



**MEDICINAL PLANTS USED AS ANTIPYRETIC AGENTS BY THE
TRADITIONAL HEALERS OF HARAPANAHALLI TALUK REGION,
KARNATAKA**

Dr. Siddalinga Murthy. SM*

A.D.B. First Grade College, Harapanahalli-583131, Karnataka, India

ABSTRACT

An ethnobotanical survey was undertaken to collect the information from the traditional healers on the use of medicinal plants in the treatment of various human diseases in Harapanahalli taluk region of Davanagere district, Karnataka. During the survey, 14 plant species were found to be used as antipyretic agents against different types of fever. Plant species such as *Azadirachta indica* A. Juss., *Aegle marmelos*(L.) Corr., *Tinospora cordifolia* (willd) Miers and *Zalea decandra*. Burm. were found to be most effective against the fever. The scientific name, family and local names of all these plants along with their parts used, dosage and method of drug preparation is provided in the present paper.

Keywords: Medicinal plants, Antipyretic, Traditional healers, Harapanahalli, Karnataka.

INTRODUCTION

Plants have been used in traditional medicine for several thousand years. Even after the induction of 200 years of modern system of medicine, about 90% people in rural India take the help of local health practitioners for the treatment of various diseases [1]. At present about 65% of the Indian population is dependent on the traditional system of medicine [2]. During the last few decades there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of the world. Documenting the indigenous knowledge through ethnobotanical studies is important for the conservation and utilization of biological resources. Today according to the World Health Organization as many as 80% of the world's people depend on traditional medicine for their primary healthcare needs [3]. There are considerable economic benefits in the development of indigenous medicines and in the use of medicinal plants for the treatment of various diseases [4]. Due to less communication means, poverty, ignorance and unavailability of modern health facilities, most people especially rural people are still forced to practice traditional medicines for their common health problems.

MATERIALS AND METHODS

Harapanahalli, one of the taluks in Davangere district of Karnataka state is located at 14.8° North latitude and 75.98° East longitude. It has an average elevation of 633 meters above the sea level. The total geographical area of the study area is 143024 ha. Major part of the taluk lies in Krishna basin and is drained by Tungabhadra River. The taluk enjoys dryness in the major part of the year and hot summer. In general south west monsoon contributes 58% of total rain fall and north east monsoon contributes 22% of rain fall. The remaining 20% rain fall is received as sporadic rains in summer months. Normal annual average rainfall is 656 mm. Major part of taluk is covered by Red sandy loam soil and followed by black soil. Major crops cultivated in this region are Maize, Jowar, Ragi, Sunflower, Groundnut and Cotton. People of the study area exhibit a vast diversity in their culture, tradition and living system.



The information on traditional medicinal plants used for treating various human ailments was obtained during the field survey of the study area. The surveys were conducted during November 2013 to March 2015 using ethno-botanical and Participatory Rural Appraisal (PRA) methods. For this purpose, frequent field trips were made to different villages in the study area. Local traditional healers, farmers and other knowledgeable people were interviewed and recorded their information on the use of medicinal plants in a standard questionnaire. Data on the local names of medicinal plants, habit, parts used, traditional uses, method of drug preparation and dosage were noted. The ethnic as well as the cultural importance of the medicinal plants were also recorded. The botanical specimens of all reported medicinal plants were photographed, collected and identified by referring to the Flora of Davangere district [5], Flora of Karnataka [6] and the Flora of Presidency of Madras [7]. Voucher specimens were made by using standard plant press, authenticated and deposited at the Herbarium centre maintained in the department of Botany, A D B First grade college, Harapanahalli.

RESULTS AND DISCUSSION

Among the total plants reported in the survey, 14 plant species belonging to 13 families were found to be used for the treatment of different types of fever. For each species scientific name, family, local name, habit, parts used, dosage and mode of drug preparation are provided in the Table 1.

Plant species and family	Local name	Habit	Type of fever	Mode of preparation and dosage
<i>Aegle marmelos</i> (L.) Corr. Rutaceae	Bilva patre gida	Tree	Chronic	Few fresh leaves are eaten directly daily morning half an hour before breakfast for 15 days.
<i>Andrographis paniculata</i> (Burm.f.) Wall. Acanthaceae	Nelabevu	Herb	Unspecified	About 20ml of leaf juice is given daily morning in empty stomach for 4 days.
<i>Argemone mexicana</i> L. Papaveraceae	Datturi	Herb	Malaria	One or two gm of root bark is given with betel leaves twice a day for 3 days.
<i>Azadirachta indica</i> A. Juss. Meliaceae	Bevina mara	Tree	Unspecified	Five to 10 ml of stem bark decoction is given twice a day for 3 days.
<i>Balanites roxburghii</i> Planch. Balanitaceae	Inglarada gida	Tree	Unspecified	About 5 gm Fruit pulp powder is given with little salt twice a day for 3 to 5 days.

<i>Barleria prionitis</i> L. Acanthaceae	Mullu Jaji	Shrub	Unspecified	About 5 ml of root decoction is given twice a day for 3 days.
<i>Boerhaavia diffusa</i> L. Nyctaginaceae	Sanadika	Herb	Typhoid	About 5 gm of whole plant powder is given with buttermilk twice a day for 4 days.
<i>Carica papaya</i> Caricaceae	Papaya	Tree	Dengue	About 5 ml of leaf juice is given daily twice for 7 days.
<i>Gloriosa superba</i> L. Liliaceae	Koli kutuma	Herb	Chronic	Ten to 15 ml of shade dried rhizome decoction is given twice a day for 3 days
<i>Polyalthia longifolia</i> L. Annonaceae	Kambada mara	Tree	Unspecified	About 10 g of stem bark is boiled in 4 cups of water till it get reduced to one cup and filtered. About 10 ml of this decoction is given 3 times a day for 3 to 4 days.
<i>Plumbago zeylanica</i> L. Plumbaginaceae	Chitra moola	Herb	Unspecified	About 6gm of root powder and little sugar candy is given with warm water twice a day for 4 to 5 days
<i>Tinospora cordifolia</i> (willd) Miers Menispermaceae	Amruta balli	Climber	Chronic	Twenty ml of stem decoction with a cup of butter milk is given daily morning for 7 days.
<i>Withania somnifera</i> (L.) Dunal Solanaceae	Ashwagandha	Herb	Typhoid	Root powder ground with dry grapes and opium seeds making into pills of 10g each. Two pills are given twice a day for 21 days.
<i>Zalea decandra</i> (L.)N. Burm. Aizoaceae	Biliganajili	Herb	Unspecified	Root powder is boiled in half litre of water till it becomes to a quarter, which is made into two equal parts and given orally twice a day for 3 days.

Table1: Plants used in the treatment of different types of fever in Harapanahalli taluk of Davanagere district.

The medicinal plant species reported in the present study were cross checked with the available literature. Even though some of these plants were mentioned earlier, the parts used, mode of drug preparation, dosage and curative properties were different. For example: *Aegle marmelos* is used for gastrointestinal disorders in Arunachal Pradesh [8]. *Azadirachta indica* in north Karnataka [9] and *Andrographis paniculata* in Tamil Nadu are used for the treatment of diabetes [10]. Stem of *Tinospora cordifolia* is used for treating Malaria in Shimoga district of Karnataka [11]. Similarly leaves of *Aegle marmelos* are used for treating asthma in Andhra Pradesh [12]. In Karnataka ethnobotanical studies on medicinal plants were conducted in various districts. However, in Harapanahalli taluk region no detailed study on ethnobotany

of medicinal plants is reported. Hence, the present study represents a contribution to the existing knowledge of folk remedies that are in current practice for the treatment of different types of fever.

CONCLUSION

The present investigation reports 14 medicinal plant species were used as antipyretic agents in the treatment of different kinds of fever. The rural people of Harapanahalli taluk are highly dependent on these medicinal plants as they are easily available and proved to be effective. Hence, these plant species could be taken up for further pharmacological and clinical studies useful in the formulation of novel drugs for treating fever.

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REFERENCES

1. Yadav SS and Patil SH. Traditional medicines and health care system of tribals of Satpuda region, Maharashtra State. *New Botanist*. 2000. 27(4): 51-65.
2. Badgujar SB and Patil MB. Ethnomedicines for jaundice used in tribal areas of North Maharashtra. *Nat. Prod. Radiance*. 2008. 7(1): 79-81.
3. Balakrishnan, P., Prema, KC., Ravindran and Philip Robinson, J. Ethnobotanical studies among villagers from Dharapuram taluk, Tamil Nadu, India. *Global J. Pharmacol*. 2009. 3(1): 08-14.
4. Chellaiah Muthu, Muniappan Ayyanar, Nagappan Raja and Savarimuthu Ignacimuthu. Medicinal plants used by traditional healers in Kancheepuram district of Tamil Nadu, India. *J. Ethnobiol. Ethnomed*. 2006. 2:43.
5. Manjunatha BK, Krishna V, Pullaiah T. *Flora of Davanagere District*, Karnataka, India. Regency Publications; New Delhi: 2004.
6. Saldanha CJ. *Flora of Karnataka*. Vol.1. Oxford and IBH Publishing Co; New Delhi: 1984.
7. Gamble JS. *Flora of the Presidency of Madras, 1915-1934*. London. Neeraj Publishing House; Delhi: Reprint in 2013.
8. Kagyung R, Gajurel PR, Rethy P, Singh B. Ethnomedicinal plants used for gastrointestinal diseases by Adi tribes of Dehang-Debang Biosphere Reserve in Arunachal Pradesh. *Indian J. Tradit. knowle*. 2010. 9(3):

491-501.

9. Bankar V, Malagi U, Naik RK.Exploration and documentation of indigenous hypoglycemic substances of North Karnataka. *Karnataka J. Agri. Sci.* 2007. 20(2): 350-352.
10. Venkataswamy R, MohamadMubarack H, Doss A, Ravi TK, Sukumar M. Ethnobotanical study of medicinal plants used by Malasartribals in Coimbatore district of Tamil Nadu (South India). *Asian J. Exp. Biol. Sci.* 2010. 1(2): 387-392.
11. Rajkumar N, Shivanna MB. Traditional Herbal medicinal Knowledge in Sagartaluk of Shimoga District, Karnataka, India. *Indian J. Nat. Prod.Resour.* 2010. 1(1): 102-108.
12. Reddy KN, Reddy, CS,Trimurthulu G.Ethnobotanical Survey on Respiratory Disorders in Easters Ghats of Andhra Pradesh, India. *Ethnobot.Leaflets.*2006.10: 139-148.