

## Herbal formulations used in Badwani district (Madhya Pradesh) India

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### Abstract

The present paper communicates the documentation of herbal formulations used for indigenous medicine by the tribal and rural people of Badwani District in MP. It reveals 36 plant species belonging to 35 genera and 22 families of angiosperms and pteridophytes. About 45 reports from first use-report for India, whereas 05 species are being reported for the first time. These help combat as many as 45 human afflictions with a variety of formulations. The vernacular plant names, scientific plant names, family, type of recipes and doses, etc. are presented. This information may help reveal new or alternate sources of herbal drugs on critical scientific examination.

**Keywords:** Traditional Ethnomedicine, Badwani District, India

### Introduction

Indigenous heritage regarding traditional herbal formulations is passed over generations orally. This wealth is often ignored by modern medicine practitioners, which in turn, culminates in gradual erosion of precious lifesaving information. This traditional medico lore can play a vital role for human health programmers and for the local communities as well. The bio-resources can be harnessed for further scientific investigations on modern lines. Certainly, it is essential for the developing nations such as India to document scientifically the traditional herbal formulations employed particularly by the local tribal and rural people. The present paper is a part of investigation in last four years in Badwani district of Madhya Pradesh in India.

### Methodology

The field studies involved extensive field survey and data collection lasting through all season of four years. All the tribal and rural people were interviewed with particular emphasis on elder and knowledgeable tribal's, rural people, heads of tribal community, Separate transect were undertaken with men and women. Occasionally actual administration and application were observed in the region. Inquiries were made pertaining to vernacular plant names, type and preparation of recipes, doses, betc. The plant specimens collected were deciphered using flora of Madhya Pradesh Vol. I-II (Verma *et al.*, 1993; Mugdal *et al.*, 1997). They have housed in the herbarium of the college. The data gathered has been compared with the classical literature (cf. Anonymous, 1948-1976; Watt, 1889-1893; Ambasta, 1986; Jain, 1991) To understand additional use reports and the plant species employed from this region. The plant species have been arranged alphabetically. They are enumerated in a terse manner; botanical name, family in parenthesis, local name and collection number. The medicinal utilities are given separately below. In few cases, critical notes are provided. Asterisk (\*) indicate new use-report for India.

### Ethnobotanical Enumeration

#### 1. *Abelmoschus manihot* (L.) Medik. (Malvaceae) Jangli Bhenda

**Medicine:** Coll.No.205

a) A spoonful of decoction of leaves is given thrice a day for a month to cure back-ache after delivery.

b) Infusion of dried fruits, about half cup, is given once a day to control sugar level in diabetes.

**Critical Notes:**

Fruits are applicable to control sugar level and leaves are used to treat back pains after delivery. These are not reported earlier in classical literature.

#### 2. *Abelmoschus tetraphyllus* (Roxb.ex Horn.) Borssum (Malvaceae) Bhenda

**Medicine:** Coll.No.302

a) Roots tubers are dried and powdered. A spoonful of powder is drunk with milk before sleep to keep fit or as tonic.

**Critical Notes:**

Application of root as tonic is being reported for the first time.

#### 3. *Abrus precatorius* L. (Fabaceae) Safed-gunj (White seeded variety)

**Medicine:** Coll.No. 42

a) Few leaves are boiled in glass of water, Decoction obtained is gargled to treat throat infections. It is practiced twice a day till cure.

b) Roots are crushed in water, extract obtained about spoonful is mixed with one cup of whey. This mixture is administered once a day for 15 days to treat spermatorrhoea.

c) Young leaves are chewed thrice a day for two day against mouth ulcer.

d) Root paste is applied on fore-head and 2-3 drops of leaf juice is dropped in nostrils to treat migraine. It is practiced for five days.

**Critical Notes:**

Use of leaves for throat infection is being reported additionally.

**4. *Abutilon indicum* (Malvaceae) Atibala**

**Medicine:** Coll.No.157

- Roots and bark paste are applied together on rheumatic swelling of joints.
- Few drops of leaf juice are dropped in ears in case of ear-ache and to prohibit pus formation.
- Juice of leaf is also useful for tooth-ache, if the juice is dropped in an ear to opposite side of the aching tooth.

**Critical Notes:**

Root and bark extract is useful against rheumatism. Leaf extract is applicable to cure ear-ache, pus formation and tooth ache. The fibres obtained from the stems are useful for ropes and cordage. All these uses are new for ethnobotany.

**5. *Acacia auriculiformis* A. Cunn.ex Benth. (Malvaceae)**

**Medicine:** Coll.No. 112

- Decoction of leaves, about a cup is drunk twice a day to get relief from head-ache.

**Critical Notes:**

To treat head-ache leaves are useful. This is a new report.

**6. *Adiantum philipense* Linn. (Adiantaceae) Kesari**

**Medicine:** Coll.No. 210

- Leaves are boiled in water. This hot water is used to warm body to treat rheumatism and arthritis. This water is also added in bath water to treat these diseases.
- Dried leaves are roasted and then powdered. Paste is prepared using coconut oil (*Cocos nucifera* L.). This paste is used to cure injuries, burns and blisters.

**Critical Notes:**

Application of leaves to treat rheumatism, injuries and blisters are still unreported.

**7. *Aegle marmelos* (L.) Corr. (Rutaceae) Bili**

**Medicine:** Coll.No. 77

- Leaves are crushed. Two spoonful extract is swallowed thrice a day for four days to treat intestinal worms.
- Fruit pulp about two gm is given twice a day to children suffering from dysentery.
- Pulp of fruit is dried and powdered finely. One spoonful of it is consumed with honey as tonic, once a day for a week.
- Bark extract is applied daily on body to treat jaundice. It is then washed out. This is followed till cure.

**Critical Notes:**

Use of leaves for intestinal worms and stem bark for jaundis are till unreported.

**8. *Aerides crispum* Lindl. (Orchidaceae) Bandgool**

**Medicine:** Coll.No.228

- Leaf juice is used as tooth-paste to cure tooth-ache. Fumes obtained from the leaves are also taken in mouth to cure tooth-ache.

**Critical Notes:**

The taxon is being reported for the first time as useful.

**9. *Bacopa monnieri* (L.) Penn. (Scrophulariaceae) Bramhi**

**Medicine:** Coll.No.38

- A spoonful of decoction of leaves is given thrice a day for a month to cure back-ache after delivery.
- A glass of leaf juice is homogenized with blackpeper. (*Piper nigrum* L.) A spoonful of this mixture is advised daily for rheumntiun,

**Critical Notes:**

Leaf juice used to reduce post-delivery back pains is an additional report.

**10. *Balanites aegyptiaca* (L.) Delile (Balanitaceae) Hingot**

**Medicine:** Coll.No. 123

- Extract of leaves 2-3 drops is applied on molar teeth to treat teeth worms.
- Spoonful of leaf extract is taken orally twice aday for four days to treat cough.
- Leaves are soaked in water overnight and infusion is gargled once for 3-4 days to treat throat infection and mouth ulcer.

**11. *Barleria cristata* L. (Acanthaceae) Nili-koranti**

**Medicine:** Coll.No.266

- Leaf extract, about two spoons, is taken orally for cough and cold for three to four times a day till cure.
- Root extract, about a cup, is drunk regularly at early morning to cure fever.

**Critical Notes:**

Leaf extract is beneficial for cough and cold. This is unrecorded earlier. Present notice of its roots against fever is being reported for the first time.

**12. *Bauhinia purpurea* L. (Caesalpiniaceae) Kanchan**

**Medicine:** Coll.No.161

- Roots are extracted. It is mixed in coconut oil (*Cocos nucifera* L.). This mixture is heated and applied for 3-4 days at morning to treat hair-blisters.
- A spoonful of leaf extract is administered orally twice or thrice a day to cure dysentery in case of childrens.

**13. *Capparis sepiaria* L. (Capparidaceae) Karer**

**Medicine:** Coll.No.370

- Decoction of unripe fruits about half cup, once a day is administered to cure chronic diarrhoea and dysentery.
- Ripe fruit pulp is thought cooling and digestive. Hence 'sharbat' prepared from the pulp is drunk at night.

**14. *Cassia auriculata* L. (Caesalpiniaceae) Walanya, Tarvar**

**Medicine:** Coll.No.25

- Flowers are crushed and mixed with goat's milk. Cup of mixture is given twice a day to the women to prevent white discharge during menstrual period. It is practiced two to three days before menstruation.
- Root extract is applied on skin diseases till cure.

**Critical Notes:**

Flowers are useful to avoid white discharge during menstruation and roots are used against skin disease. These uses are not reported in past.

**15. *Dalbergia lanceolaria* L. ( Fabaceae) Shiristi**

**Medicine:** Coll.No.335

a) Decoction of young twig is gargled twice a day to cure mouth-ulcer till cure.

b) Spoonful of stem bark powder is made into paste along with leaf pulp of (Aloe vera L.). Paste is applied on face at daily night for a week to cure pimples. It also improves fairness.

**Critical Notes:**

Stem bark is used in the treatment of pimples and improves fairness. These are not recorded yet.

**16. *Dendrobium barbatulum* Lindl. (Orchidaceae)**

**Medicine:** Coll.No.317

a) Decoction of rhizome is drunk at morning and evening. A cup of it is advised for the patient suffering from kidney-stone till cure.

**Critical Notes:**

The species is being reported useful for the first time.

**17. *Digera muricata* (L.) Mart. (Amaranthaceae) Latmahura**

**Medicine:** Coll.No.156

a) Paste of flower is directly applied on heads to reduce dandruff formation. It is advised for 3-4 days.

**Critical Notes:**

Flowers are being reported useful first time to reduce dandruff formation.

**18. *Dolichus lablab* L. (Fabaceae) Val**

**Medicine:** Coll.No.400

a) Inflorescence are cut and added in hot water. This water is used for bathing a person suffering from joint pains. This is followed for 5-7 days.

**Critical Notes:**

Medicinal applicability of inflorescence is first time reported.

**19. *Ficus amplissima* J.E.Sm. (Moraceae) Pipri**

**Medicine:** Coll.No.311

a) Leaf juice, about 10-15 ml, is mixed in a cup of milk. It is drunk once daily for 2-3 days to check dysentery.

b) Cup of root extract of this plant and equal amount of tea powder decoction is advised twice a day for 5-8 days as remedy against Jaundice, whooping cough and asthma.

**Critical Notes:**

Medicinal utility of this species reported by present investigator is new for ethnobotany.

**20. *Grewia tiliaefolia* Vahl (Malvaceae) Dhamin, Pharsa**

**Medicine:** Coll.No.334

a) Decoction of leaves of this species and leaf-lets of Neem (*Azadirachta indica* A. Juss.) is prepared in cow-urine. Half cup of decoction is drunk at morning till cure. It is beneficial in heart complaints, ulcer and rheumatic pains.

**Critical Notes:**

Decoction of leaf along-with leaves of 'Neem' is useful to treat heart complaints. This is a new report.

**21. *Hemidesmus indicus* R.Br. (Asclepiadaceae) Antmul**

**Medicine:** Coll.No. 05

a) Decoction of root and leaves are added in water used for bath to a person suffering from leprosy. It is treated till cure.

**Critical Notes:**

Application of root to treat leprosy is not reported yet.

**22. *Ipomoea nil* (Linn.) Roth (Convolvulaceae) Javitri**

**Medicine:** Coll.No.347

a) Paste of leaf is applied locally on skin for ringworms. It is practiced till cure.

b) Paste of roots is applied on scalp regularly at night to kill lice it also helps to hair growth.

**Critical Notes:**

Applications of leaves for ringworm and the roots are used against lice. Both applications are not reported in past.

**23. *Kydia calycina* Roxb. (Malvaceae) Pulia**

**Medicine:** Coll.No.321

a) Stem bark powder is made into paste with coconut oil. This paste is applied on burn injuries till cure.

**Critical Notes:**

Stem bark is useful to treat burn injury. It is not reported yet.

**24. *Leea asiatica* (L.) Ridsdale (Vitaceae) Banchalita**

**Medicine:** Coll.No.396

a) Leaf juice is applied daily on blisters till cure.

**Critical Notes:**

Medicinal use of this species is being first time reported.

**25. *Lygodium flexuosum* (L.) Swartz. (Lygodiaceae)**

**Medicine:** Coll.No.151

a) Rhizomes are powdered. It is mixed with lime. Two or three spoonful of mixture is given orally twice a day to control dysentery.

b) Rhizome extract about half cup is mixed in two spoons of cow urine. The mixture is given twice a day for strangury till cure.

**Critical Notes:**

Rhizome is applied to cure injuries. This application is new. It is sold in tribal areas.

**26. *Maerua oblongifolia* (Forsk.) A. Rich. (Capparidaceae) Bhuchakra**

**Medicine:** Coll.No.375

a) Spoonful of root powder is drunk with milk, once a day for two weeks to reduce body heat. It is practiced during summer season.

**Critical Notes:**

Use of roots to reduce body heat is not reported yet.

**27. *Pentatropis spiralis* (Forsk.) Decne (Asclepiadaceae) Aakari**

**Medicine:** Coll.No.221

a) Root tubers are boiled and half cup of it is drunk once daily to cure dysentery, sunstroke or colic problem till cure.

**Critical Notes:**

Application of root tubers to cure dysentery, sunstroke and colic are not reported earlier in classical literature.

**28. *Plectranthes mollis* (Ait.) Spr. (Labiatae) Tivi**

**Medicine:** Coll.No. 53

a) Roots are dried and powdered. Pellets prepared from powder are consumed along with a betel leaf (*Piper betle* L.) at morning, noon and evening for two days to treat colic.

b) Two spoonful of leaves extract is diluted in cup of water. It is drunk once a day to reduce pains during menstruation. It is practiced during menstrual period only.

**Critical Notes:**

Leaves used against menstrual pains and roots to treat colic are being reported for the first time.

**29. *Pterocarpus marsupium* Roxb. (Fabaceae) Bija, Bijasal**

**Medicine:** Coll.No.195

a) A twig cut from the tree is kept erect in water for sometime. It is then extracted. A cup of it is advised for 8-10 days at morning and night to purify blood.

b) Stem bark powder is sprinkled daily on body to cure small-pox till cure.

c) About 10 ml of flower extract is consumed twice a day for three consecutive days to cure fever.

**Critical Notes:**

Application of stem bark to treat small-pox and twigs are used to purify blood. These forms new reports.

**30. *Salvadora persica* L. (Salvadoraceae) Pelu, Pilu**

**Medicine:** Coll.No.182

a) Young leaves are chewed, however the saliva is spat after chewing. This helps cure mouth-ulcer.

b) Extract of roots, about spoonful, is given daily along with tea to check fever till cure.

**Critical Notes:**

Leaves are useful to cure mouth-ulcer and also used to treat bone fracture in case of bullocks. These are being reported for the first time.

**31. *Sarcostemma intermedium* Decne. (Asclepidaceae) Dudhikand**

**Medicine:** Coll.No.342

a) Shade dried roots are powdered, spoonful of it is consumed along with glass of cow's ghee daily for a fortnight to cure impotency.

b) The dried leaves are burnt with oil. The ash is collected in copper pot. This ash is then used to cure eczema.

**Critical Notes:**

Roots are used to overcome impotency and leaves are useful to treat eczema. Both uses are unreported yet.

**32. *Schleichera oleosa* (Lour.) Oken. (Sapindaceae) Kusum**

**Medicine:** Coll.No.305

a) Fresh leaves are dipped in water for sometime. This water is boiled and distilled. The oil thus obtained is massaged over joints daily for rheumatism till cure.

b) Entire plants are dried and powdered. This powder, about 5 gm, is consumed before tea. It benefits to overcome general body weakness and also helps to improve memory. It is advisable for 15-20 days at a stretch.

**Critical Notes:**

Entire plant is being reported for the first time as a tonic.

**33. *Smithia conferta* J.E.Sm. (Fabaceae) Odabrin**

**Medicine:** Coll.No.194

a) Leaf extract, about half cup, is drunk at morning for about one month to cure leucorrhoea.

b) Paste of leaves and flowers mixed in equal proportion, is applied on scalp to promote hair growth.

**Critical Notes:**

Leaves are useful to treat leucorrhoea. It is not reported in past.

**34. *Solena amplexicaulis* (Lam.) Gandhi (Cucurbitaceae)**

**Van-kakdi**

**Medicine:** Coll.No.379

a) Seeds are burnt and fumes are taken as treatment against asthma. It is practiced in early morning during winter only.

b) Spoonful of leaf extract is advised along with cup of cow's milk twice a day to cure cough. It is practiced till cure.

**Critical Notes:**

A use of leaf and seed mentioned by present investigator is not found in classical literature.

**35. *Terminalia chebula* Retz. (Combretaceae) Harra**

**Medicine:** Coll.No.93

a) Fruits two or three are powdered and mixed with spoonful seed powder of 'emali' (*Tamarindus indica* L.). This mixture is consumed along with spoonful of honey to treat asthma. It is practiced twice a day till cure.

b) Stem bark is chewed against yellow urination. This is repeated for seven days twice a day. Drinking tea, use of spicy food or pungent foods are prohibited during these days.

c) Seeds are powdered and used as tooth powder to cure tooth-ache.

**Critical Notes:**

Stem bark is not reported earlier useful against yellow urination.

**36. *Trichosanthes tricuspidata* Lour. (Cucurbitaceae)**

**Indrayan**

**Medicine:** Coll.No.376

a) Roots are dried in shadow and consumed along with cow's ghee daily for a fortnight to cure impotency.

b) Dried flowers and seeds of *Piper nigrum* L. are powdered and mixed in jaggery (*Saccharum officinarum* L.). Pellets of one gram are prepared. Two pellets are consumed twice a day for twenty-four days to cure asthma.

**Critical Notes:**

Shade dried roots are applicable to overcome impotency and dried flowers are used against asthma. These are not reported earlier in classical literature.

**Results and Discussion**

A total 36 plant species from 35 genera and 22 families of angiosperms and pteridophytes are communicated in this paper. The latter are represented by just two species and two genera. These have popular ethnomedicinal value among the local people. The traditional recipes are in the form decoction, infusion, extract, juice, paste, powder, ash, fumes, pellets, etc. Various plant parts such as leaves (mature or young, dried or fresh), fruits (ripe or unripe), roots, root tubers, stem bark, young twig, rhizome, flowers, seeds, entire inflorescence or even entire plants are used to prepare them. Usually, single source is utilized, except few wherein few species like *piper nigrum*, *Aloe vera*, *Azadirachta indica*, etc. find place in the supplementation of recipes. Some domestic substances are aid in their preparation e.g. sugar, jaggery, cow milk, ghee or urine; coconut oil, ashes etc. As many as 45 different diseases or disorders are found curable by the local medicaments.

It is interesting to note that cross cultural comparison with these use reports revealed about 45 applications are new and noteworthy for India. Also, five plant species useful from this district have not appeared useful in past literature.

The present study reveals that the reported species have been in use in the district for a long past. These are very effective and powerful among the local societies. The data gathered may thus be used for further chemical, pharmacological and clinical examinations. Obvious threats to local biodiversity and fast rate of accumulation warranted necessity of this study, which is justified by the present attempt.

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