

AN ETHNOBOTANICAL SURVEY OF MEDICINAL PLANTS USED BY TRADITIONAL HEALERS OF ADILABAD DISTRICT, ANDHRA PRADESH, INDIA

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ABSTRACT

Ethno botanical surveys were conducted from October, 2011 through September, 2012 in the Jannaram, Kaddam, Uttoor and Indravelly, mandals of Adilabad district, Andhra Pradesh, India. Information on 44 angiosperms belonging to 27 families was gathered with regard to their ethno medicinal plants used by the tribal people in alleviating diseases. The medicinal plants used by local tribal traditional healers are arranged alphabetically followed by botanical name, family names, local name, parts used, mode of preparation and medicinal uses. This paper reports for the uses of plant parts by the tribal people in the form of juices, extracts, decoctions, pastes and powders.

Keywords: Ethno medicines, Adilabad district, tribal people, Andhra Pradesh

INTRODUCTION

The Rig-Veda written during 4500 BC to 1600 BC is believed to be the oldest repository of human knowledge about medicinal usages of plants in Indian subcontinent (Puspangadan, 1995). According to WHO (World Health Organisation, 2001), about 80% of the world's population, especially in the rural areas depends on herbal medicine for their healthcare needs. The ethnic people residing in different geographical belts of India depends on wild plants to meet their basic requirements and all the ethnic communities have their own pool of secret ethnomedicinal and ethno-pharmacological knowledge about the plants available in their surroundings (Muthukumarasamy et al, 2003; Rana et al, 2010; Rajendra et al, 2002 and Jain, 2001, which has been serving rural people with its superiority. Due to changing life style, extreme secrecy of traditional healers and negligence of youngsters, the practice and dependence of ethnic societies in folk medicines is in rapid decline globally, therefore, ethnobotanical exploitation and documentation of indigenous knowledge about the

usefulness of such a vast pool of genetic resources is deliberately needed (Viswanadhan, 2004; Saikea et al, 2003; Kumar & Tewari, 2003 and Singh, 2004). We selected rural areas of Adilabad district and adjoining areas for ethnomedicinal investigation because this area is very rich in phytodiversity and tribal population.

Besides other usages of plants the practice of oral tradition for healthcare management of human and domesticated animals using herbal medicines is still prevalent among the inhabitants of the area. They have enormous knowledge about medicinal uses of plants and this knowledge is mostly undocumented and transmitted orally from generation to generation. Therefore, it is urgent to explore and document this unique and indigenous, traditional knowledge of the tribal community, before it diminishes with the knowledgeable persons. Further, documentation of indigenous and traditional knowledge is very important for future critical studies leading to sustainable utilization of natural resource and to face the challenges of bio-piracy and patenting indigenous and traditional knowledge by others. Besides, to

the best of our knowledge no ethnobotanical work has been carried out in this area. Keeping these things in mind present study was proposed to document the ethnomedicinal knowledge of traditional healers in Adilabad district, Andhra Pradesh.

MATERIALS AND METHODS

Study Area

The study area is depicted in Fig-1. Adilabad district lies between $77^{\circ} 47'$ and $80^{\circ} 0'$ of the eastern longitudes and $18^{\circ} 40'$ and $19^{\circ} 56'$ of northern latitudes. The district is bounded on North by Yeotmal, on the East by Chanda districts of Maharashtra and on the South by Karimnagar and Nizamabad and on the West by Nanded district of Maharashtra State. These harbour mainly dry deciduous forest and aborigines. These forests occupy about 44.5 percent of the total geographical area of the district. The total forest area in the district is 7218.86 sq.km. The total population of the district is 27, 37, 738 out of which the tribal population is 5,12,602 (Census of India 2011). Among scheduled tribes of Andhra Pradesh, Gonds, Lambada, Kolams, Pradhans, Manne, Naikpods, Thoties, Yerikalas, Koyas are the major communities in Adilabad District, Andhra Pradesh, India.

Ethnobotanical Survey

Field trips were conducted from October, 2011 through September, 2012 in tribal parts (Murimadugu, Kishitapoor, Munyal, Kawal, Ponkal and Indanpalli) of Adilabad district, Andhra Pradesh, India. Ethnomedicinal data were collected through conversation with traditional healers, tribal doctors and elder people in the field trips. During the interviews local names, useful plant parts, method of preparation and dosage were recorded (Table 1). The method of collection of voucher specimens, preservation, herbaria and technique for the collection of Ethnomedicinal information's follows Jain and Rao (1977). Herbarium Voucher specimens are deposited at Kakatiya University, Warangal, Andhra Pradesh, India. The plant species are enumerated by family followed by their tribal names and uses.

RESULTS AND DISCUSSION

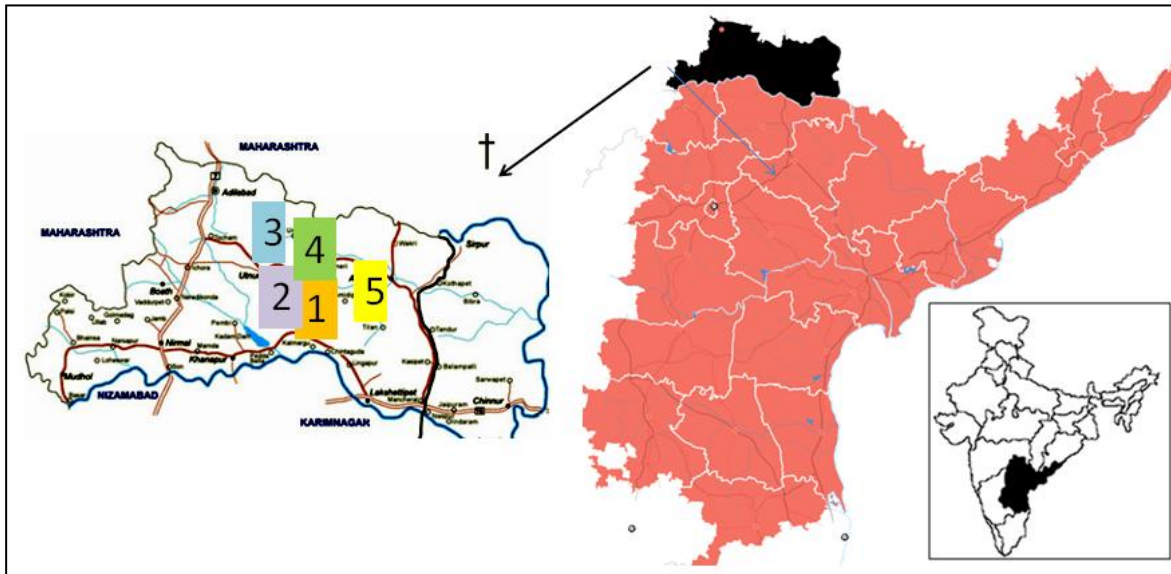
In the present account, 44 species of angiosperms belonging to 27 families are reported (Table 1). They are used as ethnomedicines for various severe diseases like jaundice, cancer, etc. by employing the preparations in the form of extracts, pastes, juices, powders, etc. Other common diseases and health complaints like Abortion, Anti inflammations, Asthma, Arthritis, Blood Pressure, Blood Bleeding, Cough, Diabetes, Dandruff, Diarrhea, Fertility improvement of male, Fever, Filaria, Hepatitis, Jaundice, Kidney disease, Ladies White Discharges, Muscular Pains, Pains, Paralysis, Ring Worm, Sugar, Scorpion Bite, Skin Allergy, Stomach Pain, Skin Diseases, STD's, Snake Bite, Tooth ache, Wound healing are cured by using of various plants found in the tribal healers of Adilabad district.

The plant material is employed in the form of decoctions, extracts, pastes, juice & Powder some times in combination with other parts of same or different plants other substances, such as sugar candy, curd, honey, hair oil, milk and turmeric powder, are also used in various preparations. The data collected from the tribal people of Adilabad district pertaining to the treatment of various ailments by Plant parts used for medicinal preparation were bark, roots, leaves, fruits, flowers, Stem, seeds and the whole plants. The most frequently utilized plant parts percentage were leaves (42.5%), followed by the roots (11.5%), seeds (4%), Stem bark (8%) fruits (8.5%), Stem (3.5%) flowers (8%), in the form of decoctions, extracts, paste, juices and powders (Fig-2).

The medicinal plants based on their use in treatment of 30 different diseases were found to be very valuable such as Jaundice, asthma, diabetes, STD's, paralysis, snake bite, Fever. Among the different plant parts used for the preparation of medicine the leaves were the most important and frequently used and majority of the remedies reported in the present study are by administering the leaves orally.

The most dominant families of ethnobotanical importance are Fabaceae (4 species), Asclepiadaceae (4 species), Amaranthaceae (3 species), Asteraceae (3 species), Leguminosae (3 species), Euphorbiaceae (2 species), Solanaceae

Fig-1. Map showing the location of Adilabad district and study area
 (1-Kishtapur, 2-Murimadugu, 3-Indanpalli, 4-Munyal and 5-Kawal)



(2 species), Phyllanthaceae (2 species), Lamiaceae (2 species), Simaroubaceae (1 species), Agavaceae (1 species), Aristolochiaceae (1 species), Meliaceae (1 species), Graminae (1 species), Rutaceae (1 species), Moraceae (1 species), Cucurbitaceae (1 species), Morigaceae (1 species), Bignoniaceae (1 species), Rosaceae (1 species), Combritaceae (1 species), Menispermaceae (1 species), Aizoaceae (1 species),

Zygophylliaceae (1 species) and Zingibaraceae (1 species). In the present study percentage of remedies using for different disessea as shown in figure 3. Traditional healers of Adilabad district used 8 species to treat body pain relief, 6 species to treat skin diseases and other for different problems like jaundice, STDs, female genital problems , fever, poisonous bites , diabetes etc.

Figure-2: Plant parts used for medicinal purposes and percentage of total medicinal species

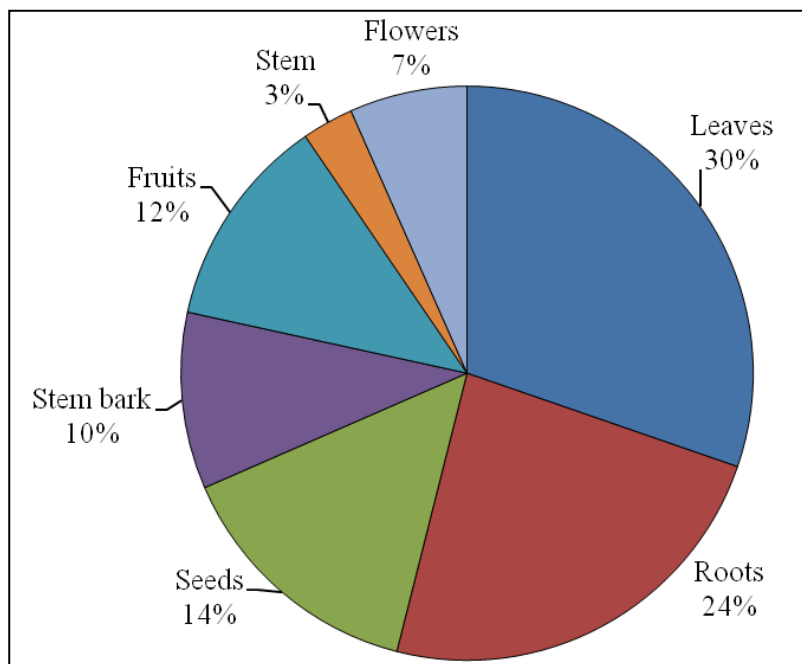
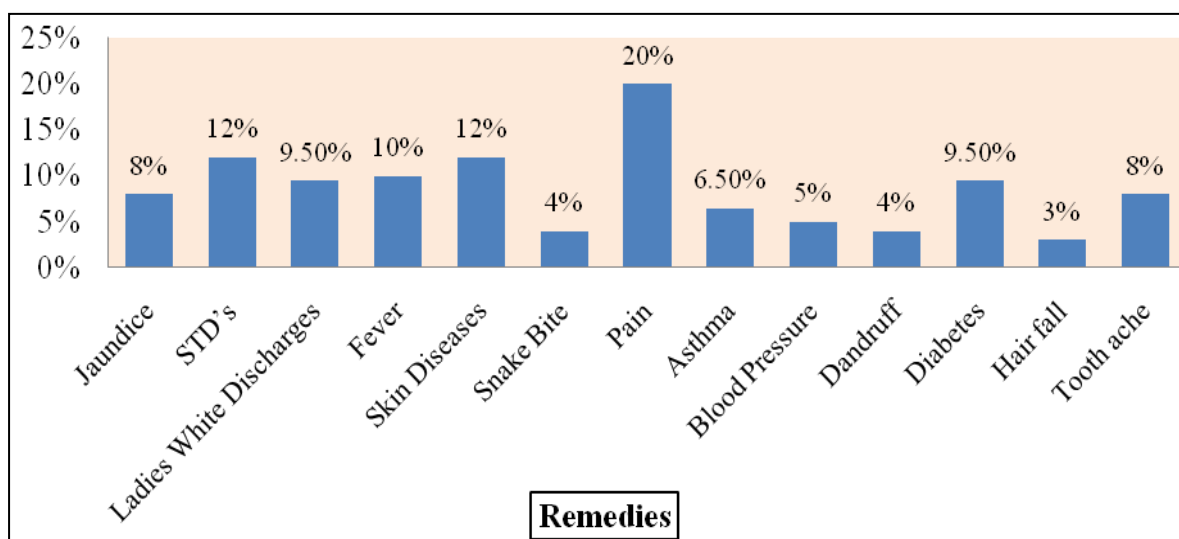


Table-1. Description of medicinal properties of plants used by traditional healers from rural areas of Adilabad District, Andhra Pradesh, India.

| S. No | Botanical Name | Common Name | Family | Part Used | Medicinal Uses |
|-------|---------------------------------|---------------|------------------|-----------|---|
| 01 | <i>Abrus precatorius</i> | Gurijalu | Fabaceae | Seeds | Snake bite |
| 02. | <i>Achalypa Indica</i> | Muripinda | Euphorbiaceae | Leaves | STDs & Jaundice |
| 03. | <i>Achyranthes Aspera</i> | Uttareni | Amaranthaceae | Root | Tooth Ache |
| 04. | <i>Ailanthus Excelsa</i> | Peddmamu Tree | Simaroubaceae | Root | Abscess |
| 05. | <i>Aloe Barbadensis</i> | Aloe-Vera | Agavaceae | Stem | Skin Allergy & Ladies White Discharges |
| 06. | <i>Alternanthera Sessilis</i> | Gungu | Amaranthaceae | Root | Ladies White Dicharges |
| | <i>Achyranthes Aspera</i> | Uttareni | Amaranthaceae | Root | |
| 07. | <i>Aristolochia India</i> | Nalla Eswari | Aristolochiaceae | Root | Snake Bite |
| 08. | <i>Azadirachta Indica</i> | Neem | Meliaceae | Leaves | Fever |
| 09. | <i>Bambusa</i> | Veduru | Graminae | Leaves | Abortion |
| 10. | <i>Butea Monosperma(L)</i> | Moduga | Fabaceae | Leaves | Pain |
| 11. | <i>Calotropis Gigantea</i> | Jilledu | Asclepiadaceae | Flower | Cramps & Arthritis & Pains |
| 12. | <i>Cassia Obtusifolia</i> | Thagerashe | Fabaceae | Leaves | Scorpion -Bite |
| 13. | <i>Cassia Occidentalis (L.)</i> | Kassitha | Leguminaceae | Fruit | Sugar & Pains |
| 14. | <i>Citrus Limon</i> | Limon Tree | Rutaceae | Fruit | Diarrhoea, Dandruff, & Hair fall |
| 15. | <i>Datura Metal(L)</i> | Erriummetta | Solanaceae | Leaves | Pains |
| 16. | <i>Ecilptaalba</i> | Bhringraj | Asteraceae | Leaves | Blood Bleeding, Skin Allergy, Hair fall, Dandruff |
| 17. | <i>Ficus Religiosa</i> | Ravi | Moraceae | Stem bark | Hepatitis & STD's |
| 18. | <i>Hemiessmus Indicus(L)</i> | Sugandi Pala | Asclepiadaceae | Roots | Tooth ache |
| 19. | <i>Mimsa Puvica(L)</i> | Atti Patti | Leguminaceae | Leaves | Filaria, Blood Pressure |
| 20. | <i>Momordica Charantia</i> | Bitter Gourd | Cucurbitaceae | Leaves | Jaundice & Diabetes, |
| 21 | <i>Moringa</i> | Munaga | Morigaceae | Root | Skin diseases |

| | | | | | |
|-----|----------------------------------|----------------------------|------------------|-----------------|----------------------------------|
| 22. | <i>Ocimum Tenuiflorm (L)</i> | Tulasi | Lamiaceae | Leaves | Skin Allergy |
| 23. | <i>Oroxylum Indicam</i> | Namale Tree | Bignoniaceae | Leaves | Pains |
| 24. | <i>Pergularia Daemia</i> | Dustapu Teega | (Asclepiadaceae) | Leaves | Fever |
| 25. | <i>Phyllanthu Amarus</i> | Nalla Usiri | Phyllanthaceae | Fruit | Ring worm, Jaundice & Fever |
| 26. | <i>Phyllanthus Emblica</i> | Usiri | Phyllanthaceae | Fruit | STD's & Skin diseases |
| 27. | <i>Pongamia Pinnata</i> | Kanugatree | Fabaceae | Leaves | Blood Pressure Paralysis & Pains |
| 28. | <i>Prunus domestica</i> | Plum | Rosaceae | Leaves | Ladies White Discharges |
| 29. | <i>Ricinus Communis (L.)</i> | Amudamu | Euphorbiaceae | Stem - Bark | Pains & Jaundice |
| 30. | <i>Terminlia Chebula</i> | Myrobalan | Combretaceae | Fruit | Cough & Diabetes, |
| 31. | <i>Tinospora Cordfolica</i> | Tippatheega | Menispermaceae | Leaves | STD's, Diabetes, & Sugar |
| 32. | <i>Trianthema portulacastrum</i> | Thella galijeru | Aizoaceae | Stem- Bark | Kidney disease |
| 33. | <i>Tribuluste restris</i> | Palleru | Zygophylliaceae | Leaves | Asthama |
| 34. | <i>Trigonella foenumgraecum</i> | Menthulu | leguminosaceae | Leaves | skin diseases |
| 35. | <i>Trodax procumbens</i> | Nallaalam (Gaddichamanthi) | Astaraceae | Leaves | Wound healing |
| 36. | <i>Tylophora Indica</i> | Kakapalla | Asclepiadaceae | Leaves | Asthama |
| 37. | <i>Vitex nigunda</i> | Vaavili | Lamiaceae | Leaves | Pains |
| 38. | <i>Withania sominifera</i> | Ashwagandha | Solanaceae | Stem- bark | Fertility improvement of male |
| 39. | <i>Zingibar officinale</i> | Sonti | Zingibaraeae | Root | Asthma, Fever |
| 40. | <i>Teprosia purpurea</i> | Vempali | Fabaceae | Whole plant | Urinary problems, diabetes |
| 41. | <i>Psidium guava</i> | Jama | Myrtaceae | Fruit | Mouth ulcers |
| 42. | <i>Mucuna prurita</i> | Duldumma (Duradagonidi) | Fabaceae | Whole plant | Tooth ache |
| 43. | <i>Justicia adhatoda</i> | Addasaram (Ippatheega) | Acanthaceae | Stem and Leaves | Fever and cough |
| 44. | <i>Euphorbia antiquorum</i> | bramhajemu du | Euphorbiaceae | Leaves | Cancer & Diabetes |

Figure-3; Percentage of remedies used for various diseases

CONCLUSION

The present investigation revealed that medicinal plants still play a vital role in the primary health care of the people. The information gathered from the tribal is useful for further researchers in the field of ethno-medico-botany, taxonomy and pharmacology. This study offers a model for studying the relationship between plants and people, within the context of traditional medical system. The purpose of standardizing traditional remedies is obviously to ensure therapeutically efficacy. The value of using ethno medical information is to initiate drug discovery efforts. This study also generated a broad spectrum of information concerning medicinal plants used by tribal's. Due to lack of interest among the younger generation of tribal's as well as their tendency to migrate to cities for lucrative jobs, we face the possibility of losing this wealth of knowledge in the near future.

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