

MINUTE STONE IMPLEMENTS FROM INDIA.

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The National Museum has become possessed of an extensive series of minute chipped stone implements from India. They were collected by Mr. A. C. Carlyle, formerly of the Archaeologic Survey, in the Vindhya hills or mountains in central and north-western India. They were obtained through the assistance of Mr. Charles Seidler, of London. The series comprises every condition of the implement, from the rude material, the nucleus or core, the flake—sometimes rude, often quite symmetrical—and so on through the various steps, until is reached the finished chipped implement of every form. Their peculiarity, differing from other prehistoric implements, is their remarkably small size. The cores themselves are rarely more than an inch and three-quarters in length, and the blades are rarely more than an inch and a quarter or an inch and a half—the majority of them are not more than an inch, while the finished specimen is frequently not more than five-eighths of an inch in length. Needless to say that all these flakes are of extreme thinness. The finished implements are of various forms—slim, almost needle-like, triangular, with a base, convex, straight or concave, quadrilateral, trapezoid, rhomboidal; while the most delicate and finely finished are in the form of a crescent.

These various shapes are indicated in the figures on the accompanying plates, and the numbers of each kind belonging to the collection will be given in the list at the end of this paper. Plate CII represents some of the implements by photograph. There is a marked difference between the two edges of the crescents. The crescent edge is thick and has been worked in to its present shape by the secondary chipping of the most minute kind, while the straight edge is the cutting edge, sharp and thin, just as it comes from the nucleus, and is without any secondary chipping. The material comprises all the variety of silicious rock jasper, chert, horn-stone, flint, agate, and chalcedony; some of them are rare and fine specimens. They belong to the neolithic period, although they are something new to its culture. The whole series bears the same impress. The similarity of form and mode of manufacture, and their being found in the same general locality, is evidence showing the same intention on the part of the makers, although we are quite in the dark

as to what that intention was. All varieties of small implements were found by Mr. Carlyle in the caves and rock-shelters among the Vindhya hills in places difficult of access and unknown to the ordinary traveler. Some of them were found in the alluvium at the mouth of the cave, where they had been washed out and were caught in slight ledges of the rock, after the fashion of washed gold in the rocking-cradle. Within the caves they were found in the upper strata, while immediately beneath, but separated from them, were larger implements, different in size, kind, and style, and formed of indurated sandstone, hematite and chert. Crescent implements were found in grave mounds in the neighborhood of the caves, leading one to suppose that the inhabitants of the caves who made these implements built the mounds and here buried their dead. Mr. Carlyle, while agreeing that these implements belonged to the neolithic period, has found those belonging to the paleolithic period in the same locality, and believes that the evidence of the archaeology of the district shows, contrary to the opinion held in regard to Western Europe, that there was no such hiatus between the paleolithic and neolithic periods, and that the series of implements run from one period to the other, their difference being accounted for by the general progress from the lower to the higher civilization. To this period of transition, Mr. Carlyle has given the name of "mezo-lithic."

It is not easy to determine the purpose of these small implements, especially the crescent, trapezoid, and scalene triangular, which have neither known prototype nor antetype. Some of the triangular and long-pointed ones might have served as arrow-heads. If they had been found on the California coast, they would, without doubt, have been thus attributed; but they are entirely different from any recognized arrow-heads in the Western Hemisphere. It has been suggested that they, or some of their kindred, might have been used for tattooing, but there is nothing more to favor this than its possibility and our ignorance of their real purpose. Some of the smaller and straighter objects might have served as needles or perforators. A possible use akin to that of tattooing might have been that of the medicine man for bleeding or scarifying. One can scarcely understand any use possible which should have required the infinite number of these implements or confined them to the one general locality.

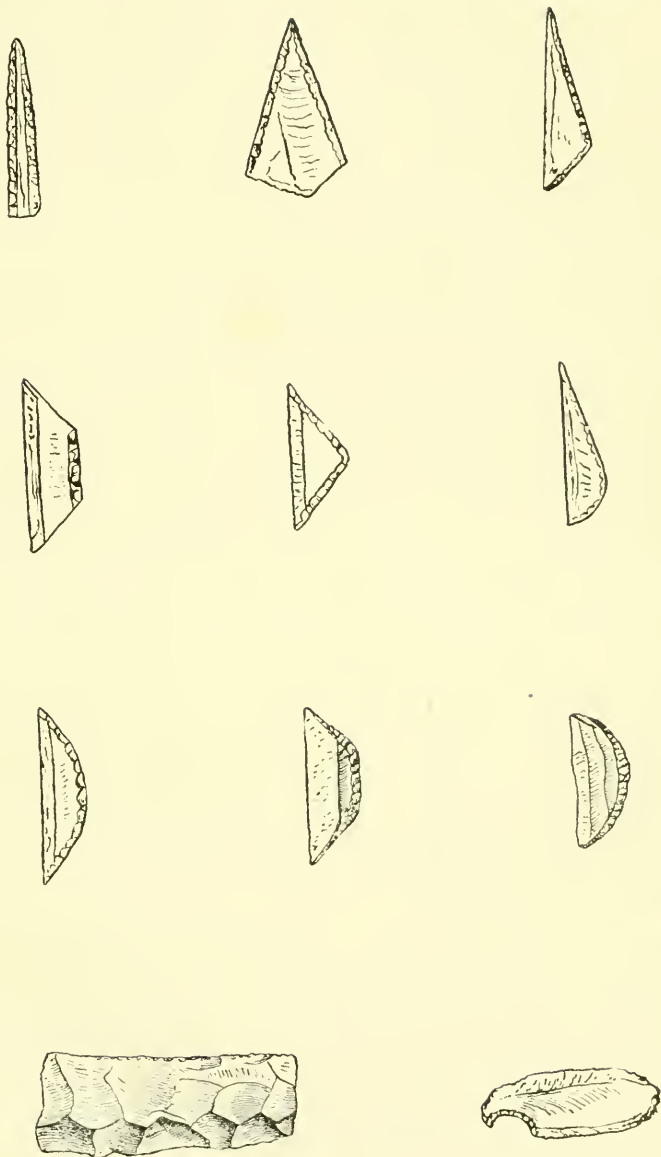
There surely is not enough distinctiveness in these implements to induce the belief that they form a racial distinction.

Mr. Carlyle reports that on the walls of some of the caves at Morahua Pahâr there were rude drawings of men and animals painted in red. They were of the usual character seen in pictographs of savage races, and the interest is increased by the fact that in these caves, and associated with these implements, rude pottery was found, roughly ornamented by incised marks which might have been made by some of these flakes. "These pieces of pottery," says Mr. Carlyle, "were rubbed



A SERIES OF MINUTE PREHISTORIC STONE IMPLEMENTS FROM CAVERNS IN THE VINDYA HILLS,
INDIA.

Four-sevenths natural size.



MINUTE PREHISTORIC STONE IMPLEMENTS FROM CENTRAL AND SOUTHERN FRANCE.
Natural size.

down and smoothed by pieces of red hematite which had been brought from the laterite deposits." There were also grinding stones with which this hematite might have been ground into a paste, such as would serve to decorate the walls. These implements have been found by other travelers—other archaeologists, one might say. Mr. Rivett Carnac has found them in the Panda district and described them in a paper entitled "Stone Implements from the Northwest Provinces of India," Calcutta, 1883. Sir John Evans has also described the discoveries of worked flints near Jubbulpur, in central India, in *Proceedings of the Society of Antiquaries*, second series, Vol. III. Prof. Haynes, of Boston, found some in Egypt; Bellucci found them in Tunis; the French army of occupation found them all along the northern coast. Adrian de Mortillet describes them in *L'Homme*, Vols. I and II, as from central and southern France. While those from France are similar to these now under discussion from India, yet it is to be suggested that they are not in sufficient number to be more than sporadic (Plate CIII). Mr. Merejkowski found some of these in the Crimea near Kizilkoda, and has described them in his *Premier recherche sur l'age de la pierre en Russie* (St. Petersburg, 1880). Whether these are of types sufficiently pronounced and are found in sufficient numbers to have relation to the implements from India, I am unable to say.

CATALOGUE OF SMALL CHIPPED IMPLEMENTS FROM INDIA, SHOWING FORM, MATERIAL, AND LOCALITY.

Collected by MR. A. C. CARLYLE.

CRESCENT-SHAPED IMPLEMENTS:	No.
Perfect: Morahua Pahâr: Agate, chalcedony, chert	26
Broken at both ends: Morahua Pahâr: Agate, chalcedony, jasper, chert ..	14
Some broken: Barkura, west of Morahua: Jasper, chert	13
Perfect: Partap Ganj: Agate	1
Perfect: Basâri, east of Maihiar: Agate and chert	2
Rude: Iathi, Riwa Territory: Carnelian, agate, chalcedony	5
Perfect: Barkura, west of Morahua Pahâr: Chalcedony	1
QUADRANGULAR:	
Barkura, west of Morahua Pahâr: Agate	1
Partap Ganj: Agate	1
TRIANGULAR:	
Barkura: Chalcedony	3
Morahua Pahâr: Agate, jasper	2
Likhneya Pahâr: Agate	1
Magardah Pahâr, Mirzapur district: Agate	5
Fields near Banda: Agate	1
Fields near Banda: Agate, chalcedony	3
LONG, NARROW-POINTED IMPLEMENTS WITH ROUNDED BUTT:	
Moretha Pahâr: Agate	1
Morahua Pahâr: Agate	1
Partap Ganj	1
IMPLEMENTS WITH SLOPING END:	
Barkura: Chalcedony	6
Moretha Pahâr: Chert	2

IMPLEMENTS WITH SLOPING END—Continued.	No.
Barkura: Chert	2
Chorwa Pahâr, Laoriya Dah	2
Partap Ganj	1
Iathi, Riwa Territory: Jasper	1
Fields near Banda: Chert	1
Misir Gaon, south of Naon: Jasper	2
Magardah, Mirzapur district: Agate	2
Morahua Pahâr: Agate, chalcedony, etc	13
DRILLS:	
Likhneya Pahâr: Agate	2
Baghe Khor, West Bhains-awar: Moss agate, chalcedony	4
Moretha Pahâr	2
Moretha Pahâr	1
Bhagatpura near Hanumana: Jasper	1
CRIMPED-BACK FLAKES:	
Morahua Pahâr: Agate, Jasper, etc	13
ROUND-ENDED IMPLEMENT:	
Morahua Pahâr: Agate	1
POINTED IMPLEMENTS:	
Likhneya Pahâr: Agate	5
ROUND-ENDED IMPLEMENTS:	
Donga Pahâr, east of Satua	4
Moretha Pahâr: Agate	1
Amila Nâla Bhains-awar: Agate	4
LONG POINTED IMPLEMENT:	
Morahua Pahâr	1
SMALL OVAL IMPLEMENTS:	
Fields near Banda: Agate, chert., etc	4
SMALL, NARROW IMPLEMENTS WITH FINELY WORKED POINTS:	
Morahua Pahâr: Agate, chalcedony, etc	22
LONG, NARROW CURVED IMPLEMENTS:	
Morahua Pahâr: Chalcedony, agate, etc	9
ROUNDED ENDS:	
Bhains-awar: Agate	2
LONG, NARROW IMPLEMENTS:	
Round ends: Morahua Pahâr: Agate	3
Two faceted with triangular section: Morahua Pahâr	2
SMALL IMPLEMENTS OF VARIOUS SHAPES:	
Morahua Pahâr: Agate, chalcedony	14
Fields near Banda	7
SMALL FLAKES WITH MINUTE SECONDARY CHIPPING:	
Barkura: Chalcedony	1
POINTED IMPLEMENTS WITH SQUARE BACK:	
Barkura: Chert	4
Naro	8
KNIFE-SHAPED IMPLEMENTS:	
Naro	3
LONG, NARROW IMPLEMENTS:	
Naro	6
KNIFE-SHAPED IMPLEMENTS:	
Moretha Pahâr: Jasper, etc	6
LONG, THICK, AND NARROW IMPLEMENTS:	
Naro	4
CORES:	
Naro	2

	No.
LONG, NARROW FLAKES:	
Much chipped from use: Morahua Pahâr: Agate, chalcedony, chert.....	56
A few chipped: Morahua Pahâr: Agate, chalcedony	12
A few chipped: Partap Gauj: Agate, chalcedony	21
A few chipped: Markura: Chalcedony, agate, etc.....	30
FLAKES AND CHIPS:	
Very small; Morahua Pahâr: Agate, chalcedony, jasper.....	35
Narrow; used as side scrapers: Iogian Dari: Agate, jasper	3
Narrow; Phases of usage: Iogian Dari: Agate, jasper, chalcedony.....	6
Long and narrow: Kachnar Ki Pahâr: Agate, chert, etc.....	63
FLAKES:	
Long and narrow, mostly used: Moretha Pahâr	129
Long and narrow, mostly used: Barkura: Chert, agate.....	12
Long and narrow: Suwara Khâte, west of Kâtia Ghat, Southern Mirzapur District: Chalcedony	7
Small: Morahua Pahâr: Chalcedony, agate, chert	191
Small: Magardah, Mirzapur District	9
Small: Fields near Banda: Agate	25
Small: Amila Nala, West Bhains-awar: Agate, etc.....	4
Used: Magardah, Mirzapur District.....	11
SCRAPERS:	
Okhara Pahâr; West Hammuna, north part of Riwa Territory	1
Bahnathka Pahâr, Mirzapur District: Chalcedony.....	6
Likhneya Pahâr: Agate	1
Bhains-awar: Rock crystal	1
BOAT-SHAPED IMPLEMENTS:	
Bhage Khor, West Bhains-awar.....	2
Moretha Pahâr.....	1
SPOON-SHAPED IMPLEMENTS:	
Naro.....	6
SAWS (?):	
Naro	2
LONG, CUTTING IMPLEMENTS:	
Naro.....	4
Likhneya Pahâr	7
SCRAPER:	
Gusrû, south of Maihiyar	1
FLAKES USED AS KNIVES:	
Lakhahar Pahâr	3
Naro.....	10
Fields near Banda	10
LARGE CHIPPED IMPLEMENTS:	
Donga Pahâr, east of Satna.....	2
FLAKES POSSIBLY USED AS SCRAPERS:	
Iathi, Riwa Territory: Chalcedony, agate	19
Bhains-awar: Jasper	20
Misir, south of Naon: Jasper	9
Suwara Khate, South Mirzapur District: Quartz	6
Partap Gauj	7
SCRAPERS:	
Basari, west of Maihiyar.....	4
Chorwa Pahari, Laoriya Dah.....	2
Rajapur, Riwa Territory	6
Baghe Khor, near Bhains-awar: Jasper	3
Gadûr Hata, West Naogaon Riwa	3

SCRAPERS—Continued.	No.
Nawa.....	1
Chilahwa Nala, Riwa Territory	2
FLAKES:	
Primari chipping: Partap Ganj	10
Primari chipping: Naro.....	7
Secondary chipping: Hanumavi, Riwa Territory: Chalcedony	1
Secondary chipping: Dhir	5
Secondary chipping: Hills between Parari and Mahatain.....	4
Secondary chipping: Barkura	6
Secondary chipping: Barkura.....	15
Three or four faceted: Barkura.....	4
Some with secondary chipping: Barkura	14
Large and small: Babura, Mirzapur District	5
Large and small: Maro	14
Large and small: Chorwa Pahari, Laoriya Dah.....	5
Large and small: Singhpur Patar Kachar	10
Large and small: Naro.....	5
Long and narrow: Morahua Pahâr.....	9
Long and narrow: Naro: Agate	14
Some with secondary chipping: Kot Tirath, South Chirakot: Agate.....	11
Some with secondary chipping: Moretha Pahâr.....	9
Some with secondary chipping: Rajapur: Agate, jasper	5
Some with secondary chipping: Naro	7
Long and narrow: Moranah Pahâr	13
Long and narrow: Amila Nâla, west Bhains-awar	6
FLAKES AND SCRAPERS:	
Marpha	23
Moretha Pahâr.....	14
Partap Ganj	22
Chilahwa, Nâla, Riwa Territory.....	14
Kodaila Pahâr, west of Partap Ganj.....	15
Naonka Pahâr, north of Partap Ganj.....	8
KNIFE WITH SQUARE BACK:	
Naro	1
POTTERY AND BONES:	
Baghe Khor, near Bhains-awar.....	6
FLAKES WITH SECONDARY CHIPPING:	
Fields near Banda	9
South of Kalinjar: Agate, chert, etc.....	36
CORES:	
Various localities: Agate, chert, chalcedony.....	81
PALEOLITHIC (?)	
SCRAPERS; LARGE, ROUGHLY CHIPPED:	
River gravels of the Gawr Riwa: Jasper, chert, etc.....	24
River gravels of the Nabada Riwa: Jasper, chert, etc	9
FLAKES AND SCRAPERS, LARGE AND ROUGHLY CHIPPED:	
Marpha: Basalt	12
Various localities	51
THICK SCRAPERS:	
Various localities: Chert, jasper, etc	111
RUDE IMPLEMENTS:	
Various localities: Chert, jasper, etc	10
FLAKES:	
Various localities: Agate, etc	47