

CHAPTER-III

3. DISCRPTION OF PLANTS**3.1 Sample selection**

The roots of *Morus indica* L., *Averrhoa carambola* L. and *Phlogacanthus thyrsoiflorus* Nees. were selected on the basis of availability of the plant on the region and literature review of the plants/plant parts. The root of *M. indica*, *A. carambola* and *P. thyrsoiflorus* (**Appendix-G**) were collected from the Bashbari (Bismuri) having Lat: 26°33'42.6"N / Lon: 90°16'17.2"E, Purana Titaguri having Lat: 26°26'43.44"N / Lon: 90°17'16.07"E and Sukhanjhara having Lat: 26°23'26.18"N / Lon: 90°12'18. 61"E respectively.

3.2 Scientific classification of *Morus indica* L.

Kingdom: Plantae

Clade: Angiosperms

Clade: Eudicots

Clade: Rosids

Order: Rosales

Family: Moraceae

Tribe: Moreae

Genus: *Morus*

Species: *indica*

Discription: The *Morus indica* is a fast growing deciduous, woody, small perennial tree with small fruits and grows upto 5-12 metres in height and are extensively cultivated as the leaves are food for silkworms. The plant is well branched and small. The plants are generally dioecious with catkin inflorescence bearing unisexual flowers in scaly clusters. Barks are rough and grey brown. The leaves are simple, alternate, usually smaller, ovate, stipulate, petiolate, entire or lobed and the number of lobes varies from one to five, have long tip and thin, uneven deeply cut edge, rough above and are about 5-10 cm long. The flowers are separate, slender hanging spikes. Fruit are small (upto 2 cm), cylindrical and dark red colour.

Distribution: Commonly found in South-East Asia.

3.3 Scientific classification of *Averrhoa carambola* L.

Kingdom: Plantae

Clade: Angiosperms

Clade: Eudicots

Clade: Rosids

Order: Oxalidales

Family: Oxalidaceae

Genus: *Averrhoa*

Species: *carambola*

Discription: It is a small tree which grows about 5-12 meters in height. The branches are flabby and the woods are white that turn reddish and are generally bushy shaped due to lots of branches producing rounded crown like appearance. Leaves are soft, medium-green, 4-10 cm in length & 2-5 cm wide, spirally arranged around the branches in an alternate fashion. The pinnate leaves have a single terminal leaflet and 5 to 11 nearly opposite leaflet. The leaflets are ovate or ovate-oblong in shape. Flowers are rose to red-purple, small, bell-shaped and have five petals with whitish edges. Under tropical condition, the flowers are produced throughout the year. Fruits are oblong shape: they are longitudinally 4 to 5 angled in general and 6–12 cm long and up to 9 cm wide, have a thin waxy skin and is orange-yellow colored.

Distribution: This evergreen tree is native to South-East Asia and the Indian subcontinent.

3.4 Scientific classification of *Phlogacanthus thyrsiflorus* Nees:

Kingdom: Plantae

Clade: Angiosperms

Clade: Eudicots

Clade: Rosids

Order: Lamiales

Family: Acanthaceae

Genus: *Phlogacanthus*

Species: *thyrsiflorus*

Discription: It is a shrub that grows upto 3-7 ft in height. The leaves are lance shaped, hairless, large with 2-4 cm wide and 8-16 cm long having tapering at both ends. Flowers are borne in thyrses at branch end or on short lateral branches with 10-25 cm long. Sepals are 6-8 mm long, densely velvet-hairy, linear. Flowers are 2 lipped, orange, wide tube shaped and closely hairy. Tube is broad from the base, curve; upper lip nearly erect and the lower lip spreading. Stamens are hairless or slightly hairy near the base of filament. Capsules are generally hairless, 3 cm long and 4 mm wide, somewhat quadrangular, 12-14 seeded. Seeds are much compressed, circular in outline and densely hairy.

Distribution: Native to South-East Asia.