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Study on Some Trees of Medicinal Importance

DR. KAPTAIN K. BAJPAYEE[1], DR. MOHD. ASHAQ[2]

ASSOCIATE PROFESSOR AND HEAD, CENTER FOR RESEARCH IN ETHNO AND MEDICO BOTANY, DR. RML PG COLLEGE, ALLIPUR, HARDOI, INDIA[1]

ASSOCIATE PROFESSOR AND HEAD, DEPT. OF BOTANY, GOVT. DEGREE COLLEGE, THANNAMANDI, DISTRICT RAJOURI, J&K, INDIA [2]

ABSTRACT: There are various trees of medicinal value:

1. Neem (Azadirachta indica) - The leaves, seeds, and bark of the neem tree are used in traditional medicine to treat a wide range of ailments, including fever, infections, and skin disorders.
2. Peepal (Ficus religiosa) - The bark and leaves of the peepal tree are used in traditional medicine to treat diarrhea, dysentery, and other digestive disorders.
3. Banyan (Ficus benghalensis) - The leaves, roots, and bark of the banyan tree are used in traditional medicine to treat a variety of conditions, including wounds, diarrhea, and respiratory disorders.
4. Jamun (Syzygium cumini) - The fruit, bark, and leaves of the jamun tree are used in traditional medicine to treat diabetes, diarrhea, and other digestive disorders.
5. Mango (Mangifera indica) - The leaves, bark, and fruit of the mango tree are used in traditional medicine to treat a variety of conditions, including skin disorders, fever, and digestive problems.
6. Bel (Aegle marmelos) - The fruit, leaves, and bark of the bel tree are used in traditional medicine to treat a range of ailments, including diarrhea, fever, and skin disorders.
7. Amla (Phyllanthus emblica) - The fruit, leaves, and bark of the amla tree are used in traditional medicine to treat a variety of conditions, including digestive disorders, respiratory problems, and anemia.
8. Arjun (Terminalia arjuna) - The bark of the arjun tree is used in traditional medicine to treat a range of cardiovascular conditions, including high blood pressure and heart disease.
9. Ashwagandha (Withania somnifera) - The root of the ashwagandha plant is used in traditional medicine to treat a variety of conditions, including stress, anxiety, and insomnia.
10. Turmeric (Curcuma longa) - The root of the turmeric plant is used in traditional medicine to treat a variety of conditions, including wounds, inflammation, and digestive disorders.

KEYWORDS: neem, peepal, banyan, jamun, mango, bel, amla, arjun, ashwagandha, turmeric

I. INTRODUCTION

For thousands of years, local communities and traditional medicinal systems around the world have utilized plants as a form of treatment for various ailments. This practice has highlighted the importance of medicinal plants in conventional medical procedures, which in turn has established a foundation for biodiversity study and conservation. In developing countries, medicinal plants play a crucial role in healthcare due to economic and psychological factors, as many individuals rely on these natural remedies for treatment. In fact, it is noteworthy that over 80% of synthetic drugs are derived from medicinal plants (Kumari et al., 2022).

In this post, we will discuss the important medicinal trees used by the Mahadev Koli tribe for the treatment of different ailments. The Mahadev Koli tribe, named after their god Mahadev, are primarily concentrated in the Bhimashankar, Kalsubai, and Trimbak peaks of the Sahyadris in Pune, Ahmednagar, and Nashik districts. They speak Marathi and use the Devanagari script, and their primary occupation is agriculture. Rice, black sesame, and finger millet are some of the crops they cultivate.[1,2,3]

Like many other tribal communities, the Mahadev Koli have a deep belief in their native folklore medicine and have developed a great knowledge of the use of plants and their products in curing various ailments (Kareti et al., 2023). By understanding their traditional knowledge, we can appreciate the significant role that these plants play in the local community's healthcare system. This knowledge can also contribute to the growing interest in traditional medicine and the importance of preserving traditional knowledge for future generations.

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Humans have been harvesting and using trees for medicinal use for millennia. While we have advanced our medical knowledge and understanding greatly, properties of trees continue to be cultivated and prized for generations. To this day medicine from trees, extracted from the wood, bark, roots, leaves, flowers, fruits or seeds is fundamental to the well-being of millions of people. Where access to modern pharmaceuticals is limited, trees offer living pharmacies open to anyone with traditional knowledge on their medicinal properties. The beauty of this is that you probably already know medicinal trees *and* they probably already grow near where you live! You can get some of these and others not mentioned here added to yard

II. DISCUSSION

Bombax ceiba
Common Name: Red Silk Cotton Tree
Family: Bombacaceae
Habitat: Both wet evergreen and dry semi-deciduous tropical forests
Medicinal Use: Seeds and roots to cure Leprosy

Carica papaya
Common Name: Papaya[4,5,6]
Family: Caricaceae
Medicinal Use: Leaves and fruits are used to cure toothache and also to increase immunity

Terminalia arjuna
Common Name: Arjun tree
Family: Combretaceae
Habitat: Sub-tropical and tropical moist regions
Medicinal Use: Its bark is used to heal wounds, stop bleeding, anginal pain, hypertension, congestive heart failure, and dyslipidemia

Cassia fistula
Common Name: Golden Shower Tree
Family: Fabaceae
Habitat: Deciduous forests ranging from tropical to moist through subtropical forest zones
Medicinal Use: Fruits are used for throat infections in cattle

Acacia nilotica
Common Name: Gum Arabic Tree
Family: Fabaceae
Habitat: Found in arable lands and scrub jungles from plains to 300m
Medicinal Use: The fresh pods are used as medicine for Toothache and sexual diseases like Spermatorrhoea[7,8,9]

Dalbergia sissoo
Common Name: Indian rosewood
Family: Fabaceae
Habitat: Native to the foothills of the Himalayas
Medicinal Use: Leaf and bark are used to treat itching, pimples, leprosy, and nausea

Vitex negundo
Common Name: Common Chaste tree
Family: Lamiaceae
Habitat: Near bodies of water, recently disturbed land, grasslands, and mixed open forests
Medicinal Use: Leaves are used to treat internal ulcers and external swellings

Ficus racemosa
Common Name: Cluster Fig
Family: Moraceae

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Habitat: A large deciduous forest tree
Medicinal Use: Leaves and gum from this tree are used to treat skin diseases and acidity

Psidium guajava[10,11,12]
Common Name: Guava
Family: Myrtaceae
Habitat: Tropical and subtropical areas worldwide
Medicinal use: Leaves are used for blood purification, diarrhea, and vomiting

Bridelia retusa
Common Name: Spinous Kino Tree
Family: Phyllanthaceae
Habitat: Deciduous forests
Medicinal use: Leaf, stem, bark, and roots are used to cure cough

Emblica officinalis
Common Name: Indian gooseberry/Amla
Family: Phyllanthaceae
Habitat: Semi-arid regions and plains of northern India
Medicinal use: The fruit is one of the major components of Triphala Churna

Terminalia chebula
Common Name: Myrobylan/Hirda
Family: Combretaceae
Habitat: Mixed dry deciduous forests
Medicinal use: The fruit is used to make Triphala Churna

Terminalia bellirica
Common Name: Baheda
Family: Combretaceae
Habitat: Scattered in deciduous forest and evergreen forest, in dry regions associated with teak, sometimes in considerable numbers
Medicinal use: The fruit is used to make Triphala Churna, and it is also used as medicine for swine flu

Ginkgo (Ginkgo biloba)
The ginkgo tree is known for a lot of things – its fan-shaped leaves, its status as a 'living fossil', the unfortunate smell of the fruit that female trees produce and subsequently shed, and its ability to withstand harsh urban conditions like soil compaction, pests, disease[13,14,15], salt, wind, cold and drought. Let's not forget another remarkable feature of the Ginkgo, it's medicinal properties – the leaves and seeds can be used to ease symptoms of everything from memory loss to dietary problems to asthma – and they can be a nutritious food in moderation.

Hawthorn (Crataegus sp.)
Hawthorn has much lore and a variety of historical uses. The traditional Mayday festival of Northern Europe was, in some places, said to fall on the day the Hawthorns bloomed, May 1. Hawthorn fruits also called "haws", have also been used traditionally to make jams and jellies. Hawthorn is also prevalent in folk medicine and has been used to counteract high blood pressure, heart failure, and chest pain. Unlike many folk remedies, these effects have recently been substantiated by conventional medical research and marketing of hawthorn extract has followed.

Sassafras (Sassafras albidum)
The sassafras trees does the most: it's known for its aromatic smell, brilliant fall foliage, three unique leaf types, and lengthy use in food and medicine. There is a well-documented history of Native Americans and colonists utilizing sassafras as a medicinal and culinary addition, and a Spanish physician in 1574 even announced that sassafras was a cure for almost every human ailment! While that may not be the case, its roots and bark were commonly used to create a root beer like tonic and tea from its leaves were touted to treat everything from skin sores to bronchitis to hypertension. You may see sassafras these days as file powder – a key ingredient in Louisiana Creole cuisine, specifically gumbo.

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Sourwood (Oxydendrum arboretum)[16,17,18]
The sweet nectar and sap of the sourwood led to early colonists and Native Americans utilizing it for a variety of things. It was used as a tonic, decoction, and even as a gum; medicinal uses include treating urinary problems, prostate conditions, diarrhea, dysentery, and many other symptoms. The Oxydendrum arboretum is a little less adaptable to its environment than other urban trees as it is generally intolerant of heavy shade, as well as high soil alkalinity and salinity. It prefers moist, well-drained soils with a balanced pH level that are not compacted. On the other hand, although it attracts some nuisance pests, the sourwood is very easy to care for and has no known major diseases, which is a plus for homeowners.

Witch Hazel (Hamamelis spp.)
Its common name alone invokes an image of magic and cauldrons bubbling full of medicinal potions. Introduced to the U.S. in 1736, witch hazel is a small understory tree with a cult following for the astringent extract collected from its leaves and bark that is said to ease inflammation and soothe sensitive skin. We also love the welcome shock of color as it blooms bright yellow in late February and March.

III. RESULTS

Overall, the Mahadev Koli tribe's use of medicinal trees is a reflection of the rich biodiversity and cultural diversity that exists in India. By exploring and learning from the practices of indigenous communities like Mahadev Koli, we can develop a better understanding of the intricate relationship between nature and human well-being.[19,20,21]

The importance of traditional knowledge in biodiversity conservation has been recognised by the Convention on Biological Diversity (CBD) as a valuable resource for maintaining the world's ecosystems. One important tool to officially register traditional/indigenous knowledge is the People's Biodiversity Register (PBR). PBR is a comprehensive database that records the traditional knowledge, current status, and utilization pattern of biodiversity in a decentralized manner.

Having a PBR is important as it provides a platform for documenting traditional knowledge and biodiversity in a systematic and scientific manner. The data collected in PBR can be used for making informed decisions about biodiversity conservation, utilization, and sustainable development. Furthermore, it helps in identifying the gaps in the understanding of traditional knowledge and areas that require further research.

There are various formats for PBR, but it requires a certain level of expertise to use. To address this issue, WOTR has simplified the PBR methodology and modified the formats to make it easy for the local community to collect practical and precise data on biodiversity. This approach is useful to develop PBR at the village level, which is an important step towards recognizing and preserving traditional knowledge[22,23,24].

IV. CONCLUSION

Conserving biodiversity is essential for effective ecosystems-based adaptation. Biodiversity ensures that ecosystems have the resilience and flexibility needed to adapt to changing conditions, including climate change.[25,26] By conserving biodiversity, we can help ensure that ecosystems continue to provide essential services such as water purification, carbon sequestration, and nutrient cycling, which are critical for supporting human well-being and livelihoods.[27]

REFERENCES

1.Convention on Biological Diversity. (n.d.). Traditional knowledge. People's Biodiversity Register. (2017).
3.Kareti, S.R., Haran, R.H., Rajpoot, V.S., 2023. Diversity of Ethnomedicinal Plants among Tribal Communities in Anuppur District, Madhya Pradesh, Central India. J. Herbs Spices Med. Plants 29, 1–23.
4.Kumari, N., Radha, Kumar, M., Mekhemar, M., Lorenzo, J.M., Pundir, A., Devi, K.B., Prakash, S., Puri, S., Thakur, M., Rathour, S., Rais, N., Jamwal, R., Kumar, A., Dhumal, S., Singh, S., Senapathy, M., Dey, A., Chandran, D., Amarowicz, R.,Andrade-Cetto, A., 2022. Therapeutic uses of wild plant species used by rural inhabitants of Kangra in the western Himalayan region. South Afr. J. Bot. 148, 415–436.

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| DOI:10.15680/IJMRSET.2024.0706016 |

6.Sen, Saikat; Chakraborty, Raja (April 2017). "Revival, modernization and integration of Indian traditional herbal medicine in clinical practice: Importance, challenges and future". Journal of Traditional and Complementary Medicine. 7 (2): 234–244. doi:10.1016/j.jtcme.2016.05.006. PMC 5388083. PMID 28417092.

7.Choudhury, Suvashish; Bahadur, Bir; Pullaiah, T. (2017). "Chapter 5. Ethnomedicinal Plants of North-East India". In Pullaiah, T.; Krishnamurthy, K.V.; Bahadur, Bir (eds.). Ethnobotany of India, Volume 3 : North-East India and the Andaman and Nicobar Islands. K. V. Krishnamurthy, Bir Bahadur (First ed.). ISBN 978-1-315-36583-1. OCLC 1003930404.

8. Palhares, Rafael Melo; Gonçalves Drummond, Marcela; dos Santos Alves Figueiredo Brasil, Bruno; Pereira Cosenza, Gustavo; das Graças Lins Brandão, Maria; Oliveira, Guilherme (2015-05-15). "Medicinal Plants Recommended by the World Health Organization: DNA Barcode Identification Associated with Chemical Analyses Guarantees Their Quality". PLOS ONE. 10 (5): e0127866. Bibcode:2015PLoSO..1027866P. doi:10.1371/journal.pone.0127866. ISSN 1932-6203. PMC 4433216. PMID 25978064.

9. World Health Organization (2019). WHO global report on traditional and complementary medicine 2019. [Geneva]. ISBN 978-92-4-069932-8. OCLC 1122458802.

10.Pole, Sebastian (2006). Ayurvedic medicine : the principles of traditional practice. [Edinburgh]: Churchill Livingstone. ISBN 044310090X. OCLC 460904361.

11. Schipmann, U.; Leaman, D.J.; Cunningham, A.B.; Walter, S. (February 2005). "Impact of Cultivation and Collection on the Conservation of Medicinal Plants: Global Trends and Issues". Acta Horticulturae (676): 31–44. doi:10.17660/actahortic.2005.676.3. ISSN 0567-7572.

12. "Chapter 6. Ethnobotanicals of Western Ghats". Ethnobotany of India. Volume 2, Western Ghats and west coast of peninsular India. T. Pullaiah, Bir Bahadur, K. V. Krishnamurthy. Oakville, ON. 2017. ISBN 978-1-315-36614-2. OCLC 965340581.

13. Tushar; Basak, Supriyo; Sarma, Gajen C.; Rangan, Latha (2010-10-28). "Ethnomedical uses of Zingiberaceous plants of Northeast India". Journal of Ethnopharmacology. 132 (1): 286–296. doi:10.1016/j.jep.2010.08.032. ISSN 0378-8741. PMID 20727402.

14. Sajem, Albert L; Gosai, Kuldip (December 2006). "Traditional use of medicinal plants by the Jaintia tribes in North Cachar Hills district of Assam, northeast India". Journal of Ethnobiology and Ethnomedicine. 2 (1): 33. doi:10.1186/1746-4269-2-33. ISSN 1746-4269. PMC 1563446. PMID 16899114.

15. Ethnobotany of India. T. Pullaiah, K. V. Krishnamurthy, Bir Bahadur (First ed.). [Place of publication not identified]. 2021. ISBN 978-1-315-18662-7. OCLC 1249021654.

16.Kumar, Syal; Dobos, Gustav J.; Rampp, Thomas (2016-10-05). "The Significance of Ayurvedic Medicinal Plants". Journal of Evidence-Based Complementary & Alternative Medicine. 22 (3): 494–501. doi:10.1177/2156587216671392. ISSN 2156-5872. PMC 5871155. PMID 27707902.

17. Meena, Ajay Kumar; Bansal, Parveen; Kumar, Sanjiv; Rao, M. M.; Garg, V. K. (2009-12-18). "Estimation of heavy metals in commonly used medicinal plants: a market basket survey". Environmental Monitoring and Assessment. 170 (1–4): 657–660. doi:10.1007/s10661-009-1264-3. ISSN 0167-6369. PMID 20020323. S2CID 27675880.

18. Thomas, Varghese; Nair, S.N.Venugopalan; Ved, D.K.; Shankar, Darshan (October 2020). "Controversial identities of medicinal plants in classical literature of Ayurveda". Journal of Ayurveda and Integrative Medicine. 11 (4): 565–572. doi:10.1016/j.jaim.2019.09.003. PMC 7772482. PMID 32070638.

19. Parasuraman, Subramani; Thing, Gan Siaw; Dhanaraj, Sokkalingam Arumugam (2014). "Polyherbal formulation: Concept of ayurveda". Pharmacognosy Reviews. 8 (16): 73–80. doi:10.4103/0973-7847.134229. ISSN 0973-7847. PMC 4127824. PMID 25125878.

20. Yang, Yong; Zhang, Zaiqi; Li, Shuping; Ye, Xiaoli; Li, Xuegang; He, Kai (2014-01-01). "Synergy effects of herb extracts: Pharmacokinetics and pharmacodynamic basis". Fitoterapia. 92: 133–147. doi:10.1016/j.fitote.2013.10.010. ISSN 0367-326X. PMID 24177191.

21. Strandell, J.; Neil, A.; Carlin, G. (2004-01-01). "An approach to the in vitro evaluation of potential for cytochrome P450 enzyme inhibition from herbals and other natural remedies". Phytomedicine. 11 (2): 98–104. doi:10.1078/0944-7113-00379. ISSN 0944-7113. PMID 15070158.

22. Newmaster, Steven G; Grguric, Meghan; Shanmughanandhan, Dhivya; Ramalingam, Sathishkumar; Ragupathy, Subramanyam (December 2013). "DNA barcoding detects contamination and substitution in North American herbal products". BMC Medicine. 11 (1): 222. doi:10.1186/1741-7015-11-222. ISSN 1741-7015. PMC 3851815. PMID 24120035.

23. Skerrett, Patrick (2015-11-16). "Experts debate: Do we need tougher regulation of dietary supplements?". STAT. Retrieved 2022-01-30.

24. Hamblin, James (2016-06-26). "Why Vitamins and Other 'Dietary Supplements' Can Contain Anything". The Atlantic. Retrieved 2022-01-30.

| ISSN: 2582-7219 | www.ijmrset.com | Impact Factor: 7.521| Monthly Peer Reviewed & Referred Journal |

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25. Ahmad, Azeem; Gundeti, Manohar S.; Dave, Parth P.; Jameela, Sophia; Khanduri, Shruti; Rao, Bhogavalli Chandrashekhar; Srikanth, Narayanam (2021-10-11). "Efficacy and safety of Ayurveda interventions for sinusitis: a systematic review and meta-analysis". Journal of Complementary and Integrative Medicine. 20 (2): 316–327. doi:10.1515/jcim-2021-0390. ISSN 1553-3840. PMID 34634197. S2CID 238584967.
26.Mukherjee, Pulok K.; Harwansh, Ranjit K.; Bahadur, Shiv; Banerjee, Subhadip; Kar, Amit; Chanda, Joydeb; Biswas, Sayan; Ahmmed, Sk. Milan; Katiyar, C.K. (February 2017). "Development of Ayurveda – Tradition to trend". Journal of Ethnopharmacology. 197: 10–24. doi:10.1016/j.jep.2016.09.024. PMID 27633405.
27. Gregory, Julie; Vengalasetti, Yasaswi V.; Bredesen, Dale E.; Rao, Rammohan V. (2021-04-08). "Neuroprotective Herbs for the Management of Alzheimer's Disease". Biomolecules. 11 (4): 543. doi:10.3390/biom11040543. ISSN 2218-273X. PMC 8068256. PMID 33917843.

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