CHAPTER V

AFFINITIES, ORIGIN AND CHRONOLOGY

In this chapter, an attempt has been made to present a comparative study of the archaeological data of Tripura in their geochronological context with material so far reported from South and Southeast Asia, with a view to tracing their affinities and origin. This will enable us to propose a chrono-cultural sequence of prehistoric Tripura.

A COMPARATIVE STUDY OF THE QUATERNARY HISTORY OF TRIPURA

A brief summary of the terrace stratigraphy as established by the author in Tripura is given below. In Fig. 13, an attempt has been made to show the various terrace levels present and the archaeological sites found on them, as well as their associated deposits.

In all, there are five fluvial terraces in Tripura which represent eight stages in the history of the Khowai river. Between the deposition of $T_1$ and $T_2$ (both Upper Pleistocene terraces), a prolonged period of erosion occurred. These may be considered in descending order, beginning with the highest and the oldest terrace as follows (See Table 4 p. 66).
Khowai Valley | Haora Valley

a) Terrace - 1 ($T_1$) - Kalyanpur Surface = Kunjaban Surface
b) Erosion
c) Terrace - 2 ($T_2$) - Melapathar Surface =
d) Erosion
e) Terrace - 3 ($T_3$) - Teliamura Surface = Jirania Surface
f) Erosion
g) Terrace - 4 ($T_4$) - Shilatoli Surface = Agartala Surface
h) Terrace - 5 ($T_4$) - Khowai Surface = Haora Surface

a) At the end of the Neogene, the sediments of the Surma Basin were tilted as a result of diastrophic movements connected with mountain building, followed by a period of peneplanation. During the major pluvial phase which ensued, rock formations of the anticlinal ridges were subjected to active erosion by precipitous streams leading to the generation of enormous clastic material which got deposited in the intermontane (valley) depressions over the tilted beds of shale-siltstone formation and this gave rise to the widest and most conspicuous depositional terrace - Kalyanpur Surface ($T_1$) (Photo 1). The coarse clastics which underlie this terrace contain boulders of shale, mudstone and fossil wood (Photo 9), occasional lenses of carbonaceous matter and some pebbles of gneiss, quartzite etc., which occur in the basal part, followed up by several cycles of un lithified, oxidised coarse, red and brown, cross-bedded and graded sands, silt and clay (Photo 8, Figs. 5 & 10). At present, the deposit
occur in the form of a highest bench occupying major parts of the valleys of Khowai, Haora and Sonai Gang rivers. This terrace deposit which has given the $^{14}C$ age of 35,610 ± 3,050 yrs.B.P., is very significant because it is associated with several, rich stratified, Stone Age factory sites (Photos 12-16).

b) As a sequel to the fall in the world wide sea level during the last glacial maxima around 18,000 yrs.B.P., the $T_1$ terrace which spans the synclinal valleys, was vigorously incised by the regraded rivers, carving out deep gullies and hanging valleys (Photo 1). The ground water table went down and the $T_1$ terrace (KS) was left high and dry. The prevailing sub-tropical climate during the last glacial phase, favoured ferrallitic weathering and the sediments of Kalyanpur Formation were ferruginised and laterised in situ. Sporadic concretionary laterite and iron stone layers (Photo 8) were formed at places, while in other areas only rubification and red ferruginisation of the sediments occurred. The late Pleistocene aridity, in Tripura has probably led to the formation of pedocalcic layers with numerous caliche nodules. Simultaneously, in several areas severe gully erosion was going on, occasionally developing into badlands (Photo 2). The $T_1$ terrace deposit of Khowai Valley is correlatable with that of the adjacent Haora Valley in Tripura,
on the basis of lithology and archaeology. Continued erosion led to carving out of wide and flat valleys by major rivers which later got partly filled up with deposits of $T_2$ and $T_3$, as inset terraces (Photo 4).

c) In the next pluvial phase, which was a minor episode in the Pleistocene history of Tripura, the $T_2$ deposit was laid. It is a depositional terrace and is presently seen as isolated remnants at a few places in the valley. The $T_2$ deposit is essentially clayey, indicating a slow rate of aggradation and tectonic stability. This deposit is assigned a late Pleistocene age based on geological grounds.

d) Following the period of alluviation of $T_2$, a cycle of erosion began which led to large scale degradation of this terrace. As such, a few remnants of $T_2$ are now preserved.

e) The subsequent major pluvial phase caused alluviation ($T_3$) of the valley which commenced in the early Holocene and continued up to the late Holocene (approx. 8,000 to 1,000 yrs. B.P.) and led to the formation of the Teliamura surface. This unit, underlain mainly by graded layers of sands and silt with minor clay, is slightly altered (Fig.10). Layers and lenses of in situ peat/organic clay (Photo 10)
enriched in fungal spores and occasional molluscan and vertebrates fauna are found. The extent of this important terrace formation suggests that the rainfall during this period was 2 to 3 times more than that of the present. This valley filling episode can be traced right into the hills of the Baramura and other parallel ridges to the east, where we see development of narrow terraces, which the rivers have since cut through 6-8m, below (Photo 5). This formation shows several cycles of deposition of unaltered sediments consisting of pebbles, sands and silts with a fair amount of organic matter (Fig.10). This terrace is important because the pottery sites are associated with it (Photo 17) (Ramesh 1987: 328). During this period, people had come down to the fertile valley-flat areas, having evolved from hunting gathering to agriculture and food production. There were occasional catastrophic floods during early historic times when the habitats were destroyed, as evidenced by fairly thick potsherid layers underlain by unaltered greyish silts (Photo 11). The nature and content of the sediments indicate that the trunk channels were very unstable and frequently oscillated leading to the formation of isolated flood basins containing thick black clay deposits and filled with coarse sands. In other areas silts and sands were deposited in various proportions. The fact that the Holocene
terrace spreads up-valley into the head-waters of major river suggests that the valley filling episode was very pervasive and vigorous. This formation has given the age range of 1,190 ± 90 to 3,450 ± 110 yrs. B.P. by $^{14}$C method.

f) There was a slight morphotectonic uplift and or valley trenching around climatic shift about 3,400 ? yrs. B.P. which led to the elevation of $T_3$ terrace (Photo 3) to the present level (4-8m above the river bed) and formation of the Teliamura Surface. Inceptisols are found to cap this unit.

g) Further incision of the rivers caused formation of the modern river system with narrow floodplains. The Ghilatoli Surface ($T_4$) representing the extra-ordinary flood plain (Photo 6), has formed due to lateral migration of the trunk channel and built up of the levees by vertical accretion, during high river stages.

h) The youngest floodplain-Khowai surface ($T_4$,) include the modern river bed with active channel, point bars, channel bars, and natural levees, comprising deposits of unaltered alluvium, giving the $^{14}$C age of 165 ± 80 yrs. B.P.

It is significant that from the Pleistocene times down to the present day, the rivers have progressively shrunk in
size. This piece of proxi-climatic evidence points to an overall trend of diminishing rainfall in the monsoon tropics during the late Quaternary in general, and late Holocene in particular. Neotectonic activity (epeirogenic type) and mild climatic changes are responsible for shaping the Quaternary landscape of Tripura.

A comparative study of the Quaternary history of Tripura with Movius' study of stratigraphy of the Palaeolithic period of Upper Burma as well as with other known studies in the Indian sub-continent, is attempted here to know whether it is possible to relate the terraces identified in Tripura with any of them in rest of India and in Burma, thus correlating the Quaternary succession of Tripura with those of the above areas. The correlation is based on geomorphological, lithological, climatic archaeological and palaeontological evidences, supported by available radiocarbon dates. Table 32 gives a comprehensive list of radiocarbon dates so far available for the different states of northeast India along with the Quaternary successions established in the different river valleys and the environments of deposition. The available radiocarbon dates for the different parts of northeast India readily enable us to attempt a correlation of the Quaternary stratigraphy, for
<table>
<thead>
<tr>
<th>Area</th>
<th>Depositional Environment</th>
<th>Locality (Geographical co-ordinates)</th>
<th>Morphostratigraphic Unit</th>
<th>Nature of deposition</th>
<th>Depth (m)</th>
<th>14C dates (yrs. B.P.)</th>
<th>BSIP Lab. No.</th>
<th>Reference</th>
<th>Associated Archaeological data</th>
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<td><strong>PAL PRADESH</strong></td>
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<tr>
<td>Assam Brahmaputra Valley</td>
<td>FLUVIAL</td>
<td>1. Namchi (27.25N:95.59E)</td>
<td>Hawai Pather Formation</td>
<td>Wood</td>
<td>1.6</td>
<td>550 ± 90</td>
<td>BS-572</td>
<td>II</td>
<td>Nil</td>
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<td>2. Sunpura (27.50N:95.52E)</td>
<td>Sunpura Formation</td>
<td>Wood</td>
<td>1.78 ± 90</td>
<td>BS-750</td>
<td>III</td>
<td>II</td>
<td>Nil</td>
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<td></td>
<td>3. Bardumas (27.30N:95.53E)</td>
<td>Ledo-Namsai Formation</td>
<td>Wood</td>
<td>1.8</td>
<td>35,600 ± 1,850</td>
<td>BS-571</td>
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<td>4. Lohit (27.43N:96.02E)</td>
<td>—</td>
<td>Carbonaceous Sediment</td>
<td>2.2</td>
<td>40,000 BS-712</td>
<td>VIII</td>
<td>II</td>
<td>Nil</td>
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<td>GLACIO-FLUVIAL</td>
<td>5. Ziro Valley (27.35N:93.50E)</td>
<td>Soro Formation</td>
<td>Peat</td>
<td>40,000</td>
<td>BS-469</td>
<td>IV</td>
<td>II</td>
<td>Nil</td>
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<td></td>
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<td>6. (27.34N:94.00E)</td>
<td>Bre Formation</td>
<td>Peat</td>
<td>3.0</td>
<td>26,140 ± 780</td>
<td>BS-248</td>
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<td>Nil</td>
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<td>7. Bombdila (27.17N:92.20E)</td>
<td>Carbonaceous Sediment</td>
<td>Peat</td>
<td>90 ± 90</td>
<td>BS-603</td>
<td>IX</td>
<td>II</td>
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<td>8. Bombdila</td>
<td>do</td>
<td>230 ± 160</td>
<td>BS-605</td>
<td>IX</td>
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<td>9. Bombdila</td>
<td>do</td>
<td>8,300 BS-604</td>
<td>BS-604</td>
<td>IX</td>
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<td>FLUVIAL</td>
<td>10. Tokagach (27.50N:95.46E)</td>
<td>Saikho Formation</td>
<td>Wood</td>
<td>1.0</td>
<td>150 ± 90 BS-570</td>
<td>I</td>
<td></td>
<td>Nil</td>
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<tr>
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<td>11. Tinsukia (27.30N:95.21E)</td>
<td>Dum Dum Formation</td>
<td>Peat</td>
<td>2.5</td>
<td>12,210 ± 340</td>
<td>BS-134</td>
<td>I</td>
<td>Nil</td>
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<td>12. Digboi (27.23N:95, 37E)</td>
<td>—</td>
<td>—</td>
<td>4.0</td>
<td>15,765 ± 260</td>
<td>BS-416</td>
<td>I</td>
<td>Nil</td>
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<td>13. Matikhadi (Ledo) (27.17N:95.43E)</td>
<td>do</td>
<td>—</td>
<td>2.5</td>
<td>17,920 ± 570</td>
<td>BS-155</td>
<td>II</td>
<td>Nil</td>
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<td>14. Tipang (27.30N:95.51E)</td>
<td>Jaiarmpur Formation</td>
<td>Wood</td>
<td>12.5</td>
<td>38,020 ± 2,230</td>
<td>BS-573</td>
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<td>FLUVIAL</td>
<td>15. Singra (26.30N:92.30E)</td>
<td>—</td>
<td>— do</td>
<td>3,540 + 1,130</td>
<td>BS-746</td>
<td>IV</td>
<td></td>
<td>Nil</td>
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<td>16. Margrapur (24.50N:92.49E)</td>
<td>—</td>
<td>do</td>
<td>1,570 ± 90</td>
<td>BS-748</td>
<td>VI</td>
<td></td>
<td>Nil</td>
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<td>17. Silchar (Alipur) (24.50N:92.58E)</td>
<td>—</td>
<td>do</td>
<td>30.4</td>
<td>40,000 BS-783</td>
<td>VI</td>
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<td>Nil</td>
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<td>FLUVIAL</td>
<td>18. Bedhura (26.37N:91.11E)</td>
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<td>Wood</td>
<td>2.0</td>
<td>1,060 ± 120</td>
<td>BS-626</td>
<td>XI</td>
<td>Nil</td>
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<td>19. Dewajudá (26.31N:90.21E)</td>
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<td>—</td>
<td>2.25 ± 120</td>
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<td>Valley/Lake</td>
<td>Area</td>
<td>Type</td>
<td>Formation</td>
<td>Sample Size</td>
<td>Age (BP ± 1σ)</td>
<td>Site Code</td>
<td>Elevation (m)</td>
<td>Latitude</td>
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<td>1st Valley</td>
<td>Loktak lake</td>
<td>Beat</td>
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<td>12.0</td>
<td>1,830 ± 110</td>
<td>BS-147</td>
<td>XII</td>
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<td>Lamphelpet</td>
<td>Peat</td>
<td>(6 samples)</td>
<td>1,750 ± 100</td>
<td>to 1,830 ± 120</td>
<td>BS-205</td>
<td>VII</td>
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<td>7,980 ± 470</td>
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<td>Phutamati Formation</td>
<td>Wood</td>
<td>6.0</td>
<td>10,610 ± 130</td>
<td>BS-470</td>
<td>IV</td>
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<td>Mendipathar</td>
<td>Formation</td>
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<td>11</td>
<td>Bhattacharja Valley</td>
<td>Teli Amura</td>
<td>Khowai Formation</td>
<td>Wood</td>
<td>3.0</td>
<td>165 ± 135</td>
<td>BS-418</td>
<td>I Modern</td>
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<td>12</td>
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<td>Ghilatoli Formation</td>
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<td>13</td>
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<td>Telamura Formation</td>
<td>Clay</td>
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<td>1,190 ± 90</td>
<td>BS-312</td>
<td>II</td>
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<td>14</td>
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<td>Kunjabhan-I Formation</td>
<td>Wood</td>
<td>2.0</td>
<td>1,430 ± 80</td>
<td>BS-312</td>
<td>II Medieval Pottery</td>
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<td>Kunjabhan-II Formation</td>
<td>Clay</td>
<td>2.0</td>
<td>3,450 ± 110</td>
<td>BS-313</td>
<td>I Neolithic Tools</td>
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<td>16</td>
<td></td>
<td>MULAPATHAR Formation</td>
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<tr>
<td>17</td>
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<td>Kalyanpur Formation</td>
<td>Carb.</td>
<td>4.0</td>
<td>35,690 ± 3,050</td>
<td>BS-450</td>
<td>I Late Middle Palaeolithic Tools</td>
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<td>18</td>
<td></td>
<td>Naora Formation</td>
<td>Peat (3 nos)</td>
<td>2.00 ± 2.75</td>
<td>BS-153 &amp; BS-189</td>
<td>VII Modern</td>
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<td>19</td>
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<td>Jerania Formation</td>
<td>Peat</td>
<td>0.4</td>
<td>1,930 ± 120</td>
<td>BS-174</td>
<td>VII Medieval Pottery and Neolithic tools</td>
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<td>20</td>
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<td>Agartala Formation</td>
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<td>Kalpania Formation</td>
<td>Peat (3 nos)</td>
<td>0.90 ± 1.05</td>
<td>BS-152 &amp; BS-156</td>
<td>VII Medieval Pottery</td>
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* Formations not dated

the first time, on afirm footing. A perusal of the Table 32 reveals that generally 4 depositional terraces are encountered of which, 2 belong to the Pleistocene and two to the Holocene.

In the Brahmaputra Valley (as well as its tributary valleys), in parts of Assam, Arunachal and Meghalaya, generally four terraces have been mapped, of which the terrace deposit ($T_1$) found in the southeastern most corner of Assam, in the Tipong nalla section, has given $^{14}$C age of 38,020 ± 2,230 yrs.B.P. and another date 40,000 yrs.B.P. comes from Lohit district. The terrace deposits of Singra in North Lakhimpur district of Assam is dated at 32,540 ± 1,130 yrs. B.P. The earliest terrace deposits of Cachar area in the Barak Valley, has yielded an age of 40,000 yrs.B.P., while the lower glacio-fluvial deposits of ziro Valley in Arunachal Pradesh, gave an age of 40,000 yrs.B.P. All these dates are fairly comparable with our Tripura $^{14}$C date (35,690 ± 3,050 yrs.B.P.) for the oldest terrace deposit ($T_1$). As such these terraces are correlatable and are placed in the Upper Pleistocene. The lacustrine (?) deposits of Tale Valley (Arunachal Pradesh) and Loktak Valley in Manipur gave consistent dates of 26,140 ± 780 and 25,465 ± 660 yrs.B.P., respectively. These also fall in the Upper Pleistocene.
In Garo Hills of Meghalaya, the Rongram, Ganol and Simsangiri streams have developed two distinct fill terraces. In the absence of datable material, it has not so far been possible to precisely date these deposits nor firmly relate the Stone Age industries to the Quaternary terrace succession (Reba Roy 1988:155). These two terraces are possibly correlatable with our Tripura $T_1$ and $T_2$ deposits, respectively.

In the Irrawaddy Valley of Upper Burma, Drs. de Terra and Teilhard (cited from Movius 1943, Table 2, p.345), have established five terraces, of which four are depositional in nature and one erosional ($T_3$)—which is between terraces $T_4$ and $T_2$. The depositional terrace ($T_2$) of Upper Burma occurs as benches around 180 to 250 feet above the river and consists of boulders overlain by cross bedded, reddish, coarse red or pink fluvial sand. The top soil is lateritic indicating a humid tropical climate. This is correlatable with the $T_1$ terrace of Tripura.

During the last Pluvial period, which occurred at the end of the Late Pleistocene, the $T_4$ deposits were accumulated in the Irrawaddy Valley. This unit is found at a height of 60 to 70 feet above the river. It is correlatable with our $T_2$ terrace.
The lowest terrace - $T_3$ is composed of cross-bedded, gravelly sand and pink silt. It occurs at a height of 40+ feet above stream level and represents the post-Pleistocene stage aggradation by the river. In composition, it is like the recent sediments being laid down by the river similar to the $T_3$ terrace deposit of the Khowai Valley.

The Quaternary stratigraphic sequence in different regions of India such as Kashmir Valley, Ganga Valley in West Bengal, Kasai Valley in Bihar, Central Narmada Valley, Tapi Valley and Son Valley in Madhya Pradesh, Gadavari, Krishna and Manjira Valleys and Kurnool caves in Andhra Pradesh, Bhima Valley in Karnataka and Cauvery Valley in Tamilnadu, associated in many cases with rich vertebrate (mammalian) fauna, suggest Pleistocene age and are therefore, correlatable.

The Kashmir Valley presents a type area for the Quaternary Geology of the Indian Sub-continent with its continuous record preserved in the form of Karewa deposits. Ever since the comprehensive study by de Terra and Paterson (1939), much interest has been shown in these deposits by later workers (Wadia 1951, Joshi et al. 1974 and Bhatt 1975), but the controversy regarding its stratigraphy and time scale is far from settled conclusively (Agrawal et al.
The Karewas, resting over the Palaeozoic and Triassic basal rocks, are a lacustrine-cum-glacio-fluvial deposits. They are classified into three units viz., Lower Karewas, Upper Karewas and the Loess; the former two are separated by the II glacial maraine and outwash. On the basis of $^{14}$C and Palaeomagnetic measurements, the Loess deposit covers an age bracket of 100,000 years (probably time equivalent to $T_1$ of Tripura) and Upper Karewas is probably 700,000 yrs.B.P. (Brunhes epoch) (Agrawal et al. op.cit : 5-8).

The region, lying south of Kashmir Valley and north of the great Indo-Gangetic plain, shows well developed terraces developed on the banks of rivers such as Beas, Banganga, Sirsa, Sutlej, Markanda etc. in Himachal Pradesh, Punjab and Haryana (Sankhalia 1974). These terraces, generally four to five in number yielded abundant stone tools designated as 'Soan Complex tools'. The highest (oldest) $T_1$ terrace is at least Middle Pleistocene in age, and $T_3$ terrace on the Sirsa belong to the Upper Pleistocene and the work done so far shows that the fluvial terraces in the sub-Himalaya are not older than the late Middle Pleistocene (Raja-guru 1981:128). Archaeologically speaking, heavy scrapers, proto-handaxes mostly worked on pebbles and massive flakes,
have been collected from the top of terraces (T₁ to T₃) of Beas, Banganga, Sirsa etc., in northwest India. The stratigraphic relation of the tools with respect to terrace sequence is yet to be properly established. "Tentatively, Lower Palaeolithic tools from the sub-Himalaya are of middle to late Pleistocene age only" (Rajaguru op.cit:128).

In the Kasai sub-basin of Bengal Basin, the Quaternary sequence consists of Laterite-T₁ (Lower Pleistocene), secondary laterite-T₂ (Upper to Middle Pleistocene), three terraces T₃, T₄ and T₅ (Holocene) and present day river flood plain deposits. The T₂ terrace (correlated with T₁ terrace of Tripura) contain mammalian fossils of Middle to Upper Pleistocene age and Palaeolithic tools of Abbevelian and Acheulian phases represented by scrapers, small bandaxes and cleavers and succeeded by scrapers, small handaxes and cleavers of Flake element (Ghosh and Majumdar 1981: 71-72). These tools are comparable with those found in Majurbhanj district, Orissa (Bose et al. 1958:49-55) and Singhbhum districts Bihar (Sen and Ghosh 1960:178-191). The T₃ terrace deposits comprising vertebrate fossils and micfoliths indicating early Holocene (Ghosh and Majumdar op.cit:72). The younger deposits of T₄ and T₅ belong to the Upper Holocene age, similar to Tripura sequence.
In Damodar-Darkeswar Valley in West Bengal (Sastry et al. 1976). Southern Ganga Valley, Bihar (Roy and Ghosh 1979) Belan-Seoti Valley, West Bengal (Dassarma and Biswas 1977), the coeval terrace sequences have been established identical with Tripura sequence.

The Narmada alluvium represents one of the best developed sections of Quaternary sediments in the Peninsular region. Stratotype sections of alluvial terraces capped by regur and black cotton soil contain mammalian bones and prehistoric implements, indicating a late Pleistocene age (Prasad 1981:122). Theobald (1860:279-298) and de Terra and Paterson (1939), subdivided the Older Alluvium into two sub-groups i.e. Lower and Upper. The Lower group consists of basal bouldery gravel, overlain by highly oxidised, reddish brown silt, was dated to the Middle Pleistocene on the basis of occurrence of mammalian fossils such as *Elephas namadicus*, *Bos namadicus*, *Equus namadicus*, etc. Naturally the associated Lower Palaeolithic tools, such as handaxes, cleavers, scrapers, choppers, flakes, cores etc., were also dated to the Middle Pleistocene (Rajaguru 1981:128-129). These scholars also observed a marked erosional unconformity between the Lower group and the Upper group and dated the latter to the Upper Pleistocene. These formations were subsequently studied by
Supekar (1968) and others. A single $^{14}$C date (about 31,750 yrs. B.P.) from the gravels of the group and associated fauna such as *Bos namadicus*, *Hexaprotodon paleindicus*, *Equus namadicus*, *Elephas hysudricus*, *Hexaprotodon paleindicus*, indicate the late Pleistocene age for the Upper group and correlated with $T_1$ unit of Tripura. Supekar (1968) discovered Middle Palaeolithic tools which are not older than 100,000 yrs. B.P. in any part of the Old World. 'Thus the antiquity of Early Man in the Central Narmada Valley cannot go beyond the late Middle Pleistocene' (Rajaguru *op.cit* :129)

In the Soan Valley, Paterson and Drummond (1962) recognised four terraces which they equated with Lower, Middle, Upper and Final phases of Soan culture. However, Ray and Ghosh (1981:147) argue that this correlation of terrace sequence with different cultural phases is very tentative, for to assume correlation between commencement of terraces and inception of cultural phase would be presumptuous.

The Billa Surgam Caves (Kurnool Caves) in Andhra Pradesh, have yielded fossiliferous deposits classified into: the Lower Cave Deposits and the Upper Cave deposits containing vertebrate fossils of Upper Pleistocene and Holocene ages, respectively and are comparable with the Lower Narmada Deposits and Upper Narmada Deposits in Madhya Pradesh (Dassarma 1979: 279-287).
A chart showing tentative correlation of Quaternary succession and events and associated cultures of Tripura with the rest of India, Burma, North China and Java is furnished in Table 33.

A COMPARATIVE STUDY OF ARCHAEOLOGICAL DATA OF TRIPURA

I. PALAEOLITHIC INDUSTRIES OF TRIPURA

A. Core-tool Industries (Pl.I-IV, Fig.I-V)

A total of 25 heavy tools are incorporated in this study. The different types and their frequencies are given in Table 23 and Fig. 25 (see pp. 140 & 154).

(i) Chopping-tool industry (Pl.III nos.1-4, Fig.VI nos.1&2)

There are 7 chopping-tools in our collection out of 25 core tools and 195 palaeolithic artifacts, giving a frequency of 28% among the core tools and 3.59% among the Palaeolithic artifacts respectively.

The chopping-tools of Tripura are generally technologically more refined and well flaked like those of the Late Anyathian I of Burma. They are very slightly patinated or fresh and generally unrolled. These are prepared on a very fine grained variety of fossil wood and the flaking
has been executed irrespective of the grain of the wood. The flakes are removed from both the sides and are small as well as big and deep usually leaving some cortex. The chopping-tools occasionally show battering marks, indicating usage.

The chopping-tools of Tripura bear close similarities with those reported from Burma, Java, China Malaya and north western India.

(ii) Handaxe industry (Pl. I nos.1-3, Fig.I nos.1 & 2)

A small number of 4 handaxes have been identified in our collection, showing a frequency of 16% among core tools and 2.5% among the palaeoliths.

Handaxes, which are said to be completely absent in the Anyathian of Burma (Movius 1943: 367), in one of our most significant finds among the core tools of Tripura. However, the occurrence of handaxes in small quantities has been recorded by Von Koenigswald (1936, 1937: 29-30, 1939:43-45) from Patjitanian in Java which Movius (1943: 376) contested and preferred to call them as pointed bifacial choppers with longitudinal flakings. Movius (op. cit : 376) also prefers to call the handaxes collected by H.D.Collings (cited from Movius op.cit : 376) at Kota
Thampan, Malaya which resemble those from Java as not true handaxes but are implements developed from chopping-tools drawing strength on the ground that these are not associated with Levalloisian techniques usually accompanying the handaxe culture of other sections of the Old World.

Handaxes have been discovered in China at Ting Tsum.

Handaxes made on fossil wood has been discovered by Dani (1966: 71) from the adjoining area of our study viz., Mainamati Range in Bangladesh which shows remarkable workmanship all over the body. This tool is assigned to a late Acheulian age and is comparable with the fossil wood implements of Burma. Some faceted tools have also been collected from Sitakund in Chittagong hill area.

Movius (op.cit Fig.58, no.8) describes it as a pointed double sided chopper, but from the figure given in his report it appears to be a unifacial tool with a flat lower surface. In our case, the pointed tools appear to be true handaxes as they are bifacially flaked tools. Recent works in Vietnam and China, however, confirm presence of handaxes in China and Southeast Asia, as well as the presence of Levalloisian techniques.

The Nui Do collection from Vietnam includes: 1) chopping-
tools and choppers-68, 2) handaxes-5 and Quasi handaxes-6, 3) Cleavers-22, 4) non-Levalloisian flake-578 and 5) Levalloisian flakes and blades-(10%). So Movius' (see p.376) observation that Levalloisian technique is absent in the Far East is found to be out of date in the light of the recent discoveries.

Therefore, the discovery of handaxes in fossil wood contradicts Movius' study in Burma, but it is in quite conformity with recent discoveries in China, Vietnam, Java and Malaya.

Handaxes are also known from parts of the Narmada Valley (compare Khatri 1966; Appendix 13) Gujarat, Bengal, Bihar, Orissa and Karnataka (compare Paddayya 1979, Fig.5), where they are associated with cleavers and flakes and belong to the Acheulian phase. Khatri (1966:102) has analysed four stages in the evolution of handaxe in the Narmada Valley. They are: Mahadevian Pebble Tool stage, Late Chellian-Early Acheulian stage, Middle Acheulian stage, and Late Acheulian stage. According to Khatri (op.cit:102) Mahadevian pebble Tool stage is comparable with the Oldowan of Africa, the former is found in the red clay and the boulder conglomerate (gravel I).

The handaxes of Tripura recall not only European and
African examples but also those of Madras region of Penin­
sular India, which proves that Tripura had maintained con­
tacts with mainland of India during the Palaeolithic (Pleis­
tocene) times.

(iii) Handadze industry (Pl.II nos.1-4,Fig.II nos.1&2 Fig.
III nos. 1&2)

The handadzes numbering 10, give a frequency of 40% 
among the core tools and 5.10% among the palaeoliths. The 
handadzes are generally tabular in shape, medium and big in 
size and are rarely patinated, and unrolled. This is in 
contrast with the Early Anyathian implement of Burma which 
are highly patinated and rolled. These are more identical 
with the Late Anyathian I of Burma in regard to their gene­
ral typology. Some specimens are well flaked by shallow, 
small and medium flakes. Occasionally, they show secondary 
flaking. However, usually a large cortex showing distinct 
grain of wood are observed.

(iv) Cleaver industries (Pl.IV nos. 1&2 Fig.V nos.1&2)

Out of the total of 25 core tools, cleavers numbering 
atleast 4 are found, giving a frequency of 16% among core 
tools and 2.05% among palaeoliths. The cleavers of Tripura 
are medium to big in size and are roughly rectangular or
quadrangular and have been carved on a fine grained variety of fossil wood, showing some part of cortex. The specimens do not show any rolling or patination. Cleaver is one of the most significant finds in the core tool category of Tripura, which is said to be absent in Anyathian. However, presence of cleavers (22) e.g. in Nui Do from Vietnam (Boriskovsky 1962) with in the Chopper-Chopping Eastern Asiatic Palaeolithic zone, is significant.


The Lower Palaeolithic industries in the global context are now divided as (i) Handaxe cultural zone of the West and (ii) non-handaxe cultural zone of the east, but recent researches have shown that these two zones are not exclusive to each other, as non-handaxe cultural tradition have been found to occur in Europe (Verteszollos in Hungary) and northeast India. Further, handaxes and cleavers have been found in Vietnam, Java and China which essentially fall within the non-handaxe zone.

It may be stated that the core tools such as handaxes
and cleavers occur in association with handadzes and chopping-tools in the same geological context at two different sites situated 3 km apart in the Haora Valley in West Tripura, as shown in the table in the following pages.

**Comparative study with Burmese material**

The handadzes and chopping-tools of Tripura bear close similarities with those from Anyathian of Upper Burma. These specimens are carved on the silicified fossil wood and for this basic reason they are typologically identical, although Movius (1943:372) states that no true handadzes were found in Late Anyathian I (compare Pl. II no.1 with Movius 1943, Fig.71 no.67). The most significant fact about the typology of the Upper Palaeolithic of Burma, is its essential similarity with the Lower Palaeolithic when the fossil wood implements are considered. In both, the handadze class predominates although in case of Late Anyathian implements of this type are considerably reduced in size and display a marked refinement in technique. It is however, difficult to decide whether this is entirely due to survival of tradition or whether the inherent nature of the material itself has been the dominating influence (Movius 1943:374). The Middle and Upper Palaeolithic everywhere yielded tools of earlier tradition as cultural survival as we observe in the Late Soan of India. The
handadzes and chopping-tools of Tripura thus have close parallels in Burma and without any parallel in northeast India.

In order to compare the occurrences of these types in terms of frequencies in different sites in Tripura, the following table can be seen.

TABLE 34

<table>
<thead>
<tr>
<th>Tool types</th>
<th>Sonai Gang (Scarp)</th>
<th>Sonai Gang (Quarry)</th>
<th>Sonai Bazar (Tilla)</th>
<th>Bairagipara</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handadze</td>
<td>3 (60%)</td>
<td>5 (100%)</td>
<td>-</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>Chopping-tool</td>
<td>2 (4%)</td>
<td>-</td>
<td>5 (100%)</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

The distinctive feature of Tripura Palaeolithic industry is the occurrence of true handaxes and cleavers which are totally absent in Burma (Movius 1943:367). This evidence of Tripura compares well with the dominant Palaeolithic handaxe-cleaver series of India.

The production of handaxes and cleavers on fossil wood in Tripura may be attributed to the highly silicified and fine grained fossil wood of good quality found there, which could be worked exactly like flint or chert.

The presence of these two types of western tool tradi-
tion may be explained as a strong evidence of Lower Palaeolithic Cultural Traditions of India in a dominant chopping tool – handadze cultural zone.

Von Koenigswald (1936, 1937:29-30, 1939:43:45) also tried to explain the presence of handaxes in Java as an evidence of Madrasian Lower Palaeolithic cultural influence.

B. Flake-tool industry of Tripura (Pls.V-VII, Figs.VI-X)

A total of 157 flake tools have been included in the study. The different types and sub-types and their frequencies are given in Table 24 and Fig.26 pp.144 & 154.

The distinctive features of the Flake-tool industry of Tripura is that majority of the flakes are removed along the grain of the wood. Some flakes are however, removed obliquely or across (Ramesh 1987:372), the latter variety are on fine grained fossil wood. The flake tools are prepared on different types of flakes such as end-flakes and side-flakes. These are prepared on basically two types of flakes as follows:

<table>
<thead>
<tr>
<th>Type of Flakes</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Levalloisian flakes</td>
<td>247</td>
<td>(79.4%)</td>
</tr>
<tr>
<td>Levallosian flakes</td>
<td>64</td>
<td>(20.6%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>311</strong></td>
<td></td>
</tr>
</tbody>
</table>
Non-Levalloisian flakes constitute (Pl.VII nos.2,5,9, Fig. nos.2.3.4) bulk of the entire collection from Tripura. A few non-Levallois cores found in association with core tools are nothing but lumps used for detaching flakes. (Pl.IX). The original grain is visible in some cases. The cores show deep and big flake scars along and oblique to wood structure. The Levalloisian flakes show prominent bulb of percussion and faceted striking platform (Pl.V no.7, Fig.VI no.3). They are carefully prepared prior to detachment (Pl.V, no.8, Fig.VI no.1). Some implement show edge wear resulting from scraping and cutting.

Scrapers are well developed and constitute a very important class of Tripura tool-kit. They are abundant and exhibit a wide spectrum. These are comparatively large and massive and are prepared on flakes as well as on cores, the latter being usually bigger. The sub-types of scrapers with relative frequency are given in Table 27 and Fig.27 in p.144 & 154.

The variety of scrapers made on fossil wood in Tripura are similar to those in the Late Anyathian II of Burma (compare Pl.VII nos.8,9, Figs.VIII nos.3, Fig.IX no.1 with Movius 1943, Fig.71 nos.65, Fig.72, no.75), Assam, Bengal, Bihar, Orissa and parts of south India and western India where this group associated with knives, points and borers
and are placed in the Middle Palaeolithic ranging in age from 20,000 to 40,000 B.C. based on $^{14}$C dates available from Maharashtra. The flake tool industry with Levalloisian technique is recognised in the Garo Hills of Meghalaya (Minarwa Sonawal 1987:6) where this industry is placed in the Middle Palaeolithic. Scrapers on pebbles have been described from Tungabadra Valley of Karnataka where the scrapers found in association with Levallois cores and points are placed in the later part of Pleistocene on stratigraphical grounds (Ansari 1970:3).

The notched concave varieties of scrapers along with points, borers and burins have been described by Joshi et al. (1981:83) from the Majira Valley of South India, where they are placed in Middle Palaeolithic based on fossil evidence. Concave (hollow) scrapers along with borers and burins have also been found from Sanghao Caves in West Pakistan (compare Allchin op.cit Fig. 4.1 no.10). The notched scrapers of Tripura might have derived their technique from China, where notching and grooving was however common (Chang 1957, pls. 1:9, 6:2,3, 9:4). Notched axes are common in Burma. The extensive studies conducted in Chikri-Nevasa by various scholars (Sankalia et al. 1960, Gudrum Corvinus 1968: 921-940) and later by other workers have brought to light a workshop-cum-occupation centre of an Acheulian Industry which is dated to the Upper Pleistocene.
Mohapatra (1974:199-212) described side-scrapers on flake, side-scrapers on pebble, steep scrapers on split pebble and Final (evolved) Soan types as unifacial pebble round scraper, unifacial pebble scraper on flake, notched scraper, concave scraper, end scraper and thumb nail scraper. Distinct Levallois technique is noticed by Paterson among the Late Soham tools. Ray and Ghosh (1981:149) like to place Late Soan somewhere in third interglacial period. These scholars point out progressive nature of development of the flake technology in Advanced Soan Stage which shows predominance of flakes and flake-blades.

A fairly good number of points consisting of simple and tanged varieties, are present in our collection. These are prepared on flakes and sometimes on cores. (Fl.XI no.3) The points are commonly prepared on Levallois flakes showing distinct bulb of percussion and faceted striking platform. The flakes are carefully removed to give an efficient working end with occasional retouches. Some points show tang produced by removing a step flake (Fig.XX. no.2).

The points from Tripura resemble those described from different parts of the sub-continent.

Typical knives, borers, burins and awls comprise other important flake tools of Tripura. The knives are elongated
along the grain of Levallois flakes. The knives have straight, concave or convex working edges. They rarely possess tang (Pl.VIII no.8, Fig.IX no.4). One heavy knife having a straight working edge was found on a core (Pl.VIII no.7).

Borers are prepared on Levalloisian flakes (Pl.VI no.3, Fig.XII no.4) and on cores (Pl.VI. nos4,6). The burin is prepared on a Levallois flake showing conspicuous bulb of percussion and faceted striking platform (Pl.XII, no.2, Fig.XI no.7). The burin is prepared on a Levallois flake showing conspicuous bulb of percussion and faceted striking platform (Pl.XII no.2, Fig.XI no.7). The burin edge is produced by removing vertical flakes on either side.

Burins have been found in Sanghao Caves in West Pakistan (compare Allchin 1973:39 Fig.4.3 nos.1-4 & 6). These are, however, single blow burins.

Commander Todd (1939:257-72) found a blade and burin industry stratified beneath microliths in a section cut at Khandivli in the suburbs of Bombay.

In Andhra Pradesh near Renigunta, M.L.K.Murthy (1968: 101) found a blade and burin industry at a group of factory sites. It is remniscent of Shanghao Caves. Murthy (op.cit) also lists a number of other finds of blade and burin indus-
tries of the Middle Stone Age Complex towards the Microlithic. He indicates instances of blade and burin industries stratified in silts and gravels above Middle Stone Age tools, but below the modern land surface with which the microlithic industries are usually associated.

In North India, in the region of Allahabad, where the Ganges-Jamuna plains meet the hills of Central India, blade and burin industries have been found at numerous sites by G.R. Sharma and his associates (Sharma 1970:78-83). They have been found at surface factory sites at the foot of the Vindhyan escarpment in the Soan river valley, and elsewhere in Central Indian hills, and in section cut by the river Belan, a southern tributary of the Jamuna. These consistantly show two indurated gravels of somewhat different character, the upper sometimes divided from the lower by a deposit of silt, and sometimes resting unconformably on it. Incorporated in the lower gravel are found Early Stone Age tools i.e handaxes, cleavers, chopping-tools and the byproducts of their manufacture. In the Upper gravel are flake tools characteristic of the Middle Stone Age. Above the younger gravel is the second deposit of silt, followed by a third gravel containing blade industry, and non-geometric microliths in the silts immediately above and below it. The uppermost silts and the modern
soil contain microliths and pottery. This sequence is very much comparable with our long Stone Age sequence in some sites of Tripura area.

Awls are quite characteristic in Tripura. They are big in size and are shaped on tabular or triangular flakes, removed along the fibre of fossil wood (Pl. VII nos. 7-10, Fig. VII nos. 1 & 2).

Awls have been discovered in the Kagna basin (tributary of Krishna) in Andhra-Karnataka border (Anon 1987: 12-13, Ramesh 1988). Awls are also reported from Sanghao Caves in West Pakistan (compare Allchin op. cit Fig. 4.3 no. 5).

Levalloisian technique is very well developed in Tripura. Whereas, this technique is conspicuously absent in Burma, Java and China (Movius 1943: 376). The evidence of Flake-tool industry showing Levalloisian prepared core technique has been dealt by Minarva Sonawal (1987) in her thesis entitled "Studies on the Flake and Blade Industries of the Garo Hills, Meghalaya". This flake culture is well developed in southern India (Paterson with de Terra 1939: 327-30, Cammiade Burkitt 1930, Krishnaswami 1938, 1938a) where it seems to be intimately associated with the Madrasian (Acheulian). In Punjab, it exerted a very strong influence on the Late Soan development (Movius op. cit: 376).
Discoidal cores with flakes struck off around the periphery are also found in the Sangho Caves (compare Allchin op.cit Fig. 4.4 no. 2). Indeed the distribution of those which are in the so-called Levallois tradition closely follows that of true handaxe complexes of developed Acheulian type. This distribution according to Movious (op.cit:377) which extends as a huge triangle from western Europe to southern India to the cape of Good Hope embracing the Mediterranean Basin and the near east as the entire continent of Africa, should now include Eastern India as well. However, Shashi Asthana (1976:11) has strongly contested the above proposition of Movious and says that it is a very vague generalisation.

The significant find in Tripura of two distinctive Palaeolithic industries viz., (i) the handaxe industry characteristics of the Lower Palaeolithic Acheulian cultural phase and (ii) the prepared striking platform or Levalloisian technique, demonstrates that there occurs in Tripura certain degree of overlap or fusion of the two basic technological patterns, represented by bifacial core implements and Levalloisian-type flakes of western traditions.

In Central Java, flake assemblages from the Notopuro Beds in the Sangiram dome are certainly Upper Pleistocene in age (Glover 1973:54). These implements are made of
chalcedony, chert and jasper and include side and end scrapers, borers, points and occasional blades. The tools are made on thick flakes with plain striking platforms and generally obtuse striking angles. Some flakes are long and narrow, but there is no evidence of the manufacture of true blades or Levallois flakes, from prepared cores. This industry is called the Sangiran Industry by Van Heekeren (1957:43-45).

C. Blade tool industry of Tripura (Pl.VI nos. 1-6, Fig.XI nos.1-8)

There are 13 blade tools in the collection with a frequency of 6.67% among the Palaeoliths of Tripura. They are comparatively large in size and are different from the microlithic blades also encountered in Tripura. The blades are prepared along the grain of the fossil wood of a fine grained variety. The blades are prepared by removal of long and thin flakes showing a main flake surface on the reverse. The working edge is slightly convex or concave with straight or slightly straight butt end, which is thicker. They are roughly leaf shaped. Some fall into the category of backed knife. Secondary flaking and retouches are occasionally seen. Some blades show fine denticulations at the working edge.
The blade tools are absent in the Palaeolithic of Burma. They are stated to appear in the post-Palaeolithic period (Movious 1943:372). Whereas, the blade industry is well represented in the Palaeolithic of Tripura, similar to that of the Late Soan, and the Upper palaeolithic blade industries recently discovered in other parts of India.

The evidence of blade-tool industry based on fluted core technique of the Upper Palaeolithic of Garo Hills, Meghalaya has been described by Minarva Sonawal (1987) in her thesis. Blade (fluted) cores have also been found in Sanghao Caves in West Pakistan (compare Allchin op.cit Fig. 4.5 nos.7 & 10).

Professor Boriskovsky (1969:93-4) believes that lack of recognisable Upper Palaeolithic tradition in Indochina, Thailand, Malaysia and Burma is probably due to lack of research. Boriskovsky cites the recent identification of blade and burin industries in India (Murthy 1968) as a parallel case.

D. Microlithic industry of Tripura (Pl.XII Fig.XI nos.6,7)

The microlithic industry in Tripura is represented by 45 artifacts. The microlithic artifacts were generally found scattered on the surface of some sites on T₁ terrace as well as on T₄ terrace, in association with some chipped
axes and small quantities of potsherds. All the specimens are very fresh and have sharp edges. Their stratigraphic context is at higher level than the flake and blade industries.

There are 42 microliths found in association with 5 microlithic cores in our collection from Tripura. The flake implements consist of both geometric forms such as trapezes and lunates and non-geometric forms viz., micro-scrapers, micro-blades and micro-points. They are shaped on a very fine grained type of fossil wood. Some specimens show prominent bulb of percussion.

The microlithic cores consist of well prepared on cylindrical, quadrangular and cubic lumps of fossil wood. The cylindrical shaped cores are sometimes fluted all around by detaching narrow parallel sided blade-flakes along the fabric, leaving some cortex alternately.

Microlithic industry has not been hitherto discovered in the continental Southeast Asia. However, microliths have been found in peninsular southeast Asia in Celebes, Philippines, Java, Sumatra and timer, but according to Solheim (1969) they are not regular in form and are not geometric in shape.
Microliths have been discovered for the first time in northeast India at Selbalgiri in the Garo Hills, Meghalaya (Lal 1968:7-8, Sharma 1978:215-17). The Garo Hills microliths are made on basalt and non-geometric in forms. There are specimens of parallel sided blades, points, arrowheads and microscrapers. So to find parallel of the Blade-tool industry and Microlithic industry of Tripura, we shall have to look to the west that is the Indian Palaeolithic tradition and Indian Microlithic tradition. In India, microlithic tradition has a very wide distribution in parts of south central and western India in association with deposits of sub-Recent age for which references have already been made. The microlithic tradition of Tripura however, appears to be younger than the blade industry there.

The evidence of mesolithic or Hoabinhian, Late Upper Pleistocene and Early Holocene cultures, has been brought to light recently in the Garo Hills by Sharma (1974:18). In the Late Stone Age, the typological similarities between the backed microlithic tools of India and Ceylon and Java, Sulawesi and Australia suggests either the widespread diffusion of ideas and techniques or perhaps, the actual movement of people eastwards out of India (Glover 1973:52). The Tripura microliths appear to belong to the Indian microlithic tradition, the evidence of which has also been found in the Garo Hills, Meghalaya.
II. NEOLITHIC INDUSTRY OF TRIPURA (Pls.XIII-XVIII Figs.XIV-XVIII)

The neolithic industry in Tripura is widespread and prolific in nature. The neolithic artifacts include both stratified as well as surface finds. It may be mentioned that the neolithic tools have been collected from exposed terrace sections as well as from terrace surfaces, and that no systematic excavation has been undertaken, so far, in Tripura to enable us to give a total picture of the neolithic culture of this region. Therefore, a correlation has been attempted corresponding to those materials occurring in stratigraphic contexts together with typological correlation of the surface finds and their geographical distribution (Fig.11:108). Stratified materials of neolithic cultures of northeast India are known from Daojali Hoding in Assam and Selbalgiri in Meghalaya in addition, a huge quantity of surface finds-neoliths. The neolithic cultures of the above mentioned sites are yet to be firmly dated. In this context, our Tripura discovery with firm dates assumes greater significance.

The evidence of Early and Late Neolithic cultures of northeast India has been clearly brought to light by Dr. T.C. Sharma in his thesis entitled "Archaeology of Assam—A study of Neolithic Cultures" (1966) which has received recognition from Dr. Bridget Allchin and Dr. Raymond Allchin in their publica-
tion "Birth of Indian Civilization (1968:170-72,178) and from Dr. H.D.Sankhalia in his book on Prehistory and Proto-
history of India and Pakistan (1974:283-98). So, in our study on the neolithic culture of Tripura, it would be our attempt to first place our material in the context of north-east Indian neolithic and then to trace its affinity with the South Asian and southeast Asian neolithic traditions.

Neolithic Stone tool Industry: Table 35 shows the distribution of neolithic stone implements in different parts of Tripura. It is evident that all the types are not uniformly distributed throughout the area, although the sites are not situated far from each other. It is also clear that the technique of manufacture varies from site to site.

It is apparent that the following stone working techniques or industrial traditions are represented in Tripura.

1. Percussion flaking employed for manufacturing the group of chipped stone implements (Group A).

2. Percussion flaking and edge-grinding employed for the manufacture of the edge-ground implements (Group B).

3. Pecking and edge grinding used for the manufacture of the pecked-and-ground implements (Group C).

4. Overall grinding used for making the fully ground implements (Group D).
### TABLE 35: SITE-WISE DISTRIBUTION OF NEOLITHIC STONE IMPLEMENTS OF TRIPURA

<table>
<thead>
<tr>
<th>TOOL-TYPES</th>
<th>TELIA-MURA</th>
<th>CHAMPAK NAGAR</th>
<th>SONAI GANG(S)</th>
<th>SONAI BAZAR(T)</th>
<th>SONAI BAZAR(L)</th>
<th>PAHA</th>
<th>MUTAN SONARAM</th>
<th>NANDA NAGAR</th>
<th>TEPHANIA COLONY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GROUP A-CHIPPED STONE IMPLEMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Chipped celt</td>
<td>3</td>
<td>-</td>
<td>2</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>2. Shoe-last celt</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>3. Rectangular axe</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>4. Pick-axe</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>GROUP B-EDGE-GROUND STONE IMPLEMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Parallel-sided axe</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>2. Short axe</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>3. U-shaped axe</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td><strong>GROUP C-PECKED-AND-GROUND STONE IMPLEMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Small axe</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>2. Parallel-sided axe</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>3. Parallel-sided celt</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>4. Short axe with flaring edge</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>GROUP D-FULLY GROUND STONE IMPLEMENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Rectangular celt with square butt end</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>2. Quadrangular tool (broken)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>37</td>
</tr>
</tbody>
</table>
In addition to these, a few implements showing the evidence of sawing are also known.

(i) The first tradition represented by the implements of Group A are made by flaking in almost the same way as the palaeolithic tools. It is known that this tradition has also a late survival all through southeast Asia and South China (Callenfels and Evans 1928: 145-46) and in Australia till recently tools are made by this process (Mitchell 1949:65-68). Two distinct tool-making traditions are discernible among this group. These are: (1) a core-tool tradition and (2) a flake-tool tradition. Tools of the former tradition are more numerous than those of the latter. Some of the core-tools are produced in the shape of palaeolithic handaxes and probably they were used as such.

The flake tradition is also well represented in Tripura. The flake tool industry is associated with neoliths and is found in stratified contexts. The flakes are generally small, thin and leaf shaped. Some of them show clear evidence of secondary flaking or retouching. A few flakes are classified as scrapers, blades, burins and awls. There are also a few examples of fluted cores showing clear evidence of blade technique (Pl.XII no.9, Fig.XI no.6). There is a definite flake and blade industry in Tripura.
Sharma states that one flaked tool made of grey shale was found in Daojali Hading in association with polished tools and pottery. Shale was extensively used by neolithic people for making axes by grinding and polishing (Sharma 1966:320). However, not a single tool made of shale has been found in Tripura although the shale formation of the same age is extending into Tripura. It follows from this that silicified fossil wood was a much better raw material for making tools.

Stone axes without any trace of grinding have been found at several excavated neolithic-chelcolithic sites in India. Among them the example from Bellary (Subba Rao, 1948, Pls. XX:2 XXI:11,12,12), Nagarjunakonda (E.V.Sundara Rajan 1958, Fig.21:1,4,9) and Biklihal (Allchin 1960, Pls.43:2,7) are interesting. These axes (Pl.XIX b:13-15) should be compared with some examples from Tripura but a great majority of the Assamese types have no counterpart in south India. Some of the chipped axes from Santal Parganas (Allchin 1962, Pl.III: 1) and from Singbhum area (Sen 1950) are roughly comparable to stone chipped axes from Assam. The technique of striking off a long flake running down the length of the tool from one end to the other is rather a common feature in neolithic axes of south India (Allchin 1960,Pl.43:2). It is interesting to note that there is one such axe in our collection (Pl.XV no.3, Fig.XV no.1).
Now moving eastward into southeast Asia, we enter into a region where better documented materials are available. Among the southeast Asian countries, the former French Indo-China, now broken up into Vietnam, Laos and Combodia, is archaeologically better known.

Both in Indo-China and Malaysia, there are innumerable caves and rock shelters, which were inhabited by prehistoric man. The cultural remains of these cave sites give an indication of at least two distinct cultural periods. The earliest one is known as the Hoabinhian after the type site at Hoabinh in Tonkin, North Vietnam, and the later period is the neolithic. The Hoabinhian is characterised by pebble choppers, Sumatralith type of axes—both unifacial and bifacial, discs, short axes, scrapers of various types, points and knives. By faunal evidence, this culture has been assigned a post-pleistocene date (Tweedie 1953:15). Culturally, it is regarded as representing a Southeast Asian Mesolithic culture (ibid:10). It is now known that this culture has a wide distribution covering a large part of south China (Chang 1963: 46-50), almost the whole of southeast Asia and spread as far as Sumatra, Java, Borneo and Celebes.

The prehistoric archaeology of Burma, specially of neolithic, is not yet a well investigated subject (Sharma op.cit: 327). In the absence of excavated material, our knowledge of
the neolithic cultures of this country is based entirely on surface finds coming from mainly two sources. The first group of stone implements consisting of stray and accidental finds were studied by Morris (1935), and the second group bearing the mark of systematic exploration by the American expedition, was analysed by Movius (1943:378-87). Recently Hoabinhian sites have also been discovered in Burma. But there seems to have developed an industry dominated by a flake and blade tradition made of a flint-like material called silicified tuff. There are also a few roughly flaked axes of fossil wood. Typologically, this industry may be regarded as reminiscent of the Upper Palaeolithic tools. But the data collected by the American Expedition suggests that the industry actually belongs to a post-Pleistocene period.

Moreover, as the industry has been found at a number of sites associated with polished stone tools and cord impressed pottery, Movius (op.cit:378) has assigned them to the neolithic period. He has also admitted that on this evidence alone, the neolithic evidence of this industry could not be finally established. Sharma (op.cit:328) observed that this industry does not seem to have an extension outside Burma. It may therefore, be regarded as a local industry of Burma developed because of the availability of a flint-like material which generally encourages a blade and flake industry.
The fluted core discovered from Selbalgiri in the Garo Hills in stratified context, along with neolithic celts and pottery, was the only evidence of a neolithic blade industry in northeast India till our discovery in Tripura. Microflake and blade industry appears to be an integral part of some neolithic sites in northeast India. We may, however, note that a blade and flake industry made of silicious rocks occurs as an integral part of the Neolithic-Chalcolithic cultures of the Indo-Pakistan sub-continent. In southeast Asia, except Burma and in South China, it is very rare but not altogether absent. It appears sporadically in some neolithic sites as in Tam-Toa in Annam (Patte 1925, Pl.XX) where suitable material is available.

There is one more special type of implement made by only flaking technique. Because of its elongated shape and D-shaped cross-section, it is referred to as the "Shoe-last celt". However, such tools made by pecking and grinding, are known from the Naga Hills. Shoe-last celts are also known from Bellary (Subba Rao 1948:34, Pl.XXI 10-13).

(2) The second industrial tradition is represented by the tools of Group B—the edge-ground axes. In southeast Asian archaeology, the term "protoneolith" is commonly applied to this class of axe (Callenfels and Evans 1928:246). The term
seems to be an evolutionary transition from a mesolithic to a neolithic industry. The descriptive term "edge-ground tool" is preferred (Sharma op. cit: 329-30).

The evolution of this tradition is clearly demonstrated in the cave-cultures of Hoa-Binh and Bac-Son. It made the first appearance in the Hoabinhian stage where some pebble tools, axes and some scrapers were smoothed at the cutting edge by grinding (Colani 1927, Pl.IX:1, Mansuy 1925a Pls.XVI: 2, XXIV 2). The full development of this technique is however, seen in the Bacsonian industry. The technique was employed in this industry to such an extent that it may be regarded as the main tool making tradition at Bac-Son.

Axes showing traces of grinding at the cutting edge are common at the excavated Neolithic-Chalcolithic sites in south India (Subba Rao 1948, Pl.XVII:10, Sundar Rajan 1958, Pl.XXIX, Allchin 1960, Pl.43:1). The axes found at Brahmagiri (Wheeler 1947-48, Pl.CX-111), although ground at the edge only, are made by pecking technique and therefore, fall into the third group. The edge-ground axes of south India as a whole are nothing but a variant of the normal pointed-butt axe and they do not show any typological relationship with the Tripura type.
Almost all types of edge-ground tools found in Tripura, are closely comparable with the eastern Asiatic types.

(3) The third industrial tradition is represented by the implements of Group C, the pecked and ground implements, actually the term "pecked-and-edge-ground would be more appropriate as these tools are generally pecked all over and grinding is used only to prepare the cutting edge (Sharma 1966:338)

The pecked and ground implements of Assam are made on diorite, gneiss and jadeite. This type of tools are confined to Naga Hills where diorite is the chief raw material. While in other areas viz., North Cachar Hills, Lakhimpur and Sadiya Frontier, pecking is confined to jadeite tools only.

Shoe-last celts and wedge shaped celts are found in Naga Hills. The distinctive feature of Naga Hills neolithic industry is that the specimens give a rounded outline giving a oval or circular cross section. Whereas in Assam and southeast Asia, tools of rectangular section made by overall grinding technique is common.

The tradition of pecking and grinding was first put into its stratigraphic context at Brahmagiri, south India, where it occurs in a Neolithic-Chalcolithic complex for making axes and other stone implements such as spheroid rubbers or grinders
(Wheeler 1947-48:245-47). Other excavated evidence comes from Piklihal (Allchin 1960:85) and Utnur (Allchin 1916:45), both in the same region. In Kashmir Valley, this technique seems to have taken a dominant place in the neolithic industry of Burzahom (I.A.R. 1960-61, Pl.II Pl.XVIII A and B).

In eastern Asia, the pecking technique seems to be mainly confined to China. Outside China, it occurs sporadically in Burma (cited from Sharma 1966:341). To the south of Tonkin and Upper Burma, it is not common. In China, it appeared in Yang Shao. Neolithic stage had since then maintained uninter rupted continuity through successive stages of development, up to the Shang Bronze Age and also probably up to Chou period 1100–222 B.C. (Cheng 1959: 80, 89, 97; 1960:96, 1963:246). In South China, as far as we know, the technique was introduced in the early neolithic period. From this we can say that the nearest source of pecking technique to Naga Hills and Tripura could be traced to the mountain tangle of Upper Burma and Southwest China (Sharma op.cit:342). The question is how old is this technique in southeast Asia and when was it introduced in northeastern region of India. In the absence of absolute date, nothing can be said precisely. It is however, known from radiocarbon date of the neolithic site at Utnur (Allchin 1961 b:63) that the technique was prevalent in South
India around 2000 B.C. and if cautious estimate of Anderson (1943:294) is accepted, it seems to have appeared in North China around 2500 B.C.

The axes made of jadeite of which the main source is found to be in China and Upper Burma (which occurs in Naga Hills, Sadiya Frontier, North Cachar Hills) are also found in Ranchi district of Bihar. This confirms the influence of Eastern Asiatic neolithic tradition that spread over a large part of eastern India (Sharma op.cit:353).

(4) The fourth industrial tradition is represented by the implements of Group D. In parts of northeastern India, different types of rocks such as dolerite, schist, mudstone, chert, sandstone, phyllite, and entirely fossil wood in Tripura and in a limited quantity in Cachar Hills, have been employed to produce tools of this group. However, in Tripura, the fully ground tools are rare in comparison to the region as a whole. In northeastern India, Sharma (1960:355) has described 11 varieties under this group which include some types such as tanged or shouldered celts, small celts, quadrangular axes, quadrangular adzes, chisels and wedges, splayed axes and lance head of which, tanged celts are most common.

The fully ground tools, quadrangular and rectangular tools are similar to the excavated material from Daojali Hading...
in Assam. These are similar to those found in Southwest China, Vietnam, Laos and Cambodia.

At present, it can be safely argued that northeast India (including Tripura) Neolithic Primarily drew its inspiration from Southwest China and Southeast Asia.

In the fully ground class, we have the square cut-variety of celt, which appear to be lately evolved type and it is rare.

The shouldered axe is the most widely distributed type in Assam. However, the absence of shouldered celts in our collection from Tripura is very significant, as this type of tool is considered as one of the dominant factor of Eastern Asiatic and northeast Indian Neolithic traditions. The absence of shouldered celts in our collection may not necessarily mean its total absence from Tripura, since shouldered celts have been found in North Cachar Hills. It should be noted that the neolithic collection from Tripura included in this study is too small and does not claim to represent the total neolithic cultural picture of the state. Further work in other parts of Tripura as well as excavation in some neolithic sites, are necessary to bring to light the total picture of the neolithic cultures of Tripura.
In the whole of northeastern India, there is only one evidence so far of a stratified neolithic site at Daojali Hading in North Cachar Hills, Assam which is fully described by T.C. Sharma (1966) in his thesis. The cultural layer of this site has revealed a single layer deposit lacking stratigraphic evidence to sub-divide the cultural period into phases. T.C. Sharma (1966) has stated that this site is more or less comparable with many neolithic sites excavated in southeast Asia particularly in the Bacsonian of Vietnam.

Immediately to the west of Tripura, lies the Bengal delta which yielded a few surface find neoliths. Contiguous to the west of the delta is the Chota Nagpur plateau which is archaeologically a very important area. Here alone, in the Santhal Parganas Plateau, a very large number of neolithic axes and other implements have been collected. Dr. Allchin’s (1962:315-22) study of this collection proves that it contains a mixed assemblage of typical Indian type pointed-butt axes as well as several Asiatic types such as "Small Celts", "Rectangular celts" and "shouldered celts". All these types and their varieties have parallels in the Daojali Hading assemblage and our Tripura assemblage. However, absence of shouldered axes and presence of pointed-butt axes distinguishes our Tripura site from those of Daojali Hading on one hand and Chota Nagpur plateau on the other.
The south Indian neolithic cultures, characterised by a pointed butt axe industry, dominated by a plain hand-made coarse grey-ware (Wheeler 1947-48, Subba Rao 1948, Allchin 1960) show some relationship with tripura culture.

Sharma (1966:361) contends that Assam may be regarded as a corridor between eastern Asia and India through which not only the cultural traits diffused, but also into which took place several prehistoric migrations from eastern Asia.

Chisels are also common in Tripura, as in Assam. In addition to these, several types of stone implements used for the manufacture of axes, adzes and chisels have been found in Tripura. These are the grinding stones and hammer-stones. The former are made on very fine grained blanks of fossil wood which show channel-shaped depressions. Similar implements have been found in Daojali Hading and Biswanath.

Having established the affinity and origin of the neolithic cultures of Tripura, we may now discuss the pattern of settlement and the people who produced these cultures. An idea of pattern of neolithic settlement can be had from the distribution map of northeastern India (see Fig.11). It must however be pointed out that these sites refer to some vaguely recorded findspots of neolithic axes but the area
The geochronological sequence of Tripura is given in Table 36 along with the available \(^{14}C\) dates. Fig. 13 shows the stepped terraces and the related cultural sites.

As already mentioned, the \(T_1\) terrace sediments of the Khowai and Haora Valleys in Tripura contain minor pockets and lenses of organic clay and peat embedded in the dominantly arenaceous deposits. One such peat layer at Dusrabari near Khowai, associated with semicarbonised wood pieces and leaf impressions (dicotyledon affinity), has been sampled at a depth of 4 m below the terrace level. The peat has yielded a date \(35,690 \pm 3,050\) yrs B.P. by \(^{14}C\) method. The stone artifacts, occurring only up to a maximum depth of 1.70 m below the \(T_1\) terrace in the Khowai Valley as well as in the Haora Valley. Therefore, the age of the sediments enclosing the stone implements at 1.70m depth, is obviously younger than the above date when we allow time for the deposition of 2.30 m thick layer of sediments. As such, we may tentatively say that the implement bearing deposits are as old as about 30,000 yrs B.P. which falls in the Late Pleistocene.
The tool assemblage of the first group comprising chopping-tools, handaxes, handadzes and cleavers as well as some flake tools and Levallois flakes, are noticed at the basal part of the anthropogenic layer in Sonai Bazar (Quarry) site. The second group of stone tools i.e., core scrapers, flake and blade tools occur at slightly higher levels. In the higher levels of the exposed section, are observed chipped axes, sometimes associated with ground tools, hammerstones and chisels and microliths as well as some flake tools and scrapers. The edge-ground and fully polished tools generally occur on the soil surface along with some small quantity of potsherds of grey and brown wares.

The next terrace for which we have a cluster of $^{14}C$ dates is the $T_3$ unit which has a thickness of about 18m. The carbon dates for the upper part of this terrace deposit shows a range from $1100 \pm 90$ yrs.B.P. to $3,450 \pm 110$ yrs.B.P. by $^{14}C$ method. Out of the numerous sections studied and longed (Fig.10), only one section near Jirania yielded a specimen of hammerstone, found in a stratified pottery deposit (Photo 15). This implement bearing marks of rolling must have been derived by the erosion of the older site, because no stone tool using people seems to have inhabited $T_3$ terrace as it was under perpetual flooding till about 1000 B.C. However, stone tools and flakes do occur in the present day stream bed,
which are apparently derived by erosion of the implementiferous deposits of older age. From the above chrono-cultural data, one could arrive at the conclusion that the Stone Age people repeatedly used the same sites from time to time, as could be judged by the tool assemblages which have a long range from Middle Palaeolithic to Late Neolithic.

A few radiocarbon dates are available from parts of eastern Asia and Europe which are fairly comparable with our Tripura dates.

Two dated sequence of cave deposits are known from Niah Cave in Borneo and Tabon in Phillipines, where $^{14}$C dates dating back to c.40,000 B.P. and 30,000 B.P. respectively, are available (Harrison 1967:95, Fox 1970:18). The Pleistocene levels at Niah seem to be poor in artifacts and apart from the morphologically modern Homo sapiens skull, contain no more than a few unretouched flakes. "This flake is dated to be about c. 40,000 B.P. and is thus the oldest $^{14}$C dated artifacts from southern Asia (Glover 1973:54 ). Small unretouched quartzite flakes continue into later times at Niah, and some where between 15,000 to 10,000 B.C. (Harrison 1967:95) edge-ground axes appear in sequence. Similar finds in New Guinea (J.P. White 1972), various parts of Australia (C.White 1971:148-53) and Indo-China (Mansuy 1925:32) confirm the opinion once put forward by Tweedie (1965:3) that edge ground tools are an
ancient and independent technological development in southeast Asia, and are not necessarily an indication of a settled, agricultural way of life.

$^{14}$C date of Terminal Mousterian (end of Middle Palaeolithic) at La Quina in France is 32,350 ± 530 yrs. B.P. and the earliest $^{14}$C dates of Upper Palaeolithic are (a) periglacial I (France) = 38,500 ± 400 yrs. B.P. (b) Jerzmanoeice culture, Poland = 38,160 ± 1,250 yrs. B.P.

Regarding settled village life during the neolithic period in northeast India, the following observation is noteworthy. The growing evidence for quite early, and perhaps independent development of agriculture and settled village life (by at least c. 3,500 B.C.) in the region bounded by South China, Assam, Bengal and the mainland of southeast Asia, might provide an impetus to re-examine the status and chronology of the Indian Eastern Neolithic cultures. (Glover op. cit:52)

The available geochronological and archaeological data enables us to propose the following chronological sequence for the palaeolithic cultures of Tripura. As the archaeological data from Tripura are unique in the context of Indian Stone Age assemblages, it would be justifiable on our part to propose a local cultural term for Tripura, which we may call "Tripurian"
in conformity with the local cultural term *viz.*, Sonian used for the Stone Age culture of North West India and Pakistan.

2. Evolved Tripurian=Upper Palaeolithic=Late Anyathian II(?) =Evolved Soan.

1. Late Tripurian=Late Middle Palaeolithic=Late Anyathian II

In both phases, handadzes class of tools as well as handaxes and cleavers occur in small quantities. But the Late Tripurian, like the Late Anyathian I types, are considerably reduced in size and display a marked refinement of techniques. This phase includes the Levalloisian flakes, side-scrapers, awls, points and knives. The Late Tripurian appears to include both Madrasian as well as Anyathian traditions.

The blade-tools of Tripura, associated with fluted cores, are unique. Similar tools are not associated in the Late Anyathian II of Upper Burma. In form and technique, they resemble closely the Upper Palaeolithic blades of India and the west. Along with blade tool assemblage are included end scrapers, thumb-nail scrapers, awls and burins.

The large size lunates and micro-flakes may be taken as a development of the Upper Palaeolithic industries in its final phase, as we find microliths and lunates in Upper Aurignacian.
This scheme of placing the microliths in the last phase of the Evolved Tripurian is tentative pending discovery of Mesolithic site in Tripura.

Regarding neolithic culture of Tripura, available data presented in this study give indication of (1) early neolithic phase and (2) late neolithic phase. Unless, a neolithic site in Tripura is excavated and firmly dated by $^{14}$C method, the present scheme may be considered as tentative.

The cultural sequence of the Stone Age cultures of Tripura enables us to propose a chrono-cultural sequence for the region, showing correlation of prehistoric cultures with the geological time scale, terrace sequence and $^{14}$C dates (Table 36).

On the basis of stratigraphical as well as typological evidences, Prof. Sankalia (1981:5) has visualised a long Stone Age sequence in Garo Hills, Meghalaya, which holds good for Tripura as well and the whole of northeast India. This sequence can be sub-divided into:

- Early Palaeolithic (c. 200,000 - 50,000 B.C.)
- Middle Palaeolithic (c. 50,000 - 20,000 B.C.)
- Late Palaeolithic (c. 20,000 - 10,000 B.C.)
- Mesolithic (c. 10,000 - 5,000 B.C.)
- New Stone Age (A) (c. 5,000 - 2,000 B.C.)
- New Stone Age (B) (c. 2,000 - 1,000 B.C.)
<table>
<thead>
<tr>
<th>Geological Era</th>
<th>Geological Period</th>
<th>Terrace Sequence</th>
<th>Cultural Sequence</th>
<th>$^{14}$C dates (yrs. B.P.)</th>
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<tbody>
<tr>
<td>QUATERNARY</td>
<td>LATE PLEISTOCENE</td>
<td>T_1</td>
<td>Late Tripurian = Late Middle Palaeolithic</td>
<td>35,690 ± 3,050</td>
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<td>MIDDLE PLEISTOCENE</td>
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<td>EARLY PLEISTOCENE</td>
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<td></td>
<td>UPPER TERTIARY BED ROCK</td>
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</tbody>
</table>
The Early or Lower Palaeolithic cultural relics of Tripura has not yet been found. The Middle Palaeolithic and Late Palaeolithic with their circa dates proposed by Prof. Sankalia corroborate closely with the Late Middle Palaeolithic and the Late or Upper Palaeolithic of Tripura with $^{14}$C date. The Mesolithic of Tripura i.e., our microlithic horizon is not yet fully explored and firmly dated. But there are indications that the geometric microliths found in Tripura may belong to the Mesolithic phase, which may be confirmed, by further investigations. The new Stone Age (A) and New Stone Age (B) as proposed by Prof. Sankalia corroborates closely with the Early Neolithic and Late Neolithic of Tripura with $^{14}$C date. This may be considered as a significant advancement for the Stone Age Archaeology of northeast India.

* * *