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A Survey of Wild Edible Plants used by Rural Peoples of Dindigul District, Tamil Nadu, India

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Abstract

The Present communication deals with the ethnobotanical exploration, identification, concerns and future potentialities of the wild edible Plant species consumed by the local People inhabiting in rural Peoples of Dindigul district**.** India. During the years 2012-2013. A field survey for wild food plants was conducted in selected study sites in Dindigul, A total of 35 species belongs to 32 genera and 24 families of wild edible plants were documented. These wild edible Plants also traditionally used as medicine and other miscellaneous purposes by the local communities. A comparative analysis of the data was undertaken showing that the quantity and quality of traditional knowledge varies among the several study areas and is closely related to the traditions, environment and cultural heritage of each country. More similarities of wild edible popular use were revealed from various parts. Additionally, it is important to study such knowledge systems and find innovative ways of infusing them to the future generations. Even though there is relatively abundant information on inventories of wild edible taxa, there is also a crucial need to understand how these plants are consumed and when and how these consumption phenomena change over time and place around.

Key words: Wild edibles, Rural Peoples, Dindigul district

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1. Introduction

Wild Plants have provided an important source of food since time immemorial and even in present scenario. Millions of people in many developing countries do not have enough food to meet their daily requirements and a further more are deficient in one or more nutrients (FAO, 2004) and the same is true about India, the country with second largest human population on the earth. The wild edible plants are the precious gift of our country nature and strongly depends on it for their day-to-day life (Reyes-Garcia *et al*., 2005; Mahishi *et al*., 2005; Tiruneh and Herbert, 2008). In India most rural communities depends on the wild resources including wild edible plants to meet their food needs in periods of food crisis, as well as for additional food supplements. Wild foods were traditionally important as a supplement to the diet (Particularly during food shortages), to which they bring diversity and serve as a source of vitamins and minerals. However, only a few people who like the taste of wild species and enjoy gathering them continue to consume them. Many people consider wild food to be old fashioned, unprofitable, or too time-consuming, and prefer to cultivate or buy their food. Some wild food plants also have medicinal properties. Such dual roles of wild plants are common in the rural areas (Etkin, 2002). Food and dishes always reflect the regional identity of people, ethnic groups and communities, and the use of wild food plants is an example that exemplifies local knowledge or traditional ecological knowledge. It is of outmost importance to obtain data about popular uses of wild food Plants before this knowledge disappears. Wild edible plant species are threatened by various natural causes and human activities (Uprety *et al*., 2012; Byg and Salick, 2009). In many regions these traditions are at risk of disappearing, and hence the urgent need to study such knowledge system (Pieroni *et al*., 2005). Although much has been documented on ethnomedicinal and floristic aspects of Plants of this area, little has been reported about the wild edible Plant resources. Keeping this in view, the Present study was conducted as an attempt from the region to explore and identify the wild edible plant resources, and indigenous traditional knowledge about their utilization.

2. Materials and Methods

The present study was carried out in the Dindigul district. The study was conducted between 10º 21'N-77º 57' E / 10. 35º N 77.95^{0}E at the elevation of 265M (869 ft) annually. Dindigul is located in the foothills of Sirumalai Hills, the district receives rainfall with an average of 812mm (32.0) annually. The Present surveys was carried out during 2012 – 2013, the region was frequently visited. To assess the traditional knowledge on wild edible Plants, frequent interactions and discussions were made with the local Villagers, which included farmers, herdsmen, shepherds, housewives and children. The indigenous knowledge received from them was noted in special field books. Live specimens and available photographs were shown to them for local identification. The fruits were collected and identified with the help of available literature, further confirmation from Department of Botanay, Saraswathi Narayanan College. Madurai. The information about the wild edible Plants given by mentioning there Botanical name, family, common name, and their uses. Photographs of some important specimens are taken for further details. Plants were identified using relevant scientific literature and standard floras. Ethnobotanical information on wild plants was collected by interviewing local inhabitants based on a structured questionnaire to collect data on local Plant names, uses, parts used and mode of utilization. To determine the authenticity of the information collected during field work, repeated verification of data from different informants was done. Thus, only the specific and reliable information cross-checked with informants has been incorporated in the present study.

3. Results and Discussions

In the present study, Wild edibles Plants of Dindigul district are listed (Table-1). Wild edible Plants comprises total of 35 Plant species of 32 genera and 24 Families were documented. Botanical name of the Plants are arranged alphabetically followed by Family name, Vernacular names, Parts used for consumption. Most of the wild Plants food do not require much processing before consumption. The fruits are generally eaten raw when they are ripe. Fruits are collected by local People while working or wandering in the forest and also their agricultural fields.

The most frequently used parts are fruits, young leaves and succulent stems. Some of the Plants are commonly known by all local peoples such as *Canthium parviflorum, Ziziphus oenoplia, Ziziphus jujuba, Syzygium cumini, Pithacellobium dulce, Opuntia dillenii, etc.*, some plants are lesser known like *Caralluma stalagmifera, Caralluma sarkariae, Flueggea leucopyrus, Passiflora edulis, Hibiscus cannabinus, Hibiscus micranthus, Citrulus lanatus* etc., They provide staple food for indigenous people, serve as supplementary food for non-indigenous people and are one of the primary sources of cash income for poor communities (Uprety *et al*., 2012; Menendez-Baceta *et al*., 2012). In recent years, with the construction of roads, reservoirs and other infrastructure, wild habitats for edible plants were severely impacted. Unsustainable harvesting of food plant species with good market price also contributes

to a decrease of these plants.Threats are not only limited to wild food plants themselves, the traditional knowledge associated with wild edibles. Therefore, systematic documentation of indigenous knowledge and biological resources is of great significance (Acharya and Acharya, 2010; Heywood *et al*., 2007). Therefore, steps are needed to undertake extensive education about their importance and assess their nutritional value to serve as a direct or indirect source of food to the local inhabitants. This may bring to light one or other new food plants from wild resources for ever increasing population of our country. Many of the wild food may not be freely available in future due to overexploitation, habitat destruction, regular forests fires and invasion of exotic plant species, has resulted in the decrease and even loss of many wild food plant populations.

Table 1: Wild Edible Plants utilized by rural (local) Peoples of Dindigul district.

S.N	Botanical names of Plants	Family	Vernacular names	Parts used
1.	*Anacardium occidentale L.*	Anacardiaceae	Munthri	Fruit
2.	*Annona squamosa L.*	Annonaceae	Cheeta	Fruit
3.	*Azadirachta indica A.juss.*	Meliaceae	Vempu	Fruit
4.	*Canthium parviflorum Lam.*	Rubiaceae	Karam palam	Fruit
5.	*Capparis sepiaria L.*	Capparidaceae	Suram palam	Fruit
6.	*Caralluma sarkariae Lavranos & Frandsen.*	Asclepiadaceae	Kattakadai / Pulichai	Succulent stem
7.	*Caralluma stalagmifera C.E.C. Fich.*	Asclepiadaceae	Kattakadai / Pulichai	Succulent stem
8.	*Carica papaya L.*	Caricaceae	Pappali	Fruit
9.	*Carisa carandas L.*	Apocynaceae	Kalakkai	Fruit
10.	*Ceropegia juncea Roxb.*	Asclepiadaceae	Puliyarai	Stem
11.	*Cissus quadrangularis L.*	Vitaceae	Pirandai	Fruit
12.	*Citrulus lanatus (Thunb.) Matsumura.*	Cucurbitaceae	Mithukkam	Fruit
13.	*Coccinia grandis L.*	Cucurbitaceae	Kovai	Fruit
14.	*Cocos nucifera L.*	Arecaceae	Thennai	Fruit
15.	*Commelina benghalensis L.*	Commelinaceae	Thenga poo	Flower
16.	*Ficus benghalensis L.*	Moraceae	Aala maram	Fruit
17.	*Flueggea leucopyrus willd.*	Euphorbiaceae	Katupila	Fruit
18.	*Gossypium barbadense L.*	Malvaceae	Paruthi	Young Fruit
19.	*Helianthus annus L.*	Asteraceae	Suriaganthi	seeds
20.	*Hibiscus cannabinus L.*	Malvaceae	Pulichai keerai	Leaves are rawly eaten
21.	*Hibiscus micranthus L. f.*	Malvaceae	Otha kallai	Fruit
22.	*Lantana camara L*	Verbenaceae	Unni palam	Fruit
23.	*Mangifera indica L.*	Anacardiaceae	Maa	Fruit
24.	*Morus australis Poiret.*	Moraceae	Pattupoochi palam	Fruit
25.	*Opuntia dillenii (Ker-Gawler) Haw.*	Cactaceae	Sappathi kalli	Fruits and young succulent stem
26.	*Passiflora edulis Sms.*	Passifloraceae	Thatpoot	Fruit
27.	*Phoenix sylvestris (L.) Roxb.*	Arecaceae	Echem	Fruit
28.	*Phyllanthus reticulata Poiret.*	Euphorbiaceae	Poola	Fruit
29.	*Physalis minima L.*	Solanaceae	Pulichakai	Fruit
30.	*Pithacellobium dulce (Roxb) Benth.*	Mimosaceae	Kodikkai	Fruit
31.	*Psidium guajava L.*	Myrtaceae	Koiya	Fruit
32.	*Syzygium cumini (L.)Skeel.*	Myrtaceae	Naaval	Fruit
33.	*Tamarindus indica L.*	Caesalpiniaceae	Puli	Fruit
34.	*Ziziphus jujuba L.Gartner, non miller.*	Rhamnaceae	Ilanthai	Fruit
35.	*Ziziphus oenoplia (L.) Miller*	Rhamnaceae	Nari ilanthai	Fruit

4. Conclusion

Above Plants have dual significance firstly they are promising future food, Wild food Plants represent inexpensive, locally available nutrition health quality. Useful wild edible Plants are found all over the Dindigul district, many of the Plants also contribute to herbal medicines which form an important part of the culture and tradition of India. Along with economic development and increasing income, only a few people want to collect wild edible plants. The younger generation is becoming less interested in them, thus causing the loss of traditional knowledge. Therefore efforts can be made to bring some of them under cultivation in order to maintain a continuous supply and help in their conservation.

5. Reference

Acharya, K.P. and Acharya, R. 2010. Eating from the wild: indigenous knowledge on wild edible plants in Parroha VDC of Rupandehi district, Central Nepal. *Int. J. Soc. Forestry*, 3:28-48.

Byg, A. and Salick, J. 2009. Local perspectives on a global phenomenon-climate change in eastern tibetan villages. *Global Environ. Change*, 19:156-166.

Etkin, N.L. 2002. Local knowledge of biotic diversity and its conservation in rural Hausaland, Northern Nigeria. *Econ. Bot.*, 56(1): 73-88.

Food and Agricultural Organization of the United Nations (FAO), 2004. The state of food insecurity in the world. Monitoring the progress towards the world food summit 2nd millennium development goals. Annual Report Rome.

Heywood, V., Casas, A., Ford-Lloyd, B., Kell, S. and Maxted, N. 2007.Conservation and sustainable use of crop wild relatives. *Agri. Ecosys. Environ.*,121:245-255.

Mahishi, P., Srinivasa, B.H. and Shivanna, M.B. 2005. Medicinal Plant wealth of local communities in some villages in Shimoga District of Karnataka, India. *J. Ethnopharmacol*., 98: 307-312.

Menendez-Baceta, G., Aceituno-Mata, L., Tardío, J., Reyes-García, V. and Pardo-de-Santayana, M. 2012. Wild edible plants traditionally gathered in Gorbeialdea (Biscay, Basque Country). *Genet Resour Crop Evol*., 59:1329-1347.

Pieroni, A., Nebel, S., Santoro, R. F and Heinrich, M. 2005. Food for two seasons: Culinary uses of non-cultivated local vegetables and mushrooms in a south Italian village. *Int. J. Food. Sci. Nutr*., 56: 245-272.

Reyes-Garcia, V., Vadez, V., Huanca, T., Leonard, W. and Wilkie, D. 2005. Knowledge and consumption of wild plants: A comparative study in two Tsimane villages in the Bolivian Amazon. *Ethnobot. Res. Appl*., 3: 201-207.

Tiruneh, F.M. and Herbert, H. 2008. Wild edible fruit species cultural domain, informant species competence and preference in three districts of Amhara region, Ethiopia. *Ethnobot. Res. Appl*., 6: 487-50.

Uprety, Y., Poudel, R., Shrestha, K., Rajbhandary, S., Tiwari, N., Shrestha, U. and Asselin, H. 2012. Diversity of use and local knowledge of wild edible plant resources in Nepal. *J. Ethnobiol. Ethnomed*., 8:16.