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Trees of Bongaigaon District of Assam, India with special reference to food plants of Golden Langur

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Abstract

The undivided district of Bongaigaon of northern Assam is the home of one endemic and endangered primate Golden Langus (*Trachypithecus geei*). The present study recorded 24 species of trees as food-plants for Golden Langur.

Key words: Tree species, Golden Langur, Bongaigaon district, Assam

INTRODUCTION

The flora of the Bongaigaon district (*sensu lato*) of Assam, India has taken to provide first impression and documentation of the wild flowering plants and their aliens and to contribute to the knowledge of the state's flora (Borah 2008). The district is having plain area, forests, several wetlands, isolated small hills, indigenous tribal and non-tribal communities with different food habits etc. provides scope and importance for floristic and ethnobotanical studies in the area.

During the study on the "*Flora of Bongaigaon district, Assam*" (Borah 2008) special attention has been paid to collect field information about wild edible plants, traditional medicinal plants and food plants of Golden Langur (*Trachypithecus geei*), an endemic and endangered primate distributed only between the rivers Sonkosh on the west and Manas on the east on the northern bank of Brahmaputra in western Assam (Singha *et al* 2005). Prior to this, there were only few fragmentary works and casual references made to the flora of the area e.g. Boruah (1992), Agarwala (1997), Agarwala & Borah (2001), Singha & Borah (2000) and Borah & Sarmah (2003).

Study area:

The district of Bongaigaon is situated within the geographical limit of 90°212 332 2 to 90°542 322 2 E Longitude and 26°412 562 2 to 26°102 272 2 N Latitude covering an area of 2510 sq km (Govt. website) in the north bank of mighty river Brahmaputra in western Assam in North-East India. It was declared a district on 29th Sept, 1989 and curved out from the erstwhile Goalpara and Kokrajhar districts. At that time, Bongaigaon district was bounded by the district Kokrajhar (adjacent to Royal Bhutan) on North, Barpeta on East, the river Brahmaputra on South and district Dhubri and Kokrajhar on the west. After the formation of Bodoland Territorial Area Districts (BTAD) in Assam, a part of the district Bongaigaon is curved out to establish Chirang district under BTAD in 2004 in the north.

Though the topography of the Bongaigaon district (undivided) is predominantly plain but a tinge of lofty green hills, forests, silvery Brahmaputra and Aie River with their tributaries, natural wetlands, waterfronts, etc. all combine to give it a spectacular grandeur. The mighty Brahmaputra

flows along the southern boundary and its major tributary Aie, Manas and Champamati flow southwards from the hills of Bhutan through and along the borders of the district to Brahmaputra. These along with many rivulets, streams and *beels* as well as small hills and elevated tracts provide habitat for rich flora and fauna. Apart from the rivers, there are a number of ponds (2882), *Beels* (55), Swamps (47) and low lying areas (23) those also increase the diversity of habitat structure for the area's biodiversity (Agarwala 1998).

The general vegetation of the study area is of moist deciduous type. The dominance of Sal forests along with Teak plantations represents this type of vegetation. Some pockets of mixed forests with a few Semi-evergreen patches are also present. There are 12 Reserved Forests (RF), nine Proposed Reserved Forests (PRF) and 13 Un-classed State Forests (USF) located within the district. Of these, the Kakoijana RF is proposed to upgrade as a Wildlife Sanctuary mainly because of Golden Langur. This endangered primate is also found in Bhairabchura PRF, Bamungaon RF, Nakkati RF, Kuklung RF, Manas RF, Khagarpur PRF and Bhumeswar PRF (Anonymous 2005-06). As per the forest survey of India, State of Forest Report (SFR 2001), the forest cover in the district is 63,100 ha forming about 25.14 % of the total geographical area. But, due to unabated deforestation and encroachment, the forest area is dwindling at an alarming rate.

METHODOLOGY

Flowering plant specimens have been collected from different localities in different seasons and identified with the help of literature and matching in different herbaria (Jain & Rao 1977). The identified plant species are than categorized according to their habit and habitat. The trees (including small trees) are enlisted separately and their distribution pattern was studied in the field.

The food plants of Golden Langur are enlisted primarily from the literature (Srivastava 1999, 2006) and information from villagers; these are than confirmed in the field following troops of Golden Langur in Bhairabchura PRF.

A species that was encountered in the forests in all localities of the area with good number of individuals is considered common; while those are encountered frequently but not in all visited localities are considered as frequent and those less encountered and number of individuals seem less are termed rare as their local distribution. These are enriched with information on the plantation of different of trees.

RESULT AND DISCUSSION

As much as 139 species of angiospermic trees, including small trees, belonging to 88 genera under 40 families have been recorded from the Bongaigaon district of western Assam.

Food plants of Golden Langur:

Out of the recorded 139 species of angiospermic trees, 24 species under 22 genera of 17 families representing 17.26 % of total tree species in the district are eaten by Golden Langur. The scientific binomials of these 24 species along with their families, local distribution and edible parts have been presented alphabetically in Table 1.

Table 1: Angiospermic trees provide food for Golden Langur in the Bongaigaon District of Assam.

Name of plant	Family	Local distribution	Edible Parts
Albizia lebbeck (L.) Bentham	Mimosaceae	Common	Leaves
Alstonia scholaris (L.) R. Brown	Apocynaceae	Common	Tender leaves
Bauhinia variegata L.	Caesalpiniaceae	Common	Leaves, flower
Bombax ceiba L.	Bombacaceae	Common	Tender leaves
Careya arborea Roxburgh	Lecythidaceae	Common	Ripe fruits
Cassia fistula L.	Caesalpiniaceae	Common	Ripe fruits
Dillenia indica L.	Dilleniaceae	Common	Fruits
Erythrina stricta Roxburgh	Fabaceae	Common	Leaves
Ficus hispida L.f.	Moraceae	Common	Ripe fruits
Ficus racemosa L.	Moraceae	Frequent	Ripe fruits
Gmelina arborea Roxburgh	Verbenaceae	Common,planted	Flower, leaves
Lannaea coromandelica (Houttuyn) Merrill	Anacardiaceae	Frequent	Tender leaves
Litsea salicifolia (Nees) Hook.f.	Lauraceae	Rare	Ripe fruits
Mangifera indica L.	Anacardiaceae	Common, planted	Flower
Melia azedarach L.	Meliaceae	Common,planted	Ripe fruits
Spondias pinnata (L.f.) Kurz	Anacardiaceae	Rare, planted	Tender leaves
Sterculia villosa Smith	Sterculiaceae	Common	Tender leaves
Stereospermum chelonoides (L.f.) DC.	Bignoniaceae	Frequent	Leaves
Streblus asper Loureiro	Moraceae	Common	Ripe fruits
Syzygium operculatum (Roxburgh) Niedenzu	Myrtaceae	Common	Ripe fruits
Tamarindus indica L.	Caesalpiniaceae	Rare	Tender leaves
Terminalia bellirica (Gaertn.) Roxburgh	Combretaceae	Common	Fruits, tender leaves
Terminalia chebula Retzius	Combretaceae	Frequent, planted	Fruits, tender leaves
Zizyphus mauritiana Lamarck	Rhamnaceae	Common	Ripe fruits

Of the recorded families, only three (Anacardiaceae, Caesalpiniaceae and Moraceae) provide three species of trees as food for Golden Langur. Two such plants, under one genus – *Terminalia*, recorded from Moraceae. Apart from these, 13 other families are represented with single species in this list. While most of these plants are naturally growing in the study area, 5 species [*Gmelina arborea*, *Mangifera indica*, *Melia azedarach*, *Spondius pinnata* and *Terminalia chebula*] are commonly planted for different purposes. As for the edible parts, ripe fruits and tender leaves are the most preferred plant parts for Golden Langur.

As much as 15 of the recognized 24 Golden Langur fodders are deciduous trees. And that indicate that a food-scarcity develops in the area during dry winter when they need to depend on only a few species of trees and may be on some other smaller plants.

Now, it is important to increase the population of those plants which provide food to this endemic and endemic species during non-favorable season in the areas where Golden Langurs prefer to stay during winter.

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