KNOW THE BOUNTY OF NATURE

NMHS: Him- NLC, Tripura

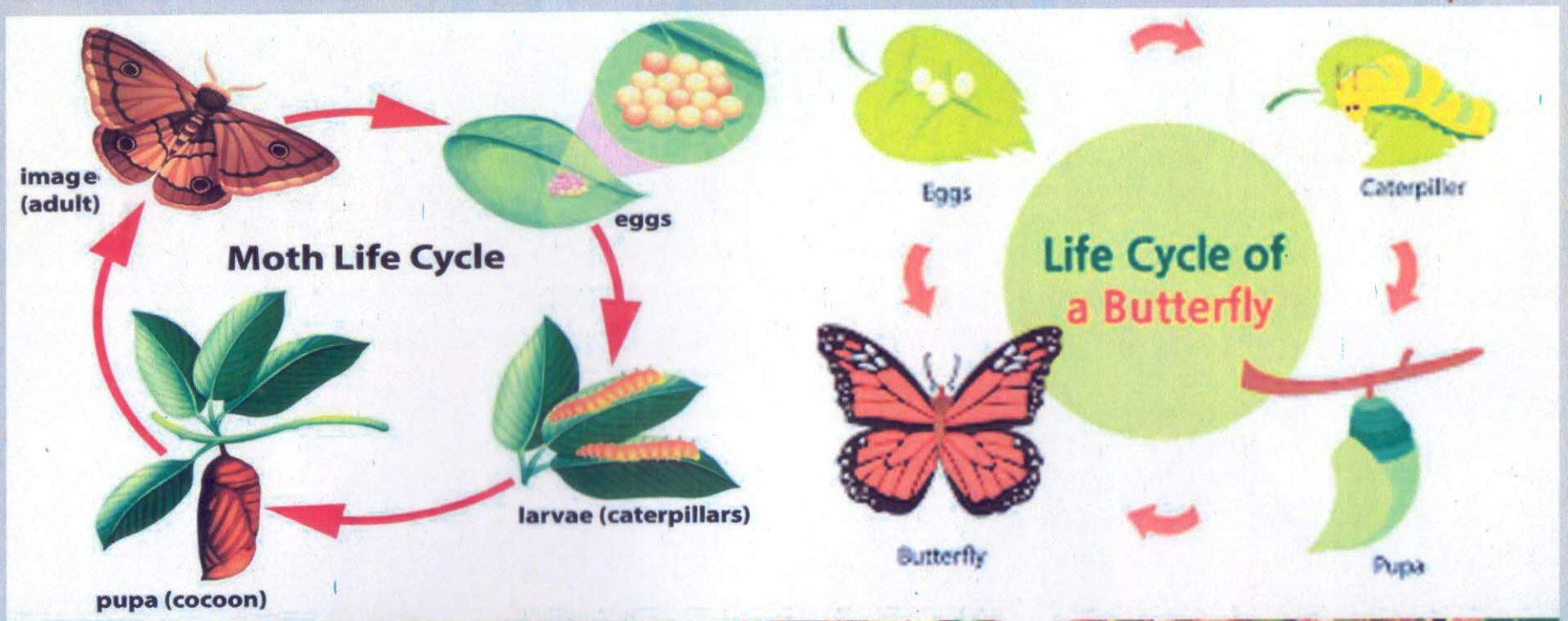

Nature is trying very hard to make us succeed, but nature does not depend on us. We are not the only experiment.
R. Buckminster Fuller

Birds from various places from Tripura

1. Bronze winzed Jacana *(Metopidius indicus)*
2. Spotted Owlet *(Strix occidentalis)*
3. Hornbill Indian Pied *(Anthracoceros albirostris)*
4. Hill Mayna *(Gracula religiopa)*
5. Greater Yellow-nape Woodpecker *(Picus flavinucha)*
6. Indian Pond Heron *(Ardeola grayii)*
7. Red breasted parakeet *(Psittacula calthropae)*
8. Yellow Bellied Warbler *(Abroscopus superciliaris)*

Common Birds of Tripura

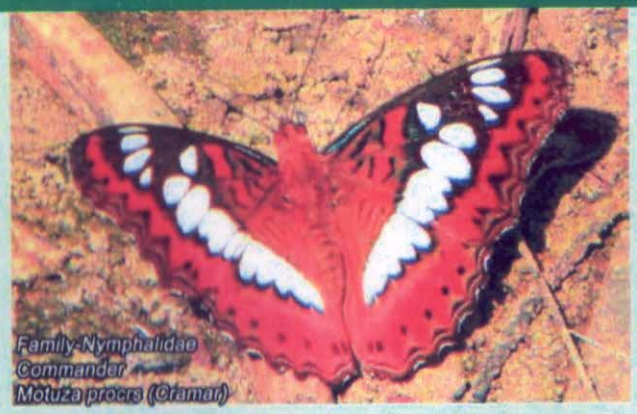
1	WHITESPORTED FANTAIL FLYCATCHER	11	SCARLET MINIVET	21	MAGPIE ROBIN	31	INDIAN TREE PIE	41	CRIMSONBREASTED BARBET	51	ASHYCROWNED FINCHLARK
2	WHITEBREASTED WATERHEN	12	RUDDY SHELDUCK	22	PEA FOWL	32	INDIAN ROLLER	42	YELLOWLEGGED GREEN	52	ASHY WREM WARBLER
3	WHITEBREASTED KINGFISHER	13	SPOTBILL DUCK	23	MAHARATTA WOODPECKER	33	HOOPOE	43	BLOSSOMHEADED PARAKEET	53	NIGHT HERONAKEET
4	WHITE EYE	14	REDWHISKERED BULBUL	24	COMMON HAWK CUCKOO	34	GREY WAGTAIL	44	CRESTED SERPENT EAGLE	54	
5	TAILOR BIRD	15	REDWATTLED LAPWING	25	LITTLE GREBE	35	GREY PARTRIDGE	45	COMMON TEAL	55	
6	SPOTTED OWL	16	REDVENTED BULBUL	26	PAINTED STORK	36	GREEN BEE-EATER	46	COMMON LARA	56	
7	BLUE SMALL KINGFISHER	17	PURPLE SUNBIRD	27	OPENBILL STORK	37	GOLDED ORIOLE	47	BRAN OWL	57	
8	SMALL GREEN BARBET	18	PURPLE MOORHEN	28	GREY HERON	38	DEMOISELLE CRANE	48	BLUE ROCK PIGEON	58	
9	SHOVELLER	19	POND HERON	29	GREY HORNBILL	39	LITTLE EGRET	49	BLACKWINGED STILT	59	
10	SHIKRA	20	PHEASANT TAILED JACANA	30	KESTREL	40	CROW PHEASANT	50	BAYA WEAVER	60	


Moth Life Cycle
image (adult)
eggs
larvae (caterpillars)
pupa (cocoon)
Life Cycle of a Butterfly
Eggs
Caterpillar
Pupa
Butterfly


Think of all the Natures Beauty
still left around you!

VARIETY OF BIODIVERSITY (Butterfly)


Family-Nymphalidae
Chocolate Pansy
Junonia iphita (Cramar)


Family-Nymphalidae
Commander
Moduza procris (Cramar)


Family-Nymphalidae
Common lascar
Pantaporia hardonia(Stoll)


Family-Nymphalidae
Common Sergeant
Athyma perius (Linnaeus)


Family-Nymphalidae
Jeweled Nawab
Polyura elelphis (Double day)


Family-Pieridae
Indian Cabbage White
Pieris canidia (Sparrman)


Family-Papilionidae
White Dragontail
Lamproptera curius (Fabricius)


Family-Lycaenidae
Common Tit
Hypolycaena erylus (Godart)

Some Butterflies reported from Tripura

A GLIMPSES OF FEW FRESH WATER FISHES OF TRIPURA

"Natural species are the library from which genetic engineers can work"

Chanda baculis
(*Hamilton-Buchanan*)

Botia dario
(*Hamilton-Buchanan*)

Calta calta
(*Hamilton-Buchanan*)

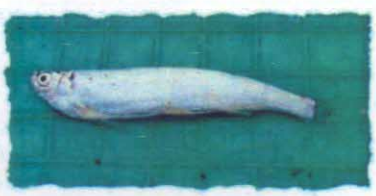
Amblypharyngodon mola
(*Hamilton-Buchanan*)

Anabas testudineus
(*Hamilton-Buchanan*)

Aorichthya aor
(*Hamilton-Buchanan*)

Badis badis
(*Hamilton-Buchanan*)

Tetraodon cutcutia
(*Hamilton-Buchanan*)



Salmostoma bacaila
(*Hamilton-Buchanan*)

Labeo calbasu
(*Hamilton-Buchanan*)

Pseudambasis ranga
(*Hamilton-Buchanan*)

Mastacembalus armatus armatus
(*Lecepede*)

Puntius sarana sarana
(*Hamilton-Buchanan*)

Puntius sophore
(*Hamilton-Buchanan*)

Puntius gelis
(*Hamilton-Buchanan*)

Puntis conconius
(*Hamilton-Buchanan*)

Salmostoma bacaila
(*Hamilton-Buchanan*)

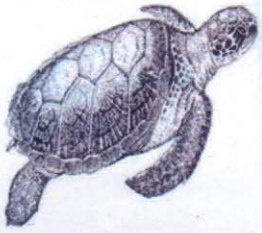
Gudusia chapra
(*Hamilton-Buchanan*)

Exploring the Faunal Diversity of Tripura

Turtle Vs Tortoise

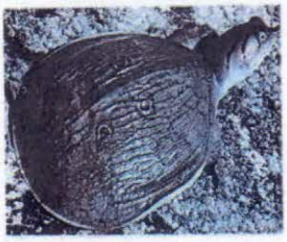
- Turtles and tortoises are closely related. They are both reptiles from the same family (Testudines or Chelonian).
- The main difference between the two is that turtle is the name given to water-dwellers and tortoise is the name given to land-dwellers.
- They are easily identified by the presence of a shell, from which their head and limbs protrude.
- Turtles shell is lighter and more streamlined than that of a tortoise. To enable swimming, it has webbed feet with long claws.
- Tortoise has a rounder, bumpier, heavier shell than a turtle. Its bent legs are short and sturdy.
- Turtles are omnivores, eating both vegetation and meat. Their life span is shorter than that of the tortoise with an average of 20-40 years and a maximum of 86 years.
- Tortoises are usually herbivores, but some eat meat. Their life span is longer than that of the turtle with an average of 80-150 years and a maximum of 188 years.

Hawksbill Turtle
(Eretmochelys imbricata)



Green Turtle (Kachchap- Bangla)
(Chelonia mydas)

Indian Softshell Turtle
(Aspideretes gangeticus)



Ganges softshell-juvenile
(Aspideretes gangeticus)

Asian Brown tortoise
(Manouria emys)

India sawback
(Kachuga tecta)

Three striped roofed terrapin
(Kachuga dhongoka)

Assam roofed terrapin
(Kachuga sylhetensis)

Deccan Sawback-tent Terrapin
(Kachuga tentoria)

Brahimany Terrapin
(hardella thuriji)

Elongated Tortoise
(Indotestudo elongate)

Chitra Turtle
(Chitra indica)

Selected Mammals

Fox Vs Jackal

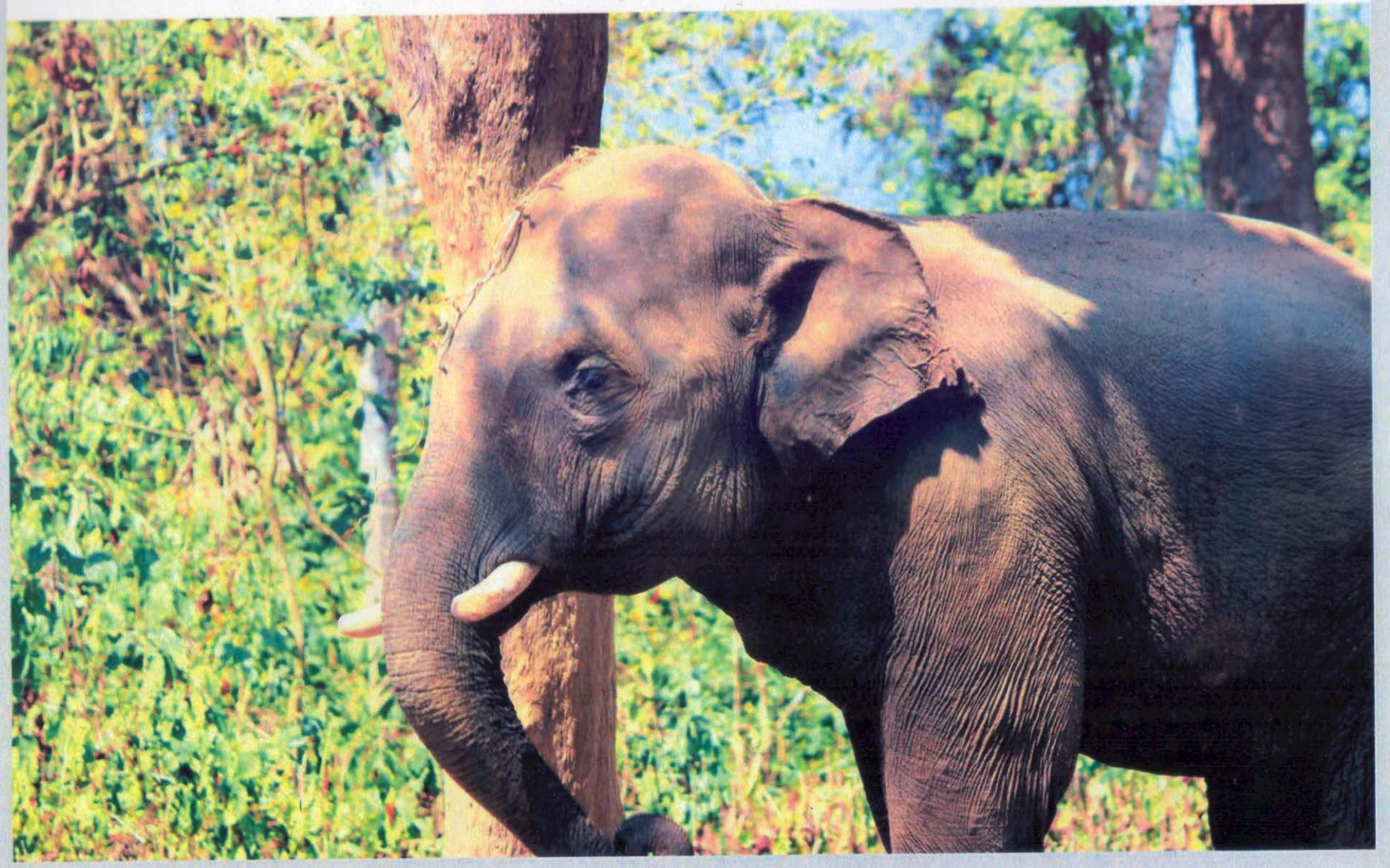
- Foxes are carnivorous mammals, which are medium to small in body size. They belong to Family: Canidae and most of them belong to Genus: Vulpes. There are about 37 species of foxes.
- According to the scientific classification, Jackals also fall in Family: Canidae and in Genus: Canis. There are three distinctive species of jackals, distributed commonly in dry areas of Asia and Africa.
- Fox have a characteristically long and narrow snout, beautiful and hairy coat, and a brush-like tail.
- Jackals snout is characteristically elongated and muscular. Interestingly, jackals like to live in pairs and male marks the territory through urination of defecation.
- The habitat of the fox is range from deserts to glacier and they are more wild than domesticated.
- Fox is an omnivorous animal preferring both animal and plant matter as food. Nevertheless, most of them are predators and their habit of burying extra food for later consumption is notable.
- Usually a jackal is 1 metre long, 0.5 metre tall, and weighs 15 kilograms. They are excellent predators and opportunistic omnivores those have well developed canine teeth for the predation.
- Usually, foxes like to hunt their prey by means of group hunting. There is a notable change in lifespan between wild and captive foxes; in wild, it is about ten years, but in captivity they can survive for a longer time. The average lifespan Fox are around 2 – 3 years in the wild.
- In wild, jackals live around eleven years, whereas it is around 16 years in captivity.
- Their long legs prove their ability to run fast, which is useful in predation.


Leopard Cat (Felis bengalansis)

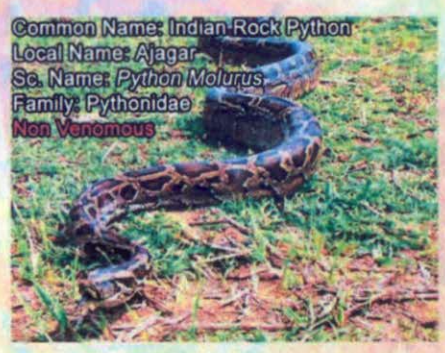
BISON FROM TRISHNA WILDLIFE SANCTUARY

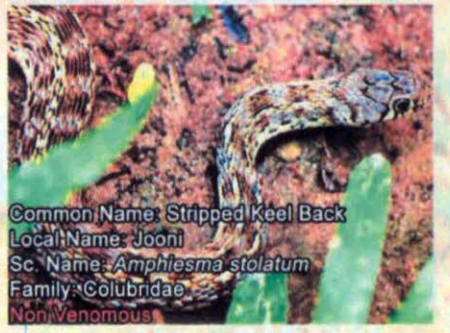
Cloeded Leopard (Neofelis nebulosa)

Elephant of Tripura



Snake Diversity of Tripura

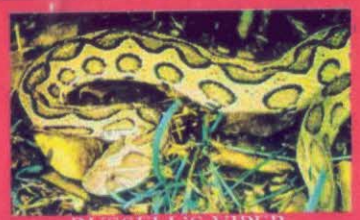




Some Major Snakes of Tripura

Source: ROMULUS WHITRAKERS & SHOK CPTAIN

POISONOUS



RUSSELL'S VIPER
(Vipera russelli)
(Chandra Bora)

BLACK COBRA
(Naja naja oxiana)

INDIAN COBRA
(Naja naja)

BANDED KRAIT
(Bungarus fasciatus)
(Sankani)

NON-POISONOUS

STRIPED KEELBACK
(Amphiesma stolatum)

COMMON INDIAN TREE SNAKE
(Dendrelaphis tristis)

INDIAN ROCK PYTHON
(Python molurus) (Ajagar)

RETICULATED PYTHON
(Python reticulate) (Ajagar)

COMMON WOLF SNAKE
(Lycodon aulicus)

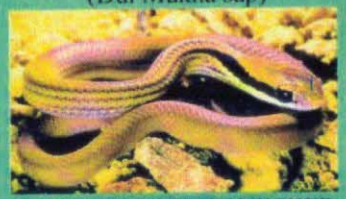
DIARD'S WORM SNAKE
(Typhlops diardii)
(Dui Mukha sap)

COMMON WORM SNAKE
(Ramphotyphlops braminus)

CHECKERED KEELBACK
(Xenochrophis piscator)
(Jaldhora)

COMMON GREEN WHIP SNAKE
(Ahaetulla nasuta) (Lan doga sap)

GREEN RAT SNAKE
(Ptyas nigromarginata) (Dhaman)



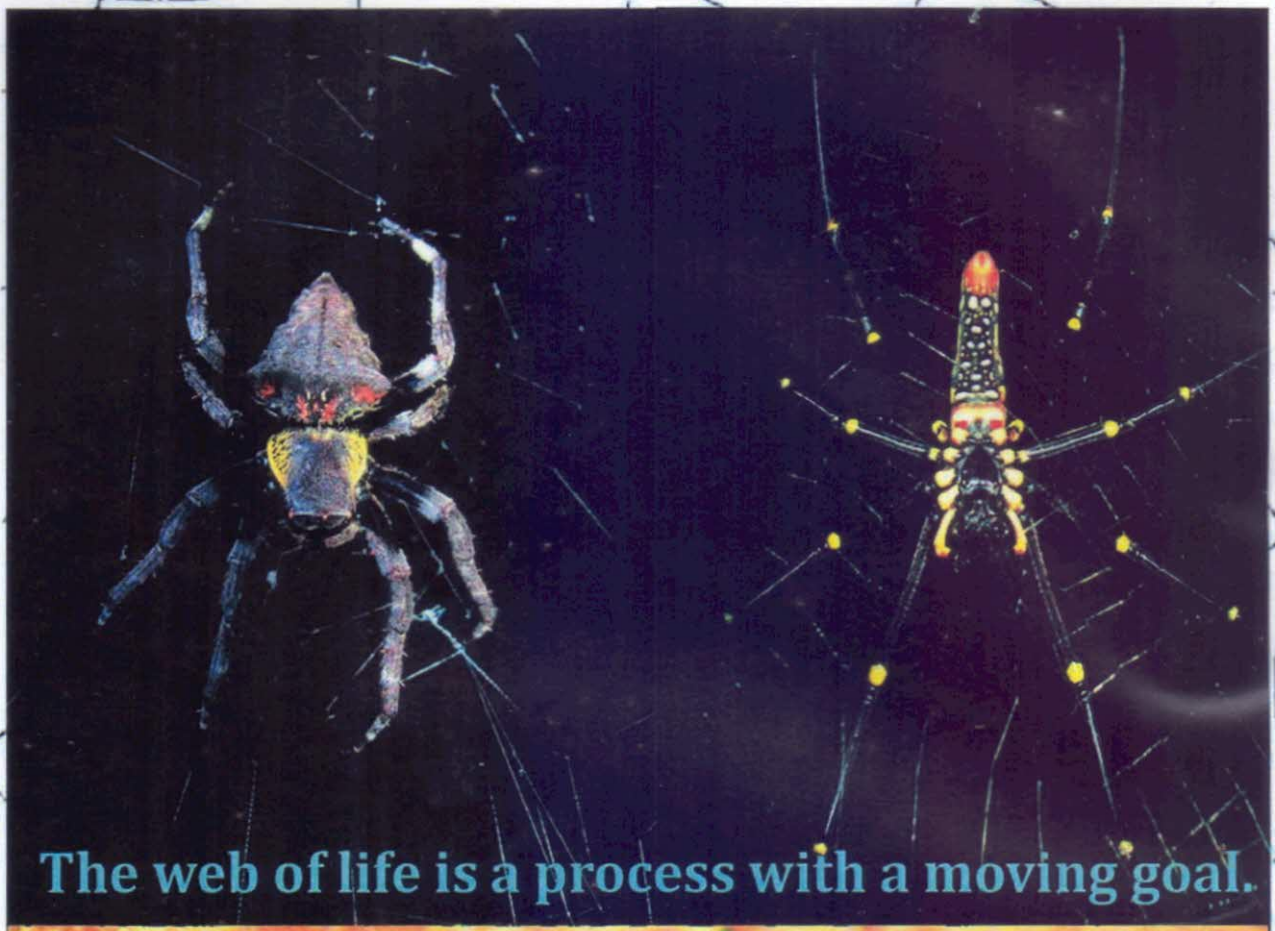
GUNTHER'S STRIPE NECKED
(Liopeltis frenata)

WHITE-BARRED KUKRI SNAKE
(Oligodon albocinctus)

GREEN CAT SNAKE
(Boiga cyanea)

BANDED TRINKET SNAKE
(Elaphe porphyracea)

FLYING SNAKE
(Chrysopelea ornata)



The web of life is a process with a moving goal.

Wetland's Wealth of Tripura

Some Potential Bio-resources of Tripura

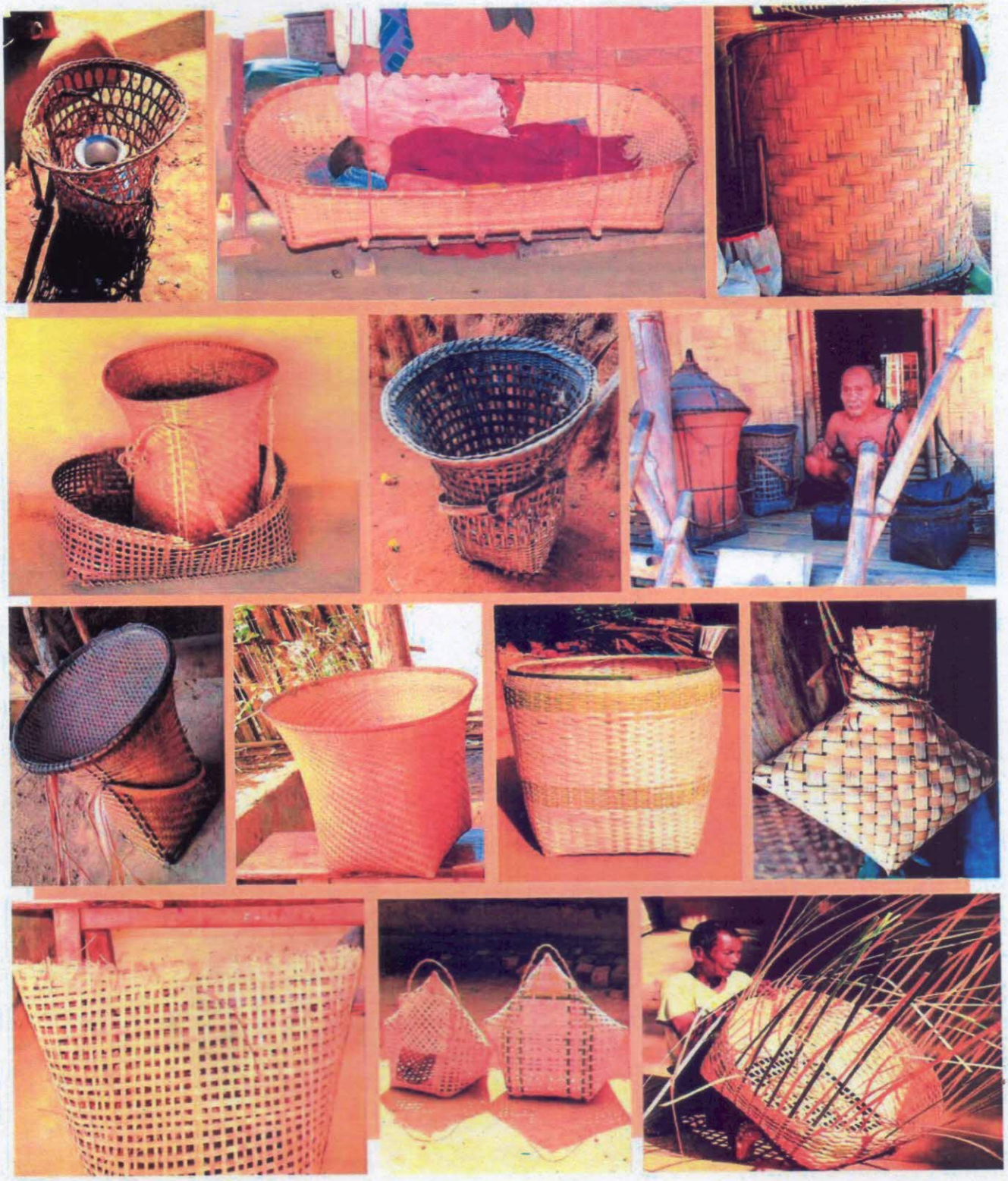
Janglee Elichi
(Elettaria spp.)

Til
(Sesamum indicum)

Bangphai
(Mucuna pruriens)

Bamboo stick for Agarbatti
(Bambusa cacharensis)

A Glimpse of Traditional Bamboo Handicraft Products of Tripura



Medicinal Plant use by Tripura Tribes

Aegle marmalos Corr. [Family – Rutaceae]
Vernacular name: Bael, Tribe: Tripuri
Part used: Fruits, Purpose of utilization: Against stomach disorders (dysentery)
Occurrence: Planted in houses and also found to grow in the wild.
Usage in Ethnomedicine: Fruit extract administered in cases of dysentery and also as a preventive of dysentery.

Clerodendron viscosum Vent [Family- Verbenaceae]
Vernacular name: Bhaitphul, Tribe: Tripuri
Part used: Roots, **Purpose of utilization:** Against jaundice (hepatoprotective)
Occurrence: Found in the wild.
Usage in Ethnomedicine: The root extract is administrated to the patient of jaundice.

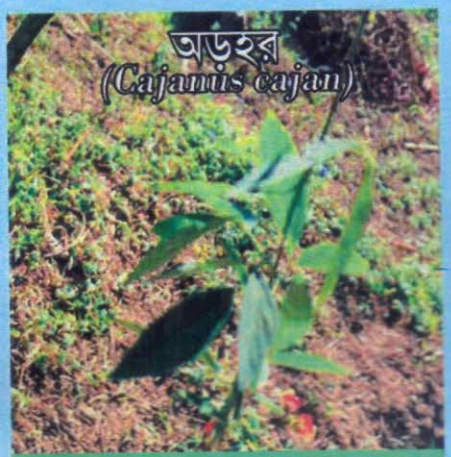
Drymoglossum heterophyllum (Linn.) Trimen [**Family** – Polypodiaceae]
Vernacular name: Sikitang.
Sporulation: April to August.
Occurrence: Common on tree trunk of exposed areas and on humus deposit of rocks.
Usage in Ethnomedicine: Paste obtained by crushing pinnae applied externally in the form of poultice on fractured bones after setting up the bones. Bamboo splints are usually tired around so as to prevent dislocation of fractured bones.

Cajanas cajan Linn. [Family – Fabaceae]
Vernacular name: Khokhlaing, Tribe: Halam
Part used: Leaves and twigs
Purpose of utilization: Against stomach disorders (dysentery &diarrhoea)
Occurrence: Cultivated in kitchen garden , Usage in Ethnomedicine: Soup is given to the patient the juice is taken as many time as possible.

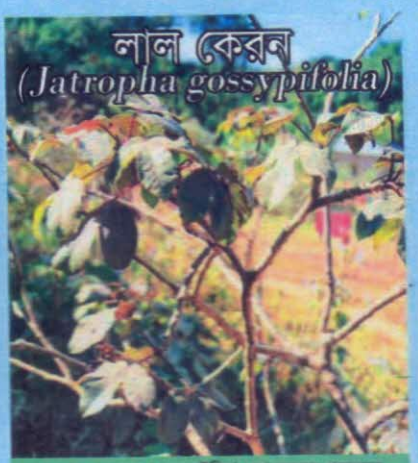
Lycopodium cernuum Linn. [Family – Lycopodiaceae]
Vernacular name: Shibjonta.
Sporulation: Found almost all round the year., Occurrence: Very common in hill cuttings.
Usage in Ethnomedicine: The whole plant is pounded and the paste prepared so applied externally over the cut portion to reduce swelling and itching.

Angiopteris evecta (Forst.) Hoffm. [**Family** – Angiopteridaceae]
Vernacular name: Skemamuidui.
Sporulation: June to July.
Occurrence: Frequent on dense natural forest, especially near watercourses and slopes.
Usage in Ethnomedicine: The rhizome paste Angiopteris evecta is applied externally in case of bone fracture along with some other plants. The poultice is applied externally on the broken or fractured part of bone to get cured. This treatment is given to the patients every 3 days of regular interval for a period of 30 days.Apical parts of caudex is cut into pieces and boiled with water till the contents become half. This extract is applied locally over carbuncle twice a day to get relief from pain, at the same time the abscess dried up within a week.

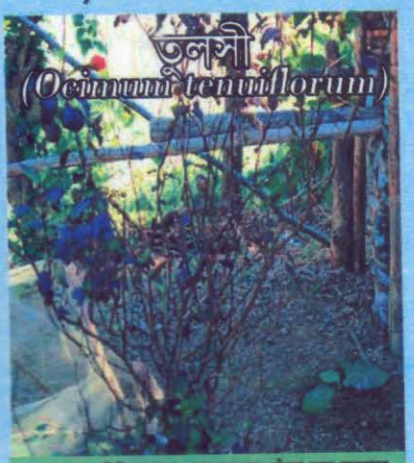
Medicinal Plants Diversity



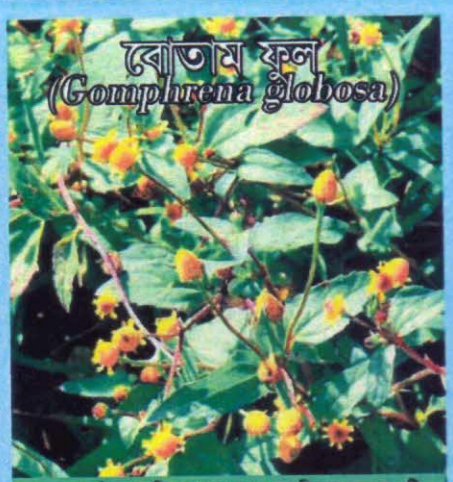
প্রয়োগঃ- অড়হর পাতার রস ৫ চামচ পরিমাণ অল্প গরম করে এক চামচ মধুসহ খেলে কাশি কমে যায়।



প্রয়োগঃ- পক্ষাঘাত (প্যারালাইসিস), মুখ মন্ডলের পক্ষাঘাতে, বাত রোগে এই মূলের রস বিশেষ উপকারী।

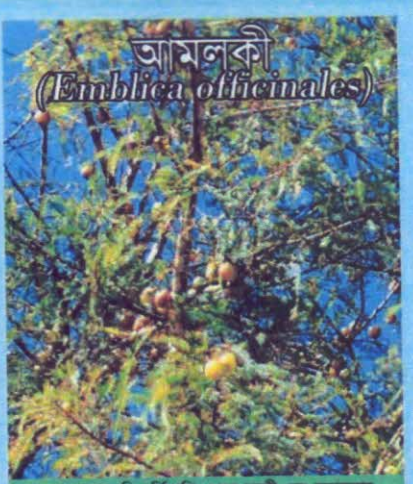


প্রয়োগঃ- টাটকা পাতা ও গাছের ছাল থেঁতো করে ব্যবহারে মশার কামড়ে উপকার পাওয়া যায়।

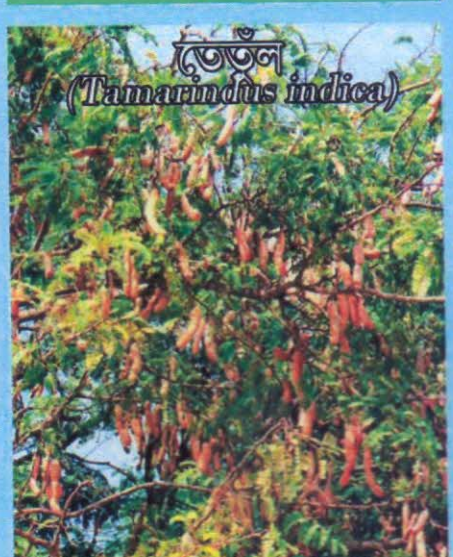


প্রয়োগঃ- দাঁতের মাড়ি ও গলার অসুখে এবং জিভের জড়তায় এটি উপকারী।

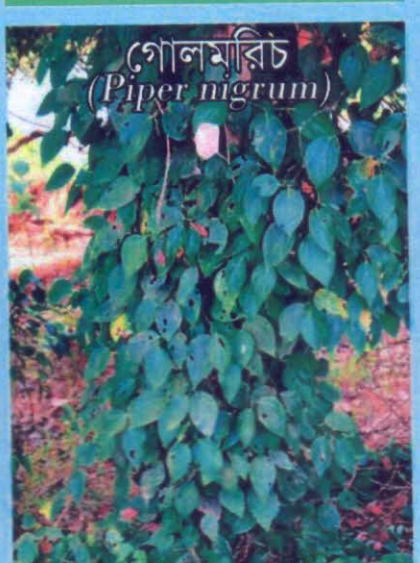
প্রয়োগঃ- প্রধানত মধুমেহ রোগের ক্ষেত্রে সমগ্র গাছটি ব্যবহৃত হয়।



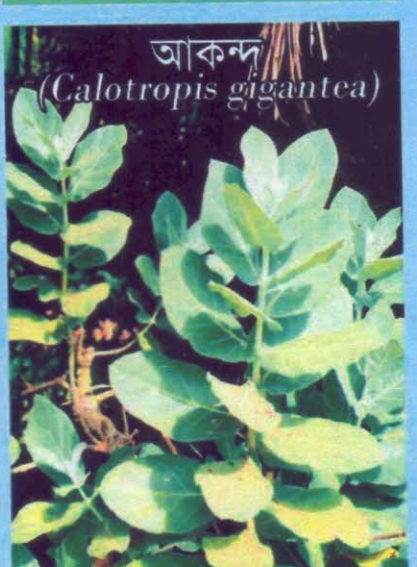
প্রয়োগঃ- অতি সর্দিকাশি থেকে হজমী এবং রক্তাল্পতায় বিশেষ উপকারী। অমলকী চর্মরোগের বিশেষ প্রতিষেধক।



প্রয়োগঃ- তেঁতুলের কাঁচাপাতা ৫ গ্রাম পরিমাণ ১-২ কাপ জলে সিদ্ধ করে ঠান্ডা করে খেলে (সর্দি, হাঁচি, নাক দিয়ে জল পড়া) রোগের উপশম হয়।



প্রয়োগঃ- কাশি, আমাশয়, শিশুদের শোখ, গনোরিয়া, মূত্রাবরোধ, পিঠ ব্যথা প্রভৃতি নানা রোগে এটি ফলপ্রদ।



প্রয়োগঃ- আকন্দের রস স্বাদে তিক্ত ও অল্প লবণ রসযুক্ত। পাতায় পাওয়া উদ্বায়ী তৈল জীবানুনাশক, সর্দি ও শ্বাসকষ্টে উপকারী।

(Photographs From Chichingcherra & Purba Karamcherra Village under Manu RD Block)

Diversity of Plants Whose Leaves Have Medicinal Benefits

তুলসী *(Ocimum tenuiflorum)*

পুদিনা *(Mentha logifolia)*

ঘৃতকুমারী *(Aloe barbadensis)*

থানকুনি *(Centella asiatica)*

পাথরকুচি *(Bryophyllum pinnatum)*

বাসক *(Justicia adhatoda)*

MEDICINAL PLANT SCENARIO IN TRIPURA

Acorus calamus

Aloe vera

Bacopa monieri

Calotropis

Cassia fistula

Centella asiatica

Costus speciosus

Clitoria spp

Emblica officinalis

Tripura has a landscape with varied climatic zones which houses luxuriant vegetation's of sub-tropical to humid tropical to sub-alpine regions. Most parts of the state gets good rainfall almost two –thirds of the year facilitation the luxuriant growth of trees, shrubs and herbs in the state offering source for food, medicine, ornamental and phyto-chemicals of great industrial value. The state is located in the bio-geographical zone of 9B –NorthEast hills and possess an extremely rich biodiversity. Situated in the Indian sub-region of oriental zoogeographic region, local flora and fauna bear very close affinity and resemblance with floral and faunal components of Indo-Malayan and Indo-Chinese sub regions.

Blessed with high rainfall, humidity and nutrient rich soils, the forests of the state are in very high productive zones. The forests in the state are mainly tropical evergreen, semi evergreen and moist deciduous.

Medicinal value of many species of plants in the state are yet to be ascertained and an exhaustive inventory of medicinal plants in the state is yet to be compiled. However, documentation and identification of around 266 species which includes 68 species of trees, 39 shrubs, 71 herbs and 88 climbers has been done. Many of these medicinal plants are distributed evenly across the state and its forests.

Ethno medicinal plants-Our Future Healers

FOCUS: Constitution of Biodiversity Management Committees

FOCUS : Preparation of People's Biodiversity Registers

FOCUS: Floral-Biodiversity

FOCUS : Agro-biodiversity

FOCUS : Traditional Knowledge

FOCUS : Socio-economic status

FOCUS : Medicinal Plant - biodiversity

FOCUS : Fish Biodiversity

FOCUS : Faunal - Biodiversity

FOCUS : Domesticated Animal-biodiversity

FOCUS : Ethnic Diversity

FOCUS : Declaration of Biodiversity Heritage Sites

FOCUS : BD Livelihood generation

FOCUS : Avian Diversity

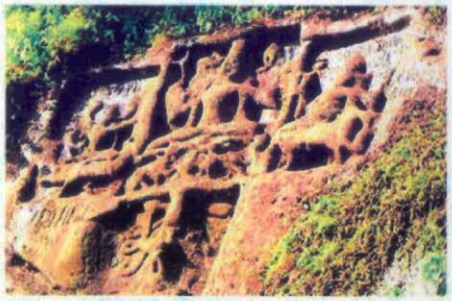
Heritage Diversity

Tripurasundari Temple

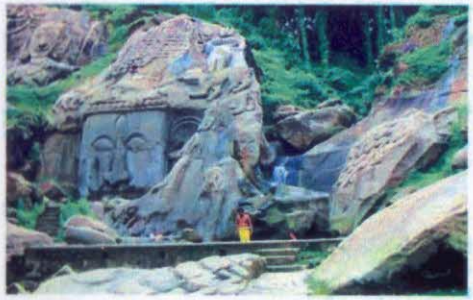
Kamalasagar Kali Temple

Chaturdash Devata Temple

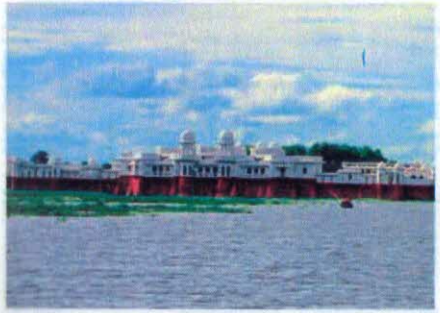
Bhubaneswari Temple



Debatamura



Unokoti



Neermahal

Ujjyanta Palace

Jampui Hill

Fair & Festival

Ashokastami Festival:
At Unokoti every year in April

Pous Sankranti Mela:
At Tirthamukh every year in January

Pilak Festival:
Every year in Nov-Dec

Rajarshi Festival:
At Bhubaneswari Temple every year in the month of May

Garia Puja:
Month of Baisakh (April) for 7 days

Kharchi Puja:
At Chaturdash Debvata Temple every year in July

Boat Race:
At Rudrasagar Lake & Gandacherra every year in August

Jampui Festival:
Every year in Oct-November

Chabimura Festival:
Every year in Sept/Oct

Dumbur Festival:
Every year in Oct/Nov at Gandacherra

Diwali Festival:
At Matabari every year in Oct/November

Sanghati Festival:
Every year on 6th December at Chandrapur

Neermahal Festival:
Every year in December

NATURE LEARNING CENTRE
SEPAHIJALA WILDLIFE SANCTUARY
SEPAHIJALA DISTRICT, TRIPURA
TRIPURA FOREST DEPARTMENT