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A preliminary survey of Fiber yielding plants in and around Bhadra Reservoir Project area, Karnataka

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Abstract

The present communication pertains to fiber yielding plants recorded in and around Bhadra reservoir Project area, Karnataka during 2009-2010. The study was based on extensive and intensive field surveys conducted in the study area to document traditional knowledge on fiber yielding plants. The botanical names of the reported plants with their family names have been documented in the present work. During this study period a total of 25 fiber yielding plants belonging to 14 families were reported. The study would not only help in documenting the traditional knowledge, it would also help in management of plant resources.

Keywords: Bhadra project area, Fiber, Plants, Families.

1. Introduction

The fiber from plant has an important role to fulfill the various human needs and is the part and parcel of his basic requirements. The contribution of wild plants as a substitute of vegetable fiber cannot be ignored as they have multiple uses in rural areas. Only a few information about these fiber yielding plants of the country is available (Manandhar, 1986; Singh & Shrestha, 1988; Manandhar, 1992) [6,7,8].

2. Materials and Methods

Study area: The study area is located at Malnad region of Karnataka. The Bhadra Project area is located at latitude 13°42' N and longitude 75°38'20" E.

Collection of data: The present study was conducted to known fiber yielding plants occurring in Bhadra project area of Shivamogga district. The study was based on extensive and intensive field surveys undertaken in and around Bhadra Project area *i.e.* Singanamane, Kudreshed, Shanti nagara, Shankaraghatta, Mallenahalli, Nellisera and Tavaraghatta during the period September 2009-August 2010. Surveys were undertaken in the remote agricultural and forest areas.

Extensive field trips were carried out to different places of BR Project, Bhadravathi taluk, Karnataka during 2009-2010. Plants were collected and identified using relevant references (Hooker, 1892-1897^[4]; Cooke, 1901^[3]; Kulkarni, 1988^[5]; Anjula Pandey and Rita Gupta, 2003; Anil Kumar *et al.*, 2005) and photographs^[1,2]. The areas represent different ecological conditions like human inhabitations, road sides, agricultural fields, horticultural fields, wastelands, etc.

2. Results and Discussion

Table 1 depicted checklist of fiber bearing plants having 25 plant species belonging to 21 genera and 14 families. The dominant family of the present study is Fabaceae with 5 species. While, Apocynaceae, Moraceae and Malvaceae having 3 species each respectively (Figure 1). The floss round the seed of *Calotropis procera* and *Calotropis gigantea* is used for stuffing pillows, mattresses and cushions. Aerial root of *Ficus benghalensis* are used for temporary binding. The local peoples make mats, fans, basket from the leaf of *Phoenix sylvestris* and *Cocos nucifera*. Moreover, the *Cocos nucifera* leaves are used for thatching also.

The fibers are mainly used for textile and paper manufacture, filling, making ropes, fishing nets and cordage, thatch, hats and other weaving materials and brush making. For items like gunny bags, ropes, cordage, fishing nets, bast fibers of commercially exploited species such as *Hibiscus* have often been used (Anjula Pandey and Rita Gupta, 2003)^[2].

Calotropis procera bark is used for making coir and nets. *Sida acuta* stem is used in mats and nets. While, *Lantana camera* stem is used in making baskets.

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Table 1: Checklist of Fiber yielding plants in the study area

Sl. No	Name of the species	Family
1.	<i>Acacia sp.</i>	Fabaceae
2.	<i>Agave sp.</i>	Asparagaceae
3.	<i>Aloe vera</i>	Liliaceae
4.	<i>Bambusa sp.</i>	Poaceae
5.	<i>Bauhinia purpurea</i>	Fabaceae
6.	<i>Bauhinia variegata</i>	Fabaceae
7.	<i>Butea monosperma</i>	Fabaceae
8.	<i>Calotropis gigantea</i>	Apocynaceae
9.	<i>Calotropis procera</i>	Apocynaceae
10.	<i>Crotalaria sp.</i>	Fabaceae
11.	<i>Cyperus iria</i>	Cyperaceae
12.	<i>Cocos nucifera</i>	Areaceae
13.	<i>Eucalyptus sp.</i>	Myrtaceae
14.	<i>Ficus benghalensis</i>	Moraceae
15.	<i>Ficus religiosa</i>	Moraceae
16.	<i>Hibiscus rosa sinensis</i>	Malvaceae
17.	<i>Hibiscus sp.</i>	Malvaceae
18.	<i>Jatropha curcas</i>	Euphorbiaceae
19.	<i>Morus alba</i>	Moraceae
20.	<i>Musa sp.</i>	Musaceae
21.	<i>Nerium sp.</i>	Apocynaceae
22.	<i>Phoenix silvestris</i>	Areaceae
23.	<i>Sida acuta</i>	Malvaceae
24.	<i>Terminalia sp.</i>	Combretaceae
25.	<i>Typha latifolia</i>	Typhaceae

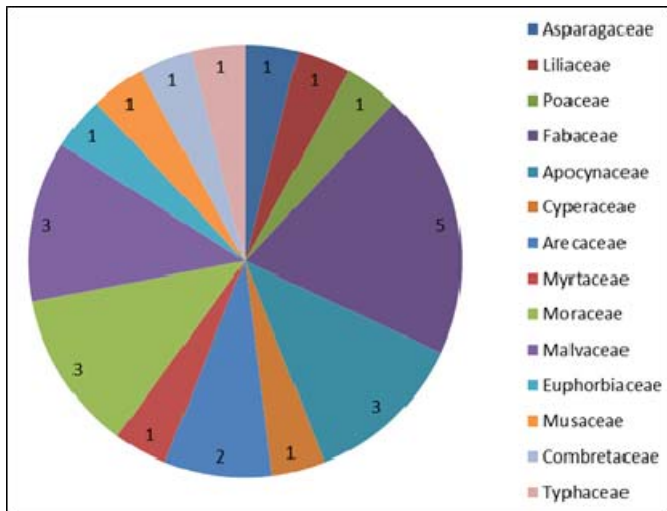
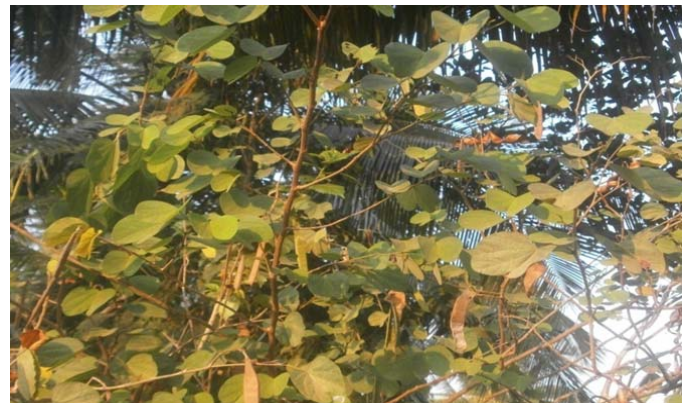


Fig 1: Each family showing number of fiber yielding plants

Fig 2: *Cocos nucifera*, *Calotropis procera* and *Bauhinia variegata*



Fig 3: *Musa* and Agave species yield fiber.

3. Conclusion

The fiber bearing plant products can contribute to the income of the rural peoples and can generate employment as well as income especially for poor farmers in the rural areas. They provide important necessities for life like food, shelter & clothing. The R&D activities, despite abundance of fibre

yielding species in native country, has not geared up to the level to attracted the attention it deserves(Anjula Pandey, Rita Gupta,2003)^[2].Thus a large number of plant species can largely contribute to socio-economic upliftment of local people.

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