Chapter 4

PREVIOUS FLORISTIC WORKS

PREVIOUS FLORISTIC WORKS

After Sir J.D. Hooker (1849 - 1904), no other important botanist seriously worked on the Duars region. Hooker explored the entire region and made a historic collection of approximately 2500 plant specimens. His expedition and the account were published by him in different forms those include *The Flora of British India* (1872 - 1897), *A Sketch of the Flora of British India* (Hooker 1904) and a series of publications in *Hooker Journal of Botany* (1852 – 1854) are still most comprehensive descriptions of botanical splendors of the region. Significantly, botanists from various parts of the world latter made significant contributions to the flora of Terai and Duars of Jalpaiguri. Prain (1903) established a significant structure of the plants of this region in his famous two volume publication *Bengal Plants*. Other important works covered Terai-Duars region include Cowan & Cowan (1929), Ohashi (1975), and Grierson & Long (1979, 1983 – 1991, 1999 – 2001, 1994 – 2000). Champion and Seth (1968) also surveyed this region for his forest type classification. Mukherjee (1965) prepare a sketch of the vegetation of Jalpaiguri District and Sikdar (1984) worked on Baikunthapur Forest division. Banerjee (1993), Pandit (1995), Das *et al*. (2003), and Pandit et al. (2004) contributed on the flora of Jaldapara Natinal Park. Sarkar (2014) worked on the NTFP plants of Buxa Tiger Reserve, Saha *et al.* (2013) recorded the medicinal plants of Gorumara National Park. Das *et al*. (2010) prepared a detailed sketch of three MPCAs of Terai and Duars are some other important contributions. Saha *et al*. (2015) also recorded the NTFPs of Gorumara National Parks.

However, even after so many sporadic publications, no any concise account of flora neither for Terai – Duars region nor for the Gorumara National Park is available even today. Some forest beat areas were never given any attention by any botanist before the present exploration. This include Khunia, Murti, Dhupjhora, Budhuram and Bichhabhanga forest beats.

4.1 IMPORTANCE OF THE PRESENT WORK

Broadleaf forests of West Bengal Duars are situated very near to the foothills of Eastern Himalaya and formed part of the IUCN recognized Himalaya Biodiversity Hotspot. The entire Landscape of the region is housing significantly rich botanical diversity, occupied an important platform for huge inflow of tourists, researchers and also for the botanists, mainly taxonomists. The flora is represented by all the major groups of plant kingdom. The migration of plants from widely different localities since the upheaval of the Himalayas during Triassic from the bordering as well as from distant land masses is continuously enriching the flora. Important countries or places include China and Malaysian in the east and south of Oriental lands, Europe, America and Africa on the west and of Tibet and Siberia on the North have contributed to the floristic diversity of Terai-Duars region (Hooker 1904; Das 2004).

Gorumara National Park is located in Duars and falling in the Jalpaiguri District of West Bengal. Though this is a comparatively smaller park (7945.28 hectare) but its location is quite critical (Saha *et al*, 2013). The Park also belongs to the Bio-Geographical zone 7B (Lower Gangetic Plain) as recognized by Rodgers and Panwar (1988). Its Ecological boundary extends up to the Sibchu, Khumani and Jaldhaka blocks of Jalpaiguri and Kalimpong Forest Divisions situated both in plains and lower hills. The ecological boundary in the eastern fringe extends well beyond Gairkata, Central

Diana upto Moraghat blocks of Jalpaiguri forest division whereas in the western part it assumes an area beyond Sursuti and Lataguri blocks of Jalpaiguri forest division up to the Apalchand and Kathambari forests of Baikunthapur forest division. Major significance of the national parks being the natural habitat for a number of schedule 1 animals those are given maximum protection at the national level. Gorumara National Park has a total no. of 326 identified plant species that includes 158 species of trees, 35 species of herbs, 77 species of shrubs, 32 species of grasses, 15 species of climbers and 9 orchid species (Forest Action Plan, 2002). All Eco-Development Committees (EDC) are rendering protection to this forest as part of their agreement with the Forest Department (FD) during the implementation of Joint Forest management (JFM) programs (Sarkar *et al.*, 2009).

Saha *et al*. (2015) has recorded 335 NTFP species of plants which include 58 edible species with commercial and non-commercial local importance. The record shows that there are 28 species fruits of which are consumed by the forest villagers directly or as vegetable. Young plants or twigs of 20 species are used as vegetable and, in addition, 13 other species used as leaf vegetables. Saha *et al*. (2013) recorded the medicinal plants of Gorumara National Park. But no one prepared a flora of Gorumara National Park previously.

4.2 OBJECTIVES OF THE PRESENT WORK

Considering the importance of the Gorumara National Park from the ecological, conservational and economic points of view the absence of a detailed flora, mainly of vascular plants was felt seriously. However, the present exploration of GNP covered only the Spermatophytes, i.e. Gymnosperms and Angiosperms. The objectives of the present work can the summarized –

i. To prepare a detailed spermatophytic flora of Gorumara National Park

ii. To prepare flowering and fruiting calendars of its floristic elements, this will be useful to the future workers in numerous other branches of science including medicine, reproductive biology, crop improvement programs, etc.

iii. To evaluate the recorded taxa for their endemic/ rare/ threatened status and to determine their population structure and distribution pattern

iv. To recognize the disturbances created by various anthropogenic and/or physical agents on local vegetation

v. To prepare a detailed data base on the exotic plants growing in the park

vi. To understand the pattern of diversity of flora in the park

vii. To record the NTFP potential of the park and their substantial utilization

viii. To understand the key points of conservation of flora and vegetation of the park; etc.