CHAPTER 8

CONCLUSION

In order to document biodiversity and ensure human welfare in the future, the study of floristic is becoming increasingly important (Bora and Kumar 2003). Assam is regarded as one of the biodiversity hotspots with the most floral diversity, accounting for 22.68% of the Indian flora. The Bodoland Territorial Region (BTR) in Assam, a region rich in flora and fauna, is regarded as a key hotspot that is home to numerous intriguing floral and faunal components. The region is gifted with many threatened and endemic taxa which are confined only in this area, not in the rest of the country.

The Chirang Reserve Forest is one of major protected areas of BTR with a total area of 592.54 sq. kms., consists of three important Forest Ranges—Gaurang Range, Jharbari Range, and Ultapani Range. The vegetation of the reserve forest is classified as (a) Semi-Evergreen Forest (b) Moist Deciduous Forest (c) Dry deciduous Forest (d) Riparian Forest and (e) Scrub Forest. Amongst the different types of Forest cover, the Dry deciduous forest occupies the major area of the reserve forest followed by Semi Evergreen, Moist deciduous and Scrub Forest. The Reserve Forest is fully dominated by deciduous and semi-evergreen trees. The study has been covered the vascular cryptogams, flowering plants with threatened species, endemic species, primitive taxa, and monotypic genera. As a dominant family, Orchidaceae is accounting for 10.57% of the total flora indicating the healthy and diverse habitat of forests.

The analysis of the floristic elements of the Chirang Reserve Forest shows the more affinity with Indo-Malayan elements by representing the species are *Aesculus assamica*, *Albizia lucidior*, *Ayenia grandifolia*, *Biophytum sensitivum*, *Cissampelos pareira*, *Dalrympelea pomifera*, *Dillenia indica*, *Dillenia pentagyna*, *Elaeocarpus floribundus*, *Magnolia champaca*, *Gynocardia odarata*, *Lepisanthes senegalensis*, *Mangifera indica*, *Mangifera sylvatica*, *Meliosma simplicifolia*, *Mesua ferrea*, *Microcos paniculata*, *Murraya paniculata*, *Sauraia armata*, *Spondias pinnata*, *Tetracera sarmentosa*, *Zanthoxylum asiaticum*, *Zanthoxylum rhetsa*. Likewise, a few Indo-Myanmar elements, Indo-Lankan elements and Indo African elements have been recorded. Species showed affinity to Indo-Myanmar regions

are *Artocarpus chama, Coffea bengalensis, Croton joufra, Dendrobium moschatum, Garcinia xanthochymus, Ficus auriculata, Ficus elastica, Ficus rumphii, Morinda angustifolia, Oreocnide integrifolia, Parabaena sagittata, Sterculia villosa, Strobilanthes hamiltoniana, Toona cilata*. Likewise, species showed affinity to Indo-Lankan phytogeographic regions are *Ampelocissus barbata, Callicarpa arborea, Cryptolepis buchananii, Dysoxylum gotadhora, Glochidion multiloculare, Litsea salicifolia, Nymphaea rubra, Oroxylum indicum, Terminalia arjuna*. Additionally, species showed affinity to Indo-African phytogeographic regions are *Justicia gendarussa, Porana paniculata, Ricinus communis.* Species showed affinity to Indo-China phytogeographic regions were *Abroma augusta, Castanopsis indica, Garcinia pedunculata, Impatiens tripetala, Mazus pumilus, Micromelum integerrimum, Merremia vitifolia, Schima wallichii, Stereospermum chelonoides*.

The conservation in the protected areas should be focused to preserve and protect the native flora and fauna and not in a particular plants or animal species (Bora and Kumar 2003). Flora and fauna are both directly dependent on each other and help in maintaining the proper ecological balance in a protected area. It is necessary to aware the local people of the forest and involved them in various conservation programmes. Some of the serious threats to the Chirang Reserve Forest like rapid deforestation, encroachment, illegal tree falling, poaching have been noticed which needs to be addressed urgently. It has been observed that rapid spread of exotic invasive species like *Ageratum conyzoids, Cuscuta reflexa, Chromolaena odorata, Mikania micrantha, Mimosa pudica* have gradually increasing in the forest. There is an immediate action required to eradicate the weeds from the forest.

The present study made a complete documentation on the floristic elements of the Chirang Reserve Forest of Assam for the first time. This work will definitely help in identification of the flora, conservation and management of threatened and endemic species of the forest. Besides the inventory of flora, the present study will also helpful for researchers, biodiversity conservationist, policymakers, foresters and the local peoples for the sustainable management of the biological diversity of the Chirang Reserve Forest.