

## Ethnomedicinal plants used for curing dysentery and diarrhoea by tribals of Jhabua District (Madhya Pradesh)

Vijay V Wagh, Ashok K Jain\* and Chitralkha Kadel<sup>1</sup>

School of Studies in Botany, Jiwaji University, Gwalior, Madhya Pradesh, India

<sup>1</sup>School of Studies in Botany, Vikram University, Ujjain, Madhya Pradesh

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Jhabua district of Madhya Pradesh is inhabited by *Bhil* and *Bhilala* tribes who possess vast knowledge about uses of a good number of plant species for curing various ailments. The present papers deals with 20 plant species used against dysentery and diarrhoea by these tribes. All plants are enumerated along with botanical name followed by family, local names, voucher specimen number, parts uses and mode of administration of drugs. Out of 20 plant species 09 plants species are used against diarrhoea and 11 against dysentery.

**Keywords:** Ethnomedicines, Bhil, Bhilala, Dysentery, Diarrhoea, Jhabua District, Madhya Pradesh

### Introduction

Since time immemorial mankind has been dependent on plants for food, medicines, fibre, fodder and other purposes. Our knowledge on intimate relationship between man and plants in his immediate surroundings has been passed on through generations. Millions of rural householders use medicinal plants in self-help mode. Over one and a half million practitioners of the Indian system of medicine use medicinal plants for preventive, promotive and curative applications. These plants gain further importance in the regions where modern facilities are neither available nor easily accessible, particularly in tribal areas<sup>1-2</sup>.

In developing countries dysentery and diarrhoea are the common causes of morbidity and mortality<sup>3</sup>. In the beginning of the 1980s, deaths caused due to diarrhoea were estimated at 4.6 millions every year among children under the age of 5 years<sup>4</sup>. Infants, younger than one year accounted for more than half of these deaths and the risk can be 2-3 times higher among infants who are not exclusively breast-fed<sup>5</sup>.

Madhya Pradesh is known to have a rich flora of medicinal plants<sup>6</sup>. Ethnomedicinal survey was conducted in different parts of this state and valuable data on the uses of plants as folk medicine has been recorded<sup>7-21</sup>. A good number of plant species are

being used by tribal and rural people for the treatment of dysentery and diarrhoea.

The terrain of Jhabua is hilly, undulating and typically known as Jhabua hills topography (Plate 1). Its major part is covered with dense forest in which various tribes like *Bhil* and *Bhilala* are living in majority. The *Bhil* tribe is one of the most important and the third largest tribes of India. The name has been derived from Dravidian word 'bil' or 'vil' meaning bow, because they always keep bow and arrow for hunting. These tribals are totally dependent on various forest products for their livelihood. The present paper comprises the documentation of some important medicinal plants used by these tribals against diarrhoea and dysentery.

### Materials and Methods

Extensive field survey in different remote areas of Jhabua district was conducted from May 2007- June 2009. Data are based on personal contact and observations and interview with local traditional healers and villagers of different localities of the district (Plate 2). A total of 5 tribal medicine men called 'Badwa' namely (Manji Badwa, Gulab Baba, Amarsingh Badwa, Jungliya Badwa and Vesta Badwa) were identified as they have sound knowledge on medicinal plants. Voucher specimens were collected for making herbarium sheets by standard method<sup>22</sup>. The plants were voucher specimens were identified by the published literature and local flora specimens deposited in the herbarium

\*Correspondent author

E-mail: asokjain2003@yahoo.co.in

Phone: +0751-2442771, 09425114344

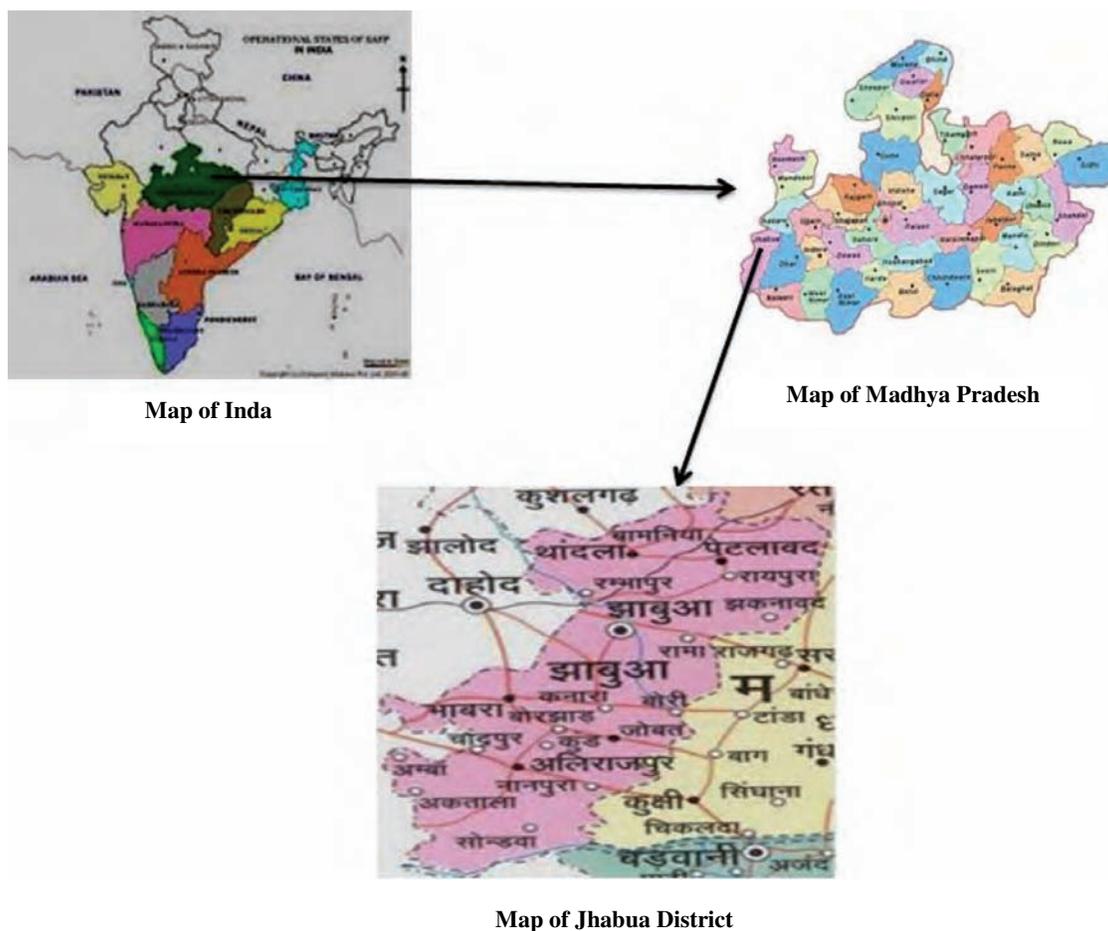


Plate 1—Maps of study area

of School of Studies in Botany, Jiwaji University, Gwalior<sup>23-25</sup>.

#### Enumeration of plant species

The species are arranged below alphabetically with family in parenthesis, local name (LN), voucher specimen (in parenthesis) number followed by folklore claim.

*Acacia nilotica* (Linn.) Willd. ex Delile (Mimosaceae)  
LN: Desi babul (JBA-132)

One teaspoonful seed powder is given empty stomach in the morning thrice a day for two days in dysentery (Plate 2).

*Alangium salvifolium* (Linn.f.) Wang (Cornaceae)  
LN: Okali (JBA-270)

Root powder (2-4 g) and bark powder is mixed with water and administered orally twice a day for 3 days in diarrhoea (Plate 2).

*Allium cepa* Linn. (Liliaceae)

LN: Piyaz (JBA- 556)

About 8-10 ml of bulb juice is administered orally twice a day for 3 days in dysentery.

*Andrographis paniculata* (Burm.f.) Wall. ex Nees (Acanthaceae)

LN: Bhuinimadi (JBA-47)

Decoction of 50 g fresh leaves in 100 ml water is given orally twice a day for seven days in diarrhoea (Plate 2).

*Azadirachta indica* A. Juss. (Meliaceae)

LN: Neem (JBA-72)

Juice of leaves (100 ml) and bark is given orally thrice a day for 2 days in dysentery.

*Bombax ceiba* Linn. (Bombacaceae)

LN: Semala (JBA-48)

Gum (10-15 g) of tree is chewed thrice a day in diarrhoea (Plate 2).



Interaction with local herbal healers



A tribal man with medicinal plant



*Acacia nilotica*



*Alangium salvifolium*



*Andrographis paniculata*



*Bombax ceiba*



*Cassia tora*



*Curculigo orchioides*



*Diospyros melanoxylon*



*Mucuna pruriens*



*Terminalia bellerica*



*Wrightia tinctoria*

Plate 2—Interaction with local herbal healer and various ethnomedicinal plants used for dysentery and diarrhoea

*Cassia tora* Linn. (Caesalpinaceae)

LN: Puadiya (JBA-129)

Whole plant decoction of *Cassia tora* and *Plantago ovata* Forsk. (Isabgol) is given orally twice a day for three days in diarrhoea (Plate 2).

*Cassia fistula* Linn. (Caesalpinaceae)

LN: Garmala (JBA-50)

A glassful of bark decoction is given twice a day for 2 days in dysentery.

*Citrus limon* (Linn.) Burm. f. (Rutaceae)

LN: Nibu (JBA-576)

Fruit juice (5 ml) is taken with salt twice a day for 2 days in dysentery.

*Curculigo orchoides* Gaertn. (Hypoxidaceae)

LN: Kali Musli (JBA-133)

Root paste is administered orally with water thrice a day for three days in diarrhoea (Plate 3).

*Cynodon dactylon* (Linn.) Pers. (Poaceae)

LN: Dub, (JBA-75)

Whole plant juice is taken orally with black salt twice a day for four days in dysentery and intestinal bleeding.

*Diospyros melanoxylon* Roxb. (Ebenaceae)

LN: Tendu (JBA-255)

The extract of unripened fruit in milk is given orally twice a day for two days in diarrhoea (Plate 2).

*Ficus benghalensis* Linn. (Moraceae)

LN: Bad, (JBA-65)

A few drops of latex with *ghee* and sugar are consumed twice a day for three days to get relief in dysentery.

*Jatropha curcas* Linn. (Euphorbiaceae)

LN: Ratanjot, (JBA-33)

Decoction (10 ml) of root bark is given thrice a day for three days in dysentery.

*Mucuna pruriens* (Linn.) DC (Fabaceae)

LN: Kewanch, (JBA-31)

Seed paste in goat milk is given orally thrice a day for two days in blood dysentery (Plate 2).

*Punica granatum* Linn. (Punicaceae)

LN: Anar, (JBA-578)

Fresh leaf juice (10 ml) is given orally thrice a day for three days in dysentery.

*Syzygium cumini* (Linn.) Skeels (Myrtaceae)

LN: Jamun, (JBA-390)

Bark is pounded in water and given orally twice a day for two days in diarrhoea.

*Terminalia bellerica* (Gaertn.) Roxb. (Combretaceae)

LN: Baheda, (JBA-191)

The paste of bark is kept in water overnight and administered next day in dysentery (Plate 4).

*Tinospora cordifolia* (Willd.) Miers ex Hook.f. & Thoms. (Menispermaceae)

LN: Giloy, (JBA-155)

Decoction of whole plant is given orally thrice a day for two days in diarrhoea.

*Wrightia tinctoria* R. Br. (Euphorbiaceae)

LN: Kueda, (JBA-82)

Seed powder (5 g) in plant latex is given twice a day for three days in diarrhoea (Plate 2).

## Results and Discussion

Uses of a large number of species against diarrhoea and dysentery by tribals of Jhabua district indicates about the rich oral tradition of transfer of knowledge from generation to generation. Such traditional knowledge is diminishing gradually due to various reasons. The main causes seem to be the depletion of forest and migration of tribes towards urban localities in search of employment. In present study herbal formulations of 09 plant species against diarrhoea and 11 plant species against dysentery have been found to be prescribed by the tribal medicine men of Jhabua district. The potential of antidiarrhoeal and antidysenteric activity has been evinced by the quick relief to sufferers that may be due to the presence of bio active compounds in these formulations<sup>26-27</sup>. Some herbs which occur in this region have exhibited remarkable antidiarrhoeal properties which are most commonly used by the local tribals<sup>28-29</sup>.

Diarrhoea and dysentery are most commonly occurring diseases among these tribes. Use of *Acacia nilotica* and *Mucuna pruriens* seeds, roots of *Alangium salvifolium* and latex of *Ficus benghalensis* for the treatment of diarrhoea and dysentery is a new record to the state because available information indicates that such species have not been reported earlier. Such species must be given due attention for conservation.

## Conclusion

Such ethnomedicinal data may provide a base to start the search of new compounds, phytochemistry,

pharmacology and pharmacognosy. This may provide new sources of herbal drugs and help to understand the molecular basis of their activities. Moreover, it may further be mentioned that overexploitation of these species in the name of medicine may lead some species ultimately to the disappearance in future. Therefore, attention should also be made on proper utilization and conservation of these medicinal plants.

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