad and more circular in section. They may be considered as the more practical form of this type, much better adapted to positive working purposes than the big specimens. The series resembles in outline the Fig. 1 of M. A. W. Cardinall’s collection of stone implements from Ashanti, described in *Man* in 1917.¹

In No. 17 of this figure the grinding of the surface of the specimen seems not entirely finished, the rougher work of coarsely flaking having merely given the typical outline.

![Image of axes and chisels](image_url)

**Fig. 3.**

Axes and Chisels of Triangular Shape and Ellipsoidal Section with Nearly Straight Cutting Edge (Fig. 4).

These specimens are of a well-known pattern, found practically throughout the whole of Africa. Nos. 23, 24, 27 and 30 have a striking resemblance to the stone implements from Ashanti, described by M. Cardinall in *Man*.² Nos. 21, 22, 26, resemble in shape and section a type of small neolithic axes and chisels I remember having seen in 1911 in the Ethnographical Museum at Berlin, where great numbers of

² *Loc. cit.*
them were shown to me as having been collected in the Cameroons by a German magistrate, who found the first specimens at the bottom of the farm baskets of the natives.

These stone axes, I was told, are considered throughout the whole of the Cameroons as charms, the natives believing in their having fallen from heaven with the lightning. This belief seems thus to have spread very widely.

FIG. 4.

ROUGHLY FLAKED AXES, GROUND ONLY ON THE EDGE SLOPES
(Fig. 5: Nos. 34, 35, 36).

No. 34 was found very far from the Welle basin; it was dug out near Elisabethville on the southern frontier of the Congo Colony. Its shape is entirely different from the models peculiar to the Welle. It is one of the current models of African neolithic axes. Nos. 35 and 36 from the Welle are rough pieces of hematite, showing well-ground cutting edges, but besides these no traces of grinding.

GREENSTONE AXES OF ELLIPTICAL SECTION (Fig. 6: Nos. 43, 44, 45).

Nos. 43, 44, and 45 are of a rather celt-like shape, and are made of greenstone (diabase). They differ from all the types represented in Figs. 1 to 5; the edges formed by the slopes of the two cutting edges are completely rounded off, giving thus an elliptical section. No. 45 is in fairly good condition, but Nos. 43 and 44 are much
and Celts from the Welle Basin, Belgian Congo.

weatherworn. As these three specimens consist of the same material—greenstone—and were picked up on the same locality somewhat outside of the Welle basin (at Bogoro, on Lake Albert), we may consider them as a peculiar type, independent of the Welle forms.

Hammer-shaped Implements, probably Worn-Out Axes used later as Rubbing or Grinding Stones (Fig. 5, No. 37; and Fig. 6, Nos. 39, 40, 41, 42).

This group consists of implements bearing traces of grinding all over their surfaces, and of battering on the ends. They are rather irregularly shaped, Nos. 39, 40, 41, 42, somewhat hammer-like. No. 37 resembles vaguely the edge end of a broken axe, but as the cutting edges are very ground and dulled it may as well be considered as a grinding implement.¹

The edge of No. 41, a specimen of the general shape of the axes represented in Fig. 3, seems to have been ground off intentionally (the edge is actually 12 mm. thick) as if this specimen had been at last employed for active grinding more than for cutting purposes. The upper end of No. 42 bears marks of battering, and the small holes thus formed are filled with bright red ochre. This suggests that some of the implements of this group, after having served as axes, may have been employed as rubbing stones for the grinding of ochre. Indeed the rubbing of hematite against

¹ Axe-shaped polished stones with edges flatted by battering are known from Mauretania by the publication of Mrs. Crova "L'industrie de l'âge de la pierre en Maurétanie," in the Revue d'Ethnographie et de Sociologie, of Paris, 1912, Nos. 9 and 10.
hard sandstone gives as result a reddish powder similar to the vegetal powder known throughout the Congo basin as *ngula*.

Thus the collection of the Congo Museum contains seven distinct groups of neolithic axes and celts:—

1. Long celts of round section with ellipsoidal edge.
2. Big pear-shaped axes of fusiform section with circular edge.
3. Smaller axes, pear-shaped and of ellipsoidal section with circular edge.
4. Axes and chisels of triangular shape and ellipsoidal section with nearly rectilinear edge.

(5) Rough cutting implements of squared section, ground only on the edge-slopes, with rectilinear or slightly curved edge.

(6) Greenstone axes of elliptical section.

(7) Hammer-shaped implements, probably worn-out axes used later as pecking and rubbing stones.

**Conclusions.**

(a) The types Nos. 1 and 2 are very different from the types of the ordinary neolithic stone axes known from Central Africa. They must be considered as peculiar
to the most developed degree of neolithic civilization of the Welle basin, having been found exclusively in the neighbourhood of this river.

(b) The hematite axes found in the Southern Congo, in the French Sudan, Futa Djallon, and the Ivory Coast are entirely different from the Welle axes, showing the ordinary well-known types of African neolithic axes.

(c) The cutting edges of a great number of the hematite axes from the Welle are surprisingly dull, several nearly 15 mm. thick. These specimens, after having served as axes, must have been employed for scraping or pecking purposes.

(d) The Congo Museum’s collection contains a series of rough pieces of hematite with carefully finished cutting edges, but ground exclusively on the edges.
(e) Marks on the cutting edges of practical use by rough working, splitting, cutting, severing, etc., are very rare.

(f) On the contrary, traces of active rubbing and grinding, other than for sharpening the cutting edges, are frequent. Shape, form, and size of some of the implements suggests their having been used as cutting or scraping implements, probably for softening and cleaning hides, bark, etc.

(g) Distinct marks of strong grinding on some pieces of hammer-like shape suggest their having been employed as pecking and rubbing stones, probably for the preparation of ochre (ngula).

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The collections of the Soc. Préhist. franç. contain, moreover, hematite axes from the Côte d'Ivoire.