

## STONE OBJECTS FROM SURAT, PENINSULAR SIAM.

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 (PLATES I AND II).

By the courtesy of the Siam Society and of the Acting President, Major Erik Seidenfaden, I have been given an opportunity of examining and describing certain neolithic-culture objects found in a tin mine at Ban Na, Surat Province, Peninsular Siam. The specimens consist of five stone celts and two large, shaped pieces of stone, which I will discuss later.

Judging by the fact that in all cases the celts are irregular about a horizontal and central plane, it is fairly obvious that they were hafted as adzes and not as axes. Such a statement would be true, too, about the majority of such implements from British Malaya. Even where celts are practically evenly ground on both the larger surfaces they were, in most cases, used as adze blades, slightly more grinding on one side of the cutting edge betraying this. In treating of these Siamese implements, therefore, one may speak of the surfaces, which were obviously upper and lower when the celts were hafted, as being respectively dorsal and ventral.

Probably the most striking of the adze-heads sent is that figured on Pl. I, fig. 1. This is of the beaked type that is so distinctive of the Malay Peninsula. I have traced it as far north as Chong, in the Trang-Patalung hills, previously and the only example of the kind obtained from that neighbourhood is figured on Plate XLIII, No. 5, of my *Papers on the Ethnology and Archaeology of the Malay Peninsula*. The distribution of the type must now, therefore, be extended still further. The present specimen (length 10.9 cms.) is of a close-textured yellowish stone, perhaps a rhyolite or a chert, and is, in places, highly polished. The dorsal surface is flattened, but slightly rounded, while, on the ventral surface, the beak is somewhat hollow-ground towards the point, a feature that is found fairly frequently, too, in examples from British Malaya. The sides diverge to some degree ventrally, giving the implement a trapezoid section, while the central (dorsal) ridge of the beak is fairly acute.

Of the other four implements one, of a dark grey colour, is of the short-rectangular chisel type, also found in British Malaya. It is illustrated, in the ventral view, on Pl. I, fig. 2. It is possible that the specimen was never finished, as considerable flaking can be seen at the cutting edge dorsally, while there is also flaking ventrally at the proximal end. This, too, may well be of chert or rhyolite. The appearance of the material is flinty and it takes a high polish. Its length is 6.6 cms.

The other three celts are roughly of one type. They may be described as being adzes of low trapezoid section, the sides narrowing dorsally, approximating to a bowed fan-adze form. Bowing is slight, but it is quite apparent in the largest and second largest examples; scarcely, if at all, so in the smallest. The two largest adze-heads are obviously unfinished and are covered with flake-markings. The bigger of these two is absolutely without grinding over its whole surface, while the smaller is only slightly ground at the cutting edge on its dorsal aspect. The lengths of the specimens are respectively 15.0, 12.6 and 9.85 cms. The largest is of a greyish stone, the second of a waxy-looking whitish colour, and, where ground, highly polished, while the third, highly polished all over, is of a grey colour and has curious natural "eye"-markings. All the materials are of fine grain and flinty nature. I suspect that they may be cherts, or, if not, rhyolites.

The two large objects figured on Pl. II are of the greatest interest. They seem to have been put to two uses—these being as pounders and as grinding stones on which stone implements were ground or sharpened. Examining that depicted on Pl. II, fig. 1 first, as being in some ways the least developed of the two, and thus the more likely to furnish information, it is found that the two ends of the stone, which is fairly fine-grained and light grey in colour, show many signs of bruizing. Extending round the greater part of the middle are parallel grooves or flutings of different breadths running longitudinally. In the case of three of these, all adjacent and separated from the rest, they are somewhat angular, while the other flutings are nicely segmental. There are nine flutes in all.

Plate I.



1.



2.



3.



4.



5.

2

The flutes or grooves were, undoubtedly, as stated above, made in the process of grinding down stone implements. They vary considerably in breadth, as can be seen in the illustration. It appears probable that the ends of the stone were used as pounders both before and after the formation of the flutes, for, in some places, the flutes extend partly over the bruizes, which are not quite obliterated, while, in others, the bruizes, especially on one side, extend for a considerable way up the body of the stone and partially obliterate the ends of the flutes. I am inclined to think that, whereas the bruizes at the ends were made by using the stone vertically as a pounder, in the case of those extending some way up the sides, pounding was done with the stone held almost horizontally. A word must be said also about the nature of the bruizes themselves. They have a "pecked" appearance and one must presume, therefore, that hard objects were pounded with the implement—perhaps bones to extract the marrow, or stones to split off coarse flakes. There is, however, one other possibility as to the way in which these bruized surfaces were produced, and that is that both the ends and one side of the stone were used as anvils on which stone adzes, or other objects, were flaked. This would account, too, for the "pecking" of the material, but it does not seem very likely that this was the case, for the stone would have to have been strongly supported in a perpendicular position when one or other end was being used. The length of the specimen just described is 22.5 cms.

In the second example (Pl. II, fig. 2) one end has also, in a marked degree, the "pecked" appearance found in the first; at the other end it is less noticeable and is only to be observed on a broad natural ridge running from side to side through the centre. The flutes, which are somewhat shallow, surround the body of the object almost completely and number twelve in all. There is one longitudinal strip, however, which is not fluted though it, too, shows signs of wear. The colour of the stone is light brown and the material may, perhaps, be quartzite. The length of the object is 24.7 cms.

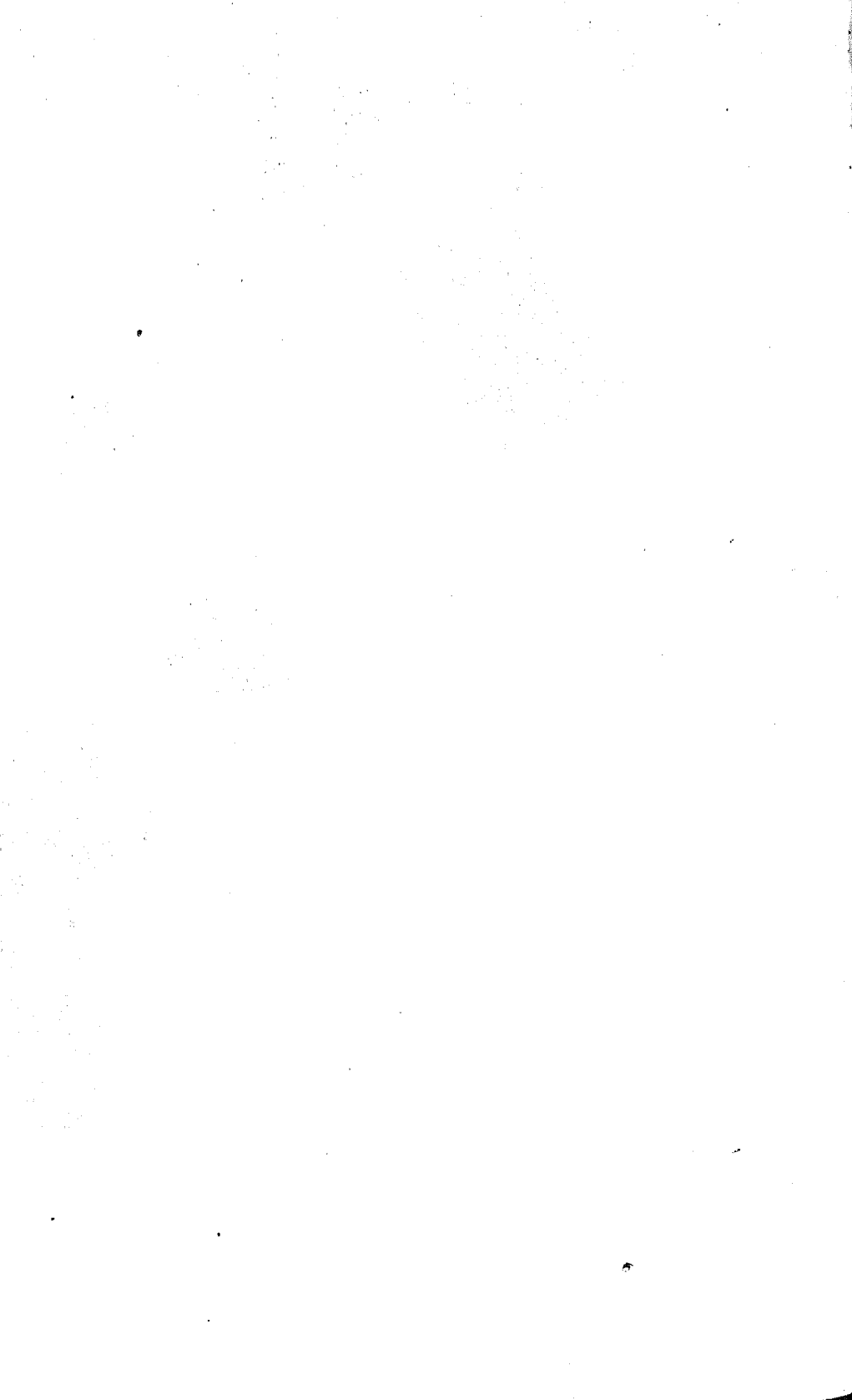


Plate II.



1.



2.

