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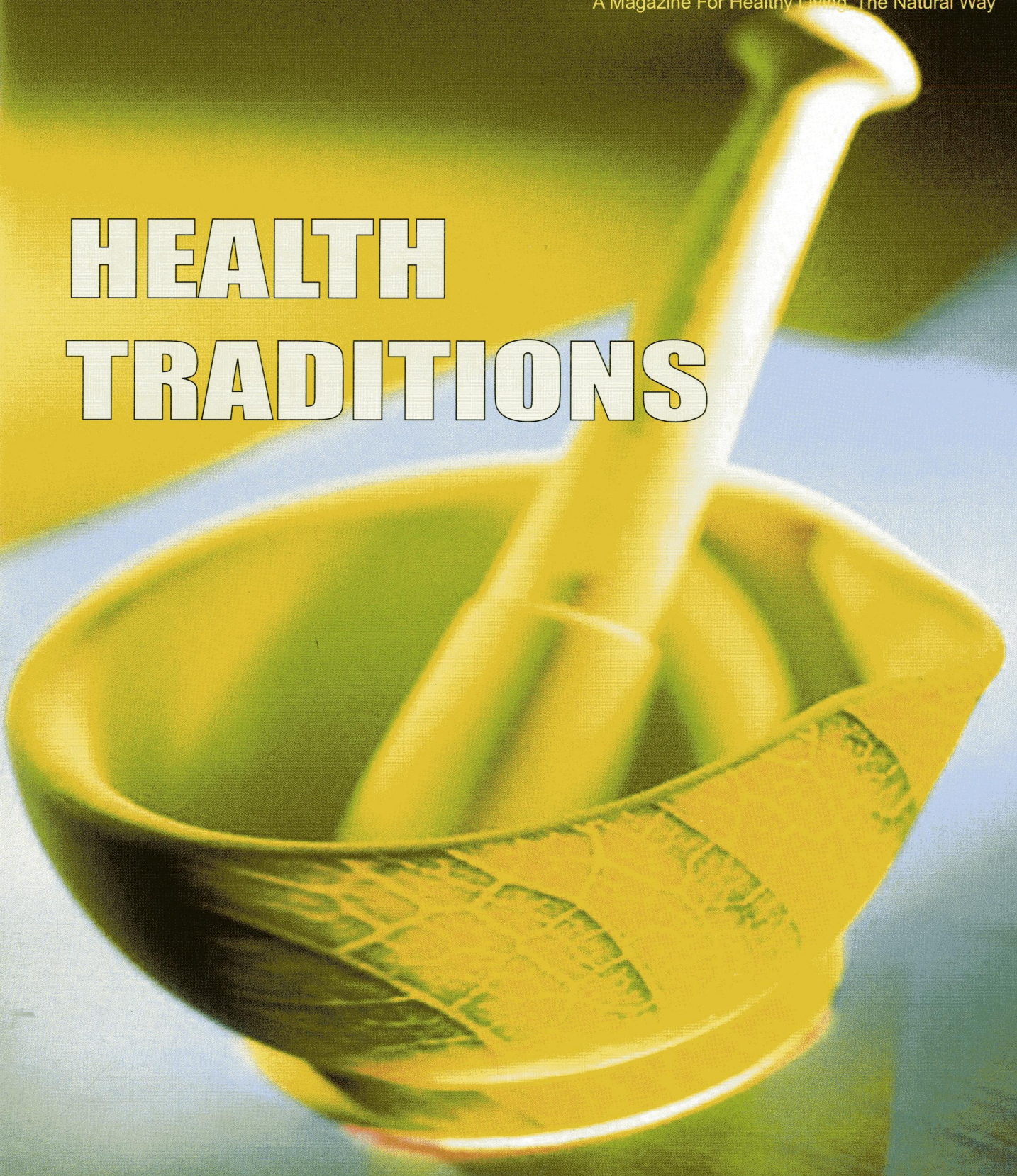
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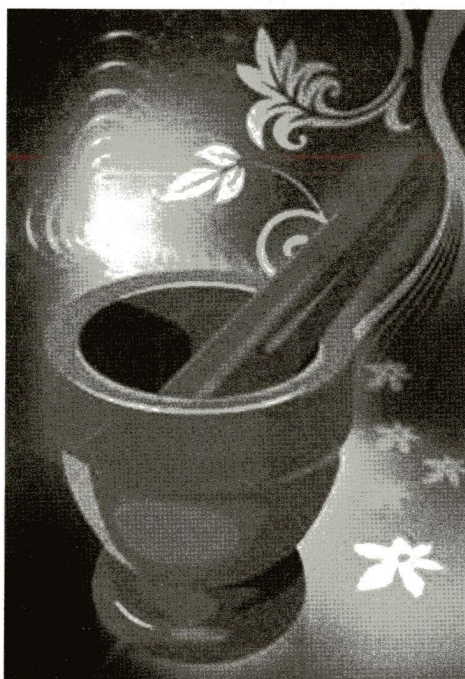
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A Fair Deal



Present Ethnobotanical aspect of Tribal Communities from Rajasthan

Vinay Kumar and Amit Kotia

Tribal communities from Rajasthan have been using several plants for interesting therapeutic purposes for various ailments as well as for food. These plants have dual significance; firstly they can be promising future food, secondly these medicinal plants can have some active constituent for future pharmaceutical analysis....

The forests and arid regions of Rajasthan have great potentiality both from the economic and botanical points of view.

Rajasthan is the largest state of the country covering an area of 3, 42,239 km², categorized into two biogeographic zones i.e. arid and semi-arid zones. The arid zone lies in the north-western part of the state and spreads over an area of 2, 08,591 km² while eastern part falls under semi-arid region (3, 17,090 km²). The state has a total forest cover of ca. 4.62%, most of which (9%) falls under semi-arid region and the scrub forest cover is around 4,564 km². The arid region of Rajasthan has typical topographic features viz. sandy plains and sand dunes. Aravalli Hill range separates semiarid tract from the arid zone. Eastern Rajasthan has rich alluvial soil that supports good forests and agricultural crops. The vegetation comprises of Tropical dry deciduous forests, Savannah woodland and Tropical Thorn Forest. Most of the areas fall under the dry tropical forest and thorny scrub forest

types. As there is a lack of good forest in the desert area, there is a very low tribal population occurring here, with only the Gadia Lohars (Banjaras) visiting this area occasionally. Most of the tribal population occurs in Southern Rajasthan as this area is covered with good vegetation and fulfills the needs of the tribal inhabitants.

The traditional knowledge system in India is fast disappearing. Today, there is an urgent need for inventorying and recording all ethnobotanical information among the diverse ethnic communities.

Tribes Inhabiting Rajasthan

Tribals are the oldest ethnological groups who live preferably in forest areas or adjoining areas of the forest. They follow primitive customs and occupation; have common language and social culture. Generally they are economically dependent on forests. India has over 67 million of

227 ethnic groups, about people belonging to 550 tribal communities. The total tribal population of Rajasthan state is 70, 97,706 which is 12.44 percent of the total population of this state 3, 42, 239. The tribals of Rajasthan constitute about 8.00% of the total population of tribals in India.

Several tribes inhabit in the state of Rajasthan viz. *Bhil*, *Bhill-Mina*, *Jogi*, *Darnor*, *Dhanka*, *Garasia*, *Kathodia*, *Mina*, *Patelia* and *Saharia*. Besides these, there are some nomadic, seminomadic tribes and de-notified communities also found. Nomadic tribes are *Sansi*, *Kanjar*, *Kalbelia Bauri*, *Bagri* etc, whereas semi-nomadic tribes are *Rebari*, *Jogi*, *Masani*, *Bhat* etc and de-notified communities include *Gadia Lohar Banjara*, which wander from place to place within the state as well as other parts of the country and have their own cultural, social and economic status. The tribal *Bhils* are historically believed to be employed by the royal families of *Rajputs* for their knowledge of forests mainly in hunting and habitat also local medicine. Ancient texts also mention about the mythological relationship of Lord Rama with Devi Shabari who offered him eaten Jujubes (*Zizyphus mauritiana*) and Kevat who helped them to cross the river while going on exile.

Saharia tribals are known for extraction of Katha dye (from *Acacia catechu*) and they also generate economy by collection of NTFP products like Gum, Tendu leaf, Honey, Mahua and medicinal herbs. It has been now gathered and learned through various surveys carried out amongst the tribes of Rajasthan

that the local people are still dependent on plant resources for treatment of various ailments, but this kind of dependence is decreasing. This is likely due to multiple reasons. One such reason is lack of belief of the young generation in the traditional medicine systems and increasing use of allopathic medicines due to their availability and efficacy. Another reason likely is the harvest by drug manufacturers especially in areas near settlements and pastures, leaving behind very little for access by local communities.

Arisaema tortuosum, *Costus speciosus*, *Eulophia ochreatea*, *Leea indica*, *Leea macrophylla*, *Puereria tuberosa*, *Corallocarpus epigaeus* etc. have medicinal value belonging to rare category while *Ceropegia bulbosa*, *Ceropegia tuberosa* and *Puereria tuberosa* having food value, but due to overexploitation now they have become rare and endangered and there is great threat of extinction.

Many plants are cultivated by tribals abundantly and sold in nearby markets. These plants have much nutritional value. *Ceropegia bulbos*, *Ceropegia tuberosa*, *Colocasia esculenta*, *Curcuma amada*, *Dioscorea bulbifera*, *Dioscorea hispida*, *Dioscorea tomentosa*, *Daucas carota*, *Iphigenia indica*, *Nelumbo nucifera*, *Pupalia atropurpuria*, *Puereria tuberosa*, *Raphanus sativus*, *Zingiber officinale* are wild tuberous plants which are used by tribals as food. If proper strategies are proposed by the researchers, then these plants may become the part of tribal economy. Some tuberous plants e.g. *Curcuma amada* and *Zingiber officinale* are

Table 1: Plants of Rajasthan with Ethnobotanical Use

Edible plants *Ceropegia bulbosa*, *Ceropegia tuberosa*, *Curcuma amada*, *Colocasia esculenta*, *Dioscorea bulbifera*, *Nelumbo nucifera*, *Pupalia atropurpuria*, *Puereria tuberosa*, *Raphanus sativus*, *Trapa natans*

Medicinal plants *Ampelocissus latifolia*, *Asparagus racemosus*, *Arisaema tortuosum*, *Costus speciosus*, *Curculigo orchoides*, *Crinum asiaticum*, *Ceropegia bulbosa*, *Ceropegia tuberosa*, *Chlorophytum tuberosum*, *Corallocarpus epigaeus*, *Colocasia esculenta*, *Curcuma amada*, *Cayratia trifolia*, *Dioscorea bulbifera*, *Dioscorea hispida*, *Dioscorea pentaphylla*, *Dioscorea tomentosa*, *Daucas carota*, *Eulophia ochreatea*, *Euphorbia fusiformis*, *Gloriosa superba*, *Globba marantina*, *Leea indica*, *Leea macrophylla*, *Langenandra toxicaria*, *Momordica dioica*, *Momordica balsamina*, *Mirabilis jalapa*, *Nelumbo nucifera*, *Puereria tuberosa*, *Raphanus sativus*, *Ruellia tuberosa*, *Sauromatum venosum*, *Tacca leontopetaloides*, *Trichisanthes cucumerina*, *Urginea indica*, *Withania somnifera*, *Zingiber officinale*

Spice plants *Curcuma amada*, *Zingiber officinale*, **Poisonous plants** *Crinum asiaticum* (Bulb), *Gloriosa superba* (Tuber), *Withania somnifera* (seed), *Dioscorea bulbifera* (Tuber), *Urginea indica* (Bulb)

Ornamental plants *Crinum asiaticum*, *Gloriosa superba*

Table 2: Plants of Rajasthan used in Ethno-medico practices

Disease	Plant Species
Abscess	<i>Arisaema tortuosum</i>
Anti cancerous	<i>Leea macrophylla</i>
Antidote	<i>Ampelocissus latifolia</i> , <i>Ceropegia tuberosa</i> , <i>Arisaema tortuosum</i> , <i>Curculigo orchoidies</i> , <i>Cayratia trifolia</i> , <i>Curcuma amada</i> , <i>Trichisanthes cucumerina</i>
Antinematodal	<i>Arisaema tortuosum</i> , <i>Curculigo orchoidies</i> , <i>Gloriosa superba</i> , <i>Puereria tuberosa</i> , <i>Urgenia indica</i>
Anti tumour	<i>Sauromatum venosum</i>
Asthma	<i>Globba marantina</i> , <i>Dioscorea bulbifera</i>
Body ache	<i>Costus speciosus</i> , <i>Curcuma amada</i> , <i>Leea indica</i> , <i>Leea macrophylla</i>
Boils	<i>Raphanus sativus</i>
Bone fracture	<i>Arisaema tortuosum</i> , <i>Chlorophytum tuberosum</i> , <i>Curcuma amada</i> , <i>Cayratia trifolia</i>
Constipation	<i>Curculigo orchoidies</i>
Contraceptives	<i>Dioscorea bulbifera</i>
Diabetes	<i>Asparagus racemosus</i> , <i>Momordica dioica</i> , <i>Withania somnifera</i>
Dysentery	<i>Curcuma amada</i> , <i>Withania somnifera</i> , <i>Leea macrophylla</i>
Dyspepsia	<i>Ampelocissus latifolia</i>
Ear-ailments	<i>Costus speciosus</i> , <i>Crinum asiaticum</i> , <i>Ceropegia bulbosa</i>
Gastrointestinal disorders	<i>Zingiber officinale</i>
Gout	<i>Ampelocissus latifolia</i>
Hair lengthening	<i>Colocasia esculenta</i> , <i>Momordica dioica</i>
Health tonic	<i>Ampelocissus latifolia</i> , <i>Chlorophytum tuberosum</i> , <i>Daucas carota</i>
Headache	<i>Tacca leontopetaloides</i>
Indigestion	<i>Ampelocissus latifolia</i>
Irregular menstruation	<i>Raphanus sativus</i>
Kidney stone	<i>Ceropegia bulbosa</i>
Lactagogue	<i>Asparagus racemosus</i>
Leuchorrhoea	<i>Chlorophytum tuberosum</i> , <i>Curculigo orchoides</i>
Leukemia	<i>Eulophia ochreatea</i>
Pyrexia	<i>Urginea indica</i>
Rheumatism	<i>Withania somnifera</i> , <i>Costus speciosus</i>
Sexual debility	<i>Leea macrophylla</i> , <i>Daucas carota</i>
Sexual vigour	<i>Curculigo orchoidies</i>
Skin disease	<i>Zingiber officinale</i>
Stomach ache	<i>Dioscorea pentaphylla</i> , <i>Ruellia tuberosa</i>
Sunstroke	<i>Corallocarpus epigaeus</i>
Tuberculosis	<i>Ampelocissus latifolia</i> , <i>Lagenandra toxicaria</i>
Typhoid	<i>Corallocarpus epigaeus</i>
Vaginal uterine prolapse	<i>Asparagus racemosus</i> , <i>Gloriosa superba</i> , <i>Withania somnifera</i>
Wound healing	<i>Crinum asiaticum</i>

widely used as spice and condiments not only by the tribals but also by the urban people. Along with food value some plants e.g. *Crinum asiaticum* and *Gloriosa superba* now have become beautiful ornamental plants but both are rare plants and found only in protected forests.

Some plants are poisonous too e.g. *Gloriosa superba*, *Crinum asiaticum*, *Urginea indica*, *Withania somnifera* (seeds), *Dioscorea bulbifera* (Table 1). It is reported that being poisonous they have great medicinal value too. The tribal people have much knowledge about the detoxification; they use *Dioscorea bulbifera*, *Urginea indica* after detoxification, they either keep them overnight in running water or boil with water and after that they cook them. Nearly about all plants are reported to be medicinal having medicinal value of curing various ailments (Table 2).



The tribes of Rajasthan have been dependent upon plants for their living. However, the present scenario has changed the total dependency on forests by tribals as the NTFP collections are reduced due to more reliable alternate substances. But the medicinal plants collection has increased because of their high demand and direct revenue generation. The over-exploitation of *Eulophia ochreatea* in Mount Abu (Sirohi area) area for medicinal value,

Buchanania lanzan (Chirongi) for its high economic value of its dry fruits sale and the whole trees of *Pterocarpus marsupium* (Bijasal) trees being destroyed for collection of wood. *Commiphora wightii*, *Boswellia serrata* and *Sterculia urens* are important resin and gum yielding trees but highly over exploited. *Acacia catechu* is an important tree for the Katha dye and this dye is obtained from the mature stem of the tree.



The present demand has increased pressure on the local Biodiversity by local tribes. For conservation of local Biodiversity, there is an urgent need to develop some awareness programs to educate tribal people about the value of local flora and fauna. Improved awareness of conservation issues is needed. Proper documentation of indigenous knowledge about the plants could be supportive in achievement of objectives. Local cultivation of medicinal plants and other economic species can play an important role in economic development of the area. For sustainable and long term conservation of natural resources of the area; there is a need to actively involve the quiescence of local people in evaluation, planning, implementation and monitoring processes as they are the best judges of the area.

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