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Ethnomedicinal Uses Of Some Fabaceae Family Plants of Narsipatnam Division, Visakhapatnam District, Andhra Pradesh, India

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Abstract:

Ethnobotanical study was carried out in the Narsipatnam division, Visakhapatnam districts of Andhra Pradesh. The present paper deals with traditional uses of 15 plant species belonging to 4 genera of Fabaceae families along with correct botanical identification, local names, parts used and mode of administration in respect to different diseases. The common diseases treated using medicinal plants are abortifacient, alopecia, Leucoderma, contraceptive, cough, Dandruff, migraine, Earache, Helminthiasis, Skin disease, Ring worm, Toothache, Whitlow, Anthelmintic, Centipede bite, Jaundice, Joint pain, Eye clarity, Ring worm, Cuts, Wounds, Boil, Swellings, Purgative, Galactogogue, Backache, Heel cracks and abscess etc.,

Keywords: *Ethnobotanical study; medicinal plants; Narsipatnam division, Visakhapatnam districts; Andhra Pradesh.*

1.Introduction

India is endeavored with many natural blessings in terms of ecological, climatic and soil rich for plant growth possess different types of climatic conditions and various tracts of tropical and temperature plains, hills and valleys. These factors are favorable for the wealth of medicinal plants. Most of the common medicinal plants are found in the forests. The use of medicinal herbs is still a tradition, continued by ethnic communities. The herbal raw drugs required for the preparation of medicines were collected from nearby forests. They possess a vast knowledge of the treatment. The method of treatment is traditional and drugs are used in crude form only. Through times immemorial this knowledge is transmitted orally from generation to generation. But due to deforestation and social changes, the folk culture and tradition has faced serious threat which may lead to loss of traditional practices in near future. Some of the younger generations are also gradually migrating to town and cities. As a result the traditional wisdom is decreasing quickly day by day, so the evaluation of traditional knowledge, the conservation of plants and scientific documentation has great significance and become an essential constituent.

2.Study Area

About 95 percent of the population in Narsipatnam Division agency 3 Mandalas is identified as tribal people. The division comprises three Mandals i.e. Chinthapalli, Gudemkotha veedi and Koyyuru. The tribals in this area belong to Bagata, Kutia, Nooka Dora and Valmiki tribes. The demarcation of reserve forest falls close to the inhabited villages and is a source of conflict between the tribals and the forest department. Tribals use the forests as sources of NWFPs, fuel wood, housing materials, medicinal herbs, water and irrigation, and for grazing their cattle, hunting and charcoal making.

Several different NWFPs in this tribals are collected by adda leaves (*Bauhinia vahlii*) used for sowing plates, karaka (*Myrobalanus chebula*), usiri or amla fruits (*Emblica officinalis*), tamarind (*Tamarindus indica*), nalla jeedi or marking nuts (*Semecarpus anacardium*), kanuga (*Pongamia glabra*), jack (*Artocarpus heterophyllus*), and mango (*Mangifera indica*). It is very labor intensive to collect many of these forest products. In the case of adda leaves and tamarind, women play a major role in collecting, drying, packing them into baskets and carrying the processed products to the shandy. Stall feeding of cattle is not practiced in this area. For firewood, both men and women travel 2 to 3 km once every two days. Women, however, spend more time collecting dry twigs and logs whereas men fell trees and take them back to the village. It is women, however,

who go for firewood collection, especially during the agricultural season when men are busy plowing the fields. It is not uncommon for women to gather wild tubers and roots while collecting firewood.

3. Material And Methods

Several Ethnobotanical surveys were conducted during the period of 2011-2012 in tribal areas of Narsipatnam Division, Visakhapatnam District, and Andhra Pradesh. The Ethnobotanical data were obtained from tribal people, Vaidyas, Ojhas, Village Pradhan and many other experienced informants having knowledge of herbal drugs used by different tribal people. The plants were collected with the help of floristic literature (Oomanchanl and Shrivastava 1996), and their herbarium was prepared as per standard protocol as described by Varghese, (1996); Dwivedi and Pandey, (1992). The collected plants thus pressed, mounted and Properly numbered, were identified with the help of local floras and other useful works in Hooker, (1872-1897); Haines, (1921-1924).

4. Enumeration

Enumeration of Plants In the following list, botanical name is followed by name of the family the name given local description of the plant, flowering and fruiting in Narsipatnam Division, Visakhapatnam District, Andhra Pradesh, India. The detailed preparation of drug, dosage and mode of use is given under uses.

4.1. *Abrus Precatorius* Linn

- Syn: *Glycine abrus* Linn.
- VN: Guriginja, Guruvinda S: Gunja H: Gunj E: Crab's eye

A deciduous straggler; leaves paripinnate, leaflets 10-13 pairs, opposite; flowers in fascicles in dense thickened racemes on axillary peduncles or short branches; calyx tube campanulate, lobes 5; corolla papilionaceous, pink; stamens 9; ovary unilocular, ovules numerous; pods oblong, wrinkled; seeds scarlet

Fl & Fr: Jan-May

- ABORTIFACIENT: One or two seeds are ground and the paste is mixed in a glass of water. This is administered daily once before breakfast for 3 days. (If 2 or more seeds are taken it leads to permanent sterility).

- ALOPECIA: Seed dal is ground into paste, mixed with coconut oil and applied on the affected areas thrice a day for one month.
- LEUCODERMA: Leaf juice is applied on the affected parts and exposed to Sun helps to reduce white spots.
- Leaf juice mixed with root juice of *Plumbago zeylanica* is applied on the spots and it helps to reduce gradually. It should not be applied on the lips.
- HOARSENESS OF THE VOICE: Handful of fresh leaves are chewed to clear the voice.
- CONTRACEPTIVE: One seed is kept in a small amount of jaggery, taken orally prevents conception for one year and two seeds are used for two years and more than two is not preferred since it leads to death.
- COUGH & *CATARRH: Two spoons of leaf juice is taken daily once or two spoons of leaf decoction is administered daily twice.
- One white seed paste is administered daily once.
- DANDRUFF & *HAIR GROWTH: Leaf paste is applied to the scalp before going to head bath till cure.
- MIGRAIN: Root paste of white variety plant is applied on the forehead.
- PARALYSIS, RHEUMATIC & SCIATIC PAINS: Seed paste is applied on the affected parts.
- REFRIGERANT: Dried leaf powder is administered to reduce heat.
- SKIN DISEASES: Quarter liter of gingelly oil mixed with one liter of leaf juice of *Eclipta alba* and two spoons of seed paste of *Abrus precatorius* is applied on all types of skin diseases.
- SNAKE BITE: Root paste is applied on the bitten area just after bite and a portion of it is given orally.
- STOMACHACHE: Five ml of leaf decoction is administered only once.
- STRONG HAIR: Leaves are ground into paste and mixed with gingelly oil and slightly heated and filtered and applied on the roots of the hair to grow.
- SWELLINGS: Handful of leaves slightly warmed with castor oil is plastered to reduce swellings.

4.2. *Butea Monosperma* (Lam.) Taub

Syn: *Erythrina monosperma* Lam.

VN: Moduga S: Palasha H: Palas E: Flame of the forest

Erect tree; stem crooked, branchlets densely tomentosa; leaves trifoliate, coriaceous; flowers large, lowest calyx tooth much shorter than the side ones, corolla orange-scarlet; petals silky-pubescent; standard petal lanceolate, wing petal falcate, keel petal veined; pod flat pubescent.

Fl & Fr: Apr – Jun

- BACKACHE & *LEG PAINS: Flower paste is administered to reduce backache and leg pains.
- BLEEDING IN URINARY CANAL: Flowers are presoaked in a glass of water overnight and mixed with sugar candy is administered daily.
- CONTRACEPTIVE: Seed paste mixed with honey and ghee is applied on the vagina during menses to avoid pregnancy.
- DYSPEPSIA: Leaf plates made up of leaves of this plant are used for eating meals daily.
- FREE URINATION: Flowers are boiled and made into paste and is applied on the navel.
- LEUCODERMA: Seed paste is applied on the affected areas.
- RINGWORM: Seed paste is applied on the affected areas.
- SWELLINGS: Flower paste is applied on the affected areas.
- WOUNDS: Stem bark juice is applied on the affected areas.

4.3. *Butea Superba* Roxb.

- VN: Palasamu S: Palasa H: Palas E: Bastard teak
- A large climbing shrub; leaves pinnately 3-foliolate; flowers in axillary or terminal racemes; calyx broadly campanulate; corolla much exserted; stamens diadelphous; ovary 2 per locule; pod follicle; seed obovate.
- Fl & Fr: Apr-May
- SNAKE BITE: Flowers are ground with the leaves of *Cinnamomum zeylanicum* and the paste is administered orally twice a day.

4.4. *Clitoria Ternatea* Linn.

- VN: Sanku pushpamu S: Aparijita H: Aparjit E: Butter fly pea

- Perennial climbing herb; leaves imparipinnate, 3-many foliate, opposite; flowers axillary, solitary or in clusters, deep blue and white; pod linear- oblong, flattened, apically beaked; seeds many, subglobose or compressed, reniform.
- Fl & Fr: Throughout the year
- ANAEMIA: One spoon of root paste is administered with water daily twice for 3-4 days. In serious conditions it is used for 10 days.
- MEMORY POWER: Half spoon of root powder mixed with honey is taken orally daily twice.
- MIGRAIN: Two drops of root juice is instilled into the nose.
- REGULAR MENSTRUATION: Two to three spoons of root decoction is administered daily once.

4.5. *Crotalaria Laburnifolia* Linn.

- VN: Pedda giligicha S: Muna
- Erect, much branched shrub, branchlets glabrescent; leaves trifoliate, ovate-elliptic, appressed, pubescent, beneath, subacute to cuneate, entire, apex mucronate; flowers yellow in elongated racemes; pods glabrous, stipitate.
- Fl & Fr: Aug- Jan
- SNAKE BITE: Two spoons extract of root bark and stem is administered only once immediately after bite.

4.6. *Crotalaria Pallida* Dryd.

- VN: Kandiri
- Erect under shrubs; branchlets woody; leaves 3-foliate, leaflets elliptic or obovate, cuneate, entire, obtuse-retuse, glaucous beneath; flowers yellow, in axillary and terminal racemes; sepals lanceolate; pods oblong, glabrescent; seeds 30-40.
- Fl & Fr: Dec-Apr
- NARCOTIC: Seeds are used in toddy preparation to increase intoxication.

4.7. *Desmodium Gangeticum* (Linn.) DC.

- Syn: *Hedysarum gangeticum* Linn.
- VN: Bhumi ippa S: Parsniparni H: Salpan E: Geethanaram

- Herb or undershrub; leaves chartaceous, unifoliate; leaflets very variable in size, ovate, ovate-lanceolate or elliptic, acute or acuminate at apex, entire, rounded, truncate or cordate at base, racemes axillary and terminal; flowers pink, blue or purple; pod sub falcate, pubescent with hooked hairs; seed small, obovate or transversely elliptic.
- Fl & Fr: Almost throughout the year
- ASTHMA & *TUBERCULOSIS: One spoon of root powder is taken with hot water.
- MIGRAIN: Root juice is inhaled.
- RHEUMATISM: One spoon of root decoction is administered daily once.
- SINUSITIS & COLD: Root powder mixed with an equal quantity of honey is administered daily once.

4.8. *Desmodium Pulchellum* (Linn.) Benth.

- VN: Konda anteetha S: Lodhrah
- Shrubs; stems 5-angled; leaves 3-foliolate, end leaflet largest, mucronate, margin undulate, rounded at the base; flowers white in axillary or terminal racemes; lomentum jointed.
- Fl & Fr: Sept-Mar
- CARBUNCLE & *WOUNDS: The leaves and tubers ground with the bark of *Moringa oleifera* and green banana and the paste is applied on the affected areas.
- GIDDINESS: The leaves are crushed and boiled with arrack and the paste is applied on the head and tied with cloth.

4.9. *Erythrina Variegata* Linn.

- Syn: *Erythrina indica* Lam.
- VN: Badita S: Paribhadrah H: Pharhad E: Indian coral tree
- A moderate sized tree; leaves 3 foliolate; leaflets membranous, terminal one largest, broadly deltoid, acuminate at apex, entire, truncate or slightly cordate at base; flowers red, in peduncled axillary or terminal racemes; pods torulose, constricted between seeds.
- Fl & Fr: Jan – Jun

- ACIDITY: Leaves boiled with equal quantities of fruits of *Phyllanthus emblica* and half cup of decoction is administered daily once.
- ANTHELMINTIC: Half cup of leaf juice mixed with one spoon of honey is administered twice a day for 3 days.
- BACKACHE: One spoon of shade dried stem bark powder is taken with one cup of rice washed water only once in night for 15 days.
- EARACHE: Four to five drops of leaf juice or stem bark juice is instilled into the affected ears.
- FERTILITY IN FAT WOMEN & *MENSTRUAL DISORDERS: Half cup of leaf juice is taken twice a day for 2-3 months.
- REFRIGERANT: Leaves dipped in the castor oil are mildly heated and plastered on the scalp to reduce high temperatures.
- RHEUMATIC PAINS: Leaf paste is mildly heated and bandaged on the painful parts.
- SCABIES: Stem bark paste is applied on the affected areas.

4.10. *Glycyrrhiza Glabra (Retz.) DC.*

- VN: Athimadhuram S: Madhukah H: Mulhathi E: Liquorice
- A tall, perennial undershrub; leaves compound, leaflets 4-7 pairs; flowers violet in racemes; pod oblong to linear, flattened; seed reniform.
- Fl & Fr: Throughout the year
- ALLERGY: Equal amounts of root powder and sugar are mixed and two spoons of it is administered twice a day.
- COUGH: One spoon of root powder mixed with half spoon of honey is made into pills. One pill is kept in the mouth and the juice is gulped.
- HICCUPS: Two spoons of root powder mixed with half spoon of honey is taken daily.
- STOMACH ULCERS: Equal amounts of root and stem bark paste is given orally daily once with water till cure.
- VIRAL FEVERS: One spoon of root powder is administered with one spoon of honey or one glass of milk.
- WOUNDS & *SWELLINGS: Root powder is mixed with slightly heated ghee and plastered on the affected areas.

4.11. *Indigofera Linnaei* Ali.

- VN: Chala pachi
- Prostrate spreading herb; leaves pinnately 5-9 or more foliate, small alternate; leaflets obovate, emarginated; flowers reddish, small in sub-capitate heads; pods oblong, hirsute.
- Fl & Fr: Jun-Feb
- ASTHMA: Equal quantities of leaves and roots are made into paste and one spoon of it is administered with water.

4.12. *Indigofera Tinctoria* Linn.

- VN: Neeli mokka S: Nilini H: Nil E: Indian indigo
- Shrub; leaves with 7-13 leaflets, tender branches bluish red in colour, ovate-oblong; flowers red or pink; fruit cylindrical; pods greenish grey when young and dark brown on ripening; seeds 10-12, globose.
- Fl & Fr: Feb. – Aug.
- BRONCHITIS, EPILEPSY & NERVOUS WEAKNESS: One g of indigo powder is administered with honey daily once.
- BOILS & WOUNDS: Leaf paste or leaf powder is applied on the affected areas.
- BURNS: Leaf paste is applied on the affected areas.
- DYSURIA & TYMPANITIS: Indigo powder mixed with water is applied on the stomach.
- REDUCE FAT BODY: One spoon of root powder is administered daily once in the early morning on empty stomach for 3-4 weeks.
- EPILEPSY & NERVOUS WEAKNESS: Two spoons of leaf juice mixed with one spoon of honey is taken thrice a day till cure.
- KIDNEY STONES: Quarter glass of root decoction is administered twice a day.
- PILES: Leaf paste is bandaged on the affected areas to reduce swellings, pain and bleeding.
- SWELLINGS: Indigo powder mixed with water is applied on the affected areas.

4.13 *Millettia Racemosa* (Roxb.) Benth.

- Syn: *Robinia racemosa* Roxb.
- VN: Gilla baddu

- Woody climbers; branches pubescent when young; leaves imparipinnate, petioles long, leaflets opposite, end leaflet the largest; racemes axillary and terminal, silky-brown dense flowered; corolla cream coloured; pods dehiscent; seeds red, ellipsoid.
- Fl & Fr: May-Mar
- FITS: One spoon of stem bark paste is administered with half glass of water daily once till cure.

4.13. *Mucuna pruriens* (Linn.) DC.

- Syn: *Dolichos pruriens* Linn.
- VN: Dula dama S: Kapi kacchu H: Kivach E: Cowitch
- Slender climbing annual herb, branches terete; leaves trifoliate, leaflets ovate; flowers dark purple with yellow shade on standard petal in long axillary racemes; pods curved at ends, densely silky pubescent with irritant hairs; seeds dark brown.
- Fl & Fr: Sept – Jan
- ANTHELMINTIC: Half spoon of seed paste or powder is administered with water.
- APHRODISIAC: Seeds and wheat grains are boiled in cow milk and eaten with ghee and left over milk is also taken orally.
- BLOOD DYSENTERY: Ficus fruit sized root paste is administered with water daily once till cure.
- *CONCEPTION: Unripe fruits and roots ground into paste are administered orally with water daily once.
- FILARIASIS: Root paste is applied on the affected areas till heal.
- *LEUCORRHOEA: Half spoon of seed powder is administered with water daily.
- OEDEMA: Seed paste is applied on the swollen body to reduce swellings and helps to remove water from the body.
- *PARALYSIS: One spoon of root powder is taken with milk once a day.
- *PARKINSONIA: Half spoon of seed powder is administered with cow milk.
- *RHEUMATISM & PARALYSIS: Quarter cup of root juice is administered daily once for one month.

- SCORPION STING: Seeds are sticked or seed paste is applied to the affected area.
- *WEAKNESS: Seeds with those of *Argyreia nervosa*, rhizome of *Acorus calamus* and sugar are made into powder. One spoon of it is administered daily once.

4.14. *Murraya koenigii* (Linn.) Spreng.

- Sy: *Bergera koenigii* Linn.
- VN: Karrivepaku S: Surabinimba H: Karipatha E: Curry leaf tree
- Shrub to small tree, branchlets green to grey; leaves aromatic, imparipinnate; leaflets oblique, elliptic-ovate; flowers white, in corymbose cymes; petals 5; stamens 10 (5 longer); ovary 2-celled; fruit berry; seeds 2.
- Fl & Fr: Apr-Sept
- *BURNS: Fine leaf paste is mixed with ghee or butter and applied on the affected places.
- *DIABETES & *SKIN DISEASES: Equal quantities of curry leaves and neem leaves are made into paste. One spoon of it is mixed with buttermilk and administered in the early morning on empty stomach to reduce blood sugar.
- DYSENTERY: One to two spoons of leaf paste mixed with half glass of butter milk is administered for 3-5 times a day.
- *FEVER: The extract taken from roots grown on ant hill and roots of *Solanum erianthum* are administered for fever.
- *INSECT BITE: Leaf juice mixed with lemon juice is applied on the affected area.
- ITCHINGS: Leaves and turmeric are taken in equal amounts and powdered. One spoon of it is given orally.
- KIDNEY TROUBLES: One spoon of root juice is taken twice a day.
- *RESPIRATORY PROBLEMS: Leaves ground into pickle by adding chillies, salt and onions and taken with rice.
- Dried plants are burnt and the flame is shown to the cock lice to die.
- One cup of leaves boiled in one and a half cup of coconut oil is filtered. This is used as hair oil.

4.Results And Discussion

Our study provides information based on 15 plant species of Euphorbiaceae families, commonly used for different type of diseases to cure by the tribal people of Narsipatnam Division, Visakhapatnam District, and Andhra Pradesh. . Leaves are the most frequently used plant part followed by fruits, latex, seed and oil, roots and stem bark. The common diseases treated using medicinal plants are abortifacient, alopecia, Leucoderma, contraceptive, cough, Dandruff, migraine, Earache, Helminthiasis, Skin disease, Ring worm, Toothache, Whitlow, Anthelmintic, Centipede bite, Jaundice, Join pain, Eye clarity, Ring worm, Cuts, Wounds, Boil, Swellings, Purgative, Galactogauge, Backache, Heel cracks and abscess etc., The detailed information of plant species with their parts used as traditional medicine for varies problems has also been presented in enumeration part. Out of the total 15 flowering species, 3 are trees, 6 shrubs, 2 herbs and climber 4. (Fig. 1).

The detailed information of plant species with their parts used as traditional medicine for varies problems has also been presented in above enumeration part. A number of medicinal plants are used traditionally by the tribal people to cure varies disorders. Most of the people in Narsipatnam Division dominated villages were almost free from serious disease problems. This could be due to their life style as they mostly remain exposed to environment.

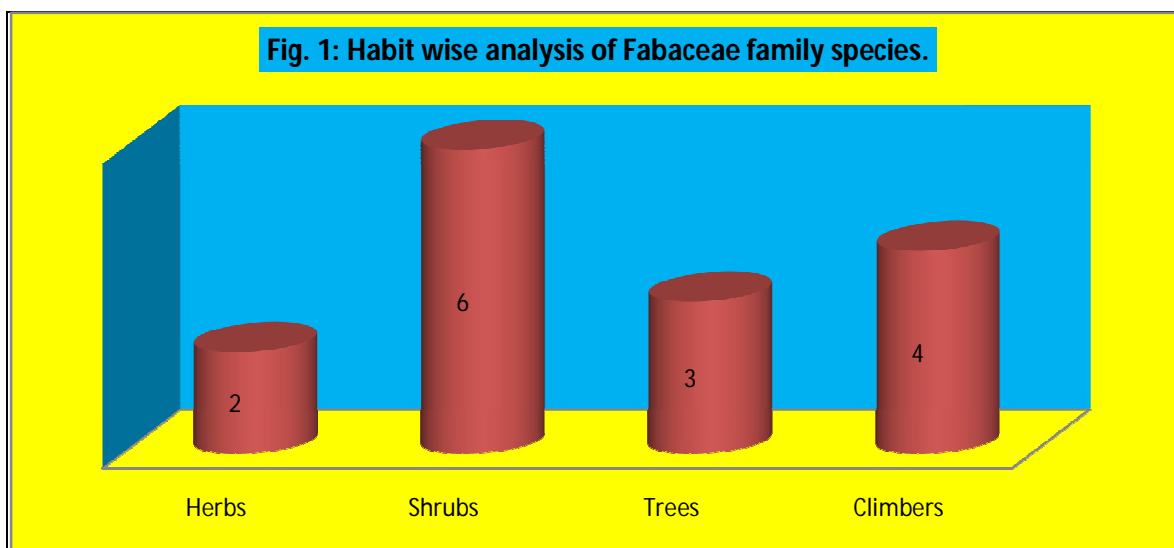


Figure 1

However, we feel that the indigenous knowledge and practices of the tribes on utilization of plant resources as medicine should be reported and preserved before they get lost due to increasing integration. In the information obtained, there were many details about the appropriate indication of each plant. There are plants that are traditionally employed for specific symptoms or conditions that often accompany itching, allergy and other skin disorders. This vast array of rare medicinal plants can be used for further research only if we ensure proper conservation of these endangered species. Thus researchers should observe ethno medical information before deciding which kind of screening should be used in the search of drugs for various diseases which may also be a potential source of modern drug industries.

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