

Flora used other than Medicinal purposes by Baduga ethnic in Nilgiri.

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Abstract.

An ethno-botanical study, particularly the plants used other than medicinal purposes was carried out among the *Baduga community* in Nilgiri hills of Tamil Nadu, India during November 2014 to April 2015. Uses of 24 non medicinal plant species spread over 20 families are described under this study. Mostly these plants were used as food, religious purposes, festives, decorative purposes, as insect repellents, biofertilizers, construction purposes, making household implements, agriculture implements and fuel. The study showed a high degree of ethno-botanical novelty and the use of plants among the Nilgiri tribals.

Kew words:

Ethno-botany, *Nilgiri* tribals, Non-medicinal uses, Tamil Nadu

Introduction

India is one of the largest mega-biodiversity countries in the World having rich vegetation with a wide variety of plants with medicinal value. The tribal population of the country, as per the 2001 census, is 84.3 million, constituting 8.2% of the total population (Ministry of Tribal affairs). With enormously diversified living ethnic groups and rich biological resources, India represents one of the great emporia of ethno-botanical wealth (Pal, 2000). During the last few decades there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of India. Primarily, Janaki Ammal (1956) conceptualized the importance of ethnobotanical studies in India and initiated such studies. After that from the year 1963, Jain extended these studies to the forefront through his pioneering research and publications. It is estimated that tribal people of Tamil Nadu occupy 1.05% of the total state population and 0.77% of the total tribal population of the country. Ministry of Tribal affairs presented a list of tribal communities in India for each state and Tamil Nadu contains 36 types of tribal communities and they are distributed in different districts in the forests and adjoining areas. Several studies have revealed that tribal population, not only depend on plant based resources for medicines, food, forage and fuel, but also play a vital role in natural resource

management that forms the core aspect of conservation biology (Ministry of Tribal affairs).

In the recent years, number of reports on the use of plants in traditional uses by either tribal people or indigenous communities of India is increasing (Ayyanar and Ignacimuthu, 2010, Ayyanar *et.al.*, 2010; Samant and Dhar, 1997; Samant *et.al.*, 1998). The main objective of this study was to assess the diversity of plants used by *Baduga* ethnic in Kotagiri hills of Nilgiri district of Tamil Nadu,

Material and method (study area)

The study area **Kotagiri**. Nick name (KTG) Kotagiri is situated at an elevation of around 1793m above sea level and is one of the three popular hill stations located in the Nilgiris. This picturesque hill station is bounded by verdant green tea estates and offers a number of trekking options. This old hill station has been developed around innumerable knolls and valleys. The Doddabetta Range is 22 km away. Catherine Falls, Elk Falls and Rangaswami Pillar are the major attractions near Kotagiri and you can trek to these places. Kodanad View Point offers a spectacular view of the gentle sloping hills and blue hills.

The three popular trekking trails are Kotagiri - Kodanad; Kotagiri - St. Catherine Falls and Kotagiri - Longwood Shola. The Kotagiri - Kodanad trail leads you through splendid views of lush-green tea estates and the magnificent Moyar River. One has to cross through meadows to reach kodanad.

Figure 1. showing (a) Kotagiri map (b) one of the village (kannerimuku velly) in kotagiri



Figure 1.1 (a)



figure 1.1 (b)

Kotagiri taluk consists of 62 large villages in Baduga (hatti), out of which Kambatti, Kappatti, Beragani, Kanneri mukku, Kunniatti, Dhimbatti, Kookalthorai, Uyilatti, Nattaka, and Kerbetta were selected in the present study for the documentation of non medicinal plants. Most of the hamlets in the villages are occupied by the *Baduga ethnic*. Each village is administrated by a leader (or) headmen called ‘Gavindikai’ and he is considered as leader of the village and even during marriages and festivals, he only initiates functions and ceremonies. Occupation is mainly cultivation which includes cultivation of Tea, Coffee, Potato, Cabbage, Garlic, Beans, Beetroot, Carrot etc are the major crops being cultivated, in some extend crops like celery, borecole, iceberg, lettuce, spinach and red cabbage are also cultivated and exported to nearby countries.

Ethno-botanical survey

Frequent field surveys were carried out in Kotagiri Panchayath union in Nilgiri district, Tamil Nadu in different seasons during December to April 2015. The data were collected through general conversations and questionnaires with the elder people (eight informants between the ages of 32–65 years). The information was gathered from them was recorded in field notebooks. The collected plants were identified by

their vernacular names through consultations with the local people, photographed and sample specimens were collected for the preparation of herbarium. The Flora of Presidency of Madras (Gamble, 1935) and The Flora of Tamil Nadu Carnatic (Matthew, 1983) were used to ascertain the nomenclature. The voucher specimens were deposited in the herbarium at Department of Botany, Government Arts College, Ooty, Tamil Nadu, India.

Results and discussion

The present study focused mainly on the plant species used by the *Baduga ethnic* for various non-medicinal uses. The reported plants were arranged according to their scientific name and family, trade names are recorded during the field work along with habit and uses. During the study period, 20 species of plants belonging to 18 genera and 13 families were identified as non-medicinal and food plants which are used by the *Baduga ethnic* in Kotagiri hill, Nilgiri district of Tamil Nadu (Table 1). The plants listed mainly belong to Rutaceae (3) followed by Fabaceae (1), Rosaceae (1), Myrtaceae (2) Apiaceae(2), Astraceae (2), Solanaceae (2), Verbinaceae (2), Euphorbiaceae (1) Poaceae (1), Nephrolepidaceae (1), Annonaceae (1), Nymphaceae (1). From the study, it was observed that four taxa are trees (30%), nine are herbs (45%), five are shrubs (25%).

Table 1.2 List of plant species used by *Baduga ethnic* for non-medicinal purposes in Kotagiri of Nilgiri district of Tamil Nadu.

Name of the plant	Family	Local name/trade name.	Habit	Non medicinal uses
Citrus sinensis	Rutaceae	Sweet orange	Small tree	Fruits are edible
Citrus aurantium	Rutaceae	Sour orange	Small tree	Fruits are edible
Citrus lemon	Rutaceae	lemon	Shrub	Fruits used for making pickle
Dalbergia latifolia	fabaceae	Rose wood	Tree	Wood is used to make furniture
Rosa spp	Rosaceae	Rose	Bushy shrubs	Grown as ornamental purpose
Psidium guayava	myrtaceae	Guva	Small tree	Fruits are edible
Callistemon lanceolata	myrtaceae	Bottlebrush	Shrub	Grown as ornamental purpose
Coriandrum sativum	Apiaceae	Coriander	Herb	Green leaves used for making chattini

Cuminum cyminum	Apiaceae	Celery	Herb	Leaves Used as vegetables
Lactuca sativa	Astraceae	Lettuce	Herb	Leaves Used as vegetables
Pyrethrum cineraraefolium	Astraceae	Kind of chrysanthemum	Herb	Whole plant used as insecticide and mosquito repellent
Solanum tuberosum	Solanaceae	Potato	Herb	Stem tuber contains starch. It is edible.
Cestrum nocturnum	Solanaceae	Night queen or night jasmine	Herb	Grown as ornamental.
Tectona grandis	Verbinaceae	Teak	Tree	Wood is used for making furniture
Lantana camara	Verbinaceae	Kind of green bush	Shrub	Plant grown as fence.
Codiaeum variegatum	Euphorbiceae	Croton	Herb	Grown as ornamental plant
Bambusa arundinaceae and dendrocalamus giganteus.	Poaceae	Bamboo	Tall shrub (bush)	Used for thatching and roofing.
Nephrolepis sps.	Nephrolepidaceae	Fern	Herb	Used as bio pesticide.
Annona squamosa	Annonaceae	Custard apple	Tree	Fruit is edible
Nelumbo sps	Nympheaceae	Lotus	Aquatic herb	Grown in pool as ornamental plant

Of the plants parts used as food by the Baduga ethnic are leaves, fruits, seeds and underground parts such as tuber, rhizome, root and corm are mostly used as food. Leafy vegetables are grown as wild weeds. other than Baduga ethnic,tribals like kurumbas,kothas,thodas and irulas in Kotagiri and Ooty region eat tubers like *Manihot esculenta*, *Solanum tubarosa* and *Dioscorea oppositifolia* (Ayyanar and Ignacimuthu, 2005). Most of the leafy vegetables such as *Acacia pennata*, *Commelina ensifolia*, *Diplocyclos palmatus*, *Jasminum angustifolium*, *Premna obtusifolia* and *Cissus quadrangularis* used by the *Baduga ethnic* and

other tribals of Nilgiri district in Tamil Nadu have also been used to treat various ailments (Arinathan *et.al.*, 2003). Besides the medicinal and food value, plants also play an important role in the socioeconomic life of *badugas*. *baduga* ethnic have grown some of the plants as sacred plants in the vicinity of their houses and temples.*Bbaduga* ethnic also use a number of plants for various economic uses viz., construction purposes and for hedge; some of the plants for, biofertilizers, fodders, fire wood, construction of household implements etc.

Figure showing family wise classification of collected plant species in the study area

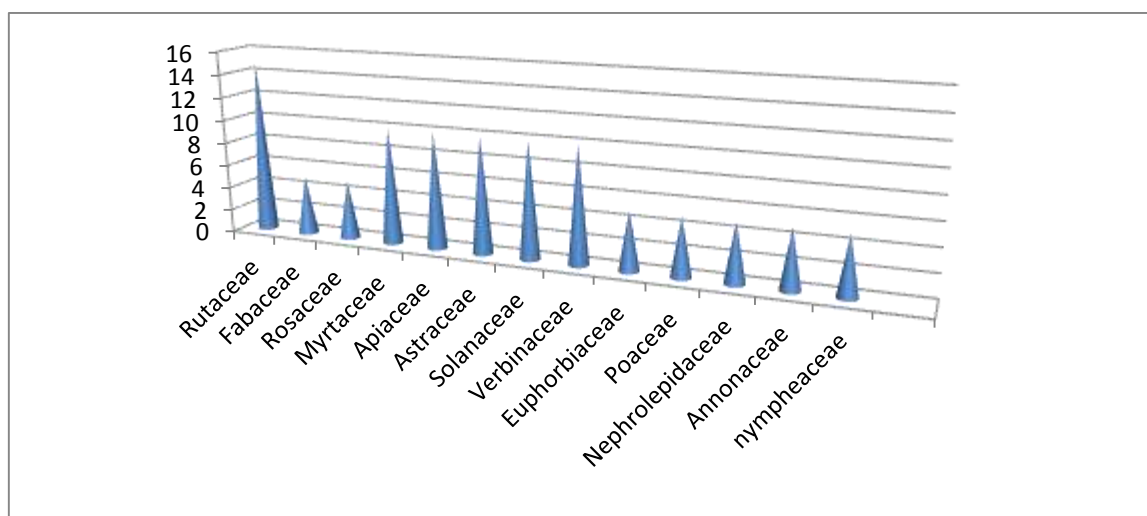


Figure 1.3 family wise classification of collected plant species in the study area

Pie diagram showing different habit of plants used other than medicinal purpose

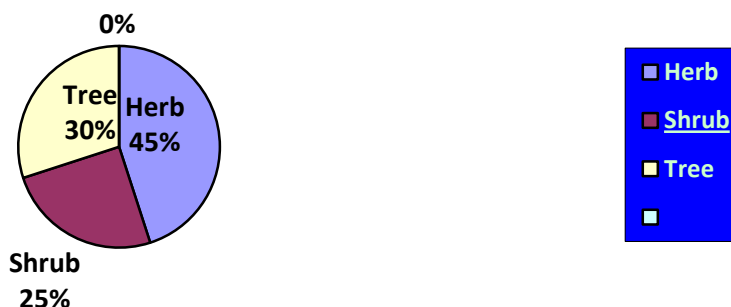


Figure 1.4 pie diagram showing habits of plant species used for non medicinal purpose

CONCLUSION

Traditional plant use and knowledge thereof is still essential to the *Nilgiri* tribals and Baduga ethnic living in the hill station in Nilgiri district of Tamil Nadu. With changes in lifestyle and associated decline of the use of plants, the ethno-botanical knowledge might continue to decline. The preservation of some rituals especially concerning economically important plants is noteworthy in the area and the study revealed that the *Nilgiri* tribals and Baduga ethnic are using many forest resources for their day-to-day life.

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