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Ethnomedicinal study on wild edible leaves used by the tribal of Hazaribag district, Jharkhand

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ABSTRACT

An extensive survey was carried out on ethno medicinal uses of wild edible leaves used by the tribal in Hazaribag district of Jharkhand. Data were collected through questionnaire. The study identifies 17 species of wild edible leaves belonging 16 genera and 15 families that are commonly consumed by tribal people as per their availability to cure various types of diseases and disorders. The habits, mode of preparation, Medicinal property have been discussed here.

INTRODUCTION

India has a variety of tribal population reflecting its great ethnic diversity. Singh and Arora in 1978 have made great contribution to prepare a list of Indian wild edible plants. Majority of tribal population of Jharkhand lives in forest ecosystems and have their own socio cultural pattern, traditions and typical food practices. Vegetable eaten are mainly of leafy variety, which grow as wild in nature. These edible plants are integral part of their diet .during rainy and summer season. The range of

these types of food used by tribal varies from locality to locality depending on the availability of resources. Tribal people are very much dependent on wild edible leaves to fulfill their nutrition, food security and income generation. Barua (1998) have reported traditional knowledge related to medicinal plants prevalent in Dhule district of Maharashtra. Bhandari et al. (1995) has described over hundred medicinal plants and their uses common in Karnataka. Bhattacharaya (1996) has done extensive survey of medicinal plants of saurashtra and has reported that about 67% of rural

population of this district slowly depends upon medicinal plants for treatment of various diseases. Bhattari (1993) has worked on plants used in treatment of respiratory diseases in various areas of Nepal. India is one of the thickly populated countries of the world suffering from scarcity of food. These edible leaves play a significant role in the food security of tribal (Kujur 1989). Tribal people pass knowledge traditionally uses of wild edible leaves through their next generation but no systematic information is yet available. Keeping this in mind an investigation was conducted to document such edible leaves of tribal with food security orientation.

MATERIALS AND METHODS

The district Hazaribag of Jharkhand lying between 23⁰25' to 24⁰48' latitude and 84⁰27' to 86⁰34' E longitude and is situated at 610 meter altitude. It forms the North Eastern position of the North Chotanagpur division of Jharkhand state. Hazaribag having 45% forest land has got a good number of wild edible leaves eaten by tribal population is still to be carried out (Lal & Singh 2012). 12.2% of total population is of tribal which possess remarkable wisdom to utilize different forms of wild plants for various purpose. The study was conducted in Hazaribag district. The five villages selected randomized for data collection which is covered by forest and residing tribal people. Selected Villages are Sikri, Ulhara, Kaile, Surugaru, Lotwa. Five families from each selected villages inhabited by Oroan, Bhumiz, Birhor, Munda, Santhal, Manjhi were selected randomly for data collection. Several field surveys were carried out during the year 2015-2016. Data collected by interviews

with tribal people of the selected village. They provided useful information on the common names of different wild leafy plant species, including the uses and mode of consumes preparation method. Repeated interviews through questionnaires were made in different villages to authenticate the information collected from different places and tribes. All species were collected to herbarium for taxonomical identification. Local floras were used to identify the plant species. Photograph were taken to show other tribal people for the correct identifications (Kanyang 2007; Panda 2007). The plant enumerated alphabetically with their botanical name, family, local name and mode of preparation for medicinal purpose (Table 1).

RESULTS AND DISCUSSION

A Total of 17 plant species from 16 genera and 15 families have been recorded as wild edible leaves in the study area. These 17 species belongs to Amaranthaceae have 2 species, Caesalpiniaceae have 2 species, Acanthaceae, Rutaceae, Rubiaceae, Oxilidaceae, Moringaceae, Scrophulariaceae, Labiatae, Lamiaceae, Asteraceae, Chenopodiaceae, Umbelliferae, Nyctaginaceae and Euphorbiaceae have one plant species. In present study 17 wild leaves plants have been enumerated among them 11 are herb, 2 are tree, 2 are shrub, and 2 climber species. These wild edible plants play a significant role as food and medicine in their daily life along with food security of the tribal, but the traditional practices are declining because the tribal have started migratory towards the cities and are not willing and interested in the practice of traditional knowledge (Verma 1981; Uperty et al. 2008; Plate 1).

Table 1: Wild plants used by tribal for medicinal purpose

Botanical name	Family name	Local name	Parts used	Uses by tribal's
<i>Achyranthes aspera</i> L.	Amaranthaceae	Latjira, Chirchiri	Whole plant	Root paste 5gm with honey in (2:1) ratio is given twice daily for 7 days in curing inpruritus, oedema, haemorrhoids and pneumonia.
<i>Amaranthus spinosus</i> L.	Amaranthaceae	Kateli /Lal bhajiara.	Root and Leaves	Birhor prescribe fresh plant decoction about 15ml to women twice a day for reducing menstrual flow.
<i>Bacopa monnieri</i> L.	Scrophulariaceae	Bramhi	Whole plant	Munda take Leaf decoction as a nerve tonic, and also in epilepsy and insanity.
<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	Punernwa	whole plant	Birhor prescribe boiled plant in the treatment of urinary troubles.
<i>Cassia occidentalis</i> L.	Caesalpinaceae	Kasaunde	Whole plant	Munda uses the leaf powder with sugar solution in case of whooping cough.
<i>Cassia tora</i> L.	Caesalpinaceae	Chakvad	leaf, and seed	Munda applies leaf paste against Eczema.
<i>Centella asiatica</i> L.	Umbelliferae	Thankuni	Whole plant	Birhor gives fresh leaves for chew to children in the nervous disorder, leprosy, tuberculosis.
<i>Chenopodium album</i> L.	Chenopodiaceae	Bathua	Leaves and seeds	Santhal uses leaf juice with common salt for longevity of life.
<i>Eclipta alba</i> Havesk.	Asteraceae	Bhringraj	Leaves, seed	Munda uses two drops of juice of <i>eclipta alba</i> with

				honey is beneficial in cough of children.
<i>Euphorbia hirta</i> L.	Euphorbiaceae	Dudhi	Whole plant	Santhal use to nursing mothers when the milk formulation is stop or deficient.
<i>Hygrophila spinosa</i> T.	Acanthaceae	Kulekhara	Leaf	Santhal & other communities consumed leaf extract everyday to increase the amount of hemoglobin in blood.
<i>Leucas aspera</i> (Spreng.) W.	Lamiaceae	Dronpuspa	Leaf and flowers	Munda gives 3 - 4 drops of leaf juice orally to the children to cure warm.
<i>Mentha spicata</i> L.	Labiataceae	Pudina	Whole plant	Birhor applies the leaf juice in stomach disorders.
<i>Moringa oleifera</i> L.	Moringaceae	Sajina, MungaSag	Whole plant	Other community applies bruished leaves as cure for wounds due to bite of wild animals.
<i>Murraya koenigii</i> (L.) Sprengel	Rutaceae	Karipatta	Whole plant	Birhor applies paste of leaves on eruptions, bruished and poisonous bite.
<i>Oxalis corniculata</i> L.	Oxalidaceae	Amruui	Whole plant	Birhor gives plant paste as an antidote to poison caused by <i>Datura metel</i> seeds and <i>Thevetia peruviana</i> fruits, lukewarm.
<i>Paderia foetida</i> L.	Rubiaceae	Gandal	Whole plant	Munda prepared soup with leaf to get relief in cough and cold.

In Hazaribag district tribal people have insufficient land and paucity of money are the main things to pressurized to dependent on the natural resources like edible leaves for their survival nutrition. These wild edible plants are integral part of their daily diet. Tribal people collect these wild plant species from agricultural land, forest area to

supplement their staple food. Day by Day due to development of the district these valuable traditional becoming extinct along with the passing out of these tribes in the near future, it is therefore necessary to document the plants efficiency to conserve them while no systematic information is yet available.



Plate 1: Some common wild leafy vegetables A. *Cassia alata*, B. *Centella asiatica*, C. *Moringa oleifera*, D. *Boerhaavia diffusa*, E. *Euphorbia hirta*, F. *Mentha spicata*

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