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Ethnomedicinal and Ethnoveterinary Plants from Boath, Adilabad district, Andhra Pradesh, India

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ABSTRACT

The present paper deals with the traditional uses of 57 plant species employed in ethnomedicine and ethnoveterinary practice by tribal and local people of the Boath Revenue Division of Adilabad district, Andhra Pradesh, to treat different ailments affecting both human and livestock. For each plant species, details on the scientific name, botanical family, local name and use are provided along with parts harvested for treatment, the manner of processing and the mode of administration.

Key words: Ethnomedicine, ethnoveterinary medicine**,** Boath Revenue Division, Adilabad district, Andhra Pradesh.

INTRODUCTION

Boath Revenue Division, located in the southwest of the Adilabad district in Andhra Pradesh, with an area of 30,878 ha, is primarily a forested tract (40% of the total land area) north of River Godavari characteristically having a rocky and gently undulating topography that continues in to the adjoining districts of Maharashtra. It enjoys the typical Deccan climate with temperatures ranging between 29 and 41°C maximum and 15 to 28°C minimum. The region receives an average annual rainfall of 995.1 mm.

The Mathura, Lambada and Gonds comprise the tribal population of this region and traditional practices of curing ailments using plants and animal resources are practiced by all these communities. In an enquiry to document their traditional knowledge of the medicinal plants, we conducted a year long survey in this region from 2006 to 2007. The data was collected by interviewing local and traditional medical practioners and village heads. Our studies have shown that these people have accumulated a wide knowledge in the usage of plant wealth over the centuries. As there exist no documentation of the traditional knowledge of tribals of Boath[1,2], through this paper we attempt to fill the gap.

METHODOLOGY

The study was carried out from April 2006 to March 2007. The information on plantswere collected by interviewing traditional practioners and village heads. Plants were identified in the field by trekking different areas of the forests along with some of the members of the community who already practiced traditional medicine[3-5]. During the field trips, plant specimens were collected, properly tagged with field numbers, and brought to the Plant Systematics Laboratory, Department of Botany, Osmania University, Hyderabad for identification, where they are

deposited.

RESULTS

The plant species are arranged in alphabetical order according to scientific names for convenience. For each plant species given in the following enumeration, details on the scientific name, botanical family, local name and use are provided along with the parts harvested for treatment and the manner of processing and mode of administration. We follow recent trends in nomenclature (IT IS, 2007).

Ethnomedicinal Plants

Burning sensation at time of urination

Aerva lanata Juss.
Family: Amaranthaceae
Local name: *Pindikura*
5-10 gms of root with zeera made into juice mixed with pinch of sugar and administered once a day until relief.

Injuries, cuts and scorpion bites

Achyranthus aspera L.
Family**:**Amaranthaceae
Local name: *Uttereni*
Handful of leaves made into paste and bandaged over the bites, cuts and injuries for three days.

Stomachache

Allium sativum L.
Family: Liliaceae
Local name: *Velli-ulli, garlic*
4-5 scale leaves were made into paste mixed with pinch of water and salt taken twice a day till relief.

Backache

Aegle marmelos Correa
Family: Rutaceae
Local name: *Maredu*
Handful of young leaves were made into paste and bandaged over night, on the backbone region for immediate healing.

Cataract

Aloe barbadensis Mill.
Family: Aloaeceae
Local name: *Kalabanda*
Mucilage applied on the eye-lids before going to bed, for seven days till eyes clear.

Dog bites

Acacia farnesiana Willd.
Family: Fabaceae/Leguminosae
Local name: *Murikitumma*
5-10 gm of leaves ground with water and made into juice mixed with cow milk administered once in fortnight.

Boils

Argemone mexicana L.
Family: Papavaraceae

Local name: *Pichikusuma*
Handful of Leaves were made into paste and applied daily over the boils until cure.

Reduce heat

Azadirachta indica A. Juss.
Family: Meliaceae
Local name: *Vepa*
5-10 gms of stem bark were made into juice mixed with pinch of sugar and ½ glass of juice administered.

Kidney stones

Butea monosperma (Lam.) Taub.
Family: Fabaceae/Leguminosae
Local name: *Moduga*
10-15 gms of stem bark were made into juice mixed with pinch of pepper powder and cow milk administered once in a month to dissolve stones in kidneys.

Lice eradication

Bauhenia purpurea L.
Family: Fabaceae/Leguminosae
Local name: *Devakanchana, Pedda Are*
Dried seed paste mixed with coconut oil applied once before taking bath will eradicate the lice.

Fertility in women

Caesalpinia cristata L.
Family: Fabaceae/Leguminosae
Local name: *Gachhkaya*
5-10 gms of stem bark ground with pinch of water and made into juice and half tea cup juice administered during menses period.

Hydrocoel

Calotropis gigantea (L.) R.Br.
Family: Asclepiadaceae
Local name: *Jilledu*
2-3 Leaves mildly heated with castor (*Ricinus communis*) oil and bandaged over the testicles, changed every day until cured.

Fertility in women & Joint pains

Citrus aurantiifolia (Christ.) Swingle
Family: Rutaceae
Local name: *Nimma*
15-20 gm of roots dried and made into paste mixed with cow milk, 2 teaspoonful given daily for one month.
Juice made from the ripened fruit added with pinch of sesame oil (*Sesamum indicum)* applied over the joints to cure.

Seminal disorders and Leucorrhea

Curculigo orchioides Gaertn.
Family: Hyoxidiaceae
Local name: *Nelathadi Gaddalu*
Powder made from the root tubers and mixed with cow milk, administered twice a week

Diarrhoea and dysentery

Cocos nucifera L.
Family: Arecaceae
Local name: *Kobbari*
One glass of tender coconut water given twice in a day will cure Diarrhoea and dysentery.

Heart ailments

Coccinia indica Wight & Arn.
Family: Cucurbitaceae
Local name: *Dhonda*
Handful of leaves ground and made into juice mixed with 10 ml of brandy given twice in a week.

Snake bite

Dregea volubilis Benth.
Family: Asclepiadiaceae
Local name: *Peddaguriza Aaku*
4-5 leaves with 5-10 leaves of *Nelagulimidi* (*Enicostema axillare*) were made into juice added with pinch of pepper powder, administered immediately bandaged over the bite and the juice is given orally.

Cataract

Emblica officinalis Gaertn.
Family**:** Euphorbiaceae
Local name: *Usiri*
Ripened fruit juice is applied on the eyelids externally everyday

Family planning

***Ficus religiosa* L.** (Moraceae) *Ravi*
5-10 gms of stem bark were made into juice is mixed with pinch of sugar, administered, ½ tea cup from the third day on menses.

Anti-cancer & Heel cracks

Ficus racemosa L.
Family: Moraceae
Local name: *Medi*
5-10 gms of stem were made into paste added with pinch of soil from the termite mounds and brass dust made into tablets, given daily one for one month.
Latex applied externally to heel cracks.

Toothache

Gossypium herbaceum L.
Family**:** Malvaceae
Local name: *Patti*
Seeds burned and ash made into paste with water used to wash the teeth early morning every day till fortnight will cure toothache.

Lice eradication and hair growth & Improves fertility in women

Hibiscus rosa-sinensis L.
Family: Malvaceae
Local name: *Mandara*
1 or 2 flowers petals boiled in coconut oil applied to head before going to bed, once in a day.
Fragrance of the flowers early morning and late evening times improves fertility in women

Diarrhoea and dysentery in children

Ipomoea obscura Ker-Gawl.
Family: Convolvulaceae
Local name: *Gollagiddi Aaku*
Part of the fresh plant tied over the wrist of children.

Bronchitis

Justicia adhatoda L.

Family: Acanthaceae
Local name: *Addasaram*
3-4 leaves ground and made into juice added with water and pinch of pepper powder, 1 or 2 tea-spoonful given internally once in a day for a month.

Cuts and injuries

Lagascea mollis Cav.
Family:Asteraceae
Local name: *Moddualamu*
Leaf paste is prepared and applied over the wounds will help to cure.

Toothache

Momordica charantia L.
Family: Cucurbitaceae
Local name: *Kakara*
Handful of leaves ground and made into juice added with pinch of sugar administered, 2-3 tea-spoonful twice in a week.

Headache

Mentha arvensis L.
Family: Lamiaceae
Local name: *Pudina*
5-10 leaves were made into juice added with donkey milk administered once in a day.

Bone fractures

Mucuna pruriens Bak.
Family: Fabaceae/Leguminosae
Local name: *Dulakaya*
10-15 seeds were soaked overnight, in water and the water is given in empty stomach twice a week until cure.

Abdominal pain and male reproductive disorders

Madhuca indica Wight

Family:Sapotaceae

Local name: *Ippa*
5-10 gm of stem paste is mixed with water and sugar given once in a day.

Joint pains and Foot pains

Opuntia elatior Mill.
Family: Cactaceae
Local name: *Brammajemudu*
Burned stem ash is applied on joints to cure pain.

Stomachache

Plumeria rubra L.
Family: Apocynaceae
Local name: *Adavi Ganneru*
5-10 gm of fresh root made into paste is mixed with ghee administered once in a day.

Boils and Joint pains & Sore throat

Plumbago zelanica L.
Family: Plumbaginaceae

Local name: *Chitramulamu*
Tender portion of the roots made into juice added with pinch of water given 2-3 tea spoonful twice a day.
5-6 gm of roots made into paste bandaged over the boils and joints.

Joint pains

***Ricinus communis* L.** (Euphorbiaceae) *Amudamu*
Two teaspoonful seed oil mixed with equal quantity of cow urine, given orally once in a day.

Anti-cancer

Sesamum indicum L.
Family: Pedaliaceae
Local name: *Nuvuulu*
Gargling with oil extracted from the seed, every day early morning after mouth wash in empty stomach for six months.

Neck and joint pains

Semecarpus anacardium L. f.
Family: Anacardiaceae
Local name: *Nalla Jidi*
Exudations from the ripened seed is directly applied on the affected area.

Kidney stones

Syzygium cumini (L.) Skeels
Family: Myrtaceae
Lsocal name: *Allaneredu*
Handful of stem bark is made into juice added with a pinch of pepper powder, along with cow milk, administered twice in a month to dissolve stones in kidneys.

Reduce heat

Tinospora cordifolia (Willd.) Miers
Family: Menispermaceae
Local names: *Tippa Tega*
10-15 cm of the fresh plant powder is mixed with cumin (*zeera*) and sugar is administered.

Dysentery in children & Snakebite

Tamarindus indica L.
Family: Fabaceae / Leguminosae
Local name: *Chinta*
Five gms of leaf juice is added with sugar and given twice in a day.
Ruptured seed is applied on the snake bite.

Stomachache

Zizyphus xylopyrous (Retz.) Willd.
Family: Rhamnaceae
Local name: *Gotti*
5-10 gm of stem bark were made into juice administered once a day.

Obesity & hair growth (not diseases)
Trigonella foenum-graceum L.
Family: Fabaceae / Leguminosae
Local name: *Menthi*
Fresh stems and leaves eaten directly and made into curry and taken with rice reduce the obesity

Ethnoveterinary Plants

Internal bleeding in the digestive system or digestive hemorrhage [For cattle]

Argemone mexicana L.
Family: Papavaraceae
Local name: *Pichikusuma, Udugu*
100 gm leaves crushed and pounded with 15 gm pepper, mixed with butter milk, given orally twice in a week.

Digestive disorders [For cattle, buffalo, goat and sheep]

Azadirachta indica A. Juss.
Family: Meliaceae
Local name: *Vepa*
50 gm leaves crushed and mixed with water, given orally once in a day.

Foot and mouth diseases [For cattle]

Aegle marmelos Correa
Family: Rutaceae
Local name: *Maredu*
Pulp of the fruit is mixed with pulp of the tamarind along with pinch of calcium is applied externally.

***Bone fractures [For cattle, buffalo, goat and sheep]* & Grinding of teeth [For cattle]:**

Butea monosperma (Lam.) Taub.
Family: Fabaceae / Leguminosae
Local name: *Modugu*
250 gms stem bark crushed well and applied externally on the fractured area
Mixing of bark powdered with 15 gms pepper is given orally twice a week.

Rheumatism [For cattle, buffalo, goat and sheep]:

Cynodon dactylon (L.) Pers.
Family: Poaceae
Local name: *Garika*
100 gms of plant with 10 gms of pepper mixed with toddy and given orally twice a day for one week will cure rheumatism.

Bronchitis and asthma [For cattle, buffalo, goat and sheep]:

Cissus quadrangularis L.
Family: Vitaceae
Local name: *Nalleda*
Mixing of 100 gms of aerial plant parts along with 50 gm of leaves of *Justicia adhatoda* (*Addasaramu*) mixed with water, given orally once a day to cure asthma.

Staggering [For cattle]

Dreagea volubilis Benth.
Family: Asclepiadecaceae
Local name: *Peddagurizaku*
50 gm leaves and 50 gm of root pounded with *Cuminum ciminum* (*Jeera*) and sugar is given orally once in a week.

Swellings [For cattle]

Erythrina suberosa Roxb.
Family: Fabaceae / Leguminosae
Local name: *Munumoduga*
100 gm of stem without bark, crushed and extract is applied on the swollen region.

Impaction [For cattle]

Holarrhena pubescence (Buch. Ham.) Wall.
Family: Apocynaceae

Local name: *Palakodisa*
10 gms of leaves with a pinch of calcium and jaggery is given direct.

For ability to take food [For cattle, buffalo, goat and sheep] Jatropha curcas L.
Family: Euphorbiaceae
Local name: *Adaviamudamu*
50 gems of leaves are crushed well and mixed with water which is given orally twice a week.

Bronchitis and Asthma [For cattle, buffalo, goat and sheep]:
Justicia adhatoda L.
Family: Acanthaceae
Local name: Addasaram
100 gms leaves pounded with *Allium sativum* (garlic) and *Carum coptium* (voma) mixed with water, given orally twice a day.

Ruminating and digestive disorders [For cattle, buffalo, goat and sheep]
Lagenaria siceraria (Molina) Standley
Family: Cucurbitaceae
Local name: Chedu Burrakaya
Unripe fruit pounded with 10 gm of pepper and mixed with butter milk, given orally once a day.

Bone fractures and rheumatism [For cattle, buffalo, goat and sheep]
Opuntia elatior Mill.
Family: Cactaceae
Local name: *Brammajemudu*
Burned ash of the plant is applied externally.

Muscle disorders [For cattle, buffalo, goat and sheep]
Pergularia daemia (Forsskal) Chiov.
Family: Asclepiadaceae
Local name: *Dustaputeega*
Latex or leaf extract applied locally.

Ruminating and digestive disorders [For cattle, buffalo, goat and sheep]
Solanum nigrum L.
Family: Solanaceae
Local name; *Kasipandlu*
100 gms of ripened fruits pounded with 15 gm of pepper mixed with butter milk, given orally once a day for 15 days.

Psychic disorders [For cattle, buffalo, goat and sheep]
Sterculia urens Roxb.
Family: Sterculiaceae
Local name: *Tapasi*
100 gms of stem bark pounded with 10 gm of pepper mixed with toddy, given orally twice a week.

Bone fractures [For cattle, buffalo, goat and sheep]
Terminalia arjuna Wight & Arn.
(Combretaceae)
Tella Maddi
250 gms of stem bark crushed and applied over the fractures.

Kill the lice and insects [For cattle, buffalo, goat and sheep]:
Vitex negundo L.

Family: Verbenaceae
Local name: *Vavili*
Spray leaf extract over the animalsto erradicate lice.

Conclusion

The present paper documents the ethnomedicinal and ethnoveterinarian uses of 57 plant species from Boath area of Adilabad district in Andhra Pradesh. Forty species of plants belonging to 39 genera and 27 families were recorded being used to treat 27 different ailments and diseases affecting tribals of this area. Most of the plant species are in local distribution and few species are in cultivation in home gardens. Different parts of medicinal plants are used in preparation of medicinal pastes or concoctions, the leaves and stem were the most frequently used parts followed by whole plant, fruits, roots and latex or exudes. Most of the species are used to treat only one disease. Only few diseases treated with more than one species. The present observation is match with the earlier reports with respect to ethnomedicine[6-7] and ethnoveterinary medicine[8-10].

Some major ailments and diseases such as cancer, heart diseases, kidney-stones and obesity were being effectively treated using traditional knowledge and locally available plant resources. *Ficus raemosa* and *Sesamum indicum* are used to treat cancer, *Coccinia indica* is used to treat heart ailments, *Butea monosperma* and *Syzygium cumini* are used to treat kidney-stones problem and *Trigonella foenum-graceum* is used as anti-obesity. Keeping in view the traditional knowledge and beliefs, we propose phytochemical and pharmacological studies of these plants in conjunction with treatments of these diseases.

As many as 17 species of plants belonging to 18 genera and 17 families are used in ethnoveterinary medicine to treat 15 diseases of livestock in general. Different parts of medicinal plants are used in veterinary practices, but the most used part are the leaves. These traditional knowledge help the local and tribals of this area immensely as there are no functional veterinary hospital in the Boath Revenue Division. Scientific studies on these plants too would yield interesting results and help us in understanding the pharmacological actions of the active compounds found in these plants that the local and tribals of the region had been using for so long.

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