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Folk Lore Uses of Some Plants by the Tribes of Madhya Pradesh with Special Reference to Their Conservation

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ABSTRACT

Madhya Pradesh sustains a very rich traditional medicinal plant wealth and inherits unique plant and animal communities. Due to deforestation, loss of biodiversity and indiscriminate exploitation of wild and natural resources, many valuable herbs like *Abrus precatorious*, *Bauhinia variegta*, *Mucuna prurita,* etc., are at the verge of extinction. The present paper enumerates status, conservation strategies and traditional uses of 80 plant species by the tribes of Madhya Pradesh. The claims were gathered by interviewing tribes of the study area. Attempts were made to verify the efficacy of claims with actual beneficiaries, although this was not possible in all cases due to social customs.

Key Words: Folk uses, Tribes, Madhya Pradesh, Ailments.

INTRODUCTION

The tribes of India have preserved a large bulk of traditional knowledge of medicinal uses of plants growing around them. This knowledge is handed down to generations through word of mouth and is extensively used for the treatment of common diseases and conditions. Herbs are mines of useful drugs. Medicinal plants have always been the principle sources of medicine in India. Since ancient past and presently they are becoming popular. There has been a rapid extension of allopathic system of medical treatment in our country during the past century (Dwivedi *et. al.* 2007). However, these drugs have adverse effect and people are going back to nature with hope of safety ad security. On the other hand, herbs are safe, cheaper, easily available and with no fear of any side effects. It is evident that many valuable herbal drugs have been discovered by knowing that particular plant was used by the ancient folk healers for the treatment of some kind of ailment (Ekka & Dixit, 2007). Moreover, the medicinal plant wealth is our national heritage and it seems to be the first and foremost line of defense for the treatment of various diseases mostly in tribal and rural communities. During the field survey it has been found by the authors that there are number of plants which are used by the tribes of the region in curing various ailments and till date no any proper work has been performed by the research scholars of the area with proper citation and hence the present work was conceived by us

to explore the hidden uses of the species and to conserve the species which are fast disappearing from the region. Efforts have also been made for the collection of the herbs that are fast disappearing form the study sites and to suggest the techniques of the conservation and protection of these herbs.

OBJECTIVE OF THE WORK

1. To collect scattered scientific information and identify the herbs used by the tribes of Madhya Pradesh.
2. To provide status and conservation strategies of the plant in order to conserve the plants which are endangered, vanishing or in the verge of extinction.

RESEARCH DESIGN AND METHODOLOGY

The following methods were adopted by the authors during the course of their investigation:

1. The plants used by the tribes in the treatment of various diseases were collected by the investigator from the different study sites of Madhya Pradesh district during Jan-2007 to Oct-2007.
2. Field and survey work was made after carefully planned field trips. During the field trip personal interview was made between the author and tribes of the region.
3. Data regarding herbal remedies were collected as per plan suggested by Dwivedi (2003), Sinha (1998), Varghese (1996) and Shrivastava *et. al.* (2007).
4. Voucher specimen were collected from different study sites and preserved as per method suggested by Agrawal (1983).
5. The plants were identified by Prof. Dr. S. N. Dwivedi, Deptt. Of Botany, Janata PG College, A.P.S. University, Rewa, M.P. and are deposited in Pharmacognosy Laboratory, Chordia Institute of Pharmacy, Indore, M.P.
6. Confirmation of the specimen were made with the help of floristic literature, Verma *et. al.* (1985), Kurian (2003) and Khare (2004).
7. Data regarding collection of the species which are fast disappearing from the study sites are designed as per plan suggested by Dwivedi (2006), Dwivedi (1999), Dwivedi *et. al.* (2007), Phillips *et. al* (1994) and Mc. Neel *et. al.* (1990).

STUDY AREA

The present investigation has been carried out in the 30 remote places of Madhya Pradesh scattered over three regions Malwa region, Nimar region and Vindhya region. For a proper and orderly study the study sites were selected considering the population and density of flora.

OBSERVATIONS

Status

During the course of present work authors tried to have some idea of endangered, vulnerable, threatened and rare medicinal plants. The status of the medicinal plant of the study area has been established (Mc. Neel *et al.* 1990, Phillips *et. al.* 1994; Dwivedi, S. *et. al*. 2007) and given in table-2.

Conservation Strategies

Conservation strategies of biodiversity with special reference to threatened herbs have been adopted as

mentioned by the tribes of the study area. The works of eminent scholars (Dwivedi 2003; Dwivedi S. *et. al* 2007; Ved *et. al.* 2004; Mc. Neel *et al.* 1990 and Phillips *et. al.* 1994) have been referred for this purpose. The conservation strategies of these plants are mentioned in table-2.

Traditional Uses

Direct discussion between the authors and tribes were made and the uses of the plants were recorded, mentioned in table-1.

DISCUSSION AND CONCLUSION

In every ethnic group there exists a traditional health care system, which is culturally patterned. In rural communities health care seems to be the first and foremost line of defense. The WHO has already recognized the contribution of traditional health care in tribal communities. In the present work authors have collected 80 plant species from different study sites. These species contain valuable chemical substances and are useful to cure various human ailments. (Table 1). During the course of present investigation attempt was made to flourish the status and conservation strategies of the plant species (Table-2) and among 80 plant species it has been found that 06 species are endangered, 08 species are critically endangered, 08 species are vulnerable, and rest are rare and common in occurrence in the study area and the method are mentioned by the ethnic group to conserve these plant species. Moreover, the detailed phytochemical screenings of medicinal herbs are required. It is very essential to have a proper documentation of medicinal plants and to know their potential for the improvement of health and hygiene through an eco friendly system. Thus importance should be given to the potentiality of ethno medicinal studies as these can provide a very effective strategy for the discovery of useful medicinally active identity. A detailed and systematic study is required for identification, cataloguing and documentation of plants, which may provide a meaningful way for the promotion of the traditional knowledge of the herbal medicinal plants. The present study reveals that the Madhya Pradesh is rich in herbal medicine with diversified ethnobotanical values. From the table presented, it can be seen that there is a wide variety of plants for common ailments and diseases. However, different types of strategies are require to adopted such as in-situ conservation, ex-situ conservation and traditional conservation to conserve the plants which are vulnerable and endangered.

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Table 1. List of medicinal plant species.

S/N.	Botanical Names	Local Name	Family	Parts Used	Uses
1.	*Abrus precatorius* L.	Ghughuchi	Fabaceae	Root, Seed, Leaves	Contraceptives, purgative, emetic
2.	*Achyranthes*aspera L.	Chirchiri	Amaranthaceae	Root, Seed, Leaves	Diuretic, time of bleeding in delivery
3.	*Acorus calamus* L.	Bach	Araceae	Rhizomes	Stimulant, stomachache, emetic
4.	*Adhatoda vasica* Nees.	Adusa	Acanthaceae	Leaf, root, bark, flower	Expectorant
5.	*Aegle marmelos* L.	Bel	Rutaceae	Fruits	Diuretic, laxative, antipyretic

6.	*Aloe vera* L.	Gheekumar	Liliaceae	Leaf pulp, dried juice of leaves	Enhancement of sexual vitality, stomachic-tonic
7.	*Andrographis paniculata* L.	Kalmegh	Acanthaceae	Whole herb	Antipyretic, anthelmintic.
8.	*Argemone mexicana* L.	Ghamoya	Papaveraceae	Seeds, roots	Boils, diuretic, expectorant.
9.	*Asparagus racemosus* Willd.	Satavar	Liliaceae	Roots, leaves	Galactogogue, aphrodisiac.
10.	*Azadirachta indica* Juss.	Neem	Meliaceae	Whole plant	Vermifuge, antiseptic
11.	*Bauhinia variegata* L.	Kachnar	Caesalpiniaceae	Roots, leaves, bark, seeds	Astringent, carminative, oral boils.
12.	*Boerhaavia diffusa* L.	Punarnava	Nyctaginaceae	Herb, roots	Diaphoretic, diuretic, jaundice
13.	*Bombax ceiba* L.	Semal	Bombacaceae	Bark	Haematuria
14.	*Bacopa monnieri*	Brahmi	Scrophulariaceae	Whole plant	Nervine tonic
15.	*Butea monosperma* Kuntze.	Palash	Falaceae	Seeds	Oral contraceptive
16.	*Calotropis procera* L.	Safed madar	Asclepiadaceae	Roots, leaves,	Detergent, snake bites
17.	*Carica papaya* L.	Papita	Caricaceae	Seed powder	Oral contraceptive, digestant, rubifacient.
18.	*Cassia fistula L.*	Amaltas	Caeselpiniaceae	Pulp, root bark, flowers	Purgative, febrifuge
19.	*Catharanthus roseus* L.	Sadabahar	Apocynaceae	Roots, leaves	Anticancer, antidiabetic
20.	*Centella asiatica* L.	Jal brahmi	Apiaceae	Whole plant	Brain tonic
21.	*Cissus quadrangularis* L.	Harjor	Vitaceae	Rhizomes, leaves, roots	Antiosteoporotic, antiasthamatic.
22.	*Curcuma longa* L.	Haldi	Zingiberaceae	Rhizomes	Anthelmintic, carminative
23.	*Calonyction muricatum* G.Don	Kotlaiya	Convolvulaceae	Pedicel	Appetizer
24.	*Corisea spinarum* L.	Karonda	Apocynaceae	Fruits	scurvy
25.	*Caeselpinia crista* L.	Gatayar	Caeselpiniaceae	Roots	Fever
26.	*Convolvulus pleuricaulis* L.	Shankhpushpi	Convolvulaceae	Flowers	Brain tonic
27.	*Datura stramonium* L.	Dhatura	Solanaceae	Leaf or whole plant	Anti inflammatory, antispasmodic
28.	*Dioscorea bulbifera* L.	Ratalu	Dioscoriaceae	Tubers	Antidysentery, antisyphilis.

29.	*Dendrocalamus strictus* Nees.	Bans	Poaceae	Leaves	Astringent tonic
30.	*Eclipta alba* Hassk.	Ghamira	Asteraceae	Whole plant	Liver tonic, antiseptic
31.	*Emblica officinalis* Gaert	Amla	Euphorbiaceae	Fruits	Stomach disorders
32.	*Euphorbia hirta* L.	Dhudhi	Euphorbiaceae	Plant juice	Infantyl diarrhoea
33.	*Euphorbia nivulea* Buch.Ham.	Sehuda	Euphorbiaceae	Leaf juice	Ear ache
34.	*Ficus bengalensis* L.	Bargad	Moraceae	Prop roots	Abortion
35.	*Ficus glomerata* Roxb	Umer	Moraceae	Bark decoction	Male contraceptive
36.	*Ficus religiosa* L.	Peepal	Moraceae	Bark decoction	Leucorrhoea
37.	*Gloriosa superba* L.	Kalichari	Liliaceae	Root stalk paste	Mumps, diphtheria.
38.	*Helicteres isora* L.	Marosfali	Sterculiaceae	Fruits	Colic, flatulence
39.	*Ipomoea fistulosa* Mart	Beshram	Convolvulaceae	Leaf paste	Sprains
40.	*Jatropha curcas* L.	Ban rendi	Euphorbiaceae	Seed oil	Purgative
41.	*Jasminum auriculatum* L.	Chameli	Oleaceae	Leaves	Oral ulcers
43.	*Lawsonia inermis* L.	Mehndi	Lythraceae	Leaves	Boils, burns
44.	*Leucas cephalotes* Roxb.	Gumma	Lamiaceae	Leaves	Cough
45.	*Lathyrus aphaca L.*	Jangali matar	Fabaceae	Seeds	Famine food
46.	*Madhuca indica* GmeL.	Mahua	Sapotaceae	Fruit pulp	Snake bite
47.	*Mentha longifolia* L.	Pudina	Lamiaceae	Leaves	Abdominal disorders
48.	*Momordica dioica* L.	Parora	Cucurbitaceae	Unripe fruits	Nutritive supplement
49.	*Mucuna puriens L.*	Kemanch	Fabaceae	Seeds	Oral contraceptives
50.	*Morus alba* L.	Shehtut	Moraceae	Bark	Purgative
51.	*Mimosa pudica* L.	Lajwanti	Mimosaceae	Roots, leaves	Carminative, aphrodisiac
52.	*Martynia annua* L.	Bichhu	Martyniaceae	Plant paste	Local sedative
53.	*Ocimum sanctum*	Tulsi	Lamiaceae	Leaves	Cough, fever
54.	*Parthenium hysterophorus* L.	Gajarghas	Asteraceae	Whole plant	Allergies
55.	*Peristrophe bicalyculata*	Chotiharjori	Acanthaceae	Whole plant	Snake bite
56.	*Phyllanthus fraternus* Webster.	Bhuamla	Euphorbiaceae	Roots	Jaundice

57.	*Portulaca olerasea* L.	Kulta	Portulacaceae	Seeds	Diuretic
58.	*Piper longum Linn*	Pepper	Piperaceae	Fruits	Stomachic
59.	*Rauwolfia serpentina* .	Sarpagandha	Apocynaceae	Roots, tubers	Antihypertensive
60.	*Ricinus communis* L.	Castor	Euphorbiaceae	Seeds	Oral contraceptive
61.	*Sida acuta Burm* F.	Kamraj	Malvaceae	Seeds	Sexual vitality
62.	*Solanum surattense* Burm F.	Kateli	Solanaceae	Anthers	Upper respiratory tract infections
63.	*Solanum nigrum* L.	Makoya	Solanaceae	Leaf	Poultice used in Scrotum swelling
64.	*Strychnus nuxvomica* L.	Kuchila	Loganiaceae	Seeds	Sedative
65.	*Saraco indica* L.	Ashoka	Caeslpiniaceae	Bark	Brain tonic
66.	*Syzygium cumini* L.	Jamun	Myrtaceae	Seed powder	Diabetea
67.	*Tamarindus indica* L.	Imali	Caesalpimiaceae	Ripe fruit pulp	Laxative
68.	*Terminalia arjuna* W. & A	Kahara	Combretaceae	Bark	Cardiac problems
69.	*Tinospora cordifolia* Willd.	Giloya	Menispermaceae	Stem	Sexual impotency
70.	*Thevetia pevuriana* Mier.	Kaner	Apocynaceae	Seeds	Abortifacient
71.	*Tephrosia purpurea* L.	Silpoka	Fabaceae	Roots, leaves	Cough, asthma
72.	*Tridax procumbens* L.	Ghawa patti	Asteraceae	Leaf	Bleeding piles
73.	*Vanda roxburghii* RBr.	Jarakindu	Orchidaceae	Leaf juice	Earache
74.	*Vetiveria zizanioides* Nash.	Khasghars	Poaceae	Root	Head ache
75.	*Vicia sativa* L.	Akari	Fabaceae	Seeds	Antiseptic
76.	*Vitex negundo* L.	Nirgundi	Verbenaceae	Leaf	Rheumatism
77.	*Vanda tessellata* L.	Hajodi	Orchidaceae	Rhizomes	Bone fractures
78.	*Withania somnifera* (L.) Dunal	Aswagandha	Solanaceae	Roots	Sexual impotency
79.	*Xanthium strumarium* L.	Chota gokhru	Asteraceae	Leaves	Diuretic, diaphoretic
80.	*Zizyphus nummularia* Lamk.	Jhar bal	Rhamnaceae	Fruits	Bilious infections

Table 2. Status and conservation strategies of vulnerable and endangered plant species.

SN.	Botanical Name	Local Name	Status	Conservation Strategies

1.	*Abrus precatorius* L.	Ghughuchi	EN	TC-OA
2.	*Achyranthes*aspera L.	Chirchiri	VU	TC-OA
3.	*Acorus calamus* L.	Bach	CR	TC-OA
4.	*Andrographis paniculata* L.	Kalmegh	EN	ESC-HG
5.	*Bauhinia variegata* L.	Kachnar	EN	TC-OA
6.	*Boerhaavia diffusa* L.	Punarnava	VU	ISC
7.	*Bombax ceiba* L.	Semal	VU	ISC
8.	*Cissus quadrangularis* L.	Harjor	CR	ESC-HG
9.	*Calonyction muricatum* G.Don	Kotlaiya	EN	ESC-N
10.	*Ficus glomerata* Roxb	Umer	CR	TC-FTRA
11.	*Gloriosa superba* L.	Kalichari	EN	ESC-CAP
12.	*Leucas cephalotes* Roxb.	Gumma	VU	ISC
13.	*Momordica dioica* L.	Parora	VU	ESC-N
14.	*Mucuna puriens L.*	Kemanch	VU	TC-OA
15.	*Martynia annua* L .	Bichhu	CR	TC-FTRA
16.	*Strychnus nuxvomica* L.	Kuchila	EN	ESC-CAP
17.	*Tinospora cordifolia* Willd.	Giloya	CR	ESC-N
18.	*Tridax procumbens* L.	Ghawa patti	CR	ISC
19.	*Vetiveria zizanioides* Nash.	Khasghars	CR	ESC-CAP
20.	*Vanda tessellata* L.	Hajodi	CR	ISC
21.	*Xanthium strumarium* L.	Chota gokhru	VU	ESC-CAP
22.	*Zizyphus nummularia* Lamk.	Jhar bal	VU	ESC-CAP

Abbrevations
VU-Vulnerable, EN-Endangered, CR-Critical Endangered,
1. ISC: In-Situ Conservation
2. ESC-Ex-Situ Conservation
ESC-HG: ESC-Home gardens, ESC-N:ESC-Nurseries.
ESC-CAP:ESC-Cultivation and Agriculture Production.
3. TC: Traditional Conservation.
TC-FTRA: TC- Faith, Tradition and Religious aspects. TC-OA: TC-other aspects.