



STUDY ON EDIBLE FRUIT PLANTS OF BHADRAVATHI TALUK, KARNATAKA

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Abstract:

The present paper deals with the preliminary survey of the edible fruit plants used by the peoples in Bhadravathi taluk of Karnataka during October 2009 to September 2010. About 26 plants belonging to 24 genera and 17 families are recorded. The plant species, their families and habit types are also reported in this article.

Introduction:

A fruit plants which bears fruit that is consumed or used by humans and some animals. All trees that are flowering plants produce fruit, which are the ripened ovaries of flowers containing one or more seeds. In horticultural usage, the term 'fruit tree' is limited to those that provide fruit for human food (en.wikipedia.org).

Fruits have satisfactory edible proteins with high quality so that we can use them in food industries and as nutrition. Fruits are generally high in fiber, water, vitamin C and sugars. From ancient time edible wild fruits played a very vital part in supplementing the diet of the people. Many people in rural areas still use them extensively as a supplement to their basic food requirement; some are preserved for use during periods of scarcity. Of the total floristic wealth of about 15,000 species of angiosperms available in India, about 1,000 species fall into the wild edible plant category either in the form of fruits, tubers, vegetables *etc.* Many of the wild edible plants and fruit species are rich in nutrients (Arora and Pandey, 1996; Anil Kumar Khaple et al., 2012).

Scientific study of fruit bearing plants is important now a days and cultivated as a source of food item for an increasing population. Hence, there is no report on edible fruit plants from the present study area and therefore, the present study was undertaken.

Materials and Methods:

Bhadravati is an industrial town and taluk in the Shimoga District of Karnataka, India It is situated at a distance of about 20 kilometres from the district headquarters Shimoga. Bhadravathi, is situated at 13° 52' N latitude and 75° 40' E longitude.

The ethnobotanical data presented here is the out come of series of field surveys from October 2009 to September 2010. During this period, many interviews were undertaken in a way to explore the data regarding edible fruit plants. Careful notes were taken about the part of the plant used as food and their mode of usage. This information was also gathered in different villages of Bhadravathi taluk, Karnataka. The methodology for collection of plant samples of fruit yielding plants have been adopted as per standard procedure (Jain and Rao, 1997; Singh and Subramanyam, 2008). The collected plant specimens were identified with the help of recent and relevant floras and confirmed from the authentic specimens.

The fruit plants used as food by local peoples are given under the respective families, which are arranged alphabetically. Under each family, the genera are also arranged in alphabetical order. Table 1 provided the scientific name, family and habit of fruit plants in the study area.

Results and Discussion:

In the present study, a total of 26 species of fruit bearing plants belonging to 24 genera and 17 families are recorded. Among these Rutaceae and Arecaceae families are dominant with 3 species followed by Annonaceae, Anacardiaceae, Myrtaceae and Solanaceae with 2 species each (Figure 1). Figure 2 shows percentage composition of habit types (Herb, shrub, Climber and Trees) of Fruit plants.

Regular usage of fruits like *Punica granatum*, *Cocos nucifera*, *Carica papaya*, *Solanum lycopersicum*, *Psidium guajava*, *Musa* sp. and *Phyllanthus emblica* were observed from the peoples.

Regular consumption of fruit is associated with reduced risks of cancer, cardiovascular diseases (especially coronary heart disease), stroke, Alzheimer disease, cataracts and some of the functional diseases associated with aging (Liu, 2003; Sasi and Rajendran, 2012). The fruits of *Mangifera indica*, *Murraya koenigii*, *Psidium guajava*, *Solanum nigrum* and *Tamarindus indica* were collected by the local peoples for selling to urban areas for income purpose.

The wild fruits are excellent sources of vitamins, carbohydrates, proteins, fibers and minerals and enormous medicinal potential. They can eat raw or processed. These fruits from forests are rich source of protein and energy and very useful in treating protein energy deficiency. The production and consumption of these fruits in arid zones provides dietary supplement as well as commercial opportunity. The growing of trees for fruit production encourages the prevention of more or less permanent stands in bares land (Deshmukh and Ahilya Waghmode, 2011).

Musa fruits are a good source of fiber, potassium and Vitamin c. *Mangifera indica* fruit is one of the delicious tropical seasonal fruit and rich in pre-biotic dietary fiber, vitamins, pro-vitamin A and minerals. *Punica granatum* fruit is a good source of poly phenols. It has thick reddish skin and many seeds. Citrus fruit is edible and it has good source of vitamin A, C and E. *Phyllanthus emblica* fruits are source of Vitamin C and it is also very high in pectin. *Aegle marmelos* fruits are of dietary use and are used in the treatment of diarrhea, dysentery, and peptic ulcers. The fruits of *Phoenix sylvestris* and *Azadirachta indica* were used for consumption during food scarcity.

Annona reticulate fruits varies in shape, heart-shaped, spherical, oblong or irregular. The size ranges from 7 centimetres (2.8 in) to 12 centimetres (4.7 in), depending on the cultivar. When ripe, the fruit is brown or yellowish, with red highlights and a varying degree of reticulation, depending again on the variety. The flesh varies from juicy and very aromatic to hard with a repulsive taste (Mahdeem,1998). The flavor is sweet and pleasant, akin to the taste of 'traditional' custard.

The *Anacardium occidentale* seed, often simply called a cashew, is widely consumed. It is eaten on its own, used in recipes, or processed into cashew cheese or cashew butter. The cashew apple is light reddish to yellow fruit, whose pulp can be processed into a sweet, astringent fruit drink or distilled into liquor. The shell of the cashew seed yields derivatives that can be used in many applications from lubricants to paints, and other parts of the tree have traditionally been used for snake-bites and other folk remedies (en.wikipedia.org).

Cocos nucifera fruit has three layers: the exocarp, mesocarp, and endocarp. The exocarp and mesocarp make up the "husk" of the coconut. Coconuts sold in the shops of nontropical countries often have had the exocarp (outermost layer) removed. The mesocarp is composed of a fiber, called coir, which has many traditional and commercial uses. The shell has three germination pores (stoma) or "eyes" that are

clearly visible on its outside surface once the husk is removed (Bourke, R. Michael and Tracy Harwood, 2009).

Conclusion:

Fruit bearing plants are always available both in drought and non- drought years. Now-a-days the traditional knowledge is declining due to lack of interest in the present generation and also absence of records about the useful plants. Hence, the truthful indigenous knowledge is immediately required to be documented and validated for serving future generations and their nutritional values should be analyzed (Sasi and Rajendran, 2012). Fruits play an important role in the nutrition of human beings including childrens.

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Table 1: List of Fruit plants in the study area

Sl.No	Scientific Name	Family	Habit
1.	<i>Aegele marmelos</i>	Rutaceae	Tree
2.	<i>Areca catechu</i>	Arecaceae	Trees
3.	<i>Annona squamosa</i>	Annonaceae	Tree
4.	<i>Annona reticulata</i>	Annonaceae	Tree
5.	<i>Artocarpus heterophyllus</i>	Moraceae	Tree
6.	<i>Azadirachta indica</i>	Meliaceae	Tree
7.	<i>Achras zapota</i>	Sapotaceae	Tree
8.	<i>Anacardium occidentale</i>	Anacardiaceae	Tree

9.	<i>Carica papaya</i>	Caricaceae	Tree
10.	<i>Citrus sp.</i>	Rutaceae	Shrub
11.	<i>Carissa carandus</i>	Apocynaceae	Shrub
12.	<i>Cocos nucifera</i>	Arecaceae	Tree
13.	<i>Citrullus lanatus</i>	Cucurbitaceae	Climber
14.	<i>Lantana camera</i>	Verbenaceae	Shrub
15.	<i>Morus alba</i>	Moraceae	Tree
16.	<i>Mangifera indica</i>	Anacardiaceae	Tree
17.	<i>Murraya koenigii</i>	Rutaceae	Tree
18.	<i>Oxalis corniculata</i>	Oxalidaceae	Herb
19.	<i>Punica granatum</i>	Lythraceae	Tree
20.	<i>Phoenix silvestris</i>	Arecaceae	Tree
21.	<i>Psidium guajava</i>	Myrtaceae	Tree
22.	<i>Phyllanthus emblica</i>	Phyllanthaceae	Tree
23.	<i>Syzygium cumini</i>	Myrtaceae	Tree
24.	<i>Solanum lycopersicum</i>	Solanaceae	Herb
25.	<i>Solanum nigrum</i>	Solanaceae	Herb
26.	<i>Tamarindus indica</i>	Fabaceae	Tree

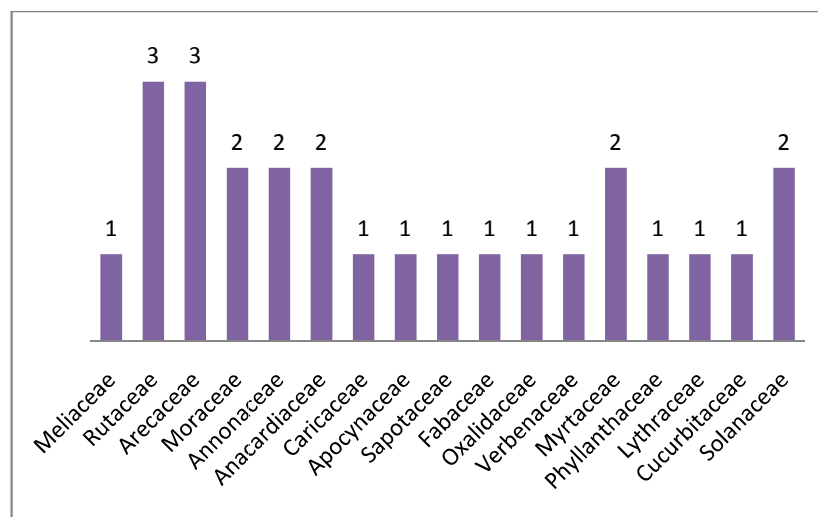


Figure 1: Number of Fruit bearing plants in each family

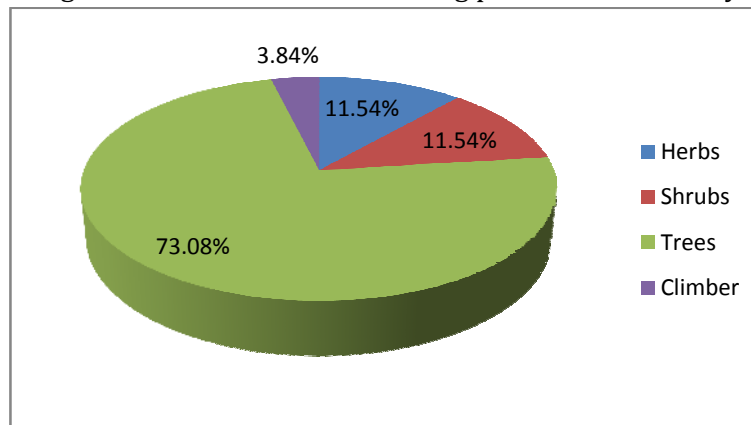


Figure 2: Percentage composition of habit types of Fruit plants