



Fig. 5. The flint object No. K. 13332: 112 from Singer. 2/3.

There are fragments of knives which when complete were larger than those depicted on Pl. 3, but none of them seems to have been of the elliptical or rectangular shape known from Prof. ANDERSSON'S China collections.

The scrapers, eleven in number, are made of broad and short flakes, the shape varying from oval to nearly circular. They are all very small, the largest measuring 4×3 cm. The same diminutive scrapers were found at Chiqin-sai (cf. p. 35 f.) and they are extremely common in Inner Mongolia. As the majority are of about the size of a thumb nail they must have been hafted with bone or wood.

A kind of roughly worked bifacial instrument shown in Fig. 5 was found in three specimens. A similar one comes from the Lop desert, Pl. 4: 17. I have found many of this type but mostly of finer workmanship in Mongolia. Their actual use is somewhat uncertain, though it seems possible that they served as small cleavers. Père TEILHARD calls them points with retouched heel (Teilhard Fig. 10).

Various coarse flakes, reject and refuse chips and flint blocks occurring all over the surface layer of the site indicate that the implements were worked on the spot.

ERIK NORIN, on seeing this material, was eager to help me to ascertain from which localities the Singer people draw their supply of raw material for the manufacture of their implements. He therefore made a few specimens the subject of a petrographic analysis, and he has kindly placed the following statement at my disposal:

“1) Yellow-brown dense phtanite, occurring along the southern side of Qizil-singer-tagh, is a slightly metamorphic type of carbonaceous chert which forms the base of the Upper Cambrian limestone series. In my stratigraphy called $C_{1\beta}$.

2) Light greyish phtanite. Same occurrence as No. 1. Is a slightly metamorphized type of the light coloured chert which forms the lower part of the last mentioned horizon. In my stratigraphy called $C_{1\alpha}$.

3) Dark greyish green flint ('hällflinta'). An effusive lava or tuff of keratophytic composition. Also occurring in the neighbourhood of Singer.

These kinds of stones have also a wide distribution to the south of Buruntu-bulaq and between Buruntu-bulaq and Altmish-bulaq.”

This examination thus proves that the raw material used by the stone age people of Singer was taken from a source close at hand.

Other stones used are quartz, quartzite, flint of grey, green and white colour, agate, felsite, chert and porphyry, all occurring near Singer.

A flat slab of garnet-micaschist rubbed down smooth on one side may possibly have been used as a grinding stone, and two strongly weathered fragments of sandstone are from a mealing-stone. The occurrence of mealing-stones does not necessarily mean that the people carried on agriculture here. The stones may have been