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THE STATE FAUNA OF TRIPURA : AN OVERVIEW

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1. INTRODUCTION

1.1. Location and area

Tripura, the smallest of the "seven sisters of the north-east", is situated between 22°51'-24°32' N and 90°10'-92°21' E. It has an international boundary of 8.39 km with Bangladesh towards its west, south and north. In the east, the state shares a common boundary with Mizoram and Assam for 109 km and 53 km respectively.

The state has a geographical area of 10,491 sq. km. It accounts for 0.32% of the total land area of India and occupies the 22nd position in terms of the area among the States and Union Territories of India. The maximum length and breadth of the state measures 183.50 km and 112.70 km, respectively. About 70% of the state is hilly. The NH 44 passes through the state. Its capital, Agartala is situated on the bank of the river Haora at 23°50'40" N and 91°22'55" E with an altitude of 12.8 m.

1.2. History

The British political parlance of Tripura was Tipperah or Hill Tipperah. The story of the origin of the name "Tripura" is shrouded in myth and legend. The name of the state is believed to have been coined in honour of the King Tripura, who was the 46th descendant of Chandra dynasty, an emperor considered to be contemporary of Raja Yudhistir of the Mahabharata age. Some scholars ascribe the name to be in honour of the goddess Tripureswari or Tripura Sundari of Radhakishorepur (Udaipur). Others treat Tripura as a derivative form of "Tri Puram" meaning 'a land

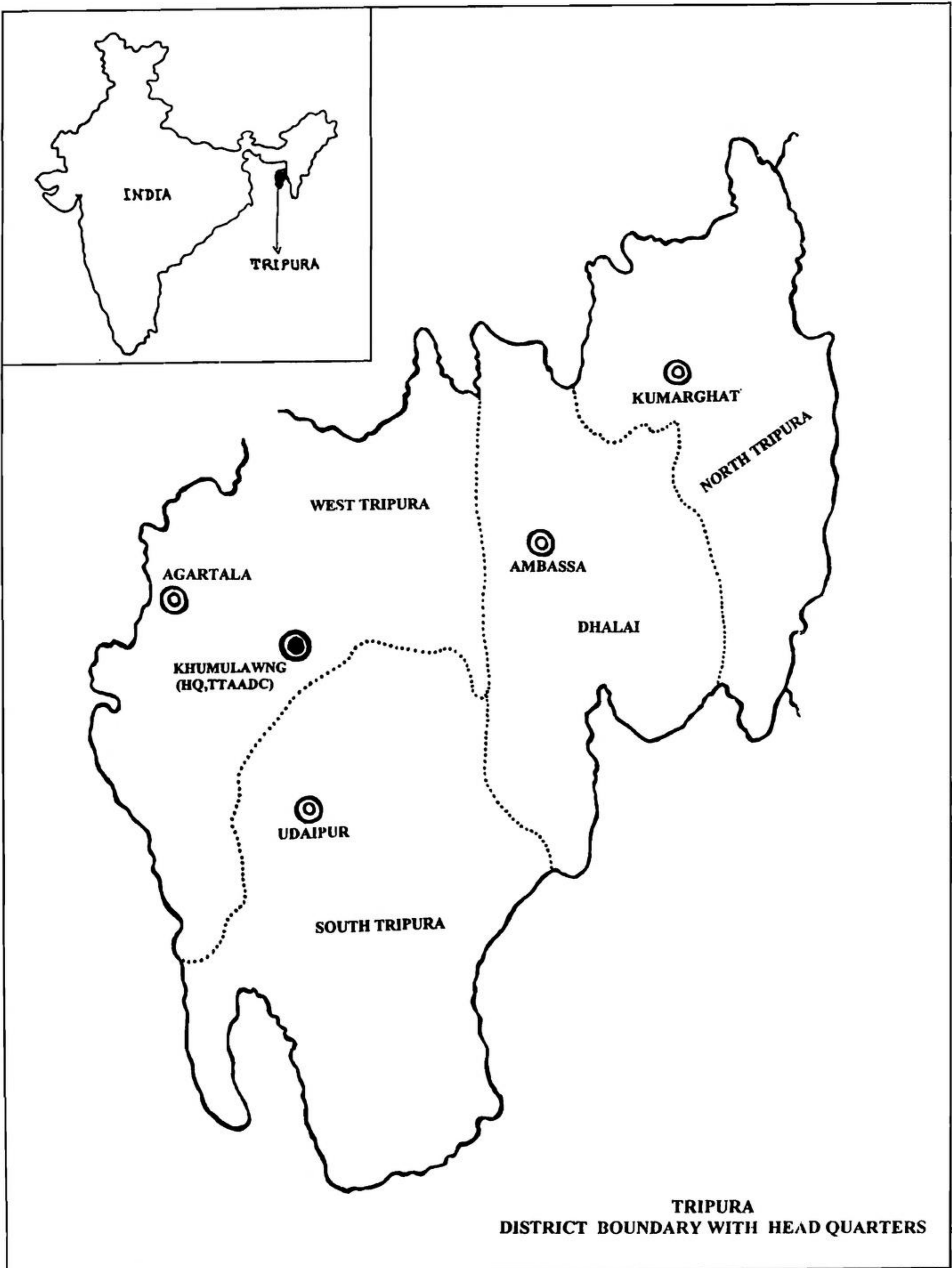
of three cities'. There are still others who believe that the name is a combine form of two tribal words, "tui" and "pra" which mean 'a land adjoining water'. Yet others well-versed in the Sanskrit learning of yore have identified it with a name Tripura that occurs in ancient Sanskrit texts. The search into the genesis of the name thus continues and the arguments over the origin of the nomenclature "Tripura" remain inconclusive even today.

Whatever may be the historical fact, the history of Tripura and its kingdom was a very ancient one. It has been ruled by the Maharajas of Tripura for an unbroken period of thirteen hundred years. The history of Tripura can be understood from the Rajmala or Chronicles of the kings of Tipperah and the writing of Mohammedan historians since 1407 AD.

It is believed that the kingdom of Tipperah was founded by King Druhya, son of Yajati, one of the kings of the lunar (Chandra) race. King Tripura, the 46th descendant of Chandra dynasty was believed to be a contemporary of King Yudhistir (of Mahabharat fame).

The Mohammedan attack on Tipperah started from 1279 AD but for about three centuries their attacks were bravely repulsed by the successive rulers of Tripura. About 1620, during the reign of Emperor Jahangir, the Mughal force attacked Tipperah and its Raja was taken prisoner to Delhi. During the reign of Maharaja Dharma Manikya, the Nawab of Murshidabad conquered a large portion of plain Tipperah but thereafter the hill Tipperah remained more or less under the peaceful possession of the Raja.

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During the British rule, the Rajas of Tipperah successively governed the State as semi-independent princes, although since 1808, from the reign of Durga Manikya, successive Raja has received investiture from the British Government. Prominent Rajas of Tipperah during the British period were Birchandra Manikya, Radha Kishore Manikya (1897-1909), Birendra Kishore Manikya (1909-1923), and Bir Bikram Kishore Manikya (1923-1947). After the death of Bir Bikram Kishore Manikya on 17th May 1947. Her Highness Maharani Kanchan Prova formed a Regency Council in order to carry out the administrative function of the State. On 15th October 1949, Tripura merged with the Union of India. The State attained full statehood on 21st January 1972 under the North-Eastern Regions Re-Organisation Act, 1971.

1.3. Administrative divisions

Until 1872, the general administration of the state was conducted from Agartala, the capital and residence of the Maharaja. In 1872, the north-eastern sub-division of Kailashahar was created and two years later in 1874, the south-western sub-division of Udaipur was created. On 15th October 1949, when the state merged with the Union of India, the administrative units of the state were termed divisions and tehsils upto 1952. From 1953 onwards, the entire state of Tripura was treated as one district territory. Until 1970, Tripura was still a district territory with ten sub-divisions. On 1st September 1970, the Union Territory of Tripura was divided into three districts, viz. North, West and South. Today, the entire state is divided into four districts, viz. North Tripura, Dhalai, West Tripura and South Tripura. In addition, with the creation of Tripura Tribal Areas Autonomous District Council, about two-third of the state, mainly encompassing tribal-compact areas, is under the Council, without of course effecting any change in its district or sub-divisional boundaries.

2. TOPOGRAPHY

True to its name (Hill Tipperah in British parlance), about 70% of the land in Tripura is

hilly. Physiographically, the area represents the western fringe of the typical 'ridge and valley' structural province of the late Tertiary fold mountain belt, commonly known as the Indo-Burman Ranges or Purbachal Range. The general altitude of the State varies from 780 m in the northeastern part to 15 m or even less in the western part above mean sea level. The physiography of the entire state can be divided into three distinct physiographic zones :

Zone-I : Hill Ranges

This zone includes six major hill ranges running parallel with north-south orientation, each separated by a narrow valleys of about 20 km wide.

Zone-II : Highland and plateau

This zone forms the western limits of the hilly region. The plateau gradually rises from west to east with an elevation ranging from 3-37 m and finally merging with the eastern hilly tracts. This zone is dissected by valleys, streams and gullies and is severely eroded.

Zone-III : Alluvial Valleys

It is the zone with an average height of 7 m above mean sea level in the valleys. But in several areas such alluvial valleys are interspersed by hillocks or low hills called 'tilas' with an elevation of 30-60 m and swamps or marshy areas locally called 'loongas'/'lungas'

However, the most striking topographical feature of State area its six principal hill ranges. These are the Jampui, Sakhantlang, Longtarai, Atharamura, Baramura and Deotamura.

The Jampui range is the highest range in Tripura. It runs 74 km over north to south alignment. Betlinag sip (975.36m) lying to the extreme south is the highest peak of this range.

The Sakhantlang range lying to the west of Jampui range is lower in altitude than the former. It runs about 78 km in north-south directions. The range is bisected by the Deo river near Kumarghat into the Unokoti range towards the north and the Sakhantlang towards the south. The Unokoti range

is about 20 km in length, built up of coastal tertiary deposits of sand and low in elevation. The famous holy shrine of Unokot near Kailashahar is located in this range. On the other hand, the Sakhantlang range from near Kumarghat runs towards the south for 58 km before it merges with Chittagong hill ranges. In this range the highest peak is the Sakhan (816.25 m).

To the West of Sakhantlang range is the Longtarai range. It is about 48 km in length. Phengpur (482 m) is the highest peak in this range. The local tribals (the Reangs) generally believe that the Longtarai devta (god) lives in this hill range.

The Atharamura (athra = eighteen; mura = hills) lying to the west of the Longtarai is lower in altitude than the former with 106 km, this is the longest hill range of Tripura. The highest elevation of this range is Niungmamura (482 m). Other important peaks of this range area Atharamura (436 m). Jarimura (457 m) and Tulamura (244 m). This hill range forms the demarcating boundary between Kamalpur and Khowai sub-divisions.

To the west of Atharamura is the Baramura (bara = big ; mura = hills) hill range. It is only 47 km in length. The notable peaks of this hill range are Saisunmura (248 m), Baramura (175 m) and Champamura (154 m). This hill range is rich in natural gas. This hill range runs over a common boundary between Khowai and Sadar Sub-division.

The Deotamura (deota or devta = god ; mura = hill) is about 85 km in length. Its highest peak is the Deotamura (247 m). This hill range runs over the boundary between Udaipur and Amarpur sub-division.

There are other geomorphologists who tend to describe the above landform of Tripura into two fundamental domains, viz. Neogene fold ridges and alluvial terrain. The major six hill ranges with north-south anticlinal ridges of nearly rounded a flat-topped Baramura to comparatively more rugged Atharamura having several spurs constitute the Neogene Fold Ridges.

The Alluvial Terrain on the other hand can further be divisible into three groups based on the characteristic relief, slope, degree of dissection, soil character, landform assemblage and nature of alluvial fill. These are (i) the table lands or "tilla" lands and rolling mounds characterised by maximum dissection, drainage and weathering, (ii) the low lands or 'lunga' lands characterised by comparatively stabilised, undissected, higher flood plains and (iii) the recent flood plains constituting the present day flood-prone belts fringing the rivers and streams.

3. SEISMOTECTONICS

Tripura is located within the seismically active zone; the state experiences mild to moderately severe seismic shock very often. The Surma Basin in the Tripura-Mizoram area lies in between the seismically active Shilong Plateau to the north and Arakan Yoma to the east. It is recorded that although the epicentres of very few earthquake recorded during the recent past fall in this area, the state has however been affected by some of the famous earthquakes like the Great Assam (1897), Srimangal (1918), Dhubri (1930), Assam (1975) earthquakes etc. In fact, the epicentres of the devastating Srimangal earthquake of 1918 lies very close to the northern border of Tripura.

4. GEOLOGY

The geological setting of Tripura is considered to be fairly young in origin. As mentioned earlier, the geomorphology of the state is characterised by a succession of hill ranges and valleys of meridional and sub-meridional trends. The hill ranges are box like anticlines with relatively compact and resistant older rock units exposed in the narrow crests, whereas the valleys are flat synclines with younger and softer rock units exposed in the wide troughs. The folded belts constitutes the frontal sub-belt of the Assam-Arakan geosynclinal basin being separated on the east by the inner mobile sub-belt or Mizoram consisting of tight linear folds. Toward its west lies the fore deep of Bengal Basin covered

origin. The Bodos, who are spread over the whole of the Brahmaputra valley and North Bengal from the main bases of the present day population of the state. According to Major Fisher, the Tripuris are of the same origin as the Kacharis. The similarity of their appearance, religions and customs make this conjecture probable. The Reangs, the second largest tribe, originally came from Burma and entered Tripura through Chittagong hill tracts. The Halams belong to Kuki chin group of Tibeto-Chinese family and the Lushais belong to central chin sub group of Tibeto-Chinese family. The customs, languages and religions of the tribe varies but the Tripuris, Noatias, Reangs and Jamatias have the same religions, customs and speak the same language. They worship the gods of fire, water, forest etc. and conform in many respect to the religious observances of the Hindus. The Kukis are the same race as the Lushais. The Chakmas are Buddhists. Among the tribes, the Tripuris, Mogs, Chakmas and Jamatias reside in plains and have taken to settle cultivation. Other tribes such as the Reangs, Kukis, Lushais prefer to reside on hill tops. Many of them are still engaged in jhum cultivation. In general the tribals are poor. Their population is concentrated more in the rural areas than in the urban areas. Socially, educationally and economically the tribals are backward, although many of them are now opting for higher education. Their life and culture are at present suffering a change with the change of social environment.

10.2. Land use

Tripura's economy is a typical agrarian. With about 80% of its population being concentrated in rural areas, there is tremendous pressure on land. Only about 29% of the geographical area is put to good agricultural use. About 58% of the State is covered by forests of different kinds and about 11% of the area is put to non-agricultural use such as tea gardens, rubber cultivation etc. The remaining area of about 2% is considered to be culturable wastelands and current jhum fallows.

11. FOREST AND VEGETATION

The forest cover to Tripura, as assessed by the Forest Survey of India in 2000, using remote sensing technique is about 52.8% of the total geographical area. Although 60% or 6292 sq. km of the State is recorded as forest area legally, the actual area covered with forest vegetation is calculated to be only 5538 sq. km, of which, 1825 sq. km is dense forest and 3710 sq. km open forest. Further, the reserved forests of the State is 4097 sq. km which is about 39% of the total geographical area. Most of the Unclassed State Forests (USF) falls under the jurisdiction of the Tripura Tribal Areas Autonomous District Council.

The forest types and their vegetation has been well described by Dr. B. D. Deb in his books on "The flora of Tripura, Vol. I & II" TTPP, New Delhi, 1981. According to him, based on the climate and altitude, the general forests of Tripura belong to the tropical forest types. They could be group and described as follows.

A. Climate types

1. Evergreen forest
2. Moist deciduous forest
 - (a) Sal forest
 - (b) Moist deciduous mixed forest

B. Seral types

3. Swamp vegetation

C. Subsidiary edaphic types

4. Bamboo forest
5. Cane brakes
6. Garjan forest
7. Savannah
8. Grass land vegetation

1. Evergreen forest : The evergreen forest covers the major part of the State in Dharmanagar, Kailashahar and Longtarai valley sub-divisions, Jampui and Sakhan Ranges, parts of Belonia,

Sabroom, Kamalpur and Sadar Sub-Division. It occupied wider areas in the past. Having been persistently subjected to biotic influences, the forest is depleted to a very large extent. It now exists only in patches in the steep slopes, rocky and steady river banks and localities which are not suitable for shifting or plough cultivation. In the eastern part of the State, some such patches have been selected for cultivation of betle vine locally called Pan jhum. Evergreen forest of Tripura is intermediate in characteristics between 'Cachar evergreen forest' and 'Chittagong evergreen forest'

The evergreen forests of Tripura are characterised by the stratification of the stand into three distinct tiers (or storeys) formed of numerous species of trees, varied in size, but none of which is very abundant. Most of the species of the top canopy are evergreen with tall clear boles. Some of the species of the top canopy may be deciduous or semi-deciduous, which do not interfere with the evergreen nature of the forest as a whole. Leaves are thick and glossy. The middle and lower canopies are dense evergreen and varied. Bamboos are frequent. Small palms are common. Epiphytes are not very numerous. Aroids, ferns, mosses and orchids are the principal epiphytes. Lianas are very conspicuous. The undergrowth is often a tangle of canes. Ground vegetation is very rich comprising numerous herbaceous species. Saprophytes are also common.

The frequency, dominance and association of species very often vary from one forest to another. However, in most cases the evergreen forests of Tripura are generally dominated by *Dipterocarpus turbinatus*, *Artocarpus chaplasha*, *Michelia champaca*, *Ilex godajam*, *Schima wallichii*, etc.

2. Moist deciduous forest : The moist deciduous forest are characterised by the presence or absence of Sal and accordingly they may be called (a) Sal forest or (b) Moist deciduous mixed forest as the case may be.

(a) Sal forest : This occurs in southern region of the western low hills extending to the border of Bangladesh. It is found locally in Belonia,

Udaipur, Sonamura and Sadar-Sub-Divisions. Local variations occur in floristic composition and abundance of different species and in the storeyed arrangement in different areas. *Shorea robusta* is the ecologically characteristic and economically important species that dominates over 60 per cent of the top canopy. *Dipterocarpus turbinatus*, *Lagerstroemia parviflora*, *Gmelina arborea*, *Careya arborea*, *Terminalia bellicica*, *Dillenia pentagyna*, etc. also occur.

Ground cover is formed of a large number of grasses and sedges. In rainy season herbs belonging to the families *Commelinaceae*, *Zingiberaceae*, *Dioscoreaceae* and a host of others grow.

Due to local edaphic factors and biotic influences on certain localities, such as in Sonamura, the Sal forest has been reduced to a secondary savannah, where much of the area has been brought under paddy cultivation by felling the trees. Trees are stunted and crooked in form. Most of the plants appear to have come up from stumps.

(b) Moist deciduous mixed forest : Moist deciduous mixed forest covers a large area of the forest in Amarapur, Sonamura, Udaipur and Sadar Sub-Divisions and occurs in patches in Dharmanagar, Kailashahar, Longtarai valley and Kamalpur Sub-Divisions. This differs mainly from the preceding one in the absence of Sal or in its scarcity. Dominants are mainly deciduous but sub-dominants and lower storeys are largely evergreen. Top canopy is not dense and even. It is about 18-25m high. Differentiation in canopy layers, is not conspicuous. *Schima wallichii*, *Dillenia pentagyna*, *Terminalia bellirica*, *Garuga pinnata*, *Lanea coromandelica* etc. constitute the top canopy.

Ground cover is formed of *Desmodium triquetrum*, *D. caudatum*, *D. heterocarpon*, *D. heterophyllum*, *Maughania strobilifera*, *M. stricta*, *Costus speciosus*, *Curcuma zedoaria*, and other Zingiberaceous plants and many others. *Eupatorium odoratum* L and *E. cannabinum* L. are fairly common.

Towards the middle of the hot season, the deciduous trees shed leaves but they are not completely leafless and they are again in leaf before the monsoon. Mostly the trees and other woody species flower in the hot season whereas the large number of herbaceous and suffruticose perennials flower in cold season. Rhizomatous and bulbous families like *Liliaceae*, *Amaryllidaceae*, *Zingiberaceae* send up their scapes and produce beautiful flowers in the rainy season. These form a characteristic undergrowth in the monsoon period.

3. Swamp vegetation : Swamps locally 'Lunga' occupy a very large area all over the State. It comprises mostly herbaceous species, some woody shrubs and a few scattered trees. *Barringtonia acutangula*, *Lagerstroemia parviflora*, *Mallotus philippensis*, are the common trees. *Phragmites karka*, *Erianthus arundinaceus*, *E. procerus da* and *Sachharum spontaneum*.

4. Bamboo forest : Bamboo brakes differing widely in character and aspect cover very large areas in Tripura as in Burma and Chittagong. Continuous bamboo forests are interrupted with scattered evergreen trees or deciduous secondary stands. Sheltered hollows and other favourable sites are dominated by bamboo. The vast preponderance of bamboo forest may be the result of activity of man in his practice of shifting cultivation. Land cleared off forest, jhumed abandoned is favourable for bamboo growth. It is also possible that bamboo holds the ground as a primary edaphic sub-climax.

The most common bamboo of Tripura is the *Melocanna bambusoides*, Locally called as 'Muli' Other species are (with local name in parenthesis) *Bambusa balcooa* (Barak), *B. nutans* (Kali), *B. pallida* (Makal), *B. polymorpha* (Barua), *B. teres* (Parua), *B. tulda* (Mirtinga), *Dendrocalamus hamiltonii* (Pecha), *D. longispathus* (Rupai), *Oxytenanthera nigrociliata* (Kalyai) and *Neohouzeaua dullooa* (Dalu).

5. Cane brakes : Impenetrable thorny thickets are seen in the evergreen, semi evergreen and moist deciduous forests. They occur in wet hollows extending outwards to various distances

and appear to be conspicuous with heavier and well distributed rainfall where the soil is finely clayey and very rich in humus. Consequent on high demand for cane during the war of 1939-1945, cane brakes have been destroyed. Common canes are *Calamus floribundus*, *C. guruba*, and *C. leptospadix*.

6. Garjan forest : The area occupied by the Garjan forest at present is small, but there are indications that Garjan used to occur in a far larger area all over the State in small or large groups. Stumps of Garjan are found near Khowai, Champaknagar, Betaga-Ludhua, Muhuri, Trishna, Tulatalikona, Chailengta, Deo, Juri, Ujan machmara, Damchara, Unakoti, Dharmanagar, Sonamura and Jalaya.

It occurs in groups and strips in scattered blocks on ferruginous red soiled elevated tillas. It also occurs in Sal forest. It forms a close canopy while growing in groups. All these appear to have been greatly influenced by man.

7. Savannah : This is caused by fresh deposit of silts or destruction of the forest. In high land-*Syzygium cerasoides*, *Ziziphus mauritiana*, *Z. rugosus*, *Garuga pinnata*, *Lannea coromandelica*, *Glochidion multiloculare*, *Vitex negundo*, *Meyna spinosa*, *Flacourtia indica*, *Desmodium triquetrum*, *Clerodendrum viscosum* etc. are common. In low land *Erianthus procerus*, *Saccharum spontaneum*, *Phragmites karka*, *Alpinia allughas*, *A. malaccensias*, *Hedychium ellipticum*, *H. thyrsiforme* grow in communities.

In the monsoon climbers of *Dioscoreaceae*, *Smilacaceae*, *Menispermaceae*, *Convolvaceae* and *Vitaceae* grow rapidly around trees and shrubs or sometimes they trail on the ground or over the herbaceous undergrowth.

8. Grass land vegetation : A large area of the State is covered with vast expanses of grasses. This grass land community is a biotic sub-climax. The vegetation is held here in a condition of equilibrium by the biotic influence.

The grazing ground is dominated by *Imperation cylindrica*, *Paspalum orbiculare*, *Cynodon*

dactylon, *Chrysopogon aciculatus*, *Bothriochloa intermedia*, *Centotheca lappacea*, *Oplismenus compositus*, *Sacciolepis interrupta*, *Cyperus* sp. and *Fimbristylis* sp.

Other commonly occurring herbs are *Desmodium heterophyllum*, *Centella asiatica*, *Leucas aspera*, *Rungia parviflora*, *Euphorbia thymifolia*, *Oxalis corniculata*, *Sida acuta*, *Urena lobata*, *Mimosa pudica*, *Solanum* sp. and *Polygonum* sp. etc.

12. FAUNAL RESOURCES

12.1. Faunal exploration

Knowledge on faunal or wildlife resources of Tripura is scanty as scientific exploration on the fauna of the State is limited. Recently, Gupta and Mukherjee (1994) briefly outlined history of wildlife exploration in Tripura while reporting on the status of wildlife of the State.

Information on the wild mammalian resources of Tripura is available from the study made by Bhattacharya and Chakraborty (1984) and that of the birds from the study of Mathur *et al.* (1984). From these account it is apparent that current wildlife resources of Tripura is limited due to habitat shrinkage, human population increase, extension or cultivable land and perhaps excessive hunting.

In the past, as reported in 'Rajmala' by Kailash Ch. Sinha in 1897, in the middle of the 18th century, the elephant and wild buffalo were reported to be numerous and the rhinoceros, bear, hog, deer, wild dogs, wild goats, slow loris, black panther, scaly ant-eater, tiger, gaint land turtles, etc. were all very common throughout the state. The elephants were so plentiful that in the year 1874-75, the Maharaja of Tripura earned a revenue of 2400 Pound from the capture of 86 elephants. Today elephants are occasionally seen in remote jungle area and their number has fallen drastically.

Along with the mammalian resources, varieties of birds and partridges were also plentiful in the past. It is reported that in 1875, 1000 parrots from Tripura were sold for 1.75 Pound in the market of neighbouring Comillah (now in Bangladesh). As per the study of Mathur *et al.* (1984), although Tripura may be having as many as 3000 species of birds, individual counts are not as many.

Partridges and jungle fowls have also reduced drastically with limited distribution.

12.2 Faunal wealth and inventory

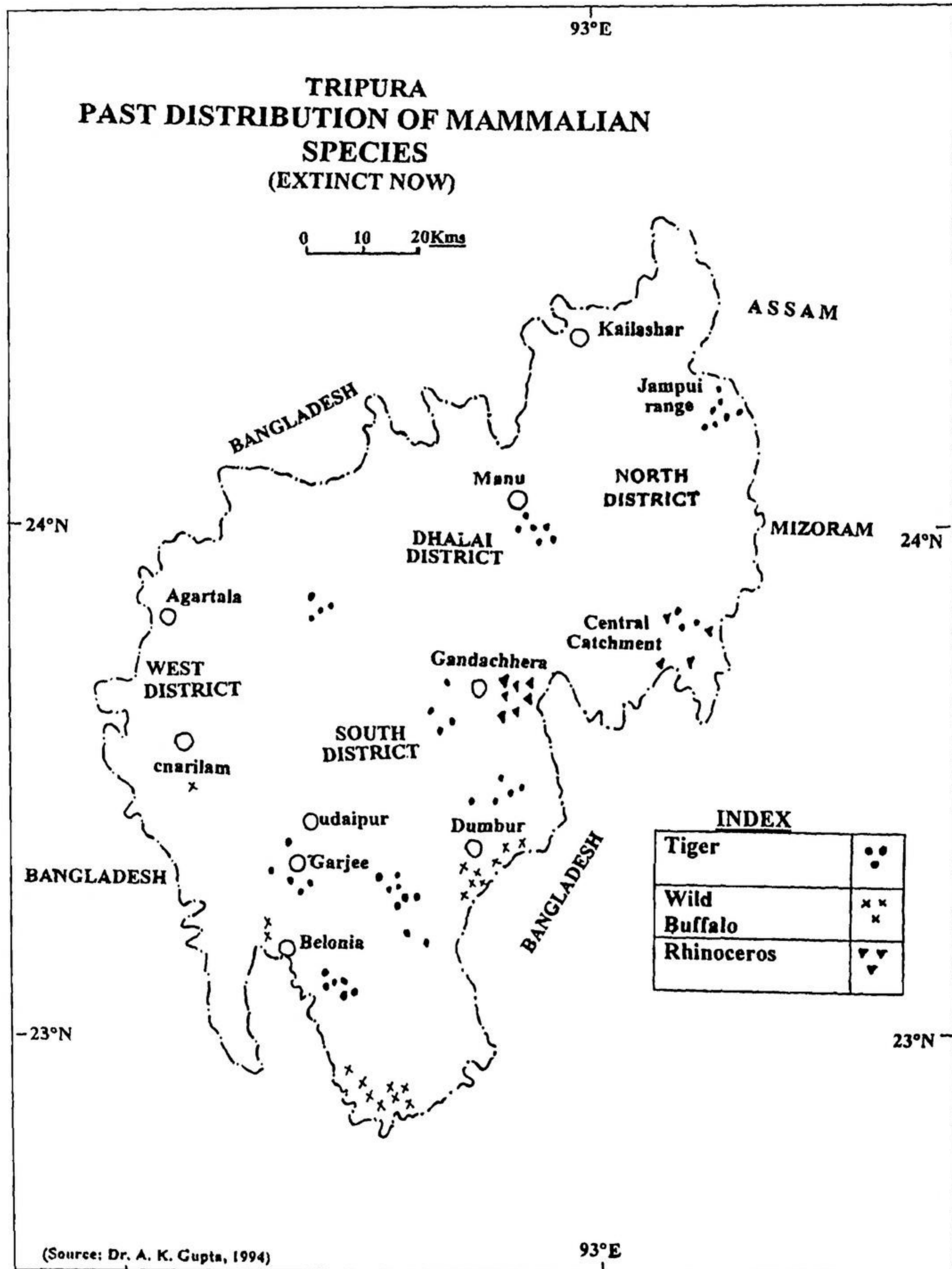
There is no precise scientific inventory of the faunal wealth of the state, which is why the need for the present volumes of publications by the Zoological Survey of India. As already mentioned earlier, Bhattacharjee and Chakraborty (1984) brought out an annotated list of the wild mammalian resources of Tripura. In the same line a check list of the common birds of Tripura was prepared by Mathur *et al.* (1984) listing about 341 species of birds found in Tripura. Further history of wildlife studies of Tripura may be seen from Gupta and Mukherjee (1994). The authors opine that due to her unique zoogeographical position and tropical humid climate with good rainfall, Tripura has been always inhabited by rich wildlife fauna. Out of a total of 135 genera of land mammals in India, 48.1% are represented in Tripura. Further, 14 genera and 18 species of land mammals belong to Schedule I of the Wildlife (Protection) Amendment Act, 1991 and 10 genera and 14 species of land mammals of the state belong to Appendix I of CITES (see Gupta and Mukherjee, 1994). It may, however, be mentioned here that *Rhinoceros unicornis* has disappeared since long from Tripura, although the authors continue to mention in their paper.

The analysis of the Fauna of Tripura, which will be brought out in four volumes reveals that there are 1708 species of animals in 1042 genera. Of these the largest group belongs to the Insects comprising of 536 species in 346 genera. Next in order of abundance after the insects, birds are the largest group with about 259 species in 157 genera. Total vertebrate fauna reveals 474 species under 301 genera.

12.3. Forestry development and wildlife management in Tripura

For long the forest and wild animals living therein have no value in Tripura. Only when the British Government developed the forests of neighbouring districts of Sylhet and Noakhali (both now in Bangladesh and the forest produce of Tripura found market in these places, the value of forest was increasingly realised.

It is recorded that way back in 1887 certain rules were framed for preservation of trees in the



then so-called reserved areas. In 1903, certain other rules were framed for regulating collection of forest produce and payment of royalties thereof. A trained forester was engaged as early as in 1910-11 and by 1913, yet a comprehensive set of rules was drawn up. Thereafter, a regulation was issued classifying and declaring certain species of trees as reserved (Deb Burman, 1914). In 1935-36, about 1090 hac. of forests were declared as reserved. In 1938 an officer was appointed to look after this forest reserves and also to carry out plantation works. It was during this period onwards that the Forest Department was gradually organised and more areas were declared reserved but actually demarcated only during 1954-55.

Till this time, however, there was no specific emphasis towards wildlife management in Tripura. The first ever attention towards wildlife matters seemed to have been specifically given when the assessment of the provisions of the Indian Forest Act 1927 and the Wild Elephant Preservation Act, 1879 were carried out and found to be altogether inadequate for the purpose of management and protection of wildlife in the State (Gupta and Mukherjee, 1994).

The first ever wildlife sanctuary of Tripura was gazetted in 1979, covering the Central Catchment area in the North District. But this was soon denotified due to political reason consequent to the pressure created by the local tribal pollution. Subsequently, the Trishna Wildlife Sanctuary, covering an area of 173 sq. km in the South District was declared in 1986. In 1989, three more sanctuaries were notified, *viz.*, the Gumti Wildlife Sanctuary (349 sq. km) in the South District, Sepahijala Wildlife Sanctuary (18 sq. km) in the West District and Rowa Wildlife Sanctuary (0.83 sq. km) in the North District. Although officially 540.83 sq. km or as much as 5.15% of the total land area of the state is presently being managed for the purpose of wildlife, the fact remains that the Gumti Wildlife Sanctuary is yet to take off in the spirit of wildlife management and protection due to tremendous pressure from the local tribal population, most of whom are oustees of the Dombur/Gumti-Hydel Project of the seventies.

12.4. Problems of wildlife management and protection in Tripura

The underlying reasons in the problems of management and protection of wildlife and their habitats (forest and wilderness) in Tripura are much the same as any other state in north-east India.

The unprecedented increase in the human population in a small state like Tripura, as may be seen from Table 2, had a direct and severe impact on the forest cover and wilderness areas of the state. This unabated increase in population caused tremendous pressure on land resulting in rapid depletion and competition in available wildlife habitat. This resulted in heavy and rapid encroachment, not only, of forest lands but also resulted in rapid conversion of wetlands, the prime habitats of wildlife, into cultivable agricultural lands. These processes were aided by illegal allotment of forest lands, denotification of protected forests and amendment of the State Land Revenue Rules. These were necessiated not only to settle the landless tribal jhumias but also rehabilitate unending streams of incoming refugees from the erstwhile East Pakistan or present Bangladesh. Other equally appalling activities that have severely affected both the wildlife themselves and their habitats are the continuing practice of shifting cultivation of jhumming, hunting and meat eating population of the local tribes, increased in numbers of domestic animals requiring larger grazing areas, forest fires particularly during the time of jhum burning, expansion of agricultural areas particularly disappearance of natural wetlands and so on. Coupled with these, there is general lack of awareness among the masses on the need and value of wildlife conservation. There is also insufficient integration of wildlife interests in the development philosophy and activities of various governmental department/organisations. Recent socio-political unrest in the form of insurgency of underground activities in the State has also added further dimension in the already fragile problems of wildlife management and protection in Tripura.

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