CHAPTER II
EXPLORATIONS AT PATNE

As pointed out before, prior to regular excavation in Area A and Area B in the year 1970-75 explorations were carried out by me around the village Patne in the years 1958, 1970, 1971 and 1972. The results of these explorations are detailed in this chapter in order to show how exploration of each time provided fresh information which could help understand step by step the nature of the lithic tool industries and also the succession of sediments in the area under study.

1. EXPLORATION IN 1958

The first impression about the surface scatter of the "microliths" on the flat (now called Area B) in 1952, when the site was first discovered by Shri M.N. Deshpande and I, was that the site represented a "factory site" of the chalcolithic period. At Dhulia, in the year 1957, I made a collection of a few blades from the gravel on the banks of the river Panjhra. This collection was pre-chalcolithic. This aroused curiosity and I felt it necessary to find out if the scatter of "microliths" at Patne was a superficial one or was exposed due to the erosional activities from the deposit over which it was found lying and thus to know if it was earlier than the chalcolithic period. Therefore, when I got the first opportunity to visit Patne in 1958 I sunk a small trench on the flat, measuring 1.2 m x 1.2 m (4 ft. x 4 ft.), to a
depth of 0.914 m (3 ft.) in the deposit of yellow kankary silt. Within the excavated depth the deposit was divided into four layers, (1) to (4), described as under:

Layer (1) composed of yellowish grey loose earth with sand and kankar pillets, 0'-8" thick.

Layer (2) composed of kankar nodules-mixed yellowish brown compact earth with a small proportion of sand, 0'-10" thick.

Layer (3) composed of yellowish kankary earth with rock-fragments of gravel grade, 0'-6" thick.

Layer (4) composed of yellowish brown laminar fine silt with occasional gravel, 1'-0".

At the bottom of layer (4) was a hard calcareous sheet.

All the above layers yielded "microliths". Besides, two pieces of indeterminate material were also recovered from layer (2).

The layerwise distribution of the specimens was as under:

<table>
<thead>
<tr>
<th>Layer</th>
<th>Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>58</td>
</tr>
<tr>
<td>(2)</td>
<td>653</td>
</tr>
<tr>
<td>(3)</td>
<td>49</td>
</tr>
<tr>
<td>(4)</td>
<td>14</td>
</tr>
<tr>
<td><em>Total</em></td>
<td><em>775</em></td>
</tr>
</tbody>
</table>

1 These pieces were later on proved to be the ostrich eggshell pieces. All the four layers were found to be part and parcel of a thick deposit of yellow silt which yielded tools of Phase II B, the end phase of the Upper Palaeolithic (Please see Chapter III).
### Table 1

**Typological Analysis of 'Microliths' from the Cutting on the 'Factory Site' at Patne, District Jalgaon (1958).**

<table>
<thead>
<tr>
<th>Layer</th>
<th>Core Nodule</th>
<th>Irregular</th>
<th>Fluted</th>
<th>Tortoise</th>
<th>Simple</th>
<th>Partially Retouched</th>
<th>Fully Retouched</th>
<th>Backed Knife</th>
<th>Pen Knife</th>
<th>Crescentic</th>
<th>Notched</th>
<th>Crescentic Point</th>
<th>Lunate</th>
<th>Crescentic Point</th>
<th>Simple Point</th>
<th>Awl</th>
<th>Arrowhead (Notched)</th>
<th>Scraper on Flake</th>
<th>Irregular, Flakes and Pieces</th>
<th>Carrettes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>3</td>
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<td>59</td>
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<tr>
<td>(2)</td>
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<td>34</td>
<td>24</td>
<td>1</td>
<td>107</td>
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<td>8</td>
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<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>27</td>
<td>-</td>
<td>49</td>
</tr>
<tr>
<td>(4)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
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<td>-</td>
<td>1</td>
<td>-</td>
<td>10</td>
<td>14</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>34</td>
<td>29</td>
<td>1</td>
<td>133</td>
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<td>9</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>9</td>
<td>498</td>
<td>775</td>
</tr>
</tbody>
</table>
FIG. 3. PERCENTAGE OF RAW MATERIAL USED IN THE 'MICROLITHS' FROM THE 'FACTOR' SITE, CUTTING AT PATNE (1958)
The typological analysis of the "microliths" and also percentage analysis of the raw material used was as shown in Tables 1 and Fig.3 respectively.

This small cutting clearly indicated that the tools were not lying superficially on the surface of the yellow silt but the yellow silt itself contained the "microliths". The high percentage of flakes and pieces or rejects also indicated that tools were manufactured at the site. The chief raw material used in the manufacture of tools was chalcedony, the percentage being as high as 67.2% (Fig.3).

Although the occurrence of the tools in the yellow kankary silt suggested that they were pre-chalcolithic in date, the presence in the collection of blades with crested ridge baffled me. Because, as per the then generally accepted views in India the technique of crested-guiding-ridge was considered characteristic of the chalcolithic period only and that it originated in the Neolithic period in the "Fertile Crescent" wherefrom it spread in India and Europe (Subbarao, 1955). Because of such views the crested-ridged specimens were being reckoned as a culture-criterion of the Chalcolithic period and as a result any microlithic industry unassociated with pottery was being considered as of the chalcolithic period or anterior to it on the basis of respectively the presence or absence of the crested-ridged specimen (Lal,
Fig. 4. Longitudinal section on the right bank of the Dongri Nala in Gatha.
2. EXPLORATION IN 1970

In April, 1970 the area was studied mainly for understanding the Stone Age stratigraphy and the culture sequence. Of the localities examined, the following have yielded interesting evidence.

A. LOCALITY KNOWN AS GAOTHYACHI THADI (Fig.4)

About a kilometer west of the village is a cliff section, locally known as Gaotyachi Thadi (गौत्याची ठाडी), about 7 meters high and 30 meters long, on the right bank of a stream known as Dongari Nala which meets the river Tittur. In its middle levels the section was concealed by talus. This talus when removed by scraping the section, a deposit of chocolate brown fissured clay was exposed. From the bottom upwards the following deposits were exposed in this section:

1. In my explorations in Dhule and Jalgaon districts, I had found in the collection of tools of the Mesolithic (then called Late Stone Age) examples with crested ridge from the following sites:

   (1) Lumbhar Pada (2) Chinchkheda (3) Kahunji Pada (4) Amoda (5) Bhudne and (6) Fanchmauli Pada, all in Dhule district and (7) Vakod in Jalgaon district.

I had also written one paper "Crested-Guiding-Ridge Technique - A New Light on its antiquity in India". But because of the firm views of the archaeologists prevailing then I could not publish this paper.

I know one glaring example in which a collection of a typical blade and burin industry of the Upper Palaeolithic was simply thrown away only because it included specimens with crested ridge.
(1) Highly calcareous brown clay-silt with slight reddish tinge, 2 m

(2) Unconformity

(2) Highly kankarized current-bedded sandy fine gravel, 1.20 m

(3) Chocolate brown fissured clay, 1 m

(4) Unconformity

(4) Current-bedded sandy fine gravel, greenish in colour, 10 cm to 20 cm thick

(5) Light reddish coarse-to-fine sandy gravel, slightly kankarized with Middle Palaeolithic tools, 1 m

(6) Brownish kankar silt with occasional lenses of sandy fine gravel, 1 m to 50 cm

(5) Unconformity

(7) Thin cover of sandy fine gravel with kankar pillets yielding lithic artefacts

The topmost thin cover of gravel was found lying over a very uneven surface of the underlying brownish silt and it was clear during the examination of the section that this thin gravel was deposited after the erosion of the upper deposits in the section.

About 200 m downstream of this section, in a newly excavated well 15 meters thick deposits were observed exposed. This indicated presence of buried alluvium in the area.

The chocolate brown fissured clay, (3), in this section is comparable with a similar deposit in the Kan basin in Dhule district where it has yielded Lower Palaeolithic tools (Sali, 1967A). The stratigraphic position of the Middle Palaeolithic tool-bearing horizon lying unconformably high
FIG. 5, STRATIGRAPHY IN A RAVINE ON WAY TO DEVI TEMPLE
AT PATNE   (NOT TO SCALE)   (APRIL 1970)

EXTANT PATCHES OF LIGHT
BROWN SILT

FINE MEDIUM GRAVEL
BROWNISH CALCAREOUS SILT
BLACK FOSSIL SOIL
CALCAREOUS SILT
CURRENT BEDDED, SANDY FINE GRAVEL
BLACKISH IN COLOUR
(LATE M.S.A. TOOLS)
UNCONFORMITY
BROWN FISSURED CLAY SILT
CALCAREOUS GRAVEL
HIGHLY CALCAREOUS SILT
REDISH GRAVEL WITH OCCASIONAL BOULDERS
above this fissured clay further confirms the surmise.

The collection of 7 artifacts of the Middle Palaeolithic from the deposit (5) in this section consisted of two cores, one end-scraper and four flakes. Except one of the cores which was of chalcedony, all the specimens were of jasper.

The assemblage of 21 lithic artefacts from the topmost gravel was divisible into:

- Fluted cores - 2 Nos.
- Bladish flakes - 3 Nos.
- Simple burins - 2 Nos.
- Foliate flake - 1 No.
- Flakes and pieces - 13 Nos.

The material used in eight of the specimens was chalcedony, in one chert and in the rest green jasper.

B. EVIDENCE FROM A RAVINE ON WAY TO DEVI TEMPLE (Fig. 5)

About 1½ km south of the village, on way to Devi Temple, is a ravine on the left bank of the Ad Nala. In this ravine following sequence of deposits was observed (from the bottom upwards):

1. Reddish gravel with occasional boulders
2. Highly calcareous silt
3. Calcareous gravel
4. Brown fissured clay-silt
5. Unconformity

It is necessary to record here that in the Tapti and the Godavari valleys chocolate brown or chocolate fissured clay of the type mentioned above was found to occur in two different stratigraphic context, viz. (1) occurring as a Lower Palaeolithic horizon (Sali, 1967a, 0.500) and (2) occurring as an Upper Palaeolithic horizon as described in Chapter III.
Current bedded sandy fine gravel, blackish in colour, loose and stained with calcium carbonate. (Two flakes, one each of chalcedony and jasper, were recovered from this deposit).

Calcareous silt

Fossil soil

Unconformity

Brownish calcareous silt

Fine and medium gravel with occasional kankar pillets

Extant patches of light brown silt

From the uppermost gravel, (9), were recovered 16 lithic artifacts which were ascribed by me to the Late Stone Age (Mesolithic). The collection included:

- Fluted and irregular cores - 4 Nos.
- Notched arrow-head - 1 No.
- Crescentic blade - 1 No.
- Trapeze - 1 No.
- Point - 1 No.
- Re-used scraper - 1 No.
- Notched blade-flake - 1 No.
- Flakes and pieces - 5 Nos.

The material used was chiefly chalcedony. One of the cores was of quartz.

In the excavation of this gravel tools of the Phase IIIC were recovered.
FIG. 6. LONGITUDINAL SECTION OF A RAVINE NEAR THE BHUNDPKHARAK LAVAN, PATNE
(HORIZONTAL DISTANCE 20 M APPROXIMATELY) (NOT TO SCALE)
C. EVIDENCE FROM THE BHUNDEHADAK LAVAN (Fig. 6)

Some half-a-kilometer further south of the above described locality was observed an exposure in a ravine locally known as Bhundkhad Lavan, a feeder of the Ad Nala. The succession of deposits at this locality was found as under (from the bottom upwards):

1. Reddish sandy fine gravel with rock-waste and boulders, 50 cm
2. Highly calcareous brown silt, 1 m
3. Unconformity
4. Reddish sandy fine gravel, 1 m
5. Purple calcareous silt, 3 m
6. Unconformity
7. Dark brown fissured clay

The lowest reddish sandy fine gravel yielded one slightly rolled and patinated cleaver of trap (Fig. 7). A corresponding gravel on the other side of the road yielded a couple of fresh tools of jasper of the Middle Palaeolithic and also a heavily rolled flake of trap ascribable to the Lower Palaeolithic. The traces of slight rolling and the patination on the cleaver suggest that it was derived and deposited in the gravel of the Middle Palaeolithic times.

The find of the cleaver here has undoubtedly proved that this area was inhabited right from the Lower Palaeolithic times.

The cleaver is V-shaped, of trap and trimmed along both the margins and the butt-end with a view to achieving an almost straight edge. The straight edge opposite the
Fig. 8. Section on the left bank of the AD Nala at the dam site, Patne  
(Not to scale) (April 1970)
butt-end is broken in the left side corner. On the underside it is extensively flaked near the butt-end. Thin and lenticular section, the specimen represents an Advanced Acheulian form as at Gangapur. 135 mm long, 85 mm broad and 30 mm thick (Fig. 7).

One of the artifacts of Middle Palaeolithic was an end-scraper on large and thick end-flake of jasper.

D. SECTION AT THE DAM SITE (Fig. 8)

The local F.W.D. had proposed to construct a dam across the Ad Nala and for preliminary investigations they had taken bore-holes at the proposed site situated about half-a-kilometer downstream of the Devi Temple. The bore-hole data indicated 8 meters thick buried alluvium in the area lying above weathered basalt. In the exposed cliff-sections in the area the deposits were about 17 meters thick. Thus in the area of the Dam Site the total thickness of the deposits was 25 meters. One of the sections, 15 meters high above the river bed, showed the following sequence of deposits (from the bottom upwards):

1. Current-bedded sandy fine gravel, 1 m
2. Red-brown clayey silt, 1 m
3. Unconformity
4. Reddish brown coarse-to-fine gravel, 2 m
5. Pinkish brown silt, 3 m
6. Current-bedded sandy fine gravel, 2 m
7. About 2 m portion concealed by talus
8. Yellowish sarkary silt, 2 m
9. About 2 m portion concealed by talus
10. Light red sandy fine gravel, 3 m
It was not possible to examine all the deposits in this section with a view to finding tools, as it was very steep.

3. EXPLORATION IN 1971

In the exploration of 1970 it became clear that the area around Patne has more than 25 meters thick alluvio-colluvial deposits and from the cultural point of view the area yields Stone Age tools from the Lower Palaeolithic to the Mesolithic through the Middle Palaeolithic. Therefore, this area was considered by me as an ideal area for understanding different stages of each culture in a stratified context. But it was necessary to pin-point a section or sections which could yield evidence of a succession of lithic tool industries of different Stone Age cultures. This was considered quite possible because in my exploration of 1970 I had combed quite a large part of the area and found the surface littered with tools on chalcedony and jasper. The study of surface collection indicated the presence of an industry intermediate between the Middle Palaeolithic characterized chiefly by blades and blade-tools. I was therefore seeking an opportunity for visiting the site which I got in December, 1971 after I joined the Deccan College Postgraduate Research Institute for writing a text book Stone Age India and also for doing my Ph.D. I submitted my scheme to Dr. H. D. Sankalia, my guide, for the explorations at Patne, giving the background and the aim of my work, who immediately approved it.

This time, first the sections exposed on either bank of the Ad Nala between the Devi Temple in the amphitheatre (area B) and the village Varthan, a stretch of about 6 kilo-
FIG. 2. COMPOSITE SECTION ON THE LEFT BANK OF THE AD NALA AT PATNE (NOT TO SCALE) (DEC. 1971)
meters, were re-examined. But none of them yielded satisfactory
evidence which could fulfill the objective. However, in quite
a number of cliff-sections on the Ad Nala within a stretch of
about one km (Fig. 9) the gravel underlying the purple silt and
resting upon the basalt yielded Middle Palaeolithic tools
chiefly on jasper. It is this purple silt and the underlying
gravel in these sections containing Middle Palaeolithic tools
that appear to correspond the purple silt and the underlying
 consolidated gravel exposed at the base of PTN-10 trench in
Area B (please see Chapter III, p. ).

The Middle Palaeolithic tools, 11 in number (Fig. 10),
collected from the gravel, as said above, are, except one,
which is on chalcedony, on jasper. They include one flake
core represented by almost half portion of a pebble of jasper
(Fig. 10, 1), one point on a sub-triangular end-flake of jasper
(Fig. 10, 7), three borers, one on a side-flake of chalcedony
(Fig. 10, 10) and two on end-flakes of jasper (Fig. 10, 2 and 3),
one dihedral burin on a flat piece of jasper (Fig. 10, 9), three
side-scrapers on flakes (Fig. 10, 4, 5 and 11), one end-scraper
on a flake (Fig. 10, 6) and one hollow scraper on a flat piece
of jasper (Fig. 10, 8).

In the course of further explorations away from the
left bank of the Ad Nala, however, (in what was afterwards
named as Area A), it was observed that fresh sections were
exposed on either side of the road leading from the Fatne
village to Devi temple when it was widened in the summer of
1971. Examination of these sections yielded startling results
which proved a turning point in the history of Stone Age research
FIG. 1. SECTION IN THE ROAD-SIDE CUTTING
AT PATNE (NOT TO SCALE) (DEC. 1971)
in not only Patne area but also elsewhere. In these sections the finer sediments such as clays and silts were found implementiferous. This was surprising in view of the fact that it was being generally held that the Stone Age tools were found in the coarser sediments such as sands, gravels, pebbles, etc. In one of the sections (Fig. 11) the brown fissured clay and the topmost gravel yielded lithic artifacts chiefly of chalcedony. Those from the fissured clay, consisting of blades, seemed to be of the Upper Palaeolithic and from the topmost gravel, of the Mesolithic, comprising a backed blade, a backed point, a fluted core, etc. In order to confirm the observations and also to understand further details of the tool industries from stratified deposits it was then proposed to scrape some of the sections in January 1972 in the first instance, before undertaking regular excavation at some selected spots.

4. THE CUTTINGS 1971-72 (Fig. 12)

Five cuttings, PIN-1 to PIN-5, were made in Area A on either side of the newly constructed road leading from the village to Devi temple, the work of which exposed fresh sections. The spots were selected in such a way as to give a sequence of deposits and the enclosed lithic tool industries from the highest point in the area to the lowest exposed deposit to the level of the road. The five cuttings are described below:

(1) PIN-1

This cutting was made at the highest point, on the
top of an extensive flat, on the right side of the road. An area of about 2 m x 2 m was dug to a depth of 1 m. The following deposits were exposed (from the top downwards):

(1) Surface humus, a few centimeters

(2) Fine and coarse sub-rounded gravel, 35 cm thick

(3) Light brown calcareous silt, loess-like, 60 cm (partly excavated)

From the silt, (3), was recovered one fluted core of jasper while from the overlying gravel were obtained a few artifacts chiefly on chalcedony.

(ii) PTN-2

Some 10 meters south of PTN-1 the roadside cutting was straightened and dug some 60 cm inside the section to the level of the road. The sequence of deposits was met with as under (from the top to bottom):

(1) Surface humus, a few cm thick

(2) Sub-rounded fine and coarse gravel, 20 cm

(3) Light brown loess-like calcareous silt, 1 m 50 cm thick

(4) Unconformity

(5) Black fossil-soil-like or peat-like deposit, 50 cm

Sandy fine gravel showing current bedding, 50 cm (partly exposed)

The lowest exposed gravel yielded one fluted core and one blade, both of chalcedony.

(iii) PTN-2

About 100 meters further south of PTN-2 was made this cutting on the left side of the road on the top of a cliff-
section shown in Fig.12. There is a steep slope from PTN-2 to this section and beyond and the lowest gravel, (5), exposed in the cutting PTN-2 is the topmost deposit. The tying up of the gravel in the two cuttings has enabled me to obtain a sequence of deposits and also of the enclosed tool industries from the top downwards.

Here a cutting, 2 meters away from the face of the section and measuring 2 m x 2 m, was made to a depth of 1 m 80 cm. The following stratigraphy was observed from the top downwards:

(1) Surface humus, a few cm
(2) Sandy fine gravel showing current bedding and with occasional pebbles and sub-angular small boulders, 1 m 40 cm
(-) Erosion marked by pot-holes
(3) Yellow calcareous hard silt, excavated to a depth of 40 cm only

Within the deposit of sandy fine gravel three different horizons, distinguished from each other by colour difference and variation in compactness, could be located although the composition and character of current-bedding remained common to all.

(a) Blackish-brown comparatively loose sandy fine gravel, 50 cm thick
(b) Reddish compact sandy fine gravel, 35 cm thick
(c) Greenish sandy fine gravel, 55 cm thick

The exposed surface of the yellow calcareous silt was uneven and marked by pot-holes suggesting occurrence of
erosional activities after the deposition of the yellow silt, prior to the deposition of the overlying gravel.

All the deposits exposed in this cutting yielded lithic artifacts.

(iv) PTN-3

The junction of the yellow silt and the brown fissured clay was not visible in the section on the top of which PTN-3 cutting was made. The face of this section was therefore scraped. The following stratigraphy was noticed in this cutting (from the top downwards):

1. Reddish sandy fine gravel, 40 cm
2. Erosion
3. Yellow kankary silt, 20 cm thick
4. Unconformity
5. Brown fissured clay, exposed to a depth of 50 cm only

In the scraped portion no gravel was found intervening the brown fissured clay and the yellow silt. The junction of both these deposits was sharp and indicated an unconformity.

All the deposits yielded lithic artifacts.

(v) PTN-5

Some 15 meters to the south of PTN-3, on a slope, the top of the brown fissured clay was exposed. In order to obtain more tools from this deposit a small trench, measuring 2 m x 2 m, was dug to a depth of 1 m. The excavated portion was found to be more rich in yielding stone artifacts as compared to any other deposit in the exposed cuttings.
Fig. 13. Symbols used in showing different deposits exposed in the excavated trenches.

Fig. 12. Cuttings at Patna, 1971-72, Area A.
It would thus be seen that except the fossil soil, all the deposits exposed in the five cuttings yielded lithic artifacts. The occurrence of fresh tools and quite a number of waste flakes clearly suggested that the tools were manufactured at the site. This cannot happen unless man had occupied the site. In turn, therefore, this evidence also suggested that the area represents a living or primary site.

The presence of fluted cores, blades including pen-knife and notched varieties in the assemblage from the brown fissured clay, besides a few burins and points, chiefly on blades indicated Upper Palaeolithic characters rather than Mesolithic. The collection from the yellow kankary silt also showed similar characteristics. The presence of a blade with a wavy ridge (a crested ridge) in the collection from the brown fissured clay further fortified the surmise that the crested-guiding-ridge technique was known to the man in India since the Stone Age times; it is not the characteristic feature of the Chalcolithic period and it was not introduced in India from the West Asia ('Fertile Crescent'), as was supposed to be, during the chalcolithic times.

A. THE STONE AGE STRATIGRAPHY

The reconstruction of the stratigraphic sequence of deposits exposed in the cuttings may be made as under (from the top downwards):
(1) Surface humus
(2) Gravel, coarse and fine
(3) Brownish grey calcareous loess-like silt
(4) Unconformity
(5) Fossil soil-like deposit
(6) Sandy fine gravel
(7) Erosion
(8) Yellow kankary silt
(9) Unconformity
(10) Brown fissured clay
(11) Yellowish calcareous pink silt

The yellow kankary silt exposed in the cuttings PTN-3 and PTN-4 was found to be akin in composition to the yellow kankary silt in which a small trench was sunk by me in the year 1958 (please see p.).

B. THE STONE AGE INDUSTRIES

Except the fossil soil and the yellowish calcareous pink silt (lying at the base of the section) all the deposits exposed in the cuttings described above yielded lithic artifacts. They are classified as under:

(1) Tools from the Brown Fissured Clay

This was found to be the richest of all the deposits in yielding artifacts. This deposit was exposed in the cuttings PTN-4 and PTN-5. The assemblage is classified as under:

(1) Levalloisian - type core - 2 Nos.
(2) Fluted core - 3 Nos.
| (5) | Pen-knife blade | 2 Nos. |
| (4) | Notched blade | 1 No. |
| (5) | Blade | 3 Nos. |
| (6) | Blade with a crested ridge | 1 No. |
| (7) | Burin (simple) | 2 Nos. |
| (8) | Awl | 1 No. |
| (9) | Point | 1 No. |
| (10) | Scraper | 1 No. |
| (11) | Large flake | 2 Nos. |
| (12) | Partially worked core nodules | 3 Nos. |
| (13) | Waste-flakes | 75 Nos. |

Besides the above tools, one tiny piece of indeterminate material (which later on proved to be the piece of ostrich eggshell) was also recovered from the deposit.

The material used in the manufacture of tools is chiefly chalcedony.

The industry on the whole is based on blades. It is neither Middle Palaeolithic nor Mesolithic. It cannot be ascribed to any other cultural stage except that of the Upper Palaeolithic.

A couple of rolled and glossy specimens were collected from this deposit. They seem to be derived and belong to the Middle Palaeolithic complex.

(2) **Tools from the Yellow Lankury Silt**

This deposit was exposed in PTH-3 and PTH-4. The collection comprised of the following types:

| (1) | Backed blade | 1 No. |
| (2) | Tanged blade | 1 No. |
(3) Notched blade - 1 No.
(4) Simple blade - 1 No.
(5) Burin - 2 Nos.
(6) Foliate point - 1 No.
(7) Waste flakes - 10 Nos.

Apart from the lithic artifacts, one tiny fragment of indeterminate material (proved later on to be a piece of an ostrich eggshell) was also collected from this deposit.

The raw material used is chiefly chalcedony.

The assemblage closely resembled that obtained from the yellow silt in 1958 and I ascribed it to the Upper Palaeolithic (IAN 1971-72, pp. 32-33).

(3) Tools from the Sandy Fine Gravel

This gravel was exposed in the cuttings PTN-2, PTN-3, and PTN-4 and yielded quite a number of artifacts which I ascribed to the Mesolithic. The collection consisted of the following types:

(1) Tanged pen-knife blade - 1 No.
(2) Blacked blade - 1 No.
(3) Lunate - 3 Nos.
(4) Retouched blade with a notch - 1 No.
(5) Blade - 4 Nos.
(6) Fluted core - 2 Nos.
(7) Core-flake - 1 No.
(8) Awl - 1 No.
(9) Point - 1 No.
(10) Scraper - 1 No.
(11) Partially worked nodule - 2 Nos.
(4) **Tools from the Brownish Grey Loess - like Silt**

This deposit was exposed in the cuttings PTN-1 and PTN-2. Only one fluted core of jasper was recovered from this deposit in the cutting PTN-1.

(5) **Tools from the Coarse and Fine Gravel**

This gravel, exposed in the cuttings PTN-1 and PTN-2, yielded following types of artifacts:

1. Fluted core  -  1 No.
2. Blade  -  1 No.
3. Scraper on a tiny  -  1 No.
4. Flake of quartz  -  10 Nos.

This gravel represents the topmost gravel in the sequence of deposits at Patne and the tools collected from this gravel in the exploration in April 1970 (see page ___) were ascribed to the Mesolithic.

The five cuttings described above yielded an information about the succession of lithic tool industries which appeared to be of the Upper Palaeolithic and the Mesolithic in a stratified context. This work paved the way for further investigation by way of excavation with a view to confirm the above evidence.

**Contributions of the Explorations**

The explorations of 1958, 1970, 1971 and 1972 provided valuable information which ultimately helped understand the potentialities of the area. The area yielded evidence of the Lower Palaeolithic, the Middle Palaeolithic, the Upper...
Palaeolithic and the Mesolithic, that of the last two being the most important having been found in successive deposits showing relation of one with the other. The lithic artifacts observed in 1962 on the surface of the flat, and considered then as "microliths" of the Chalcolithic period, were found in 1958 as belonging to the underlying yellow kankary silt, a fluvial deposit of geological time. But because of the views prevalent then among the archaeologists in this country about the origin of the crested-guiding-ridge technique of which specimens were found in the excavated assemblage, I did not dare declare the collection as of the Pre-Chalcolithic. In 1970 for the first time evidence was found of the Lower Palaeolithic and the Middle Palaeolithic, besides that of the Mesolithic. This time an idea about the expanse as well as the thickness of the Stone Age sediments in the area under study could be had for the first time.

The exploration of December 1971 provided clues for the first time that in this area the finer sediments such as clays and silts are also implementiferous. This was confirmed in January 1972 when five cuttings were made and when an idea about the succession of the Upper Palaeolithic and the Mesolithic, with at least two Phases within each, could be obtained. The work in January 1972 and my traverses in the vast area of the site from 1958 onwards clearly indicated that the site is a primary or living site of the Stone Age.

The evidence of particularly of the Upper Palaeolithic was of great interest and required further investigation. An excavation at suitable localities was, therefore, planned.