International Journal of Advanced Research in Biological Sciences
ISSN: 2348-8069
www.ijarbs.com
DOI: 10.22192/ijarbs Coden: IJARQG (USA) Volume 8, Issue 1 -2021

Research Article

DOI: http://dx.doi.org/10.22192/ijarbs.2021.08.01.009

Some Ethnomedicinal plants from Amravati District (M. S.) India.

[1]P. A. Dhole*, [2]P. Y. Bhogaonkar, [3]V. N. Chavhan, [4]P. P. Kshirsagar

[1]Central Botanical Laboratory, Botanical Survey of India, Howrah -711103
[2]Ex- Director, G. V. I. S. H. Amravati
[3]Department of Botany, Arts, Commerce and Science College, Maregaon Dist. Yavatmal 445303 (M.S.) India.
[4]Modern College of Arts, Science and Commerce, Ganehskhind, Pune – 16
*Corresponding author: *pankajdhole@bsi.gov.in*

Abstract

Present paper deals with documentation 76 ethnomedicinal plant species belonging to 33 families used for prevention and treatment of various diseases by the tribal and indigenous non-tribal communities of Amravati District, Maharashtra. 56 ethnic drugs are monoherbal and 9 are polyherbal. This first-hand ethnomedicinal information was collected directly from a field survey of remote tribal villages and forest areas of the district. Among them family Leguminosae is represented by maximum number of plants (14 species) followed by Apocynaceae (07 species) and Acanthaceae (06 species). Habit-wise analysis revealed that trees are dominated with 20 species followed by herbs (15 species) and shrubs (13 species). These plant species are arranged in alphabetical order followed by family, habit, local name(s) along with the method of preparation and mode of treatment.

Keywords: Ethnomedicine, Monoherbal and Polyherbal drugs, Amravati District.

Introduction

Medicinal plants have been in the focus as life saving drugs right from the beginning of the human civilization. Medicinal plants have been the subject of research in both systematic and advanced areas of plant sciences. The tribals have the knowledge of medicinal and another uses of plants growing in the forests. Tribal medicine men know the exact preparation of the medicine and diagnosis of the diseases. However, though widely used, it is not a codified system. National Institute of Science and Communication, New Delhi, has published exhaustive information of about 700 medicinal plants (Chatterjee and Pakrashi, 1992-2001). Same institution has published Glossary of Indian medicinal plants (Chopra *et al.*, 1956) and its supplements in 1980 (Chopra *et al.*, 1969). Indian codified system is Ayurveda, which no doubt has its origin in ethnobotany. Status Report on Ethnobiology published by Govt. Of India (1994) shows that 7500 plant species are used all over India by tribals as medicinal (Anonymous, 1994). Jain (2012) has enumerated 2500 species and 15000 folk uses. During botanical exploration made for the project funded by Rajiv Gandhi Science & Technology Commission, Mumbai, (Digitized Inventory of Medicinal Plant Resources of Maharashtra) during the year 2009-2012 many medicinal plants were recorded from the region.

Study area

Amravati District (Maharashtra state) is located in its north region and lies between latitudes 210 15'-210 45'N, and longitudes 760-57- 770 33' E, endowed with very diverse topography, having plains, mountainous ranges- famous Melghat harbouring Tiger Sanctuary - and low hills, and water bodies. Tiger reserve covers a total area of 1676.93 sqkms. The forest is of dry deciduous type and vegetation changes occur at close intervals. Tapti River and the Gawilgadh ridge of the Satpura Range forms the boundaries of the Reserve. Korku, Gond, Nihal, Balai, Gawali, Gawalan, Halbi and Wanjari are main tribes inhabiting the district.

Materials and Methods

Field survey was carried out during the year 2009-2012. Old and experienced medicine men (*Vaidus*) were interviewed for the first hand information on ethnomedicinal uses of the plants from rural and forest areas of Amravati district. Informants were taken to forest to show the exact plant species used. Repeated and cross queries were done for confirmation and verification of the information. These plant species were identified with the help of state floras (Cooke 1967, Naik 1998, Bhogaonkar and Deverkar 1999, Singh and Karthikeyan, 2000, Singh *et al.*, Dhore 2002) and herbarium specimens made are deposited in the herbarium of Department of Botany, Government Vidarbha Institute of Science and Humanities, Amravati. For recent valid nomenclature The International Plant Names Index, The Plant List and Plants of the World Online (POWO) were referred.

Enumeration

Acacia leucophloea (Roxb.) Willd. (Leguminosae); Tree; *Hiwar*

Galls produced on branches are crushed, boiled with water and filtered. Filtrate is used for gargling in dental problems.

Achyranthes aspera L. (Amaranthaceae); Herb; *Aghada*

a) Root is tied around the west or kept below the neck of woman for easy delivery if the foetus turns horizontal in the womb.
b) Root powder is mixed with regular tooth powder and used for strong teeth and to treat dental problems.
c) Seeds are roasted on low temp. (on pan used to roast the roti) and powdered. Powder mixed with honey is given twice a day for a month in asthma.

Adiantum lunulatum Burm.f. (Pteridaceae); Herb; *Rajhans*

Dried leaves and lump sugar are powdered together. One spoonful of powder is given with curd twice a day to treat amenorrhea, body heat and prostatitis or prostatocystis.

Aegle marmelos (L.) Corr. (Rutaceae); Tree; *Bel*
Fruit pulp used in stomach ache.

Ailanthus excelsa Roxb. (Simaroubaceae); Tree; *Maharukh*

Stem bark (250 gm) is pounded, mixed with 1 lit. water and allowed to stand overnight. Cold infusion is collected and stored in glass bottle. This is given in stomach ache.

Andrographis echioides (L.) Nees (Acanthaceae); Herb; *Bhuineem*

Leaf powder given in fever.

Anogeissus latifolia (Roxb. ex DC.) Wall. ex Guillem. & Perr. (Combretaceae); Tree*; Dhawada*

a) Gum fried in ghee and given as tonic.
b) Bark pounded in water. Decoction given to cure cough and cold.

Baliospermum solanifolium (Burm.) Suresh (Euphorbiaceae); Shrub; *Danti*

Castor oil is applied on leaf, warmed on low fire and this warm leaf is tied over sprains.

Barleria prionitis L. (Acanthaceae); Herb; *Kate Korhanti*

Leaves are chewed to treat mouth ulcers. Leaf juice is also given in severe ulceration.

Bauhinia malabarica Roxb. (Leguminosae); Tree; *Aapta*

Seed is crushed along with placenta. One teaspoon of powder given before meals with cup of milk in spondylitis.

Boswellia serrata Roxb ex. Colebr. (Burseraceae); Tree; *Salai*

Gum is used as tonic.

Butea monosperma (Lam.) Taub. (Leguminosae); Tree; *Palas*

a) Three gm of inner bark (should have become reddish in color) is finely pounded, thoroughly mixed with a cup of water and filtered. Filtrate is divided in to 3 parts. This is given thrice in a day for blood purification.
b) Laddus of gum are given in lumber pain.
c) Tuber of young plant given as tonic; its decoction is given in bilious vomiting.
d) Two-three flowers are put in a glassful (preferably copper glass) of water overnight. In the morning flowers are removed, one *Bttasha* is dissolved in this water and given to drink to combat body heat. Treatment can be continued till relief. Useful especially on hot flushes experienced by women after menopause.

e) A small but deep pit is dug near the trunk to reach old thick root. Part of root is chopped off to make a wide gap in the root. Rice is soaked in water overnight, tied in a cotton cloth, inserted in the gap of root and then is covered with soil. Fire is made on this part of soil; red exudate comes out from root cut and rice gets cooked in exudate. Cooked rice is dried and made into powder. This is given as aphrodisiac.

Butea superba Roxb. (Leguminosae); Liana; *Vellya Palas, Mahulvel*

Root is kept in water overnight and cold infusion collected. This is given to treat the etching eruptions caused due to excess secretion of bile.

Calotropis gigantea (L.) Dryand. (Apocynaceae); Shrub; *Mothi Rui*

Flowers are dried and made in to ash. A pinch of ash is given with honey in whooping cough, twice a day.

Calotropis procera (Aiton) Dryand. (Apocynaceae); Shrub; *Rui*

Corona is removed from mature floral bud and is filled with jaggery, one bud is eaten in the morning on empty stomach for 15 days, if required for more period; very much effective on sickle cell anaemia which results from frequent malarial attacks or chronic malaria.

Cassia fistula L. (Leguminosae); Tree; *Ramdanda, Bala, Banakabhungudu*

Two and half seeds are made in to paste and mixed with water. This is given as single dose 3 times a day for 2 days in stomach ache.

Cayratia trifolia (L.) Domin (Vitaceae); Climber; *Jangli Angur*

Root paste applied on boils.

Cissus woodrowii (Stapf ex Cooke) Santapau (Vitaceae); Shrub; *Hadjodi*

Leaves dried and made in to powder. One spoonful of powder is given with milk for healing the fractures.

Citrullus colocynthis (L.) Schrad. (Cucurbitaceae); Climber; *Kadu Indravan*

Powder of three seeds is given in severe stomach ache.

Clerodendrum phlomidis L.f. (Lamiaceae); Shrub; *Takalan*

Leaf juice (5 ml.) given once in a day in asthma. If patient has heavy breathing, then 5-10 ml. juice is given twice a day.

Cryptolepis dubia (Burm.f.) M.R.Almeida (Apocynaceae); Climber; *Nagvel*

Bark pounded in water and decoction given in dysentery.

Cuscuta chinensis Lam. (Convolvulaceae); Climber; *Adharvel, Varvel*

Fresh stem (10-15 gm.) is crushed, mixed with jaggary and is given to feeding mothers to increase lactation.

Desmodium oojeinense (Roxb.) H.Ohashi (Leguminosae); Tree; *Tiwas*

a) Leaf paste applied over deep wounds; helps to heal the wound very fast.

b) Inner bark pounded and juice expressed. This is applied on wounds; helps to check the wound infection.

Dicliptera paniculata (Forssk.) I.Darbysh. (Acanthaceae); Herb; *Karata*

Juice of leaves put in to ear in tooth ache.

Euphorbia heyneana Spreng. (Euphorbiaceae); Herb; *Lahan Dudhi*

Powder of whole plant is given to remove worms.

Evolvulus alsinoides (L.) L. (Convolvulaceae); Herb; *Vishnukanta*

Whole plant powder is mixed with sugar. One spoonful of powder is taken with water in the morning for a month in general weakness.

Firmiana simplex (L.) W.Wight (Malvaceae); Tree; *Kadhai, Hadal*

a) Gum fried in ghee and given as tonic.
b) Bark paste applied on burns to get cooling effect.

Gymnosporia emarginata (Willd.) Thwaites (Celastraceae); Shrub; *Bharati*

Leaves chewed for strong gums.

Helicteres isora L. (Malvacceae); Shrub; *Muradsheng*

a) Pod levigate is given in stomach ache; especially the spasmodic pain.
b) Root paste mixed with water is given to drink in snake bite. This causes vomiting; the person breathes easily after vomiting.
c) Root pounded in water; water becomes mucilaginous. This is given in amoebic dysentery.

Holarrhena pubescens Wall. ex G.Don (Apocynaceae); Tree; *Pandhara Kuda*

Bark pounded in water and decoction given in fever.

Hyptis suaveolens (L.) Poit. (Lamiaceae); Shrub; *Ran Tulas*

Leaf juice given in leprosy; also leaf pest applied externally on leprosy affections.

Indigofera cassioides DC. (Leguminosae); Shrub; *Jirolabhaji*

Flowers mixed with onion choppings are made in to vegetable. It is useful in constipation and weakness.

Leea macrophylla Roxb. ex Hornem. (Vitaceae); Shrub; *Hattikand*

Tuber paste applied on boils and blisters.

Lepidagathis cristata Willd. (Acanthaceae); Herb; *Bhuigend*

a) Two and half leaves given to chew in snake bite.
b) Ash of inflorescence is mixed with coconut oil and applied on patches of alopecia.

Leptadenia reticulata (Retz.) Wight & Arn. (Apocynaceae); Climber; *Harandodi*

Tuber is given in general weakness.

Madhuca longifolia var. latifolia (Roxb.) A.Chev. (Sapotaceae); Tree; *Moha*

a) Flowers are pounded and made into thick *roti*. Warm roti is put on head and tied with cotton cloth at night, removed in the morning. This is repeated for five consecutive nights. Cures chronic headache.
b) Bark decoction is given for easy delivery. Also a piece of bark is kept below west and removed immediately after delivery.

Martynia annua L. (Martyniaceae); Herb; *Wagh-nakhi*

Oil extracted from dried fruits is used in skin diseases.

Millettia elliptica (Roxb.) Steud. (Leguminosae); Tree
Root is crushed and applied on head to kill head lice.

Nyctanthes arbor-tristis L. (Oleaceae); Tree; *Parijat, Kharkhasi*

a) One leaf given with betel leaf once in a day in early morning in chronic low fever till relief.
b) Two and half leaf given to eat every morning in elephantitis.

Ocimum basilicum L. (Lamiaceae); Herb; *Pandhari Tula*s

Leaf juice given as blood purifier.

Oroxylum indicum (L.) Kurz (Bignoniaceae); Tree; *Tetu*

a) Bark is put under arm in fever.

b) Flowers are boiled in water and water discarded, flowers are then made in to vegetable. This is given to the patient of arthritis.
c) Young fruits are given vertical cuts and put in salt overnight, water oozed out is discarded. Fruits are now cut in to pieces and pickle prepared. This given to treat arthritis.
d) Two and half seed is powdered; powder given with water to vomit out any toxin swallowed or in food poisoning. It is also given in snake bite; vomiting is supposed to lower the effect of snake poison.

Ricinus communis L. (Euphorbiaceae); Shrub; *Erand*

Leaves are wrapped around dry rhizome of ginger and heated on low heat till it becomes dry and powdered together. Powder is given with milk in early morning to get relief in arthritis.

Sauromatum venosum (Dryand. ex Aiton) Kunth (Araceae); Herb; *Narak Kand*

a) Fresh corm or petiole juice applied on scorpion sting.
b) Corm powder given with honey and ghee to cure tuberculosis, bleeding piles and blood cancer.

Selaginella ornithopodioides Spring (Selaginellaceae); Herb; *Sanjeevani*

Whole plant dried and made in to ash. Ash mixed finely with coconut oil is applied on blisters and boils that develop on head due to heat in summer.

Semecarpus anacardium L.f. (Anacardiaceae); Tree; *Biba, Soso*

Seed oil is applied on cuts, wounds and foot cracks.

Sida acuta *Burm.f.* (Malvaceae); Herb; *China*

One teaspoonful of root powder along with seeds of khaskhas (*Papaver somniferum*) is given with milk twice a day for 15 days in weakness.

Tectona grandis L. f. (Lamiaceae); Tree; *Sag*

Two and half seeds are powdered and made in to small tablets of the size of pigeon pea seeds. One tablet given twice a day for 5-6 days in urinary troubles, especially when complete urine is not passed out.

Terminalia arjuna (Roxb. ex DC.) Wight & Arn. (Combretaceae); Tree; *Arjun, Aajan*

Bark is kept in water; over the time water gradually becomes bluish. As color changes to its maximum, the water is then given to treat amoebic dysentery.

Tridax procumbens (L.) L. (Compositae); Herb; *Kambarmodi*

Whole plant powder used as tooth powder.

Tinospora sinensis (Lour.) Merr. (Menispermaceae); Climber; *Gulwel*

Juice of stem and leaves given in jaundice (treatment is given on Tuesday and Saturday only).

Ventilago denticulata Willd. (Rhamnaceae); Liana; *Sakhal-vel*

Bark powder given with honey for blood purification.

Viscum articulatum Burm. f. (Santalaceae); Herb; *Had-kawarka*

Plants growing on Moha (*Madhuca longifolia* var. *latifolia*) are collected, dried and powdered. Spoonful of powder is given with milk in morning to treat bone fractures.

Vitex negundo L. (Lamiaceae); Shrub; *Nirgudi*

Handful of leaves are boiled and this water is used to take bath for patients of arthritis and rheumatism.

Vitis quadrangularis Wall.ex Whight & Arn. (Vitaceae) Climber; *Had-jod, Kandvel*
Stem paste applied on paronychia.

Woodfordia fruticosa (L.) Kurz. (Lythraceae); Shrub; *Dhayati*

Bark is finely pounded and boiled with water to make a paste. This is applied on burns.

Wrightia tinctoria R. Br. (Apocynaceae); Tree; *Kala Kuda*

Leaves and young follicles are put in coconut oil and kept in sun light for 9-10 days; frequently the plant material is changed. This oil is used on psoriasis.

Polyhebal treatments

1) Leaf powder of *Andrographis paniculata* (*Bhui neem*), *Syzygium cumini* (*Jamun*) and seed powder of *Centratherum anthelminticum* (*Kadu jeera*) are mixed together in equal quantity. One spoonful of mixture is taken with luke-warm water thrice a day for three months in diabetes.

2) Bark powder of *Bauhinia racemosa* (*Bhosa*) mixed with fruit powder *Tribulus terrestris* (*Gokharu*) and resin powder of *Commiphora mukul* (*Guggul*) are mixed in equal amounts and pea-nut size tablets are made. One tablet is given thrice a day in arthritis. To treat soft tissue lumps (lipoma) one tablet is given every day with honey for about one month.

3) Gum of *Butea monosperma* and that of *Anogeissus latifolia* (Dhawada) are mixed with powder of *Trapa natans* to prepare laddus. One laddu is eaten early in the morning on empty stomach in general as well as seminal debility.

4) Leaves of *Lagerstroemia parviflora(Jamraj), Senna tora, Barleria prionitis, Cymbopogon martini* (*Tikhadi*) along with the bark of *Cassine glauca* (*Bhutyaaron*) and *Dolichandrone falcata* (*Medshingi*) are boiled in water to reduce it to half. Half cupful of decoction is given twice a day for 21 days for arthritis and rheumatism. Oily and spicy food is avoided.

5) Pure distilled liquor made from *Madhuca longifolia var. latifolia* (*Moha*) is mixed with gum of *Buchnania lanzan* (*Chironji*) and *Diospyros melanoxylon* (*Temru*); allowed to ferment further. Half cup a day is given for 15 days for birth control (antifertility).

6) One tuber of *Momordica dioica* (*Kartule*) and that of *Citrullus colocynthis* (*Kadu-indravan*) are kept in water and juice expressed. Half spoonful of each is given every hour in appendicitis. White flowered variety of *M. dioica* is supposed to be more efficacious.

7) Roots of *Plumbago zeylanica* (*Chitrak*) with roots of *Calotropis gigantea* (*Mothi Rui*) and leaves of *Datura metel* (*Kala dhotra*) are dried. 200 gm. each are powdered together. This is mixed with milk of black cow (if not available, in water) and applied over patches of leucoderma. In children treatment of only 45 days completely cures the patches.

8) Seeds (100gm.) of *Senna tora* (*Tarota*) with seeds of *Foenum-graecum* (100gm) are roasted and powdered. This is mixed jaggary and wheat flour and seven laddus are made. One laddu given in morning on empty stomach every day in rheumatism and arthritis.

9) Two and half leaves of *Ziziphus nummularia* (*Ber*) with handful of *Acacia nilotica* leaves are chewed as antidote to scorpion sting.

Results and Discussion

Information on total number 95 ethnomedicinal uses of 76 plant species belonging to 33 families have been collected from the tribal and rural people of Amravati district of Maharashtra during the study. The analysis also reveals that highest number of plant species are used for stomach problems (5 species), followed by Fever, Dysentery and General weakness (4 species each). Some polyherbal formulations of medicinal plants are used on leucoderma, arthritis, rheumatism, appendix, diabetes, seminal debility etc. Leguminosae is represented by maximum number of plants (14 species) followed by Apocynaceae (7 species) and Acanthaceae (6 species). Habit-wise analysis revealed that trees are dominated with 20 species followed by herbs (15 species) and shrubs (13 species).

Conclusion

Traditional healers use plants as a source of drug through trial and error method and the process is experienced over hundreds of years. It has been observed that the use of the medicinal plants is a routine practice in tribal and rural areas. These ethnomedicinal plants should be analyzed chemically for identification of their active constituents responsible for their efficacy to these diseases by various pharmaceutical industries /laboratories to give a lead to development of new herbal drug molecules. Some potential plant species should be identified for the establishment of herbal cottage industries in the tribal areas for the socio-economic augmentation of the country as a whole and tribals in particular.

Acknowledgments

Authors are thankful to the Director, Botanical Survey of India, Kolkata and Head of Office, Central Botanical Laboratory, Howrah for providing all the necessary facilities. Thanks are also due to DFO Amravati (Territorial) and DFO Melghat Tiger Reserve Project, Amravati district for permission and all the support rendered during field survey. Authors are thankful to RGSTC for financial assistance. They are thankful to the informants for sharing their valuable knowledge.

References

Anonymous 1994**.** *Ethnobiology in India – A Status Report*. All India Coordinated Research Project on Ethnobiology. Ministry of Environment and Forests, Govt. Of India.

Bhogaonkar P.Y. & V.D. Devarkar 1999. *Additions to the Flora of Melghat*, The Directorate, Project Tiger, Melghat, Amravati, India, Tech Bull No VII, 1999.

Chatterjee Asima & Pakrashi Satyesh Chandra (1992-2001). *The Treaties on an Indian medicinal plants*. Vol 1-6. Publ. National institute of science and communication, New Delhi.

Chopra R.N., S.L. Nayar & I.C. Chopra 1956. *Glossary of Indian Medicinal Plants*. CSIR, New Delhi: India

Chopra R.N., I.C. Chopra & B.S. Varma 1969. *Supplement to Glossary of Indian Medicinal*. Publications and Information Directorate, Hill Side Road, New Delhi.

Cook, T., 1967. *The Flora of Presidency of Bombay*, Vol. II. Botanical Survey of India, Calcutta.

Dhore, M. A. 2002. *Flora of Amravati District with special reference to the distribution of tree species*, Amravati University, Amravati.

Jain S.K. (Ed.) 2012. *Dictionary of Indian folk medicine and ethnobotany*. Deep Publications New Delhi.

Naik V.N., 1998. *Flora of Marathwada*. Amrut Prakashan, Aurangabad.

Sharma B. D., S.Karthikeyan & N.P. Singh 1996. *Flora of Maharashtra State: Monocotyledons*. Botanical survey of India, Howrah.

Singh N. P. & S. Karthikeyan 2000. *Flora of Maharashtra State: Dicotyledons*, Vol. I (Ranunculaceae - Rhizophoraceae). Botanical survey of India, Howrah.

Singh N. P., Lakshminarsimhan P., Karthikeyan S. & Prasanna P. V. 2001**.** *Flora of Maharashtra State: Dicotyledones*, Vol. II (Combretaceae - Ceratophyllaceae). Botanical survey of India, Howrah.

Access this Article in Online	
	Website: www.ijarbs.com
Quick Response Code	Subject: Medicinal Plants
DOI:10.22192/ijarbs.2021.08.01.009	

How to cite this article:
P. A. Dhole, P. Y. Bhogaonkar, V. N. Chavhan, P. P. Kshirsagar. (2021). Some Ethnomedicinal plants from Amravati District (M. S.) India. Int. J. Adv. Res. Biol. Sci. 8(1): 65-71.
DOI: http://dx.doi.org/10.22192/ijarbs.2021.08.01.009