

UNIVERSITY OF BARISHAL



A Project Proposal

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Abstract:

Ethnobotany deals with the plants in relation to human and animals. The ethnobotanical studies include all type of interrelation between people and plants, with respect to their medicinal, religious belief and uses. Now a day's ethnobotany emerges in a very complex structure which often requires collaboration of experts. The tribal people act as storehouses of traditional knowledge which developed through continuous uses of plants in their daily life. As this indigenous knowledge is not documented and transfer verbally there is a chance of depletion of its integrity. This study reveals that the ethnic people and forest dwellers have considerable traditional knowledge of wild edible plants and their utilization. The paper report is based on survey, interview, and field work studies on wild edible plants used by tribals and rural people.

Introduction:

Ethnobotany encompasses the total, natural and traditional man-plant relationships. It recognizes the important role of the ambient vegetation in the economic life of people. Ethnobotany has now contributions to an understanding of man-plant relationships, as well as for the practical applications of the biological knowledge of aboriginal people in medicine, health, agriculture and industry (Pawar, 2008). From ancient time plants have been used as a source of food, shelter, clothing, medicine, fibre, gum, resin, oil, etc. Several wild plants are used as food by tribals and other local people living in and around the forest areas (PY, 2010). Tribal and local people prefer wild vegetables over the cultivated as they grow naturally; provide better taste and good health. By selling these wild edibles to the nearby urban markets could earn them extra income. Aboriginals believed that some of the seasonal wild vegetables are good for health and also provide the immunity during the rains which is supposed to be the most suspicious period to become ill by various disorders (Setiya, 2016). Modern scientific researchers are trying to value these traditional food items to fill the gaps between growing population and food production (D. Sarker, 2013). The present studies were conducted to explore the knowledge of wild edible plants to meet the increasing demands of the growing population.

Ethnobotanical Survey

To perform the ethnobotanical survey questionnaires preparation is the important tool as it gives the relevant data for required study. The informant for collection of data is mainly the villagers, locals, traditional healers and priest resides in a particular community. The data collection through interview includes detail information of plants are being used from person to person. The herbarium preparation is also an important tool for the ethnobotanical survey. By the herbarium the identification and taxonomic classification of plants and documentation can be done. The survey includes common name, local name, scientific name of the plants, the plant parts that are used for different purposes.

Problems occurs during ethnobotanical survey:

The following problems occurs for ethnobotanist during the field survey:

- As the indigenous traditional knowledge is not documented and transfer generation to generation verbally, loss of information occurs.
- Researches may be unable to understand the dialectical nomenclature used by local people to describe plant species.
- Some time it is also difficult to identify the plants correctly from its local name and confusion occurs over the Latin name of the plant during documentation.

Strategies to overcome the problems:

- During ethnobotanical survey the informant should be taken into confidence that the indigenous knowledge given by the tribes will not cause over exposure of plants.
- Using extension teaching methods and aids helps to educate local people and appropriate counseling ensures availability of the required knowledge.
- The social economical standard of the tribal people should be improved as it reduced their move towards the city for livelihood.
- Government laws and policy will be helpful in needed conservation practices.

Materials and Methods

Study Area

- The whole area was surrounded by dense forest.
- This information on wild edible plants is outcome of ethnobotanical field surveys and interviews among tribal people, ethnic men and women.
- Data collection was made in different places i.e. forest and other woody areas, farm borders, grazing land etc.

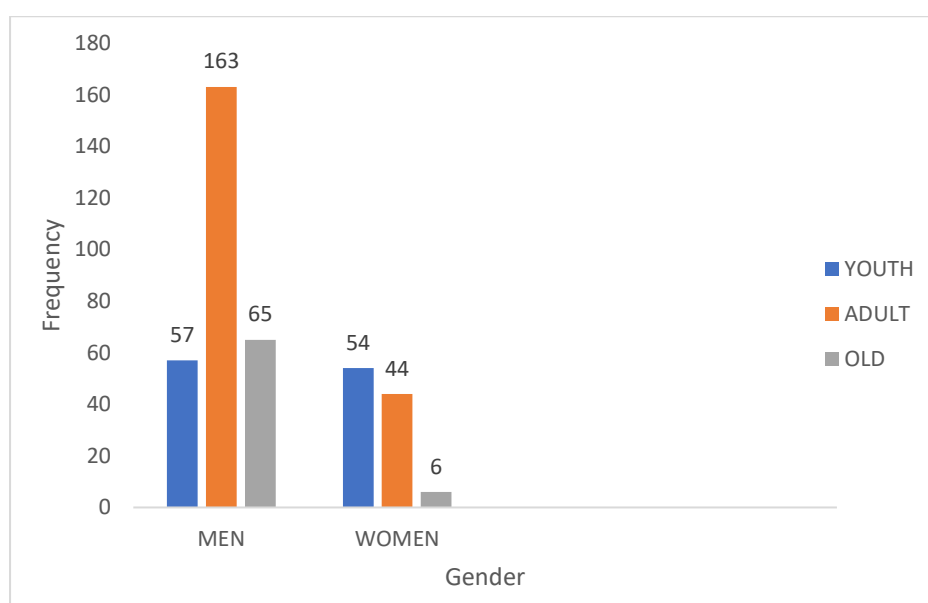


Fig.1 : Interviewing ethnic men & women

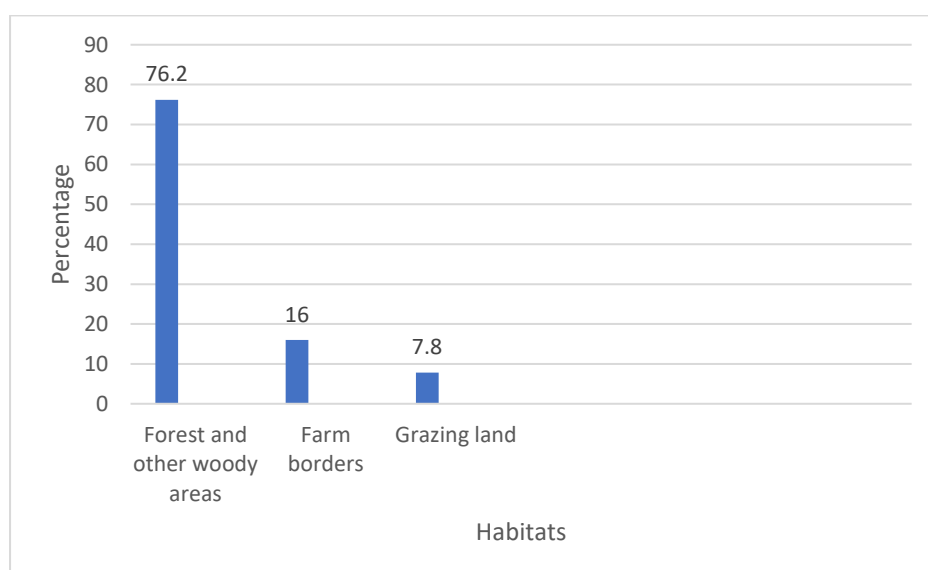


Fig.2 : Data collecting habitats

DATA COLLECTION

Table 1. Wild edible plants used by Local people of study area

S. N.	Plant Name	Family	Local name	Life form	Part(s) used
1	<i>Abelmoschus moschatus</i>	Malvaceae	Kasturi okra	H	Fruits
2	<i>Abrus precatorius</i>	Fabaceae	Gomchi	C	Leaves
3	<i>Acacia catechu</i>	Mimosaceae	Khair	T	Gum
4	<i>Acacia nilotica</i>	Mimosaceae	Babul	T	Gum & seeds
5	<i>Aegle mermelos</i>	Rutaceae	Bel	T	Fruits
6	<i>Amaranthus spinosus</i>	Amaranthaceae	Katanote	H	Leaves
7	<i>Annona squamosa</i>	Annonaceae	Ata	T	Fruits
8	<i>Artocarpus heterophyllus</i>	Moraceae	Kathal	T	Fruits
9	<i>Azadirachta indica</i>	Meliaceae	Neem	T	Whole plant
10	<i>Bacopa monnieri</i>	Scrophulariaceae	Brahmi	C	Whole plant
11	<i>Bambusa vulgaris</i>	Poaceae	Bash	T	Tender shoots
12	<i>Bauhinia purpurea</i>	Caesalpiniaceae	Kanchon	S	Leaves & Flower buds
13	<i>Butea monosperma</i>	Fabaceae	Palas	T	Flower
14	<i>Cassia fistula</i>	Caesalpiniaceae	Sonalu	T	Flower & Seeds
15	<i>Cassia tora</i>	Caesalpiniaceae	Kalkasunda	H	Leaves
16	<i>Chenopodium album</i>	Chenopodiaceae	Bethua	H	Leaves
17	<i>Ficus racemosa</i>	Moraceae	Dumur	T	Ripe Fruits
18	<i>Gmelina arborea</i>	Verbanaceae	Gamar	T	Ripe Fruits
19	<i>Colocasia esculenta</i>	Araceae	Kochu	C	Leaves, Petiole & Tuber
20	<i>Ipomoea aquatica</i>	Convolvulaceae	Kolmi	H	Leaves
21	<i>Mangifera indica</i>	Anacardiaceae	Aam	T	Ripe Fruits
22	<i>Nelumbo nucifera</i>	Nelumbonaceae	Podmo	H	Seeds, Rhizomes
23	<i>Nymphaea nouchali</i>	Nymphaeaceae	Shapla	H	Peduncles, Rhizomes
24	<i>Phyllanthus emblica</i>	Euphorbiaceae	Amloki	T	Ripe Fruits
25	<i>Physalis minima</i>	Solanaceae	Futki	H	Ripe Fruits
26	<i>Solanum nigrum</i>	Solanaceae	Titbegun	S	Leaves, Fruits
27	<i>Syzygium cumini</i>	Myrtaceae	Jam	T	Ripe Fruits
28	<i>Tamarindus indica</i>	Caesalpiniaceae	Tetul	T	Leaves, Fruits
29	<i>Terminalia bellirica</i>	Combretaceae	Bahera	T	Seeds
30	<i>Trapa natans</i>	Trapaceae	Pani fol	H	Fruits

H-Herb, S-Shrub, C-Climber, T-Tree

RESULTS

Fig.3 : Classification on the basis of usage

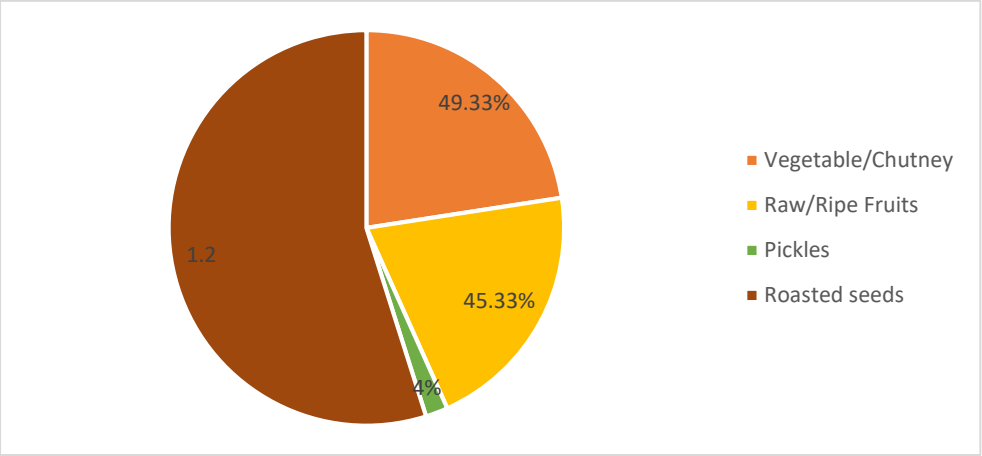


Fig.4 : Classification on the basis of parts used

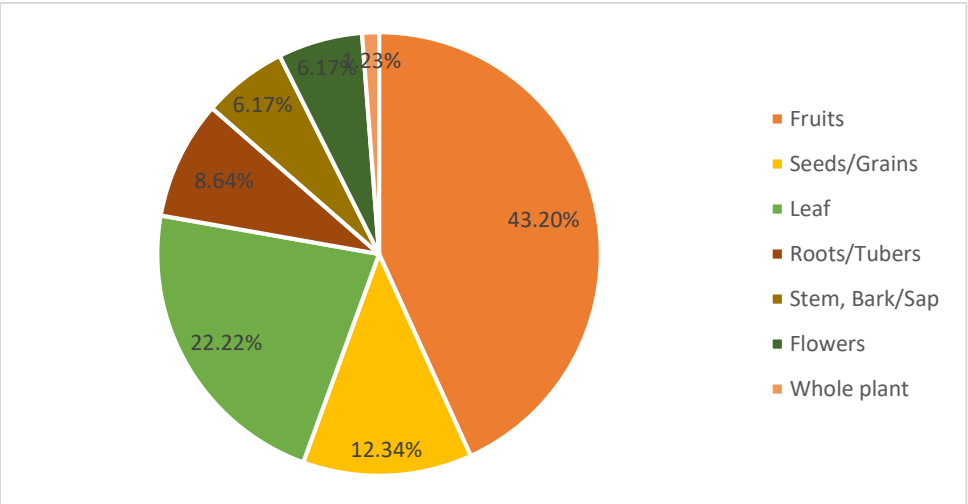
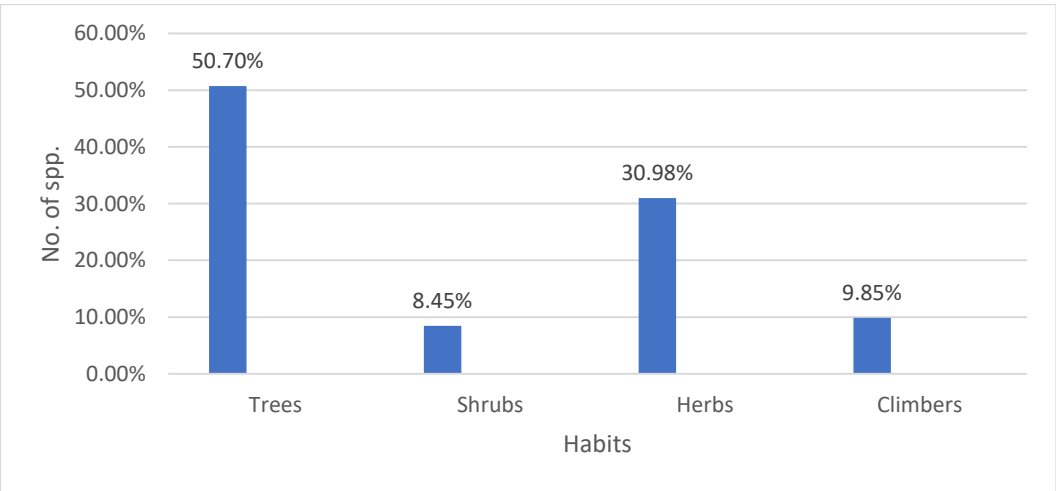


Fig.5 : Wild edible plants growth habits



Some wild edible plants



Fig. 6 : Flower of *Holarrhena pubescens*



Fig.7 : Fruits of *Pithecellobium dulce*



Fig.8 : Tender shoots of *Dendrocalamus strictus*



Fig.9 : Leafy vegetable of *Olax psittacorum*



Fig.10 : Leafy vegetable of *Colocasia esculenta*



Fig.11 : Dried Fruits of *Phoenix sylvestris*



Fig.12 : Fruits of *Terminalia bellerica*



Fig.13 : Fruits of *Averrhoa carambola*

Table 2. Family wise distribution of wild edible plants of study area

Rank	Family	Genus	Species
1	Fabaceae	2	2
2	Malvaceae	1	1
3	Caesalpinaceae	4	4
4	Araceae	1	1
5	Poaceae	1	1
6	Anacardiaceae	1	1
7	Euphorbiaceae	1	1
8	Mimosaceae	2	2
9	Amaranthaceae	1	1
10	Rutaceae	1	1
11	Moraceae	2	2
12	Meliaceae	1	1
13	Annonaceae	1	1
14	Chenopodiaceae	1	1
15	Scrophulariaceae	1	1
16	Convolvulaceae	1	1
17	Combretaceae	1	1
18	Solanaceae	2	2
19	Verbanaceae	1	1
20	Nelumbonaceae	1	1
21	Nymphaeaceae	1	1
22	Myrtaceae	1	1
23	Trapaceae	1	1

Discussion:

Many rural parts of the world depend on wild edible plants for their food (Sundriyal, 2003). Vegetable contain large quantity of vitamin C, Vit. A and Vit. B complex as well as good amount of dietary fibers and phytochemicals. The contents of the wild vegetables also protect our body against various malnutrition, and nutrient disorders that is why they are called as protective food (Rai, 2004). Such unconventional wild edible plants are sources of proteins, fats, rich source of micro-nutrients and trace elements (Kulkarni, 2006). Critical evaluation of the literature reveals that the adequate vegetable consumption can be protective for some chronic diseases such as cancer, obesity, diabetes, cardiovascular diseases, metabolic syndrome, as well as improve risk factors related with these diseases. [19] In the present study many wild vegetables are also being consumed for various medicinal purposes. *Azadirachta indica*, *Butea monosperma*, *Syzygium cumini* were commonly used to treat deadly disease diabetes (Ghosal, 2014). *Cassia fistula*, *Acacia nilotica* and *Mangifera indica* are also used as medicinal plants to cure various women related problem like menstrual disorder, Urinary problems and Leucorrhoea (Quershi, 2014).

Ethnobotanical surveys of wild plants indicate that more than 7000 species have been used for human food at some stage in human history (Grivetti, 2000). But this important knowledge is slowly diminishing day by day due to invasion of alien cultures. Documentation of wild edible plants from ethnobotanical approach is important for enhancing the understanding of indigenous knowledge system (Poudel, 2010).

Conclusions:

Demand of food and vegetables of increasing population cannot be fulfilled unless we cannot find out the ways and means to increase the production of vegetables and other substitute like wild plants. So, it is of the immense need to document the indigenous knowledge of wild edibles for future generations and to encourage the peoples for cultivation of wild edible plants in their home gardens. Further research on cultivation and utilization of wild vegetables would help the tribal and rural people to have better nutrition.

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