

Some Rare Endemic and Endangered Plants from Goalpara District, Assam

N. NATH¹, S. RAO¹, AND A. DAS²

¹*Department of Botany, Goalpara College, Goalpara 783101, Assam, India*

²*Department of Geography, Sonapur College, Sonapur 782402, Assam, India*

Abstract

Due to tremendous pressure on environment many plants are getting endangered. There are many rare and endemic species also. It is important to conserve the plant resources as a whole and the rare endemic endangered species in particular. Goalpara district is rich by its plant resources but the district is under tremendous pressure due to various developmental activities. This study recorded such endangered species of the district so that necessary steps can be taken in proper time.

Key words : Endangered, Endemic, Rare species.

There are many plants all over the globe, which have already become extinct and there are many such species, which are facing the danger of extinction. These species are known as endangered species. Besides, there are many such species, which are rare, and many are endemic to a particular region. Tremendous rate of growth of population is giving pressure on environment leading to destruction of forest due to expanding agriculture, urbanization, industrialization, export of some species, over exploitation of natural resources and pollution. All these are basically the causes of loss of biodiversity leading some plants to be endangered and rare. In India, nearly 450 plant species have been identified as endangered, threatened or rare.

Study Area

Goalpara district with an area of 1,958 sq km., lies between 25° 33'—26°12' N latitude and 90° 7' E-91°5' E longitude and it is located in the extreme south western part of Assam. Topographically the district exhibits a remarkable diversity as the Garo Hills of Meghalaya form its southern boundary and the greater part of the district constitutes the Brahmaputra plains, which is flowing in the northern side, in the eastern side it is the district of Kamrup and in the west it is Dhubri district along with which Bangladesh border is attached.

Methods

Field Survey. Extensive survey was carried

out in almost all parts of the district covering different habitats, forest types. As far as possible field works were carried out in different seasons. During the survey plant specimens were collected and herbarium materials were prepared following standard herbarium technique (Jain and Rao 1977). In the field apart from transient characters of the plants, notes on abundance, habitat, associated plants were recorded.

Identification of Specimens. The collected specimens were made into herbarium specimens. Preliminary identifications were made with the help of literature and subsequently confirmed in Kanjilal herbarium (BSI), Shillong and Central National Herbarium (CAL), Kolkata.

Results and Discussion

The study was carried out during 1998—2005. There are about 700 species of angiospermic plants in the district of which 427 species belong to dicotyledonous group (Nath 2006). Though collections were

Table 1. Forest cover and human population of Goalpara district from 1994 to 2001. Source : Govt. Assam (2000).

Year	Population	PRF (ha)	RF (ha)
1994	6,99,659	13,790	25,779
1997	7,31,180	13,425	25,194
2000	7,62,701	13,050	24,609
2001	8,22,306	12,827	24,255

Table 2. List of threatened plants of Goalpara district.

	Botanical name	Local names (Assamese)	Family	Ecological status
1	<i>Abroma augusta</i>	Bonkopahi	Sterculiaceae	Endemic
2	<i>Acacia odoratissima</i>	Dhol Koroï	Mimosaceae	Extremely rare
3	<i>Acacia mardinata</i>	Kal koroï	Mimosaceae	Extremely rare
4	<i>Adina cordifolia</i>	Holdu	Rubiaceae	Rare
5	<i>Albezzia proper</i>	Koroï	Mimosaceae	Endangered
6	<i>Andrographis paniculata</i>	Kalmegh	Acanthaceae	Vulnerable
7	<i>Arthocarpus chama</i>	Kathali chama	Moraceae	Rare
8	<i>Bacopa monnieri</i>	Brahmi	Scrophulariaceae	Vulnerable
9	<i>Baccaurea ramiflora</i>	Leteku	Euphorbiaceae	Rare
10	<i>Bombax ceiba</i>	Simolu	Bombaceae	Endangered
11	<i>Cassia fistula</i>	Sonaru	Caesalpinaceae	Endangered
12	<i>Cedrella toona</i>	Poma	Meliaceae	Endangered
13	<i>Chikrassia tabularis</i>	Bandordima	Meliaceae	Extremely rare
14	<i>Cissus quadrangularis</i>	Hadjora lata	Vitaceae	Rare
15	<i>Cleome burmoni</i>	–	Capparidaceae	Rare
16	<i>Diillenia pentagyna</i>	Oxi	Dilleniaceae	Rare
17	<i>Euryle ferox</i>	–	Nelumbonaceae	Vulnerable
18	<i>Lagerstroemia parviflora</i>	Sida	Lythraceae	Rare
19	<i>Lannea grandis</i>	Jia	Datisceae	Extremely rare
20	<i>Lindernia antipoda</i>	–	Scrophulariaceae	Data deficit
21	<i>Mesua ferrea</i>	Nahor	Ternstroemiaceae	Rare
22	<i>Michelia champaka</i>	Titasopa	Magnoliaceae	Endangered
23	<i>Mussaenda frondosa</i>	Musanda	Rubiaceae	Data deficit
24	<i>Oroxylum indicum</i>	Dingdinga	Begoniaceae	Endangered
25	<i>Phlogocanthus thyrsoiflorus</i>	Ronga Bahak	Acanthaceae	Endemic
26	<i>Phoebe goalparensis</i>	Bosum	Lauraceae	Extremely rare
27	<i>Porana paniculata</i>	Bhumlota	Amaranthaceae	Vulnerable
28	<i>Rauvolfia densiflora</i>	Sarpagandha	Apocyanaceae	Endangered
29	<i>Rauvolfia serpentina</i>	Sarpagandha	Apocyanaceae	Endangered
30	<i>Sapindus mukorossii</i>	Monisal / Ritha	Sapindaceae	Vulnerable
31	<i>Schima wallichii</i>	Makrisal	Ternstroemiaceae	Rare
32	<i>Terminalia tomentosa</i>	Panisoroi	Combretaceae	Rare
33	<i>Terminalia bellerica</i>	Bhomora	Cmbreataceae	Extremely rare
34	<i>Tetrameles nudiflora</i>	Bhela	Datisceae	Rare

done covering various habitats but forest areas recorded majority of species. Forest form a dominant part of the district of Goalpara. The district is having 51 reserve forests (RF) with an area of 24,255 hectare and 54 proposed reserved forests (PRF) with an area of 12,827 hectare (Table 1).

The human population is increasing but the area of forest cover is decreasing at an alarming rate. Population growth and its pressure on forestland is a major cause for the destruction of the forest in the study area. The reason is that to meet the demands of this rapidly growing population agricultural lands, settlements are created permanently by cleaning forests. As a result, a good number of plants are under the

threat of their survival. A number of indigenous plants of Assam have already entered in Red Data Book on India (Nayar and Sastry 1987, 1988, 1999). Chatterjee (1940) has emphasized the richness of flora of Eastern Himalayas and North Eastern India, including British Burma and estimated 3,169 endemic species in this region out of the total of 6,850 endemic species in India. There is no comprehensive account of endemic flora of Assam. However, a search on the endemic species of the state of Assam reveals that there are as many as 102 endemic species in Assam (Nayar 1984, Baishya 1999).

The study also records the occurrence of 2 endemic species in the study area viz. *Abroma augusta*

(L.) L. f. and *Phlogacanthus thyrsoiflorus* (Roxb.) Nees. Such endemic species by virtue of their narrow distribution also qualified for conservation. According to the degree of threats such plants collected from Goalpara district are presented in the Table 2.

Conclusion

As the district is having many rare, endemic endangered plants, so steps should be taken for conservation of such types of plants. The conservation can be done in both *in situ* and *ex situ* conditions. The forests of the district can be conserved in their natural habitat. The people should be conscious and some strict laws can be imposed. Some rare, endangered, endemic plants of the district can be conserved by transplanting them to botanical gardens and through seed banks and also by tissue culture.

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