

## ETHNO-MEDICINAL STUDY OF SOME IMPORTANT PLANTS OF JHARKHAND AND THEIR CONSERVATION

ANIL KUMAR VIDHYARTHY\* AND H.S. GUPTA\*\*

### Introduction

Importance of traditional and folk medicines in the treatment of various human ailments is well known from olden days. The epic *Ramayana* tells us about 'Sanjivani Booti', a life saving drug. From ancient times in India, the importance of herbal and folk medicines in the treatments of various ailments is well known and the country has kept alive a number of traditional systems of medicines, like Ayurveda, Sidha, Yoga, Unani-Tibb. etc. Among them the oldest is Ayurveda. It has a lot of information on Indian medicinal plants. The ancient works *Charaka Samhita* and *Sushruta Samhita*, describe uses of more than 1,200 plant-based drugs along with their action and specific therapeutic applications.

In India, about 2,500 plant species belonging to more than 1,000 genera are used by traditional healers and about 500 plant species are used by 159 different pharmaceutical companies (Chandel *et al.*, 1996).

Plants are used in folk medicines by various tribal and ethnic groups in Jharkhand. A majority of plants are collected from the wild. A number of such plants have become rare, endangered or threatened. A number of workers have drawn attention towards the threatened

medicinal plants of India from time to time (Jain and Shastry, 1980; Shah, 1975). This paper explains how the medicinal herbs are processed for specific treatment of particular disease.

### Material and Methods

Extensive survey work was conducted in three districts namely Ranchi, East Singhbhum and West Singhbhum. In each district, six villages were selected under five different community development blocks. Information on important medicinal plants generally used by these villagers was collected from villagers, medicine men of villages, 'Vaidis' and 'Hakims'. Vernacular names of important medicinal plants given by them were checked from local flora and botanical names were identified.

*Enumeration of Species* : Explanation of traditional knowledge of local tribes, rural people on indigenous homestead technology using root, shoot, leaf, flower and fruit in different form for curing major and minor disease is very important. Traditional knowledge of any society presents a unique picture on the basis of the beliefs, norms and culture of the society to which they belong. Hence careful documentation and scientific analysis for further transmission to those who are not familiar with the practice is essentially

\* Asstt. Prof., Faculty of forestry, CCS-SDS (PG) College, Igias, Aligarh (U.P.)

\*\* Divisional Forest Officer, Sarranda Division, West Singhbhum, Chaibasa (Jharkhand)

required. This will provide scientific explanation to the experience generated knowledge. Some of the medicinal herb, shrub and tree cited as under which are used by tribe and "Vaid" for treatment of disease.

*Atylosia scarabaeoides*, Benth.  
Papilionaceae

Vernacular name : Ban Kurthi

Use : Root is ground into paste and applied on affected part to cure tooth ache.

*Alstonia scholaris*, Br.  
Apocynaceae

Vernacular name : Chatne

Use : Bark is ground in to paste and given to cattle at the time of indigestion or proper feeding problem.

*Abrus precatorius*, Linn.  
Papilionaceae

Vernacular name : Kanijari

Use : Fruit is used as syrups in stomach ache.

*Andrographis paniculata*, (Burm. f.) Wall.  
Acanthaceae

Vernacular name : Chiraita

Use : Whole plant is ground and syrup prepared, which is used to cure fever.

*Achyranthes aspera*, Linn. Amarantaceae

Vernacular name : Chirdhiri

Use : Root is ground in to paste and applied on affected part to kill pain.

*Amaranthus viridis*, Linn.  
Amaranthaceae

Vernacular name : Jangli chauri

Use : Leaves are ground into paste and consumed as syrup, on snake bite.

*Amoora rohutuka*, W&A.  
Meliaceae.

Vernacular name : Sirkau

Use : Oil is extracted after crushing and used externally to alleviate pain.

*Acorus calamus*, Linn.  
Araceae

Vernacular name : Buch

Use : Root is used as paste antispasmodic and nervine sedative.

*Asparagus racemosus*, Willd.  
Liliaceae

Vernacular name : Satawar

Use : Root is used as paste and consumed as 'Chatani'. It is used in fever, blood urination.

*Butea monosperma*, Lamk.  
Papilionaceae

Vernacular name : Palas, Dhak, Flame of the forest

Use : Root and bark is used as 'chatni' to cure against worms.

*Clausena excavata*, Burm.  
Rutaceae

Vernacular name : Agnijhal

Use : Root is dried and powdered and used in paste form to avoid tooth decay.

*Centrella asiatica*, (L)Urban. Umbelliferae

Vernacular name : Brihmi

Use : Whole plant is ground into paste which is applied externally to cure leprosy.

*Clerodendron infortunatum*, Gaertn.  
Verbenaceae

Vernacular name : Changar

Use : On snake bite, root is ground into paste and applied externally at the wound to minimise the poison.

*Croton oblongifolia*, Roxb.  
Euphorbiaceae

*Vernacular name* : Gote Putri

*Use* : Root is dried in sun and ground into paste. It is consumed as drink to check dysentery, headache.

*Echinochola colona*, Link.

Gramineae

*Vernacular name* : Jhari

*Use* : Root is soaked in water overnight and consumed in the form of 'chatni' to check vomiting.

*Erycibe paniculata*, Roxb.

Ericaceae

*Vernacular name* : Karinari

*Use* : Bark is consumed as drink in cholera.

*Ficus nemoralis*, Wall.

Urticaceae

*Vernacular name* : Dudhla

*Use* : Root paste is used to cure throat infection.

*Melia azadirachta*, Linn.

Meliaceae

*Vernacular name* : Bakain

*Use* : Fruit is ground into paste and used as a medicine to cure toothache.

*Mimosa pudica*, Linn.

Mimoseae

*Vernacular name* : Chauimuai

*Use* : Leaves are ground into paste and consumed to avoid urinary problems.

*Morinda tinctoria*, Roxb.

Rubiaceae

*Vernacular Name* : Chali

*Use* : Bark is boiled in water and ground into paste and used as syrup to cure stomach ache.

*Murraya exotica*, Linn.

Rutaceae

*Vernacular name* : Athel.

*Use* : Young green leaves are dried and powdered. Dry powder is taken with warm water to cure stomach ache.

*Nycthanthes arbortris*, Linn.

Oleaceae

*Vernacular name* : Harsingar

*Use* : Root is consumed as 'chatni' to check loose motions.

*Opentia dillenii*, Haw.

Cactaceae

*Vernacular name* : Nagphani

*Use* : Leaf is applied in paste form externally, on fracture or sprains.

*Plumeria acutifolia*, Poiret.

Apocynaceae

*Vernacular name* : Gulachi

*Use* : Flower is dried and ground into powder. It is consumed as powder, to cure animal from high fever.

*Phyllanthus niruri*, L.

Euphorbiaceae

*Vernacular name* : Jara amla

*Use* : Leaf and bark are used as syrup in jaundice and dropsy treatment.

*Ruellia suffruticosa*, Roxb.

Acanthaceae

*Vernacular name* : Ranu

*Use* : Seed paste is taken in indigestion, pain and preparation of alcohol.

*Syzygium cumini*, Lam.

Myrtaceae

*Vernacular name* : Jamun

*Use* : Seed and bark are sun-dried, ground into powder form, taken to cure diabetes.

*Smilax proliferata*, Roxb.

Liliaceae

1	2	3	4	5
Deku Sindu	<i>Buetthheria heabacea.</i>	1, 2, 3	Leaves	Ry.
Dahu	<i>Artocarpus lakoocha</i>	2, 3	Fruit	May-Oct
Dudhia	<i>Wrightia tomentosa</i>	1, 3	Leaf, Bark, Root	Ry.
Dudhla	<i>Ficus nemoralis</i>	2, 3	Root	Ry.
Gulanchin	<i>Plumeria acutifolia</i>	3	Flower	May
Gausam	<i>Schleichera trijuga</i>	1, 3	Leaf	Ry.
Gursilai/Gurach	<i>Tinospora cordifolia</i>	2, 3	Wp	Ry.
Gote	<i>Croton oblongifolia</i>	1, 3	Bark, Root	Ry.
Garundiark	<i>Alternanthera sessiliu</i>	2, 3	Leaf	Ry.
Grahami	<i>Grona grahami</i>	2, 3	Wp	Ry.
Harjarwa	<i>Vitis repanda</i>	1, 2, 3	Wp	Ry.
Hara	<i>Terminalia chebula</i>	1, 2, 3	Fruit	June-July
Imli	<i>Tamarindus indica</i>	1, 2, 3	Seed, Fruit	April-June
Jamun	<i>Syzygium cumini</i>	1, 2, 3	Fruit, Seed	May-June
Jangli Chaurai	<i>Amaranthus viridis</i>	1, 3	Leaf	Ry.
Jar amla	<i>Phyllanthus niruri</i>	2, 3	Wp	Ry.
Jhari	<i>Echinochola colona</i>	3	Wp.	Ry.
Jangli angur	<i>Vitix vitiginea</i>	2, 3	Root	Ry.
Kujari	<i>Celastrus paniculata</i>	2, 3	Fruit	April
Karanj	<i>Deris indica</i>	1, 2, 3	Seed.	Feb.-Mar.
Kuti.	<i>Croton oblongifa</i>	1, 2, 3	Bark	Ry.
Kalmelata.	<i>Rivea hypocrateriformis</i>	1, 2, 3	Bark, Leaves	Ry.
Kathbel	<i>Feronia elephantum</i>	1, 2, 3	Fruit	Nov.-Jan.
Kanijari	<i>Abrus precatorius</i>	2, 3	Bark	Ry.
Kalmegh	<i>Andrographis paniculata</i>	2, 3	Wp.	Ry.
Mehndi	<i>Lawsonia inermis</i>	1, 2, 3	Leaves	Ry.
Makal	<i>Trichasarathes palmata</i>	1, 3	Root, Fruit.	Nov.-Dec.
Mahua	<i>Madhuca indica</i>	1, 3	Root	Ry.
Mirga	<i>Polygala crotalariode</i>	1, 2, 3	Root	Ry.
Neem	<i>Azadirachtā indica</i>	2, 3	Fruit, Leaves	May,
Nagphani	<i>Opuntia dillenit</i>	2, 3	Leaves	Ry.
Palati	<i>Calotropies gigantea</i>	1	Root	Ry.
Pipal	<i>Ficus religiosa</i>	1, 2, 3	Tender leaves, Fruit	Ry. July
Ranu	<i>Ruellia suffruticosa</i>	1, 2, 3	Root, Fruit	Ry, Sep-Dec
Ramdatun	<i>Smilax prolifera</i>	1, 3	Stem	Ry.
Ridi ruhen	<i>Soymida</i>	1, 2, 3	Bark	Ry.

Contd

1	2	3	4	5
Rohanichal	<i>Soymida febrifaga</i>	2, 3	Bark	Ry.
Simjanga	<i>Vitex peduncularis</i>	2, 3	Bark	Ry.
Sarphuka	<i>Tephrosia purpurea</i>	1, 3	Leaves	Ry.
Sikru	<i>Amoora rohituka</i>	2, 3	Fruit	May-June.
Simurl	<i>Bombax malabaricum</i>	2, 3	Leaf	Ry.
Sauriarcach	<i>Polygonum glabrum</i>	2, 3	Whole plant	Ry.
Soroa	<i>Garcinia cow</i>	2, 3	Fruit	June.
Schimjadur	<i>Vitex peduncularia</i>	1, 2, 3	Root, Leaves	Ry.
Sarkara	<i>Saccharum munja</i>	1, 2, 3	Root	Ry.
Ulu.	<i>Flemingia chappr</i>	1, 2, 3	Branch, Leaf	Ry.
Vervain	<i>Verbena officinalis</i>	1, 3	Branch, Leaf	Ry.

Note: - Ranchi: -1; East Singhbhum: -2; West Singhbhum: -3; Round the year: -Ry.; Whole plant: -Wp.

*Ex-situ conservation* : Conservation of medicinal plants outside their habitats by perpetuation of sample population. *Ex-situ* conservation process involves field gene

banks, herbal gardens, seed gene banks, *in-vitro* conservation, cryo-banks for conservation of germplasm and DNA conservation.

### Acknowledgements

The authors are grateful to Indian Council of Forestry Research and Education Dehra Dun, Shri P.C. Mishra, ex-Conservator of Forests, Shri Sanjay Kumar, Conservator of Forests, Deptt. of Forests and Environment, Research and Evaluation Division, Ranchi (Jharkhand) for providing financial assistance and facilities for study.

### SUMMARY

The increasing demand of medicinal plants has resulted in the rapid dwindling of these natural resources and there is a urgent need of systematic and conservation and sustainable production of medicinal plants involving local communities, university students and developmental field groups with stronger linkages for collaborative work to meet future demand on a sustained manner. There are some plants which are a panacea for most human ailments. Their documentation is the need of the hour. Also suitable propagation techniques are to be developed, like tissue culture etc. In light of this, it is essential to have an interface between traditional trends and modern concept of production, marketing and technology of this important resource. Creating awareness and proper networking on the medicinal properties of these indigenous plants, which we very often encounter in our daily life, through dissemination of research data with extension activities will go a long way in conserving nature's priceless gift.

झारखण्ड के कुछ महत्वपूर्ण पादपों का जाति-औषधिपरक अध्ययन तथा उनका संरक्षण  
अनिल कुमार विद्यार्थी व एच०एस० गुप्त

सारांश

औषधि-पादपों की बढ़ती जा रही मांग एवं तेजी से घटते जा रहे उनके प्राकृतिक संसाधनों के कारण स्थानीय मूल्य, विश्वविद्यालयों के विद्यार्थियों, मजबूत जुड़ावों वाले क्षेत्रीय विकास समूहों को साथ लेते हुए लम्बे समय तक निरन्तर मिल रहे वाले ढंग से भविष्य की मांग पूरी करने के लिए सहकारिता-कार्य में विधिवत् और टिकने वाले तरीकों से इनका संरक्षण करने की त्वरित आवश्यकता है। कुछ पेड़ पौधे ऐसे भी हैं जिन्हें अधिकांश मानव रोगों के लिए गमवाण औषधि माना जाता है। उनकी उपलब्ध जानकारी का प्रलेखन करना समय की मांग है ताकि अपने इस पैतृक चिकित्सीय स्वतंत्रता विदेशी मनसूवों से रक्षा की जा सके। इसके अलावा, हमें प्रवर्धन करने की इनकी उपयुक्त विधियों जैसे अति मर्यादित भी विकास करना है। इन सब बातों को देखते हुए हमें पारम्परिक प्रवृत्तियों और उत्पादन, विपणन और प्रौद्योगिकी के आधुनिक धारणाओं के मध्य इस महत्वपूर्ण संसाधन का जानकारी-पट (Interface) तैयार कर लेना अनिवार्य है। पारंपरिक औषधियों के बारे में, जो हमें प्रतिदिन अपने जीवन में कदम-कदम पर मिलती हैं, जागरूकता उत्पन्न करना, इन चिकित्सीय गुणों का जालकर्म अनुसन्धान सामग्री का विस्तार कार्यक्रमों द्वारा दूर-दूर तक फैला कर तैयार कर देना, इनके इस अमूल्य वरदान को संरक्षित करने में बहुत अधिक प्रभावी रहेगा।

References

- Chandel, K.P.S., G. Shukla and Neelam Sharma (1996). *Biodiversity in Medicinal and Aromatic Plants in India : Conservation and utilization*. NBPGR, New Delhi. pp. 1-239
- Jain, S.K. and A.R.K. Sastry (1980). *Threatened plants of India - A state of the art Report*. Botanical Survey of India, Howrah.
- Shah, N.C. (1975). Prospect of botanical drug from hill district of Uttar Pradesh. *Indian Drug* 12(11) : 17-20.
- Roberts, E.H. (1975). Problem of long storage of seed and pollen for genetic resources conservation. *Crop Genetic Resources for Today and Tomorrow* (O.H. Frankel and J.G. Hawkes eds.). Cambridge University Press, Cambridge (UK). pp. 269-296.