



Indigenous Traditional Medicinal Plant Resources from Ahmednagar District, Maharashtra, India.

D.N. Gayake¹, U.D. Awasarkar*² and P.P. Sharma¹.

¹Department of Botany, Shri. Muktanand College, Gangapur, Aurangabad.

²Department of Botany, Agharkar Institute, Pune, Maharashtra.

Received:
18th June 2013
Received in revised form:
20th July 2013
Accepted:
30th July 2013
Available online:
10th Aug 2013



Online ISSN 2249-622X
<http://www.jbiopharm.com>

ABSTRACT

Present communication is based on extensive ethnobotanical studies done during 2009 to 2012 in the Ahmednagar district of Maharashtra. Ahmednagar is a place of attraction to many herbal drug practitioners and dealers of the neighbouring areas. Akole taluka forests of the district are especially rich in medicinal plants and exhibit remarkable plant diversity. The tribals residing the forests use plants for treating different ailments. Total 12 tribes inhabit the district, of these Bhil, Mahadeo koli, Pardhi, Thakar are the major tribes in the district. During the study total 66 plant species belongs to 38 families used for medicinal purposes have been documented. Enumeration includes details like name of the disease, plant part used, method of preparation of medicine, doses, mode of administration, etc.

Keywords: Traditional Uses, Medicinal Plants, Ahmednagar district, Maharashtra.

1. INTRODUCTION:

Ahmednagar district is located between 18°02' and 19°09' north latitude and 73°09' and 75°05' east longitude. It is largest district of Maharashtra occupying more or less the central position in the state. The district is bounded on the north by Nasik district, on the north-east by Aurangabad district, on the east by Beed and Osmanabad districts, on the south by Solapur district and on the west by Pune district, on the north-west it is surrounded by Thane district.

The district is divided into 14 revenue Taluka's. Major rivers such as Godhavari, Bhima, Mula and Pravara with 2 dams, viz Mula and Bhandardara exist in the district.

1.1 Forests: The forest covering the area is 1,432.64 sq km. i.e. 8.41% of the total geographical area of the district. The vegetation in general is mixed deciduous type. It is

further classified in to 3 types Dry-tropical forest, Moist-tropical forest and Western-subtropical hill forest. Ahmednagar district is a place of attraction to many Ayurvedic drug dealers and 'Vaidus' of the neighbouring areas. The mountainous regions of Akola taluka are rich in medicinal plant resources. Pradhan and Singh (1999) reported 1044 total species consist of 779 Dicots, 253 Monocots and 12 Pteridophytes including 12 endemic plants and 11 rare plants in the district.

1.2 People: Total 12 tribes reside in the district out of this Bhil, Mahadeo koli, Pardhi, Thakar are the major tribal groups in the area. Besides these tribal groups, several other communities are staying as forest dwellers and possess excellent knowledge about plants and their utility.

2. MATERIALS AND METHODS

The present work involves survey and documentation of plants which are utilized by people for treating various diseases. The methodology used for procuring information through interviews of people. Interviews consisted of open and semi-structured questions and the information collected was verified during different occasions with same informant and in different localities with other informants in the area. Following literature consulted for uses of plants. Plants were identified by using keys for botanical determination given in regional floras (Pradhan & Singh 1999, Cooke 1901-1908).

The plants and their uses subsequently catalogued according to their utility. The information collected was analyzed quantitatively to obtain the following data: plants to which most uses were attributed, number of different uses and most reported medicinal uses, part of plants most frequently mentioned and the most common preparations and mode of applications.

Enumeration of plants: Plants are listed alphabetically along with family name in parenthesis, Local Name and detailed uses.

Acacia chundra (Roxb. ex Rottl.) Willd. (Mimosaceae) 'Khair'

Use: Wounds: Stem bark powder mixed in coconut oil applied over wound.

Acacia nilotica (L.) Willd. ex Del ssp. *indica* B renan (Mimosaceae) 'Babul'

Uses: 1) Leucorrhoea: Fresh bark juice (10-15 ml) in one cup water taken once in early morning for a week.

2) Stomach ache: Powder of single seed taken once with water.

Aegle marmelos (L.) Corr. (Rutaceae) 'Bel'

Use: Throat infection: 50 to 100gm pulp of mature fruit eaten once.

Allium cepa L. (Liliaceae) 'Kanda'

Use: Eye irritation: Put 1-2 drops of bulb juice instilled in eye thrice for a day.

Aloe vera (L.) Burm. f. (Liliaceae) 'Korpad'

Use: Indigestion: Half cup leaf juice with salt taken twice a day for a week.

Amaranthus spinosus L. (Amaranthaceae) 'Katemath'

Uses: 1) Sunstroke: Sharabat made by using fresh leaf juice with *Coriandrum* & Jeera seed powder taken twice or thrice a day.

2) Foot cracks: Leaf juice / paste applied over cracks twice a day for 2-3 weeks.

Amaranthus blitum L. (Amaranthaceae) 'Tandulja'

Use: Eye irritation: Leaf juice (50ml) with sugar taken once a day for a week.

Argemone mexicana L. (Papaveraceae) 'Bilyat'

Uses: 1) Jaundice: Root extract (3-5ml) taken orally once in early morning for a week.

2) Swelling: Root paste applied on affected part twice for a day.

Argyrea nervosa (Burm.f.) Boj. (Convolvulaceae) 'Samundersok'

Use: Wounds: Leaf eaten directly twice a day for two days. *Artocarpus heterophyllus* Lamk. (Moraceae) 'Phanas'

Use: Diarrhoea: 50ml decoction of 5-10 gm fresh roots taken twice in a day.

Asparagus racemosus Willd. (Liliaceae) 'Shatavari'

Use: Lactation: Root paste (50gm) taken twice a day for a month.

Bambusa arundinaceae (Retz.) Willd. (Poaceae) 'Bamboo'

Use: Wound: Root paste applied over wound for 2 days.

Bauhinia racemosa Lam. (Caesalpiniaceae) 'Apata'

Use: Stomachache: 50ml leaf juice with *Momordica charantia* leaf juice in equal proportion taken once.

Brassica juncea (L.) Czern. (Brassicaceae) 'Mohari'

Use: Dandruff: Gentle warmed seed oil massage on head for 1-2 weeks.

Butea monosperma (Lamk.) Taub. (Fabaceae) 'Palas'

Use: Indigestion: Fresh stem bark decoction (20-30ml) taken twice a day.

Carica papaya L. (Caricaceae) 'Papai'

Use: Scorpion sting: Leaf latex applied at a site of scorpion sting to relieve pain.

Carissa congesta Wight (Apocynaceae) 'Karvand'

Use: Fever with shivering: Leaf decoction (30ml) taken once for 2-3 days to reduce temperature.

Cassine glauca (Rottb.) O. Ktze. (Celastraceae) 'Bhusket'

Uses: 1) Increase bone in nose: Dry leaf powder smoke through nose thrice a day for a week.

2) Snakebite: 5 leaf juice in water (50ml) taken orally twice a day.

Catharanthus roseus (L.) G. Don (Apocynaceae) 'Sadaphuli'

Use: Diabetes: One leaf eaten early in the morning for 15 days and again repeated after interval of 15 days.

Cucumis sativus L. (Cucurbitaceae) 'Kakdi'

Use: Acidity: Fruit juice (100ml) taken twice for a day.

Curcuma longa L. (Zingiberaceae) 'Halad'

Use: Throat infection: Rhizome powder (5gm) boiled in milk (50 ml) & taken twice a day.

Cynodon dactylon (L.) Pers. (Poaceae) 'Haral'

Use: Headache: Whole plant paste applied over forehead to relieve headache.

Cyperus rotundus L. (Cyperaceae) 'Lavhala'

Use: Snakebite: Root tubers (5-10) crushed and 50-100 ml of extract given orally once.

Datura innoxia Mill. (Solanaceae) 'Dhotra'

Use: Dog bite: 1gm seed powder with 5 gm root paste taken in milk.

Datura metel L. (Solanaceae) 'Kala dhotra'

Use: Swellings: Fresh leaf juice or paste applied over swellings twice for 2-3 days.

Dendrophthoe falcata (L.f.) Ettina. (Loranthaceae) 'Bandgul'

Use: Dysentery: Fresh leaf juice (20ml) taken thrice a day for two days.

Echinops echinatus Roxb. (Asteraceae) 'Utkatanti'

Use: Scorpion sting: Root (5gm) eaten directly to relieve pain due to scorpion sting.

Embllica officinalis Gaertn. (Euphorbiaceae) 'Avala'

Use: Acidity: Fruit juice (50ml) with honey taken early morning once a day for 11 days.

Erythrina variegata L. (Fabaceae) 'Pangara'

Use: Earache: Leaf juice (1-2 drop) dropped in ear twice a day.

Eucalyptus globulus Labill. (Myrtaceae) 'Nilgiri'

Use: Hernia: Leaf crushed, warmed & applied on affected part.

Ficus benghalensis L. (Moraceae) 'Wad'

Use: 1) Tonsils: Stem latex rubbed on swelling twice daily for a week.

2) Jaundice: Prop root juice (50 ml) taken once a day for 3 days.

Ficus racemosa L. (Moraceae) 'Umbar'

Use: 1) Indigestion: 100ml fresh tender root juice taken twice a day.

2) Small pox: Root liquid (50 ml) taken daily for 2 days.

Gloriosa superba L. (Liliaceae) 'Kal lavi'

Use: Stomachache: Root paste (3 gm) in one glass milk taken once a day for two days.

Guizotia abyssinica (L.) Cass. (Asteraceae) 'Khurasani'

Use: Burn wound: Fresh leaf paste applied over wound once a day till cure.

Gymnema sylvestre (Retz.) R.Br. (Asclepiadaceae) 'Afumari'

Uses: 1) Snake bite: Root (3 inch) taken orally once.

2) Diabetes: One tea spoon dry leaf powder taken orally once a day.

Holarrhena pubescens (Buch.-Ham.) Wall. ex G. Don (Apocynaceae) 'Kala kuda'

Use: Dysentery: Root paste (5gm) in 100ml water taken once a day for 2 days.

Justicia adhatoda L. (Acanthaceae) 'Adulsa'

Use: Stomachache: Leaf juice (5-10ml) taken once in early morning for 3 days.

Lantana camara L. (Verbenaceae) 'Ghaneri'

Uses: 1) Piles: Leaves (10-12) eaten once in early morning for 10 days.

2) Vet: Wounds: Leaf paste applied over wounds for 2-3 days or till cure.

Leucas aspera (Willd.) Link. (Lamiaceae) 'Kumbha'

Uses: 1) Earache: One drop of fresh leaf juice dropped in ear.

2) Eye infection (Red coloured eye): Leaf juice 1-2 drops put in eyes once 2 days.

Luffa acutangula (L.) Roxb. (Cucurbitaceae) 'Dodaka'

Use: Piles: Leaf decoction taken twice a day for 3-5 days.

Mangifera indica L. (Anacardiaceae) 'Amba'

Use: Scorpion sting: Unripe fruit latex applies on sting area once.

Mundulea sericea (Willd.) A. Chev. (Fabaceae) 'Supli'

Use: Earache: One drop of leaf (boiled in oil) put in ear for once or twice in a day.

Oxalis corniculata L. (Oxalidaceae) 'Changeri'

Use: To improve diet: Leaf decoction taken early morning for a week.

Pogostemon benghalensis (Burm f.) O. Ktze. (Lamiaceae) 'Phangala'

Uses: 1) Wounds: Leaf juice / paste applied on wounds twice a day for 2-3 days.

2) Stomach ache: Root bark paste (5-6gm) taken orally once in a day.

Pongamia pinnata (L) Pierre. (Fabaceae) 'Karanj'

Use: Whooping cough: 5gm seed paste taken early morning, empty stomach for 2 days.

Plumbago zeylanica L. (Plumbaginaceae) 'Chitrak'

Uses: 1) Piles: Root paste applied on piles twice a day for a week.

2) Headache: Root paste applied externally in the form of spot on head once morning.

Ricinus communis L.(Euphorbiaceae) 'Arend'

Use: Rheumatism: Leaves deeped in seed oil, warmed over fire & bandaged over joints. Seed oil used to massage over joints.

Semecarpus anacardium L. f., Suppl. (Anacardiaceae) 'Biba'

Use: Rheumatism: Flowers (3-4) taken orally twice a day for a week.

Senna fistula L. (Caesalpinaceae) 'Bahava'

Use: Mouth ulcer: Decoction of leaf used for gargling twice a day for two days.

Solanum anguivi Lam (Solanaceae) 'Chinchurdi'

Use: Blood dysentery: One teaspoon root paste in 1 cup water taken early morning for once.

Solanum xanthocarpum (Solanaceae) 'Kate ringni'

Use: Cough in child: 2-3 gm fruit powder with honey given to child twice a day.

Spilanthus paniculata Wall. ex DC. (Asteraceae) 'Akkalkara'

Use: Throat infection: One flower taken twice a day for 2 days.

Syzygium cumini (L.) Skeels (Myrtaceae) 'Jambul'

Uses: 1) Gas trouble: Fresh bark juice (50 ml) taken twice a day for 2 days.

2) Vet: Stomach swelling: Fresh bark juice (200ml) given twice a day for 2 days.

Tagetes erecta L. (Asteraceae) 'Zendu'

Use: Wounds: Fresh flower paste applied on wound twice a day for 2-3 days.

Tectona grandis L.f. (Verbenaceae) 'Sag'

Use: Dysentery: Root paste (10gm) in one cup water taken early morning for 2 days.

Terminalia bellirica (Gaertn.)Roxb. (Combretaceae) 'Behada'

Use: Diarrhoea: About 2gm fruit powder taken with honey twice a day for 2 days.

Terminalia chebula Retz. (Combretaceae) 'Hirda'

Uses: 1) Stomach ache: Fruit powder (5gm) taken with milk twice a day for 2 days.

2) Wounds: Fruit paste applied on wounds twice a day for 2 days.

Thespesia populnea (L.) Soland. (Malvaceae) 'Bhendi Zad'

Use: 1) Scabies: Dry fruit ash mixed with coconut oil & applied for few days & also fresh stem bark decoction (20ml) taken once a day for a week.

Tinospora cordifolia (Willd.) Miens ex Hook. f. & Thoms. (Menispermaceae) 'Gulvel'

Uses: 1) Jaundice: Stem decoction (50ml) taken once for 2-3 days.

2) Weakness: One leaf of *Tinospora* crushed with 10 leaves of *Ocimum tunuiflorum* L. in 100 ml of water, taken once in early morning for a month.

Tribulus terrestris L. (Zygophyllaceae) 'Sarata'

Use: Backache: Dry fruit powder (10gm) taken with water twice a day for 2-3 weeks.

Vangueria spinosa Roxb. (Rubiaceae) 'Aliv'

Uses: 1) Headache: Seed without seed coat taken twice for 2 days.

2) Scabies: Stem or branch tumour paste applied on affected part till cure.

Vigna radiata (L.) Wilizeck (Fabaceae) 'Udid'

Use: Backache: Fresh leaf as well as seeds used in diet till cure.

Vitex negundo L. (Verbenaceae) 'Nirgudi'

Use: Mouth ulcer: Leaf decoction used for gargling till cure.

Withania Somnifera (L.) Dunal. (Solanaceae)

'Ashwagandha', 'Dholgunj'

Uses: 1) Weight loss: Root Paste (5-10gm) with honey taken once in early morning for a week.

2) Weakness: 3-5 gm root paste taken once a day for two weeks.

3) Vet: Weakness: 250gm root paste given orally twice a day for a week.

Woodfordia fruticosa (L.) Kurz. (Lythraceae) 'Dhayati'

Uses: 1) To strengthen teeth: Dry flower powder used as tooth powder for cleaning teeth.

2) Itching: Flower powder decoction (50ml) taken twice a day for 2 days.

Ziziphus mauritiana Lam. (Rhamnaceae) 'Bor'

Use: Cough: Half cup bark decoction with bark of *Acacia nilotica* taken twice a day for 2-3 days.

3.0. RESULTS

Information gathered from Ahmednagar district indicates that the tribals, and other village people of this region possess good knowledge of herbal drugs, but their continuous and progressive exposure to modernization may result in extinction of such rich heritage of knowledge in the course of time. The collective efforts of ethnobotanists, phytochemists, pharmacologists and pharmacologists are needed to document and evaluate the efficacy and safety of these claims.

During the study total 66 plant species from 38 families used for medicinal purposes have been documented so far. Majority of the species used are from families Solanaceae (05), Asteraceae (03), Fabaceae (03) and Liliaceae (03) and majority of preparation are from leaves (30), root (19), fruits (08) and stem bark (06), etc.

Most prevalent diseases/ailments found in the areas are wounds (07), stomachache (06), jaundice, indigestion, piles, throat infection, dysentery, earache, headache, scorpion sting and snake bite 3 each, etc.

To test the scientific validity of the herbal preparations further experimental work is required, which can establish therapeutic properties of these preparations for safe use.

Acknowledgements:

Authors' thanks are due to the help from the Principal, Shri. Muktanand College, Gangapur, Aurangabad for providing the laboratory and library facilities. Authors are also thankful to the Director, Agharkar Research Institute, Pune for cordial help and heartily support..

4. REFERENCES

1. Almeida M.R. 2007. *A check list of plants of Ahmednagar District*, Thomas Paul Almeida at orient press limited Mumbai.
2. Ambasta S.P. 1994. *The Useful Plants of India*. CSIR, New Delhi.
3. Chopra R.N., Nayar S.L and Chopra I.C. 1956. *Glossary Of Indian Medicinal Plants*, CSIR, New Delhi.
4. Cooke T. 1901-1908. *The flora of the presidency of Bombay*, London vol-2 Repr. Ed.1958 3 vol. Govt. of India.
5. Jain S.K. 1991. *Dictionary of Indian Folk Medicine and Ethno botany*, Deep Publications New Delhi.
6. Jain, S.K. and Rao R.R.1977. *A Hand book of Field and Herbarium Methods*, Today & Tomorrow printers and publishers, New Delhi.
7. Kapoor L.D. 2001 *Handbook of Ayurvedic Medicinal Plants*, CRC Press LLC, London.
8. Khade, M.S., Wani, P.S., Awasarkar, U.D and Patkar A.S. 2008. Ethno medicinal Plants used in the treatment of Toothache By Tribals of Akole, Ahmednagar (M.S.), *Enrich Environment*, 76-80.
9. Pradhan, S.G and Singh, N.P 1999 *Flora of Ahmednagar District*, (Maharashtra). Deep publication, Deharadun, India.

10. Sharma, P.P. and Singh, N.P. 2001. *Ethno botany Of Dadra, Nagar Haveli & Daman* (Union territories), BSI. Calcutta.
11. Wabale, A.S., Petkar A.S. 2005. Ethno medicinal plants used against Jaundice by the Tribals of Akole taluka (M.S.) *J. Phytol. Res.* 18(2):259-261.
12. Gayake D.N., Sharma P.P. and Vijigiri Dinesh (2012). Plants used in medicine by folklore of Ahmednagar district, Maharashtra. *IJSPER*, vol.1(3)19-24.

Conflict of Interest: None Declared

Cite this article as:

D.N. Gayake, U.D. Awasarkar, P.P. Sharma. Indigenous Traditional Medicinal Plant Resources from Ahmednagar District, Maharashtra, India. *Asian Journal of Biomedical and Pharmaceutical Sciences*, 2013, 3: (22), 1-5. (Review Article)