Indian Journal of Natural Rubber Research, 15(1) : 103-106, 2002.

FLORA OF RUBBER AND OTHER PLANTATIONS IN TRIPURA

The terrain of Tripura consists of parallel hills and ridges alternated with narrow valleys and is divided into eight agro-ecological zones. Due to a humid sub-tropical climate, this region has high rainfall (2000-3000 mm) and rich vegetation with different species of lower and higher plants growing luxuriantly throughout the state (Bhattacharyya *et al.*, 1996). Tripura has two types of soils, *viz.* laterite in the hills and hillocks and alluvial in the plain land. Both these soils are acidic in reaction (Pal and Dey, 2000). In recent years dwindling natural forests are being replaced by plantations of different trees. At present the total area occupied by rubber is 25,380 hectares (Rubber Board, 2001). Shifting cultivation, the primitive practice of the native tribal families has been substituted by rubber cultivation in some areas. Natural vegetation like ferns, grasses, herbs and shrubs, which render coverage to the exposed soil surface, are allowed to grow inside the rubber plantation (Pal and Dey, 2000). The flora of rubber plantations of Kerala has already been documented (Abraham and Abraham, 2000) but there is no such information regarding the flora of rubber and other plantations in Tripura. A study of the flora of rubber compared to other plantations was therefore carried out in this region.

The rubber plantation at Taranagar, sal plantation at Salbagan, teak plantation at Kalabagan and cashew and acacia plantations at Gandhigram in West Tripura were included in the study. A survey was undertaken in 1997-98 during the post-monsoon period. Plants collected from the different plantations were identified and are listed in Table 1. The families are arranged in the sequence of Hutchinson's system and the species alphabetically. Ten random sampling quadrats (5 m^2 each) were laid for each plantation from which the frequency and abundance were calculated according to Curtis and Cottam (1962). The distribution pattern of different species in the rubber plantation and their relative dominance are presented in Table 2. The mode of reproduction in the different species was also observed during the course of the study.

A total of 81 species under 75 genera belonging to four pteridophyte and 36 angiosperm families were recorded from the different plantations (Table 1). The number of species was found to be the highest (43) in the rubber plantation followed by sal (34), cashew (33), acacia (28) and teak (17) plantations. Seven species namely *Clerodendron viscosum, Dioscorea aculeata, Eleusine indica, Chromolaena odorata, Holarrhena antidysenterica, Lantana camara* and *Mikania cordata* occurred in all the five plantations. Of the rest, six species occurred in four plantations, nine species in three plantations, 15 species in two plantations and the remaining were confined to one plantation only. *Chromolaena odorata* was reported as a dominant species in rubber plantations in Kerala (Abraham and Abraham, 2000).

The bulk of the species (47 out of 81) belonged to 44 genera distributed in 12 families *viz.*, Apocynaceae, Caesalpinaceae, Compositae, Euphorbiaceae, Gramineae, Labiatae, Mimosaceae, Moraceae, Papilionaceae, Piperaceae, Verbenaceae and Zingiberaceae. The families Compositae, Gramineae and Leguminosae (Caesalpinaceae, Mimosaceae, Papilionaceae) together contributed more than 27 % of the total species. These three families have also been reported as dominant families distributed all over the state (Deb, 1981).

The distribution pattern showed that 24 species were exclusively found in rubber plantations while the number of exclusive species in sal, acacia, cashew and teak plantations were 10, 5, 2 and 2 respectively. This