GEOGRAPHICAL BACKGROUND OF MANIPUR

The present state of Manipur occupies a considerable tract of land in the extreme north-eastern part of India. It is predominantly a hilly state, but in its central part there is a small plain of alluvial filling. This plain area is thickly populated and is the centre of political and economic activities of the state. Imphal, the capital of the state is located in the northern part of the plain area. The present state of Manipur lies between 23°50' N and 25°41' N Latitudes and 93°2'E and 94°47'E Longitudes. The total geographical area of Manipur is 22356 sq.kms, which is about 0.68 per cent of the geographical area of India.

From the very beginning Manipur has been characterised by geographical isolation. According to Manipuri Puranas (mythology), in the beginning everything was under water. Nine Lai-pumthous (gods) and seven Lairemes (goddesses) all working together made sixty-four hillocks. Thus they created the land (Ansari, 1973:1). It is situated in the middle of the mountain ranges separating the plains of India and Burma (Myanmar). They run roughly north-east to south-west and as such act as great a barrier to east-west communication. But for a few mountain passes, which act as lines of communication this region is one
Map: 1 Manipur, Administrative Units and location of the State in the Indian Union.
of the most isolated parts of India. Actually it lies almost halfway between the trijunctions of Indo-Burma-China in the north and Indo-Burma-Bangladesh in the south. It is bounded on the north by Nagaland, on the west by the Cachar district of Assam, on the east by Burma (Myanmar). In fact it serves as the gateway of India from the rest of South East Asia. Out of 855 sq.kms. constituting the boundary of the state, approximately a length of 352 km. forms the international boundary with Burma.

The physiographic nature of Manipur is characterised by north-south parallel hill ranges attaining altitudes upto 3050 mts. A.M.S.L. The hill ranges are generally higher in the eastern parts than in the west. The central portion is in the form of valley or an intermontane basin which has an area of about 1765 sq.kms. and is surrounded by hills.

After the independence, the native state of Manipur was merged into the Indian Union and it was kept in the category of part 'C' states. The instrument of merger was signed by the then Maharaja Budhachandra (between the Government of India and Manipur) on September 21st 1949. It became a fullfledged Indian state on the 21st January 1972 and included its language in the 8th Schedule of the Indian Constitution on 20th August 1992.
PHYSICAL FEATURES

Manipur falls on humid landform area. On the basis of structure, topography and geomorphic process, Manipur can be divided into two distinct units viz., the Manipur valley and the Manipur hills which surround the valley. The Manipur hills cover about 92 per cent of the total area of the state. They stretch roughly north-south as parallel folds with altitudes varying between 762 mts. (2500 ft) to nearly 3048 mts (10,000 ft) A.M.S.L. They are parts of Assam-Burma tertiary ranges, which sweep in a long curve from the north-eastern corner of Assam to the Cape Negrais in Burma. In this state they enclose the central plain at an altitude of about 792.4 mts (2600 ft) high enough, to draw attention, in such a mountainous country (Ansari, 1973:13).

The Manipur valley which is bounded by the latitudes 24°5' - 25°15' N and longitudes 93°37' - 94°15' E and has a geographical area of 2639.75 sq.kms (Angou, 1987:21). This valley is also known as Imphal valley and comprises the entire plain regions of the Imphal District, Thoubal District, Bishenpur District and parts of Senapati and Chandel Districts.

The average elevation of the valley is 763 mts A.M.S.L.
Map: 2 Manipur, Physiography.
with some isolated hillocks jutting out of the valley portion. The valley is widest at the central portion. It tappers towards north and south. Out of the total area of the valley, about 600 sq.kms. are occupied by lakes and marshes viz. Loktak, Ikop-pat, Waithou-pat, Pumlel, Lamjao, Loushi-pat and Kharung-pat etc. by barren uplands and hillocks viz. Chinga, Heibok, Langol, Lang-thabal, Chingmeirong, Langjing etc.

The topography of the Manipur valley is more or less flat elongated, sloping gently from North to South-East. The gradient as calculated between Sekmai (24°57′N and 93°53′E at 824.22 mts. A.M.S.L.) and Bishenpur (24°37′40″N and 93°46′E at 777 mts A.M.S.L.) about 46 kms apart, comes to around 1.22 metre per kilometre (Angou, 1987:23).

The most interesting and important topographic feature is of the Loktak lake, the greatest fresh water lake in North-East India which lies in the South-Western part of the valley. It has a spread of about 257 sq.kms. during dry season. The catchment area of the lake is 6,000 sq.kms.

B. GENERAL GEOLOGY

Geologically this region can be called a 'virgin' area. Information on the geology of Indo-Burma region is also sketchy.
Geologically, Manipur is a part and parcel of Assam-Burma Geological unit in which tertiary ranges sweep in a long curve from the north-eastern corner of Assam to the Cape Negrais of Burma. The geological succession established by Oldham (1883) and updated by Evan and Mathur (1964) is as follows.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Locality</th>
<th>Rock type</th>
<th>Formation Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Manipur Valley</td>
<td>Sand, silt and clay</td>
<td>Recent</td>
</tr>
<tr>
<td>2.</td>
<td>Western Hill ranges at higher elevations and the Chingai formation on the eastern side of the valley</td>
<td>Flaggy sandstone coarse bedded with sandy shales</td>
<td>Barail group (Oligocene)</td>
</tr>
<tr>
<td>3.</td>
<td>Western Hill ranges at lower elevation and the relict hills in the valley</td>
<td>Dark grey to green splintary shales with fined grained sandstones and carbonaceous shales</td>
<td>Disang Formation (Eocene)</td>
</tr>
</tbody>
</table>

**Rock Formation**

The rock formation of Manipur, according to Th. Angou Singh (1987: 33-35) are as follows:
(i) Alluvium

This is the youngest deposit which covers the entire valley and consists of very fine grained sand, silt and clay. Occasionally a few pockets of gravels consisting of materials reworked from the Disang series are also encountered. It has a thickness of 200 - 300 m.

(ii) Tipam Series:

Tipam series is represented by coarse grained feruginous, micaceous and weathered sandstones interbedded with shale, clay and conglomerate. It occurs in a small area and has a thickness of about 2700 m. The age of this formation is of upper and middle Miocene (Angou, 1987:33).

(iii) Surma Series:

Surma series is deposited on the western part of the state especially in the Manipur-Assam borders. It comprises of
the usual alternation of sandstone and shale. It dates to the Lower Miocene and has a thickness of about 4000 to 4500 m. (Angou, 1987:33-34).

(iv) **Barail Series:**

Surma series is unconformably underlain by Barail series which dominates the western parts of the state. Some parts of the eastern and northern Manipur are also deposited by the Barail series. It consists of buff to yellow and olive coloured medium to coarse grained sandstone and some minor quantity of arenaceous shales. The Age of this series is of Oligocene and Upper Eocene. It has a thickness of about 4 km. to 6 km.

(v) **Disang Series:**

Parts of eastern southern Manipur (hilly areas), parts of the Manipur valley and also hill ranges on the western flanks of the valley belong to this series. It consists of dark, olive gray and buff coloured splintary shales which are well bedded, highly cleaved, jointed, folded and faulted; often intercalated with beds of fine grained sandstone, mudstone and siltstone (Anand et al; 1968:loc.cit). The age of this series ranges from Upper Cretaceous to the Upper Eocene.
(vi) Axials:

The sedimentary rocks to the north and the north-east of Sekpao and around Ukhrul and the eastern parts of the state have been mapped as Axials (Cretaceous). The rocks are mainly buff coloured and variegated shales, slates and siltstone with subordinate sandstone and quartzites and limestone beds. A few small serpentinite intrusives which occur in the forms of dykes within the axial group of rocks are also encountered. Jha and Agrawal (1981) reported the presence of forminiferal assemblages of Upper Cretaceous age in the limestone lenses and the closing shales.

Geological Structure

The Director General, Geological Survey of India reported that "The regional strike of all the work formation in Manipur varies between North-South and North-East to South-West. The Patkai and Kohima synclineris continues southwards into Manipur and form parts of the Burmese Arc" (G.S.I. 1974: 61). Bhattacharya (1973) reported that Disang series which forms the rock surface and pediment belonging to the lower part of the Tertiary were deposited under geo-cycninal facies of Assam-Arakan basin. Brown and Dey (1955:48) say "Though some anticlinal crest remain intact at the surface, they have been removed at depth by thrusting".
According to Oldham (1883) and Pasco (1912) the Manipur valley represents an anticlinorium plunging southwards, the crest of which has been eroded away. The rocks of the eastern part of this valley trend to east and that of the western trend to west. This clearly demonstrates the evidence of anticlinorium. Further it is also seen that the entire north-eastern region of India including the Manipur valley fall under zone 'V' in I.S.I. seismic zone map of India. Dayal and Duara also reports "The Manipur valley which is a unique depression between the Naga Hills and Arakan Yoma is possibly a tectonic valley" (Dayal and Duara, 1962-63). Its exact character and history are difficult to explain at this stage. The presence of a narrow belt of Barail rock in the eastern part of the valley and the existence by numerous salt springs along a straight line on its eastern side viz. Shihkong, Chandrakhong, Ukhongsang etc. possibly indicate a thrust fault by which the younger Barail have been brought down in relation to the surrounding Disang (Angou, 1987:36).

According to Oldham the succession of beds in Manipur and Naga Hills is as follows:

Alluvium

Glacial (?) gravels and talus deposits of Naga Hills

Tertiary
Serpentine rocks-intrusive
Cretaceous and Axials

About this R. D. Oldham says "It is a characteristic dark coloured serpentine; it frequently becomes a grabro and contains bronzite, and is intersected by veins of gold coloured chrysolite, or sometimes carbonates of magnesia, ......... In the neighbourhood some of the larger masses of serpentine and sandstones and shales are converted into greenstones and chloritic schist" (Oldham, 1883:225).

M. S. Krishnan also wrote; "In this region, rocks from Upper Cretaceous to the present alluvium are found. The oldest rocks found in Manipur are confined to the eastern parts of the state, close to Indo-Burma border. They are grouped as cretaceous rocks accompanied in many places by serpentine. The serpentine belt extends from the jade mines of northern Burma through Naga hills and east Manipur Hills into the Arakan region' (Krishnan, 1960:73).

In this connection A. S. Ansari also mentioned in his 'Economic Geography of Manipur' that, in Manipur the Trappiean intrusions are confined to the eastern portion of Tangkhul
region, occurring in dykes of varying size. The main axis of intrusion forms a band, a mile or two in breadth, which runs in north-south direction through the whole of the eastern part of the state (Ansari, 1973:12).

Anand Banerjee and Dayal reported in their paper entitled 'Investigation of Nickel and Copper Mineralization in the Moreh Area of Manipur state' that the serpentine rocks are younger than Cretaceous, and the associated sedimentary rocks have been described as Axials. The sedimentary rocks, east of the main serpentine body, stated as Axials (Cretaceous), are mainly variegated shales, slates and silt stones with some amount of sandstone and quartzites (Banerjee and Dayal, 1968:23).

Edwin H.A. Pasco, viewed this region as follows: 'In the Tangkhul Naga region around Ukhrul, limestone of cretaceous age is found. Along the Indo-Burma border, the monotonous flysch succession is interrupted by a conglomerate containing pebbles of serpentine. The beds on the east side of conglomerate with a more foliated habit had a harder texture than the beds to the west. The more easterly beds consist mainly of argilaceous deposits with occasional arenaceous band and greater degree of metamorphism' (Pasco, 1959: 1328).
J. Goggin Brown and A. K. Dey, in their book entitled 'India's Mineral Wealth' stated that the tertiary rocks which are found all over the state, range in age from Eocene to Pleistocene. In Assam the lowest Tertiary beds are Mallet's Disang series. "A very great thickness of almost unfossiliferous shales, slates and phillites, best exposed in Naga Hills and Manipur" (Goggin, B. and Dey, 1955:98-99).

Here we may recall the words of Anand Banerjee and Dayal "Almost all the foot hills of north-west of Tengnoupal are of Disang Shales. Lithologically the series consist of dark olive grey and buff coloured splintary shales which are well bedded, highly jointed and cleaved, often intercalated with thin beds of fine grained sandstones and siltstones" (Banerjee and Dayal, 1968:237).

The Disang series is provisionally recognised by R.D. Oldham as older series and contains beds of slates, sandstones and quartzites, well distributed over the Angami Naga area and elsewhere. These beds are met with after crossing the Makru river on the road from Cachar to Manipur. In the bed of Barak river, the series continues as far as the alluvium of Manipur Valley. To the east of this valley there is a huge series of slates and quartzites with an easterly dip. The beds extend towards the Tangkhul Naga area of great serpentine intrusion (Oldham, 1883:219).
C. DRAINAGE SYSTEM

The state lies in the catchment area of two river systems namely the Ganga-Brahmaputra and the Chindwin-Irrawadi. The tract of land between the plains of Cachar and Manipur forms the catchment of the Barak river. The water-shed is marked by the Japvo-Barail range on the north, roughly along the boundary between Manipur and Nagaland upto Mokokchung. The first range west of the central plain, acts as the water-shed of Barak river. Further south, the water-shed is marked in Mizoram. Nearly half of Manipur lies in the Barak catchment.

The eastern half of Manipur including the central plain is in the catchment of Chindwin-Irrawadi system. The water-divide on the north is formed by the eastern spur of Japvo, east of Mao, which itself is situated on the divide line with land sloping to the north as well as to the south.

Thus, the drainage system of Manipur can be divided into three main systems viz. (i) the Manipur system, (ii) the Barak system and (iii) the Chindwin system. The Manipur (or the Imphal river) also called the Turei Achouba basin covers about one fourth of the total area of the Manipur state, while the Barak and the Chindwin cover two fifth and one fourth of
the state's area respectively. These three important rivers and their main tributaries perennial. Some tributaries flowing in the piedmont zone and upper reaches are, however, intermittent and ephemeral. Drainage is often controlled by joints and fractures of the tertiary rocks. The drainage pattern, therefore ranges from dendritic to parallel and trellies type (Angou, 1987:51).

(i) **THE MANIPUR RIVER**

The Manipur river is the longest and the most important river in Manipur. It has nine major tributaries: the Imphal, Iril, Kongba, Thoubal, Nambul, Sekmai, Khuga, Nambol and Chakpi. The catchment area of this basin is 5600 sq.kms. and 25 per cent of the total area.

The Imphal river rises in the northern hills of Kangpokpi, having a height of about 11,000 mts. A.S.L. Flowing south, it divides the Manipur valley into two parts. After joining the Kongba river at Kongba-Irong, the Iril at Lilong and the Thoubal river at Irong-Ichin and the Khuga river at Ithai, it traverses through the hills of the southern parts of Manipur and finally falls into the river Chindwin. The Imphal river in its lower course is known as *Turel Achouba* or Manipur River.
(ii) THE BARAK RIVER

The Barak river and its tributaries, which flow in the north-western part of Manipur state, is the biggest river of the state. It joins the Brahmaputra after many meanderings through the Cachar district of Assam and Bangladesh. It rises in the northern range, about 16.09 kms east of Mao and follows a south-westerly course and crosses the Imphal-Dimapur road at Karong, then it takes a bends towards Maram. Then it follows a westerly course till it reaches the north-west corner of the state. At Tipaimukh it is joined by the Tipai river which flows northwards from Mizoram. At Jirighat it is joined by the Jiri river. The important tributaries of Barak river are Irang, Jiri, Makru and Tipai.

(iii) CHINDWIN RIVER

The rivers of the north-eastern and eastern parts of Manipur falls into the Chindwin-Irrawadi system of Burma. Thus the rivers viz. Chingai, Chamu, Lokchao, Phou-khong, Yu, etc. are the tributaries of the Chindwin system.

LAKES

Besides these drainage systems, there are a large
number of lakes and marshy-swampy areas on either sides of the Manipur river right from the central parts of the valley, but especially towards the southern parts. Since the level of the Imphal river is lower than that of the Loktak lake, which lies close to the right-bank of the Imphal river, it does not fall into this lake. On the other hand, the excess water derived from these lakes is forced into the river through a channel called Khordak. In fact, the other lakes viz. Ikop-pat, Kharung pat, Lamjao pat and Pumlel pat etc. are connected to the Imphal river through a number of natural waterways. Therefore, the southern parts of the valley are occupied by many lakes and marshes. Out of the total area of the valley ie. 2639.75 sq.kms about 600 sq.kms is covered by lakes.

LOKTAK LAKE

It is the most striking landmark of Manipur. This lake is the biggest natural reservoir in the valley. The general elevation of this lake is 767.3 mts A.M.S.L. where water spread covers an area of 260 sq.kms. and varies from time to time. The rivers viz. Nambul, Nambol, Thongjaorok, etc. feed this lake. The lake is also connected to the Manipur river through a narrow channel.
The other smaller lakes that occupy the left bank of the Manipur river are also connected to the river through natural channels.

The catchment area and normal annual run-off of the Lamjao Khong with Pumlel pat, Kharung pat, with Ikop pat, Waithou pat, Lousi pat, Kumbi pat, Poirou pat and Sana pat covers 62.88 sq.km., 54.9 sq.km, 16.61 sq.km., 14.5 sq.km., 6.8 sq.km., 0.79 sq.km. and 1.986 sq.km. respectively. Apart from these lakes there are a number of small lakes which are strictly speaking marshes, locally called Pat. They are found throughout the valley. They are Porom pat, Utra pat, Sangai pat, Kaji pat, Laphu pat, Lening pat, Akam pat, Ungam pat, Lamphel pat, and Tekhao pat etc. Some of them have been totally or partly reclaimed for cultivation during the last few decades (Angou: 1987, pp.59-62).

D. **SOIL**

The soil of Manipur is classified as follows:

1. **Soils of the hills**
   
   (i) Ferrugenous or non-laterized red soils (ultisol)
   
   (ii) Laterized (oxisol)

2. **Soils of the plain**
   
   (i) Alluvial soils (Entisol)
   
   (ii) Organic soils (Histosol)
1. **SOILS OF THE HILLS**

   (i) **Ferruginous or Non-Laterized Red soils (ultisol)**

   These soils occur in the eastern and western hill of the valley. Their colour varies from red or yellowish red to brown depending on the presence of hydrated oxides of iron. These soils are mainly derived from the weathered sandstones or slate and phyllite. Texturally they are sandy loam and structurally granular. They are moderate to highly acidic and contain a fair quantity of nitrogen, phosphate and potash.

   (ii) **Laterized soil (Oxisol)**

   These soils are found predominantly in the Barak basin and the hill slopes of the western Manipur hills. They are red in colour, coarse in texture and moderately acidic. They are rich in potash, nitrogen and phosphate.

2. **SOILS OF PLAIN**

   (i) **Alluvial soil**

   These soils which were mainly deposited by the Imphal and its tributaries dominate the valley. They are clayey loam in texture, grey to brown in colour, and moderate to less acidic.
They contain a moderate proportion of potash, phosphate, nitrogen and organic matter.

(ii) Organic Soils

These soils of hydromorphic origin occur in and around the Loktak lake and other lakes, marshes and in low lying areas of the Manipur Valley. They are clayey, clayey to loam in texture, dark grey in colour, rich in organic matter and acidic. They contain a good proportion of nitrogen and phosphate but are poor in potash.

E. CLIMATE

Following the climatic classification of Kappen and updated by Th. Angou Singh, the Manipur valley belongs to warm temperature rainy climate with dry winter and hot summer (Angou, 1987:38). The climatic condition, however, has to be studied in relation to the seasons. There are two main seasons separated by two short transitions. They are:

1. Seasons of the north-east monsoon:
   (i) Winter Season (December to February)
   (ii) Summer Season (March to April) with intermittent rain.
2. Seasons with south-west monsoon:

(i) Hot and rainy season (May to September) and
(ii) Retreating monsoon (October to November).

Winter months are dry and cold. The precipitation in June, the wettest month (313.91 mm) is more than twenty times that of December, the driest winter month (14.04 mm). Therefore, it belongs to dry winter type of climate (Angou, 1987: 38).

7. RAINFALL

The rainy season commences in April and continues upto December. There are generally long spells of fine weather. June, July and August are the wettest months of the year. During the months of April and May the rains are due to convection, associated with thunder and lightning. They occur, usually in the afternoon. Such rains are considerable in amount and are the precursor of monsoon rains. 84.09 per cent of rainfall is distributed over the months from May to October. Thunderstorms occur more frequently during April to May and September. Rainfall is heaviest in the western hilly region of Manipur and varies with the topography of the region.
G. TEMPERATURE

In general the temperature throughout is very pleasing and enjoyable. Thermometer seldom touches the freezing point, nor at any time of the year is excessively hot. In the hill areas it is much cooler as compared to that of the central plain. Altitude plays an important part in lowering the temperature of the air. Mean monthly temperature for the coldest month (January) is 12.65°C. The mean monthly minimum temperature is less than 4°C and sometimes the minimum temperature is recorded below 0°C. Frost is rare in this area. However it is common in the surrounding hills particularly at Ukhrul. The period from October to February is foggy. Fogs are thickest in December.

Summers are hot and wet. The highest mean temperature is 25.14°C in July. Days are hot in the month of April. Average mean monthly temperature of this month is 29.29°C. However, the recorded mean maximum temperature for May is 33.46°C (Angou, 1987: 48).

H. FAUNA

The thickly forested hill districts of Manipur have
preserved many wild animals. The forest fauna of Manipur contains a large variety of species as noted below:

They are: elephant (Elephas indicus), fox (Vulpus bangalensis), grey mongoose (Herpestes pallidus), jackal (Canis nutilaus), jungal cat grass/water snake (Rhabdophis stolatus), krait (Bungarus candidus), king cobra (Naja hannah), paithon (Python molurus), spotted deer/chital (Axis axis), sangai/brow antler deer (Shurbus eldi eldi), long tailed monkey (Maccaca radiata), tiger, deer (Cervus elephus), etc. etc.

A wide range of animals and birds whose habitats extend from the tropical region to frigid zones are found. Thus we find the goral and hyelaphus porcinus whose habitats extend upto Siberia and Phillipines respectively. Apart from the famous brow antlered deer (cervus eldi eldi), some of the other important animals available are the Himalayan black boar, the common Indian sloth bear, wild boar, mithun, leopard and several species of procupines, mole, etc.

Among the birds, the common wood partridge, the black patridge, the red jungle fowl and several species of quail, snake, duck, beal etc. are most commonly observed.

In the winter, great flocks of geese, duck, and some
other seasonal birds come from the north to the lake of the central plain. Music birds along with fishing birds like crane, kingfishers and water crane are found abundantly. The cocks, parrots, dove, pigeons, ducks and swans are the domesticated birds.

I. FLORA

Manipur has a flora similar to that in the adjacent regions, there being similar environment, especially topography and climate. The forest are of mixed type, since a large variety of species grow in the same area. The species slowly change depending on altitude.

The forests of the state may broadly be divided into (1) the tropical moist deciduous with secondary growth, (2) tropical moist deciduous, (3) sub-tropical pine, (4) sub-tropical and (5) tropical semi-evergreen with predominantly bamboo (Ansari, 1976:25). The official classification of forest, however, include Reserved, Protected and Unclassified forests covering 1334, 4171 and 8860 sq. kms. respectively (Department of Statistics, Government of Manipur, 1972:44).

1. The tropical moist deciduous forest with secondary growth occurs in patches in the south-eastern part of the state
along or close to the Indo-Burma border. It contains broad-leaved trees, the most important being teak.

2. There are patches of tropical moist deciduous forest in the western part of Manipur. This forest is also found in the south-eastern part of the state, where it contains valuable teak trees.

3. The Sub-tropical pine forest occurs in the north-eastern part of Manipur along Indo-Burma border. There are also a few patches in the southern part of the state when this type of forest occurs. It contains softwood trees.

4. The hills surrounding the central plain contain sub-tropical forest. There is a good demand for firewood and structural timber in the plain. Most of the supply comes from this forest.

5. The tropical semi-evergreen forest with predominantly bamboo occurs in areas of heavy rain. It contains hard wood trees. The trees are tall and thick. The Barak and Jiri rivers pass through this forest region.

Some of the common plants of the state are given below: Bamboo (Bamboosa fulda), bay leaf (Cinnamomum), amla (Phyllanthus...
thusem), banana (Musa paradissiaca), betel nut (Areca catechu), betel (Piper betel), cotton (Gossypium herbaceum), mango (Magnifera indica), maize (Zea mays), potato (Solanum tuberosum), pineapple (Ananas comosus), papaya (Carica papaya), sal (Sorea robusta) etc. etc.

Besides there are many species of domesticated plants like soyabean, rice (paddy), wheat, pulses (pea, gram, country beans of various types), oil seeds (rape, mustard, sesamum), jute, turnip, cauliflower, pumpkin, squash, citrus fruits of various species/types, apple (sour type), various species of phaseolus (hawai uri, koli hawai, kalandri hawai), vagina sinensis (hawai ashangbi), etc.

Above all there are also many plants of economic importance. Some of them are adina cordifolia (haldi in Hindi), albizzia lebbek, aquilaria agallocha (agon), brusella serrate (salai), cannamomum ceceodephne (tumtla), canarium (mekruk), castonopsis indica (sahi), cedrela toona (tairel), cordia ode-ratiasima (lamuk), duabanga sametoids (tan), gamelina arborea (wang), langerstroemia-flos-reginae (jamul/javil), mesua ferrea (iron wood - Uthou), bonsom/phoecha heisnana (uningthou), pinus longifolia (uchan), quercus semiserrata (uyil), salmalia mala-barica (tera), schima wallichii (usoil) and tretameles nudifolia (tal).