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Shoulder-headed and other forms of stone implements in the Santal Parganas.—By Rev. P. O. Bodding, Mohulpahari, Santal Parganas.

[Read 2nd March, 1904.]

Since I wrote the short article on Ancient Stone Implements in the Santal Parganas (printed J.A.S.B., Vol. LXX., Part III. No. 1, 1901), I have seen a great many other stone implements, all found in the Dumka sub-division of the Santal Parganas, and in form mostly resembling those pictured in the plates accompanying that article. I have, however, also come across some forms which I did not at the time know were to be found in these parts of the country, and as specially one of these forms is of more than common interest, it might not be superfluous to say a few words about them.

There are specially five new forms which I would point out.

Some of the wedge-shaped axes are curved in a peculiar manner, the (apparently) upper side being convex, and the other more or less concave. Fig. 29, Pl. IV of the article mentioned above, gives some idea of the form, only the curving is more pronounced. I have observed

it in so many specimens, that there cannot be any doubt of the shape

being intentional.

Implements with square, sometimes quite parallel, side-edges (vide Fig. 41, Pl. VI of Mr. Cockburn's article in J.A.S.B, for 1894) are rather frequent. These have formerly been thought very rare in India.

Another form is represented by a small oblong, flat stone, the edge of which has been cut with small notches, and which has probably done service as a kind of saw. It easily cuts wood. Very likely more of this kind might be found; but as they do not much resemble the common kind of celts, and at first sight are not very different from a broken piece of stone, they are not thought to be "thunderbolts" and hence not picked up by the Santals from whom I have got almost all the specimens of celts I have had. I ought to mention that chips and flakes of

flint, chert, etc., are found in many places.

Of perforated stones I have seen two complete specimens and parts of two broken ones; they are all of sandstone; one is triangular in form-almost a facsimile of this implement I have seen pictured in Evans, Ancient Stone Implements of Great Britain, but not having the book, I cannot give the number of the figure; -one is irregularly rhomboidal, and the two broken ones have apparently been circular in form. The hole in the centre has been drilled from both sides, narrowing towards the middle where there is a circular opening of about $1\frac{1}{4}$ inch diameter. Taking the form and material into consideration, it seems likely that these perforated stones have been mace-heads. have heard about another perforated stone, which, according to the description given of it by Santals, resembles the perforated hammers found in Europe, the hole being close to the one end.

By far the most interesting, however, are the so-called "shoulderheaded" celts of which I have seen four specimens found in the Santal Parganas, the biggest about 4" long and $2\frac{1}{2}$ " broad, the smallest one about $2\frac{1}{2}$ by $1\frac{1}{2}$, in shape more or less resembling the two pictured in plate II of the Proceedings, A.S.B. for 1875. The biggest stone shows one note-worthy difference, viz., that the edge has not been cut with a straight facet, like that of a chisel, from back to front, but has been gradually rounded off. The material of the celts is, I think, chert and sandstone. A sequestre see management of a section of the section

Some of them have two small notches, continuing a line drawn along each side of the neck down into the body of the stone. In one of the specimens this notch is partially shown along the whole "neck." These notches are clearly marks left by the manufacturer, and show

something to follow in making the neck, after which the neck has been formed, by using some kind of chisel and by grinding. The appearance of the neck seems to allow of such a deduction. In any case, the shape of these as of some of the other stone implements presupposes

In an article in this Journal, Vol. LXV, Part III, No. 1, 1896, the late Mr. Peal calls attention to the resemblance between these shoulder-headed celts and a kind of small iron hoes which he found used in some Naga villages in weeding the hill paddy. In an accompanying plate he gives a sketch, showing how these iron hoes are furnished with a handle, and he has "no hesitation in assuring that these Rangkoi [as they are called there] are simply the Kol Mon shoulder-headed celt made in iron, and that hence we see not only the meaning of the peculiar shoulder, but the office of the complete implement as a mini-In the statement of the statement of ature hoe."

It is very likely that these stone implements may have been used after the fashion supposed by Mr. Peal, viz., as hoes; some of them being of a rather soft material would, indeed, point to this being the and the same was a self-or the case.

There are, however, some circumstances which require to be taken into consideration. 15 sales of these tole of the

If these peculiar celts should originally have belonged to the ancestors of the Mon-Khmer etc., and the Munda peoples, one would expect, if Mr. Peal's deductions are correct, to find an iron hoe of the same shape used by these peoples also. So far as I know,—I can speak with certainty so far as the Santals are concerned, -no such or similar implement is found. The oldest and formerly the only kind of agricultural implement with the Santals is a club or thick stick, some three to four feet long, with a flat piece of iron fixed at the end, used for the purpose of digging-roots, etc., and for making small holes in the ground.

On the other hand we find among these people (as all over India) a kind of adze, used where we use the plane, not for cutting, but for smoothening purposes. Most of these have a hole for the handle; but there is one adze which has "shoulders," but with this difference, that whilst in the shoulder-headed celts the shoulders are parallel with the edge, in the adze mentioned they are (nearly) vertical on the plane of the edge. It is fixed to the handle by an iron clamp going round the "neck." With another kind of handle it is used as an axe, the "neck" being placed in an aperture made for the purpose in the handle. The present-day Santals consider this kind of adze to be superior to all others, and say they have got it from the Hindus. Whatever its origin, in several points it much resembles the shoulder-headed celts.

If we further look at the sharp edge and the oblique shape of this, like that of a chisel, it seems to deserve being taken into consideration, whether these celts may not after all also have been used as adzes, and not only as hoes. More I cannot say.

In any case, in the shoulder-headed celts which I have seen, the handle must have been fixed, as shown by Mr. Peal, and the instrument most likely used for hoeing or cutting by moving it towards oneself.

So far as I have seen, these shoulder-headed celts have formerly been found exclusively in the Malayan Peninsula and in Chota Nagpur; to these places must now be added the Dumka sub-division of the Santal Parganas.

Several writers have taken the fact that these celts have only been found in the countries mentioned, as a proof that the present-day peoples of these places, viz., the Mons and Mundas, belong to the same stock, thereby implying that the shoulder-headed celts were originally

manufactured and used by these races.

Now there is no doubt at all that the Munda-family of languages in India-as the Kolarian languages are to be called in future according to the Linguistic Survey of India -- and the Mon-Khmer and other languages in the Malayan Peninsula resemble each other so much, that we cannot avoid drawing the conclusion that the peoples originally belonged to the same stock. But to take these celts as a proof of this fact is altogether unnecessary and unadvisable, because there is absolutely nothing to connect the present-day peoples with them. Both in India and in Pegu they are believed to be thunderbolts; their nature as implements is not understood. However long the Mons, etc., may have been living in the South, I do not think it possible to prove that they have been in those countries since their stone-age, and the Munda peoples have certainly not been so long in Chota Nagpur. Here in the Santal Parganas they, i.e., the Santals and other races related to them, all belonging to the Munda family, have not been for more than upward of one hundred years.

So far as our present knowledge goes, we cannot say more than this: the fact of these peculiarly formed celts being found in Chota Nagpur and the Santal Parganas in India, and in the delta and valley of the lower Erawati (so says Sir A. Phayre, in a letter printed in the Proceedings, A.S.B., No. 1, 1876), and nowhere else, makes it so likely as to be almost a certainty that in a former age the same peoples have either been living in the countries mentioned (and those between), or there has been some kind of communication or intercourse between the countries, by migration or otherwise. If these shoulder-headed celts should be found, e.g., in the Assam Valley and Burma, they would point

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out where these peoples were living, or the line of communica-

The original owners may, of course, for all we know, have been the Mon-Khmēr and Muṇḍa peoples; but they may also just as well have