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Floristic Study of Medicinal Plants of Jamtara District (Jharkhand), India.

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ABSTRACT

Medicinal plants have helped man for curing diseases since time immemorial. Tribals have specific knowledge about medicinal plants and their novel uses. Jamtara district of Jharkhand is tribal dominated area and have wisdom regarding use of plants for curing various diseases. In present studies plants used for treatment of Jaundice, Malaria, Dysentery and Filaria have been discussed.

Keywords: Medicinal plants, Jamtara, Malaria, Dysentery.

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INTRODUCTION

The application of plants as medicines, dates, back to prehistoric period. Although use of traditional medicines was subdued under the impact of modern medicine, we find a comeback of herbal traditional medical practices these days and it may be said the present time is the time of “herbal renaissance. Today herbs are finding diverse uses in society from medicine to manure, insecticides, pesticides, and many articles of daily uses. Herbal tablets, herbal tonics, herbal soaps, herbal shampoos, herbal toothpastes and herbal cosmetics have become popular consumer items and herbal renaissance is blooming across the world. The present study was aimed at studying floristic diversity of Jamtara with special reference to medicinal plants.

MATERIAL AND METHODS

By personal contact a rapport was established with the chief of a village community and his guidance was sought to establish contact with the medicine man, locally known as witch-doctor. He keeps things secret about the medicinal plants and methods of treatment. In such a secretiveness, it was decided a interview a number of elderly people who have some influence on the witch-doctors. Thus a link man selected for different localities. Birth-attendants, woodcutters and cow-boys were also consulted. Accompanying them the nearby forest hillocks, and field sites were visited. Frequent field surveys were carried out during deferent seasons 2003 & 2004. Cross check of collected information from different people were made to know the utility of a plant. Data were also collected through questionnaires in their local languages. In additional to the vernacular names and medicinal uses, detailed information, ingredients, dose, mode of uses were also collected. The plants were identified by their local names, Photographed and sample specimen were collected for preparation of herbarium.

Taxonomic confirmation of the collected plants were done with the help of Flora of Bihar and Orissa H H Hains and Flora of Bhagalpur – S.K. Verma

During survey some interesting facts came to light which are not mentioned in any ethnobotanical literature. Some medicine man claim that he had been using some new plants successfully in treatment of diseases which are unknown to others and is the secret of his being a famous and powerful witchdoctors.

Study area

Jamtara district is located between latitude 23^o 5 latitude and 80^o.49 E longitude. It is above 260m above sea level. Jamtara district was constituted in 2000 by carrying out the district of Jharkhand and has a total area 1842.81 Square kilometre . Jamtara is a tribal dominated district. The name JAMTARA has tribal origin, made up of two tribal words JAM and TARA means “snakes” and “TARA” means “big or large” habitat of large snakes. The district borders Dumka and Deoghar on the North, Dhanbad on the South Giridih on West and Burdwan districts of West Bengal on the east. The North and north-western portions of the district consisting of hilly regions with a number of stone-crusher units. The remaining portions, mostly in north-eastern part constitute plains with scattered hilly area. A coal mine is situated in Nala Block of district. The Ajay river is the most important river of Jamtara district, Barakar river flows through Narayanpur block of district dividing it from Dhanbad district. The district has been divided into 4 blocks namely-Narayanpur, Jamtara, Nala and Kundahit with only one Jamtara sub-division.

Climatic conditions

The climate of the district is characterized by general dryness. It is pleasant during cold weather from November to February. Thereafter the climate becomes warm. It remains hot until the monsoon breaks towards the middle of June. With setting of rains the temperature falls and humidity rises. July to October are rainy months. The average annual rainfall in the district is approximately 1200 mm.

Population

On the basis of report of census 2001, the total population of the district is 653081 out of which male population is 3, 33,541 and female population is 3,219,567 showing sex ratio 4:3:5. There are 1,175 villages in the district.

RESULT AND DISCUSSION

The district Jamtara in the state of Jharkhand represents interesting diversity of flora and vegetation due to its variable topography, soil and climate. The total forest area in the district is about 312.8 Sq. km. which consists of hills, lower plateau, cultivated lands, rivers, rivulates and the streams on the plateau, tanks ponds, natural lawns, low land etc.

The forest of Jamtara mainly consists of deciduous species with patches of few evergreen ones found mainly along certain moist pockets and streams, Sal, dominate the forests. The common associates are *Diospyros melanoxylon madhuca latifolia*, *Dalbergia*, *Sissoo*, *Sterculia urens*, *Terminalia alata*, *Butea monosperm*, etc.

The Chief associates of dry deciduous *Shorea robusta* (Sal) bearing forest are *Syzygium cumini*, *Terminalia arjuna*, *Terminalia Chebula*, *Cassia, fistula*, *Lagerstromia*, *Parviflora*, *Oroxylum, indicum*, *Peterocarpus*, *marsupium Croton roxyburghii*, *Dendrocalamus strictus*, *Buchanania lazan*

Dry areas of the district do not show Sal but reflects a more xerophytic species, though not always of the same composition. This type occurs on the shallow and degraded sites both on hills and the plains. Most trees have low spreading canopy. Trees are deciduous during the dry season the main species are *Butea mnonosperma*, *Buchanania lanzan*, *Boswellia Serrata* *Acacia indica*. *Diospyros melaxylon* with patches of Sal and Mahua.

To 16 families have been recognised for their medicinal properties used in the treatment of diseases like Janudince, Leucorrhoea, Dysmenorrhoea, Malaria, and Filaria,

1) For Jaundice

a) *Andrographis Pariculata* Nees

Local Name - Kalmegh, Kirayat
 Family - Acanthaceae
 Mode of uses - The whole plant is useful. Generally leaf paste is used.

b) *Boerhaavia diffusa*

Local Name - Punarnava
 Family - Nyctaginaceae
 Mode of uses - The root paste

c) *Hydrocotyl asiatica* L

Local Name - Brahmibuti, Thamkuni
 Family - Apiaceae
 Mode of uses - Fresh or Shade dried leaf and root paste power

d) *Leucus aspera*

Local Name - Ghalghasi Halkusi
 Family - Lamiaceae
 Mode of uses - Leaf paste with black pepper seeds

e) *Oroxylon indicum*

Local Name - Sona Gachha
 Family - Bignoniaceae
 At present the plant is not available in the locality due to

human greed.

- Mode of uses - It was said that the bark of the tree was used.
- f) *Phyllanthus nirui*_L
- Local Name - Bhuiamla, Jaramla
 Family - Euphorbiaceae
 Mode of uses - Root paste is used.
- g) *Scoparia dulcis*_L
- Local Name - Banchini
 Family - Scrophulariaceae
 Mode of uses - Flower is used
- h) *Streblus asper* L
- Local Name - Shaora/Shehur
 Family - Moraceae
 Mode of uses - Stembark paste with curd.

2. **For dysmenorrhoea**

- a) *Alroma augusta* L
- Local Name - Ulat Kambal
 Family - Sterculiaceae
 Mode of uses - Rootbark as well as stembark is used.
- b) *Aloe indica*_Wild
- Local Name - Ghrit Kumari
 Family - Liliaceae
 Mode of uses - Leaf pulp with termaric powder and salt.
- b) *Ficus benghalensis* L
- c)
- Local Name - Bat/Bar
 Family - Moraceae
 Mode of uses - Root bark with milk of goat.
- d) *Ficus religiosa*_L
- Local Name - Peepal
 Family - Moraceae
 Mode of uses - Root bark or Stembark
- e) *Ficus infectoria*_Roxb
- Local Name - Pakar
 Family - Moraceae
 Mode of uses - Decoction of stem bark and latex.
- f) *Saraca indica*_L
- Local Name - Ashok
 Family - Caesalpiaceae
 Mode of uses - Decoction of stem bark.

g) *Sida cordifolia*_L

Local Name	-	Berel/Bariar
Family	-	Malvaceae
Mode of uses	-	Root paste with honey or milk.

3. **For Leucorrhoea**a) *Adhatoda visica*_Nees

Local Name	-	Basak/Adalsa
Family	-	Acanthaceae
Mode of uses	-	10-20 gm of leaf or flower is boiled with 250 ml of water.

When water is reduced to half of its volume, it is given to the patient to consume.

b) *Blumea odorata*_DC

Local Name	-	Kokronda/Barokuksima
Family	-	Asteraceae
Mode of uses	-	Leaf juice is used.

c) *Evolvulus alsinoides*

Local Name	-	Shyam Kanta
Family	-	Convolvulaceae
Mode of uses	-	The whole plant is used. Some medicine man suggested that with <i>Asparagus racemosus</i> (Satavar) it is more effective.

d) *Phyllanthus nirui*_L

Local Name	-	Bhuiamla
Family	-	Euphorbiaceae
Mode of uses	-	The whole plant is used. Root alone is equally effective.

d) *Sida cordifolia*_L

Local Name	-	Berela/Bariar
Family	-	Malvaceae
Mode of uses	-	Root paste with sugar and milk taken empty Stomach.

f) *Saraca indica*_L

Local Name	-	Ashok
Family	-	Caesalpiniaceae
Mode of uses	-	15-20 gm decoction of the stem bark is used thrice daily.

g) *Vinca rosa*_L

Local Name	-	Sadabahar, Nayantara
Family	-	Apocynaceae
Mode of uses	-	Decoction of root is useful.

4. **For Malaria**a) *Achyranthus aspera* L

Local Name	-	Chirchiri/Apang/Latjira
Family	-	Amaranthaceae

- Mode of uses - Leaf paste with black pepper and garlic is used.
- b) *Clerodendron infortunatum*
- Local Name - Ghetu/Bhant
 Family - Verbenaceae
 Mode of uses - Leaf juice is used. Twice daily for one week.
- c) *Glycosmis pentaphylla/arborea*
- Local Name - Bannimbu/Ash/Shaoora/Daton.
 Family - Rutaceae
 Mode of uses - Decoction of Leaf and root bark is useful. It was also reported that those who brush their teeth daily with the twig of the plant, develops immunity against malaria.
- d) *Nyctanthes arbour-tristis* L
- Local Name - Harshingar/Sheoli
 Family - Oleaceae
 Mode of uses - Decoction of leaf with ginger and honey is consumed.
- e) *Streblus asper* L
- Local Name - Shaora/Shehur
 Family - Moraceae
 Mode of uses - Decoction of stem bark is administered daily in morning for five days.
- f) *Vernonia cinerea* Less
- Local Name - Sheal motra/Kuksima/Sahadevi
 Family - Asteraceae
 Mode of uses - One gram of leaf with seven number of black pepper are mixed to prepare the medicine. It was suggested by a medicine man that the medicine should be taken on Sunday or Tuesday morning in empty stomach.

5. **For Filaria**

- a) *Cassia Occidentalis* L
- Local Name - Kasunda/Kalkasunda
 Family - Caesalpiniaceae
 Mode of uses - Decoction of the root is useful. With black pepper it is more effective.
- b) *Streblus asper* L
- Local Name - Shaora/Shehur
 Family - Moraceae
 Mode of uses - Stem bark decoction is useful. The paste of the stem bark is applied locally on fissured swollen leg of a filaria patient.

The results obtained during this study is in confirmation with previous results of Hembrum (1996), Jain (1981), Jha(1994) and Verma and Srivastawa (1986). In the present era of biopiracy, documentation of medicinal plants has become more important to save them from onslaught [1-4].



REFERENCES

- [1] Hembrum, PP. Ethnobotany 1996;3: 93-97.
- [2] Jain, SK. Glimpses of Indian Ethnobotany. Oxford and IBH Publ. New Delhi. 1981.
- [3] Jha, RR. Ethnobotany 1994;6: 87-93.
- [4] Verma SK and DK Srivastawa. J Econ Taxo Botany 1986;5(3) : 750 – 752.