Chapter – V

Physiography of the habitat site(s)

The state of Assam is located in the tropical Latitude 24-28 degree North and Longitude 90-96 degree East and an area covered by 78,523sq km. Assam is bounded in the north by Arunachal Pradesh and Bhutan; in the east by Nagaland, Manipur, and Burma; in the south by Bangladesh, Tripura, Mizoram; and in the west by West Bengal. As the Brahmaputra flows in Assam, the climate here is cold and there is rainfall most of the year. The river Brahmaputra with steep gorges and rapids in Arunachal Pradesh entering Assam, becomes a braided river (at times 16 km wide) and with tributaries, creates a flood plain the Brahmaputra Valley (80–100 km wide and 1000 km long). In the south, the Barak originating in the Barail Range (Assam-Nagaland border) flows through the Cachar district with a 40–50 km wide valley and enters Bangladesh with the name Surma.

With the "Tropical Monsoon Rainforest Climate", Assam is temperate (summer max. at 35–38 °C and winter min. at 6–8 °C) and experiences heavy rainfall and high humidity. The climate is characterized by heavy monsoon downpours reducing summer temperatures and affecting foggy nights and mornings in winters, frequent during the afternoons. Spring (Mar–Apr) and autumn (Sept–Oct) are usually pleasant with moderate rainfall and temperature.

Geographical information of Morigaon District:

Latitude: 26.15 degrees North and 26.5 degrees North, Longitude: 92 degree East and covers 1450.02 Sq. Kms area. Morigaon district is bounded by the river
Brahmaputra on the North, Karbi Anglong district on the South, Nagaon District on the East and Kamrup District on the West. A large part of the district is an alluvial plain, criss-crossed with many rivers and water bodies, marshes and beels. The river Brahmaputra flows along with the northern boundary of the district.

The study area

The survey area includes various riverine islands under Morigaon district of Assam, India. Five habitat sites were recorded during the experimental period.
Plate 1: Study site(s)

A: Hamur Char

B: Tengatoli Char

C: Dimbur Char

D: Sitalmari Char

E: Maderkuri Char
Study Site(s):

A. *Hamur char*: Geographical location: 25°13'125"N to 88°17'173"E

Area covered: 2 sq km.
Vegetation: Jhou and Thypa sp.
Soil type: Sandy (Plate 1; A)

B. *Tengatoli char*: Geographical location: 29°23'007"N to 98°18'168"E

Area covered: 1.5 sq km.
Vegetation: Jhou and Thypa sp.
Soil type: Sandy (Plate 1; B)

C. *Dimbur char*: Geographical location: 26°27’001”N to 92°15’222”E

Area covered: 1.5 sq km.
Vegetation: Jhou and Thypa sp.
Soil type: Sandy (Plate 1; C)

D. *Sitalmari char*: Geographical location: 26°29’016”N to 092°2’0415”E

Area covered: 2 sq km.
Vegetation: Jhou and Thypa sp.
Soil type: Sandy (Plate 1; D)

E. *Maderkuri char*: Geographical location: 26°28’002”N to 92°26’125”E

Area covered: 2 sq km.
Vegetation: Jhou and Thypa sp.
Soil type: Sandy (Plate 1; E)