

# Notes on a Palaeolithic Site Survey in Pakistan

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**A**N archaeological site survey conducted cooperatively by the Pakistan Department of Archaeology and the University of Minnesota had as its primary objective the location of sites of the 3rd interglacial and 4th glacial age which could be excavated at a later date. The reconnaissance was limited to the Potwar plateau region, the classic Soan River region first analyzed by Helmut De Terra and T. T. Paterson (1939), who established both a cultural and geochronological sequence for the Pleistocene of the region.

The Potwar is an elevated plateau extending east-west between the Jhelum and Indus rivers, and north-south from the Margala to the Salt Range (Fig. 1). This highly dissected plateau consists of a loess mantle overlying pleistocene gravels which cap pliocene and earlier tertiary deposits (Elahi and Martin 1961). The work of De Terra and Paterson (1939) and Graziosi (1964) concentrated on collecting palaeolithic tools from exposed terrace surfaces along the Soan River and its tributaries. The assemblages derived in this manner form the basis for the established Soan cultural sequence.

The final stage of the Soan sequence defined by De Terra and Paterson, called the Late Soan, is a refined chopper industry amplified by the addition of Levallois techniques in its earliest phases (Late Soan A) and a flake industry characterized by elongate flakes or blades (Late Soan B). Both occur in and weathering out of the Potwar loess which overlies the gravels containing the Early Soan (De Terra and Paterson 1939:309). The recent report of Paterson and Drummond (1962), which presents a re-analysis of these data and discusses a "Clactonian invasion," unfortunately does not aid in the understanding of these complexes. The need for amplification of the Late Soan based on assemblages from excavated sites was the reason for the selection of the Potwar region for our survey. The region is also important for the distinctive character of Soan when compared with the industries of the Indian peninsula and equally important in understanding the apparently

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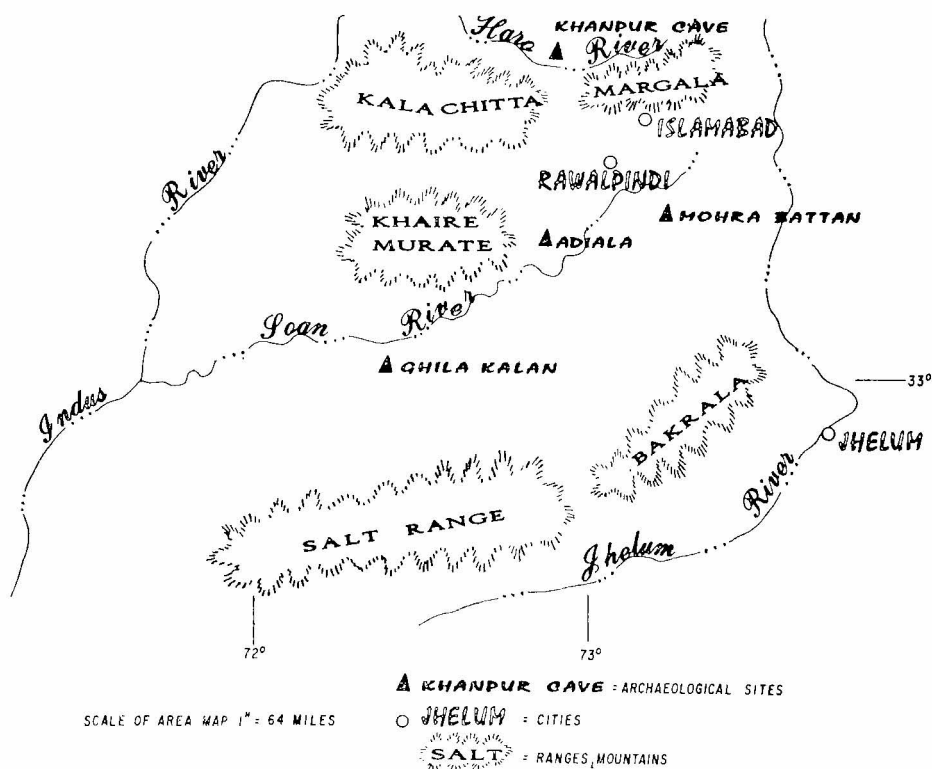


Fig. 1 Map of the Potwar region, West Pakistan.

complex South Asian upper Palaeolithic or Middle Stone Age. The presence of Levallois techniques in Late Soan A also indicates the significance of the region in understanding interactions with the west.

At the present time the status of these latter problems is far from clear. The reasons for this obscurity include both the inadequate definition of complexes associated with the upper Pleistocene in South Asia and the lack of solid dating controls for those already defined. The case has perhaps been overstated by Bordes (1968:200)—who recently noted that “Practically nothing is known about the upper Palaeolithic in India or Malaysia”—for Sankalia (1964), Joshi (1964), Allchin (1963), and their colleagues have certainly added to the knowledge of the period with carefully documented descriptions of the Nevasian and Wainganga B flake industries.

Sankalia sees the Indian Nevasian and the Pakistani Late Soan as contemporary and as distinct industries but sharing an as yet undefined mutual influence (1962:200). He wisely cautions against the fairly common but premature attempts to seek wider affinities “between the Middle Stone Age culture and African (including the Egyptian) or European stone age cultures” on the basis of the limited data now available (1964:374).

Four Potwar archaeological sites that span the time period concerned are described briefly below. Tests were made at each of these sites and, although the resultant assemblages are very small, and the sites need excavation to provide fuller

data, they clearly indicate a Levallois-Mousterian intrusion, a distinctive Late Soan industry, and a probable postglacial microlithic horizon.

The site of Mohra Battan, located on the eastern Kastril tributary of the Soan, was described by De Terra and Paterson as the Malakpur site (1939:283). Examination of the site in 1964 revealed the presence of a workshop or living floor area extending for several hundred feet along the eroded edge of the yellow loess. The lithic materials lie in place at the contact juncture of pink silt and overlying yellow loess (Plate I). Surface collections from the eroded slopes below this deposit provided a collection of approximately 200 specimens, and a test trench which removed the loess overburden from a  $2 \times 3$  m area produced a chopper, discoid core, flake tools, and waste flakes lying directly on the pink silt surface (Plate II). All of the latter stone materials are sharp, unweathered, and are clearly not secondarily deposited. Scattered flakes also occur on the surface and within the overlying yellow loess, and De Terra and Paterson reported Early Soan at this same locality from the occasional exposed surfaces of boulder conglomerate.

Though the assemblage from Mohra Battan was not available for complete study, a brief examination of the materials in the field showed their strong similarity to the surface collection from Ghila Kalan described by Krantz (1972). The Ghila Kalan assemblage is Late Soan A in the De Terra-Paterson scheme and shows a continuity of Soan chopper technology combined with a dominant Levallois flake technology. It should be noted that the site of Ghila Kalan referred to here and described by Krantz is not that of De Terra and Paterson (1939:291), who collected from a locality near the village of Ghila Kalan known as Pir Abdul hill, where boulder conglomerate of second terrace age is capped by yellow loess. The 1964 site of Ghila Kalan is an erosional remnant of the same terrace formation located a half mile north of Pir Abdul hill and directly bordering the Soan valley. It is suggested that the name Pir Abdul hill be applied to the De Terra-Paterson site and that the name Ghila Kalan be restricted to the site of the 1964 locality.

The boulder conglomerate is exposed on the T-2 surface over much of the site area, though a yellow loess cap does exist near the Soan valley edge of the terrace. The surface materials described by Krantz came from the open conglomerate surface and there were no indications of materials of this assemblage in place in the loess. The tools found in place in the loess were located at one small locality termed Ghila Kalan-2 and are illustrated here (Fig. 2). These cortex flakes have prepared platforms and edges beveled from the cortex surface to form scraping tools. Numbers of them appear to be in place in the loess and trenching in this locality would certainly be warranted, for the tools seem to be a part of a distinctive assemblage. Scrapers such as these do not occur in the Ghila Kalan or Mohra Battan assemblages nor do they appear in the Nevasian industry of peninsular India. The Late Soan B of De Terra and Paterson, though defined on the basis of very little evidence, does not include such tool types.

One of the most encouraging finds was that at Adiala, where a chopper, hammer-stone, and flakes were found weathering out of the highest yellow loess. Associated with these tools were fragments of mammalian bone and flecks of charcoal. One mandibular fragment was exposed in place (Plate III) and has been tentatively identified from the photograph as a specimen of Ruminantia, possibly camel. This find is encouraging, as De Terra had earlier noted that loess is not a favorable

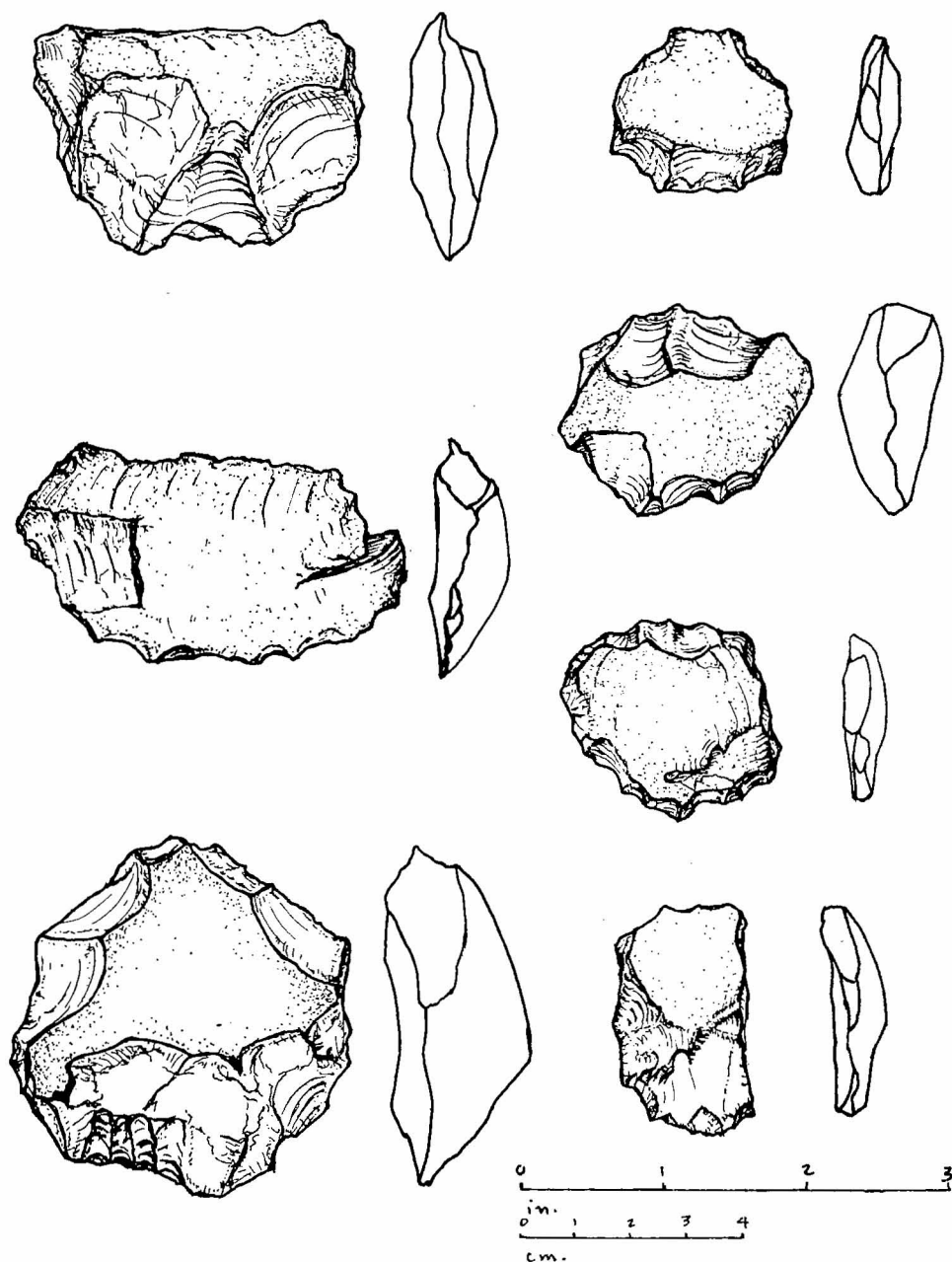


Fig. 2 Ghila Kalan-2 assemblage.

medium for bone preservation and questioned whether any would be found in the Potwar loess (1939:273). The assemblage from Adiala is not sufficient for any meaningful description, but it should be noted that discoid flakes are present. Excavation would clarify this, however, and could well produce a faunal assemblage and charcoal sufficient for accurate dating.

The final sites to be noted are two small caves located in the abrupt range rising on the north bank of the Haro River at the point where the road from Taxila to Haripur passes the community of Khanpur (Plate IV). Both caves lie about 300 ft above the Khanpur valley floor and both are visible from the road. A single test pit in the first cave showed recent Buddhist period ceramics in the first meter. The next 50 cm contained chalcedony microliths and hand-formed, unpainted pottery, apparently in association. The test was not continued further, but there is a minimum of 2 m of additional deposit. The second cave was not tested, but it also contains depositional material on the floor. Excavation of these caves could offer data which might help clarify the assemblage excavated by Dani (1963) from the Sanghao Cave, where a flake industry lacking choppers and the distinctive Soan technology, but with a prismatic core and blades, appears to have a microlithic tendency and is probably terminal pleistocene or early postglacial.

Other cave deposits exist in the northern flanking Margala Range; some 20 were located and tested here and in the smaller internal Potwar ridges, the Khairi Murat, and the Bakrala. Time did not permit any survey in the Salt Range, which has a core of Eocene limestone exposed in places, though cave site potential is there, as is the potential for palynological research based on cores from the series of brackish ponds on the northern edge of the range.

The majority of the caves were located in the area of the Margalas from Rawalpindi west to the Wah Gap and generally at elevations below 3500 ft. The steep dip of the formations, almost vertical in many places, has resulted in the formation of shaft caves which follow the bedding plane and offer no potential for palaeolithic occupation. The few rock shelters located in this same area were found to contain very recent material only. Similarly, the Khairi Murat and Bakrala ridges had no caves showing palaeolithic occupation. Elevations above 3000 ft in the Margalas and in the similar terrain north from Taxila toward Abbottabad should be carefully surveyed for caves.

Clarification of some of the questions of cultural content, age and sequence, external cultural influences, and possibly the ecological setting of the latest pleistocene cultures of the Potwar region could result from the excavation of the sites reported here. With the exception of the cave sites, all are in physical situations where erosional activity is great, a factor which could lead to the destruction of the sites and the loss of data.\*

\* The generous assistance and support of Dr. F. A. Khan, Director, and Field Officers Dar, Sadardin, and Sharif of the Pakistan Department of Archaeology is gratefully acknowledged. The 2,500 specimens from over 25 surface and test excavations collected for the Pakistan Department of Archaeology are deposited in Lahore. The collection from Ghila Kalan is at the University of Minnesota. Copies of field notes and photographs have been filed with the Pakistani authorities.

Bruce Erickson, Curator of Paleontology, Science Museum, St. Paul, Minnesota, provided the identification of the fragment shown in Plate III. The original specimens were deposited with the Department of Zoology, Panjab University, Lahore, and were not available for study.

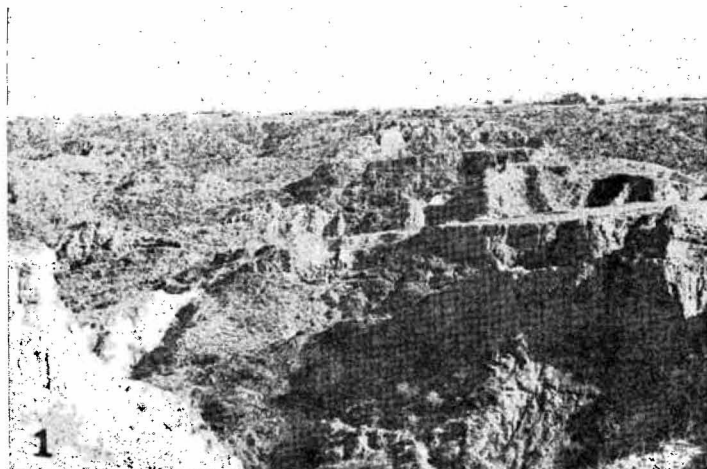


Plate I Eroded loess-silt zone at Mohra Battan. Test trench is located in the center of the photograph.



Plate II Mohra Battan test trench with materials in place on red silt.



Plate III Adiala mandible and hammerstone in place.



Plate IV Khanpur Cave No. 1 entrance.

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