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TRADITIONAL USES OF EUPHORBIACEAE FAMILY OF KHAMMAM DISTRICT, ANDHRA PRADESH, INDIA.

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ABSTRACT

An ethno-medico botanical survey of plants used in the treatment of different type of diseases of Khammam district, Andhra Pradesh was conducted. The information was collected on the basis of personal interviews with traditional healers, tribal doctors and old women of the society. The investigation revealed that 16 plant species belonging to Euphorbiaceae families and 9 genera are commonly used in the treatment of varies ailments.

KEY WORDS

Traditional uses, Euphorbiaceae family plants, tribal people, ailments, Khammam district.

1.INTRODUCTION

Every country has brought out herbal and materia medica with rich folk lore, recipes, prescriptions, etc. indicating the application of crude drugs to be very ancient. Rig-Veda, which is considered to be the oldest available record in India, dating back to 4000-5000 B.C. recounts some medicinal plants. Atharvaveda, another religious book of Hindus, has described about 2000 plants having medicinal properties. Sushruta Samhita (1000 B.C.) further records the medicinal virtues of 700 plants. Later on, there have been a number of workers from time to time who have described the medicinal importance of plants, namely Charak, Watts, Kirtikar and Basu, Chopra, Nadkarni, etc. our present day knowledge of Indian Materia Medica accounts for nearly 3500 species under various crude drugs, both of indigenous and exotic origin.

2. STUDY AREA

Khammam district came into existence on October 1, 1953. It was carved out from the taluks of Warangal and East Godavari districts and occupies an area of 16,029 km2 covering 46 Mandal Praja Parishads. It lies between 16° 45' and 18° 35' North latitude and between 79° 47' and 80° 47' East longitude. The total population of the district is 25, 78, 927 of which 6, 82,617 (26.46%) are scheduled tribes as per 2001 census. The district presents a rough topography with dissected uplands and hills, which sometimes exceed 600 m. Temperature varies from 10 to 44° C. The average rainfall of the district is 1045 mm. The main tribes of the district are Koyas, Gonds/Naikpods, Lambadas and Konda Reddis. The district has more than 52.6% forest land with 5 divisions. Dry deciduous, moist deciduous, riparian, scrub and grass land forest types are predominant.

3. MATERIAL AND METHODS

Interviews were conducted with tribal Group at their dwellings. During oral interviews specific questions were asked and the information supplied by the informants was noted. The data were verified in different villages among the interviewers showing the same plant sample and even with the same informants on different occasions. The knowledgeable informants were taken to the field and along with collection of

plants for the voucher specimens; the use of the plants as given by the tribal informants was noted.

The approaches and methodologies for ethnobotanical work, suggested by Jones (1941), Schultes (1960, 1962), Croom (1983), Jain (1987, 1989), Bellany (1993), Chadwick and Marsh (1994) and Cotton (1996) were followed. Emphasis was given mainly on intensive field work in selected tribal habitations.

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 Khammam District, and Andhra Pradesh, India. The detailed preparation of drug, dosage and mode of use is given under uses.

***Acalypha indica Linn.**

VN: Kuppinta S: Aritta munjariye H: Kuppe E: Indian Acalypha

Annual erect herbs; branchlets striate, ascending; leaves long petioled; both male and female flowers in axillary spikes, male flowers minute followed by a tuft of sterile flowers, the females scattered; fruit capsule; seed ovoid.

Fl & Fr: Throughout the year

Traditional Uses:

EARACHE: Leaf extract is slightly heated and instilled into the ear.

HELMINTHIASIS: Half spoon of leaf juice mixed with equal amount of Carum copticum seed juice is administered only once.

SKIN DISEASES & RINGWORM: Leaf extract mixed with small amount of lime is applied.

***TOOTHACHE:** Two to three drops of leaf juice is poured into the affected teeth side of the ear.

***WHITLOW:** Leaf paste is tied to the affected finger to reduce the pus and pain.

***Breynia retusa (Dennst.) Alston**

VN: Gudilingam chettu H: Kambi S: Kamboji E: Cup-saucer plant

Monoecious, spreading shrubs; leaves elliptic-oblong; flowers small in axillary fascicles; perianth 6-lobed, thick, fleshy; stamens 3; ovary half-inferior, 3-locular; ovules 6 per locule; capsules depressed-globose, fruiting perianth enlarged, spreading; seeds trigonous.

Fl & Fr: Feb-Aug

Traditional Uses:

Bridelia montana (Roxb.) Willd.

Syn: Cluytia montana Roxb.

VN: Sankumanu H: Geia S: Ekavira E: Feather foil

Trees, sometimes climbing; stems often spinose; leaves rhombic-obovate, acute at apex, long cuneate at base, usually glabrous; flowers pale green, in axillary or spicate, sessile clusters; drupe globose, greenish to black on ripening (Fig. 56).

Fl & Fr: Oct. – Mar.

Traditional Uses:

ANTHELMINTIC: Root bark is ground with dried ginger (2:1). A spoonful of paste is administered daily twice for 3 days.

***CENTIPEDE BITE**: Stem bark is pound with water and the paste is applied on the affected areas.

***JAUNDICE**: Stem bark mixed with that of Pterocarpus marsupium, Oroxylum indicum, Terminalia alata/Cipadessa baccifera and root tubers of Rubia cordifolia are made into decoction. Half glass of it is administered daily once on empty stomach.

Wood is used in making agricultural and household **implements**.

***Bridelia retusa (Linn.) Spreng.**

Syn: Cluytia retusa Linn.

VN: Mulla maddi H: Kattian S: Asana E: Spinous kinotree

A moderate sized tree; leaves simple, elliptic-obovate, obtuse; flowers reddish-yellow, in long terminal and axillary paniculate spikes; drupe round, black-greenish purple, fleshy at maturity and becomes hardened after drying; pyrenes 2.

Fl & Fr: Aug – Dec

Traditional Uses:

***JOINT PAINS & ARTHRITIS**: Half glass of stem bark decotion is administered daily once.

***Euphorbia hirta Linn**.

Syn: Euphorbia pilulifera sensu Hook. f.

VN: Reddy vari nana balu S: Pusitoa H: Lal dudhi E: Snake weed

An annual, erect or ascending, reddish hispid herbs; leaves opposite decussate, obliquely obovate-lanceolate; cyathia in terminal corymbose and axillary cymose heads; capsules hairy; seeds 4-angled, minutely furrowed, light reddish.

Fl & Fr: Throughout the year All over agency

CONJUNCTIVITIS: Plant latex is applied on the edges of the eyes as kajal.
COUGH: Half spoon of plant juice is administered daily in the morning with pepper.
EYES CLARITY: Two to three drops of latex are instilled into the eyes.
RING WORM, CUTS, *WOUNDS & BOILS: Plant latex is applied on the affected areas.
***SWELLINGS:** Latex of the plant is applied on the affected areas.

***Euphorbia heterophylla Linn**.
VN: Pala chettu
Herbs; leaves alternate, opposite below, obovate-rhomboid, serrate, acute, sparsely hairy, base acute; cyathia 6-10, cuneate, in terminal clusteres; male florets 12-15, bracteolate; female floret latterally pendulous; capsules green, globose; seed angled, bluntly tuberculate.
Fr & Fl: Most of the year
Traditional Uses:
***PURGATIVE**: The crushed leaves boiled along with castor oil and taken with rice. Leaves of four plants are used for adults and one for children.
***GALACTAGOGUE**: Young leaves and fruits are boiled and ground into paste with garlic is given orally daily once for a week.

***Euphorbia ligularia Roxb.**
VN: Chettu jamudu S: Snuhi H: Sehund, Thuhar E: Common milk hedge
A large fleshy, glabrous, branched or a small tree; leaves fleshy, deciduous, obovate, spathulata, shortly acute, involucres usually in threes on a short fleshy peduncle, the glands transversely oblong; fruit tricoccus, seeds greenish brown.
Fl & Fr: Jan-May
Traditional Uses:
***BACKACHE:** Latex is applied on the affected areas.
***HEEL CRACKS**: Latex and gingelly oil each taken in two spoons mixed with salt is applied on the affected areas.

***Euphorbia nivulia Buch.-Ham.**
VN: Akujamudu S: Snuhi H: Thor E: Leaf milk hedge
Armed, deciduous, succulent tree; branches whorled; leaves obovate to oblanceolate; cyathea paired in sub terminal lax twice forked cymes, involucure glands 5; capsules 3-gonous, glabrous, seeds 4- angular, smooth.
Fl & Fr: Jan-May
Traditional Uses:
***ABSCESS:** Leaves are dipped in castor oil, warmed and bandaged on the affected areas.
***CUTS:** Stem latex is applied on the affected parts.
EARACHE: Leaves are warmed and 2-3 drops of juice is squeezed into the ears.

***Euphorbia pulcherrima Willd. ex Klotz.**
Syn: Poinsettia pulcherrima Garhm.
VN: Pala sampenga E: Christmas flower
Unarmed shrubs or under shrubs; leaves ovate-elliptic to lanceolate, entire or sinuate-toothed or lobed, long petiolated, pubescent below; upper leaves narrower, greenish, bearing a large yellow gland on one side.
Fl & Fr: Most of the year
Traditional Uses:
***PAINS:** Stem containing latex is poked on the pained areas for relief.

***Jatropha curcas Linn.**
VN: Dola chettu S: Kananerada H: Safed-arnad E: Barbados nut
Monoecious shrubs; branchlets glabrous; latex watery; leaves orbicular-cordate, glabrous, base cordate; flowers greenish white, unisexual or polygamous, in axillary or terminal cymes; perianth lobes 5+5; stamens 10, biseriate, 5+5; ovary globose, 3-locular, ovules 3, pendulous; capsules subglobose or rugose when dry (Fig. 86).
Fl & Fr: Apr-Dec
Traditional Uses:
***ABSCESS:** Slightly heated leaves are bandaged on affected areas.
***ALOPECIA:** Seed dal ground with lime juice is pasted on the affected areas.
***COUGH:** One spoon of latex mixed with sugar is administered before day light.
***CUTS & WOUNDS**: Milky latex is taken into hands and rubbed into powder and applied on the affected areas.
GALACTAGOGUE: Two spoons of leaf decoction is given orally and fine leaf paste is applied on the mammae.
***HAIR OIL**: Seed oil is extracted from the seeds and used as hair oil.

***MUSCLE PAIN**: Seed oil mixed with coconut oil is used for massage.
***REFRIGERANT**: Oil is applied on the scalp and massaged.
RHEUMATIC PAINS: Stem bark is crushed and heated with castor oil and tied to the affected joints.
***SKIN DISEASES**: Seed oil is applied on the skin to cure eczema, scabies and other skin diseases.
***SWELLINGS**: The leaves are slightly warmed and plastered on the affected areas.
TOOTH DISORDERS & STRONG TEETH: Stem branches are used to brush the teeth.

***Jatropha gossypifolia Linn.**
VN: Nepalam S: Dravanthi H: Bhetenda E: Bronze leaved physic nut
Shrub; branchlets glandular hairy; leaves in close spirals, deeply 3-5 lobed, subcordate, lobes obovate, glandular hairy, apex acute; flowers in axillary cymes; capsule 3-lobed; seeds oblong, carunculate.
Fl & Fr: Throughout the year
Traditional Uses:
***ANAEMIA:** One tea cup of root juice is administered daily.
***BALDHEAD**: Leaves are crushed and massaged on the affected areas.

***Mallotus philippensis (Lam.) Muell.Arg.** Syn: Croton philippense Lam.
VN: Sinduri S: Recanakah H: Sindur E: Kamala tree
A small tree with grey or pale brown rough bark; leaves alternate, simple, ovate or ovate-lanceolate, entire or shortly serrate, red glandular beneath; flowers pale yellow, in terminal racemes; capsule red, glandular; seeds black (Fig. 93).
Fl & Fr: Aug – Feb
ANTHELMINTIC: Half spoon of fruit powder mixed with equal quantity of jaggery is administered once on empty stomach.
***CARBUNCLE**: Fruit paste is applied on the affected areas.
CONSTIPATION: Three g of fruit powder is administered daily twice.
***EYE DISEASES**: Seeds powder is pounded with Phyllanthus emblica fruit juice and made into tablets and sun dried. Tablets mixed with water are applied as kaajal daily.
***GONORRHOEA & *SYPHILIS**: Three g of fruit powder is taken daily once.
***LAXATIVE**: Three g of unripe fruit powder is taken daily in the early morning.
***PILES:** Three g of seed powder is administered daily.
Fruits used as **nail polish** by mixing the juice with honey.

***Pedilanthus tithymaloides (Linn.) Poit.**
Syn: Euphorbia tithymaloides Linn.
VN: Seema chitramulam E: Slipper surge
Succulent shrubs; stems green, shining, latex white; leaves subsessile, ovate or ovate-lanceolate, mostly acuminate, obtuse; cymes dichotomous, terminal or on short lateral shoots; cyathia slipper-shaped, bracts scarlet red; perianth lobes 0; ovules 3 per locule.
Fl & Fr: Jan-Mar
Traditional Uses:
***SKIN DISEASES**: Root paste is applied over the affected areas till cure.

***Phyllanthus amarus Schum. & Thonn.**
Syn: Phyllanthus niruri Linn.
VN: Nelasirli, Nela usiri S: Bhumyamalaki H: Bhu-Amla E: Phyllanthus herb
Annual erect, glabrous herbs; leaves distichous, resembling pinnate leaves, leaflets oblong or elliptic oblong, obtuse at both the ends; flowers unisexual; perianth lobes 4; stamens 4; carpels 3; capsules dry, depressed, globose; seeds vertically muricate, brown.
Fl & Fr: Throughout the year
Traditional uses
***ACIDITY**: Whole plant is ground and quarter cup of filtrate is taken daily once.
***CARBUNCLE & *SWELLINGS**: Leaf paste mixed with rock salt is applied on the affected areas.
DYSENTERY: Handful of leaves is eaten daily once till cure.
***DYSMENORRHOEA & MENORRHAGIA**: Four spoons of whole plant juice mixed with a pinch of pepper powder is taken during the 3 days of menses (Milk rice is to be taken as food).
JAUNDICE: Roots ground with the bark of Oroxylum indicum and half glass of extract is taken orally daily once.

Whole plant paste mixed with milk is administered daily or quarter cup of plant decoction is taken daily once.

MENORRHAGIA: One spoon of seed powder is given with water daily.

***SHIVERING FEVER & INTERMITTANT FEVER**: Ten g of root paste mixed with 1 g of pepper powder is taken daily once.

SKIN DISEASES: Whole plant ground with salt is applied on the affected skin daily.

***Phyllanthus emblica Linn.** Syn: Emblica officinalis Gaertn.

VN: Usiri chettu S: Amlaki H: Amla E: Indian gooseberry

Small or medium sized tree; leaves subsessile; stipules up to 0.1 cm long, ovate, finely acute; flowers unisexual, greenish-yellow, in axillary clusters; perianth lobes 6; stamens 3; drupes indehiscent, depressed-globose; seeds trigonous.

Fl & Fr: Mar – Jul

Traditional Uses:

APPETISER: One spoon of fruit paste is taken with ghee or honey.

***BLOOD PRESSURE**: Fruits with seeds are dried, powdered and mixed with jaggery and made into pills. One pill is taken daily before breakfast.

DIABETES: Quarter cup of fruit juice is given orally with a pinch of turmeric paste and honey daily once.

***HAIR FALL:** Fruit paste is applied on the head for half an hour before hair wash and it is repeated once a day for one week.

***MEMORY POWER & *LONG LIFE SPAN**: Fruit powder and gingelly powder of equal quantities mixed with little honey is taken daily early in the morning for one month.

***MENORRHAGIA:** One to two spoons of fruit powder is taken with water or equal quantities of honey.

***NOSE BLEEDING**: Fruit powder mixed with cool water and paste is applied on the scalp.

REFRIGERANT: Half cup of fruit juice mixed with 10 g of jaggery is administered daily once.

***URTICARIA**: Fruit powder and jaggery of equal quantities are mixed and 10 g of it is administered daily thrice.

***Ricinus communis Linn.**

VN: Amudam S: Eranda H: Erandi E: Castor oil

Monoecious shrubs; leaves alternate, palmately 6-10 lobed; flowers in terminal racemes; male flowers below, female flowers above; perianth lobes 5; stamens numerous; ovary 3-locular, ovules 3 per locule; capsules 3-lobed; seeds oblong with marbled, smooth, shiny, carunculate.

Fr & Fl: Throughout the year

Traditional Uses:

BACKACHE: Quarter cup of dried ginger decoction mixed with 1-2 spoons of castor oil is taken orally.

***JAUNDICE**: Five g of root powder mixed with honey is administered orally or ten leaves pounded with 20 pepper grains and paste is administered orally.

PILES: Quarter cup of decoction of three- fruit- powder mixture (triphala) (Terminalia chebula, Terminalia bellirica and Phyllanthus emblica) is mixed with one to two spoons of castor oil and administered daily once.

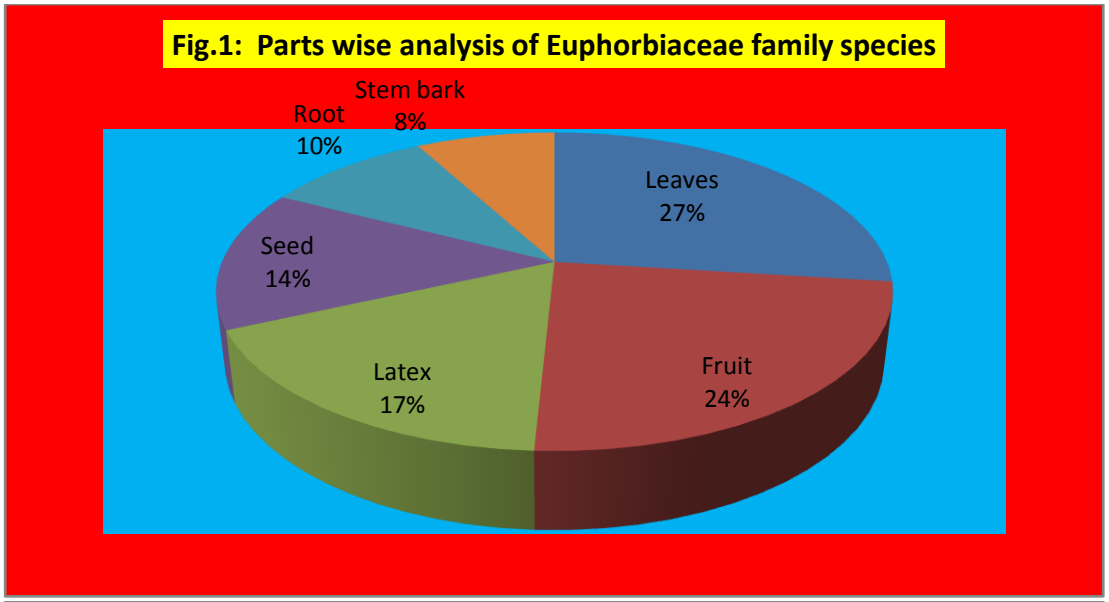
***REFRIGERANT & *EYE PROBLEMS**: Castor oil is massaged on the scalp and hair is washed with lukewarm water.

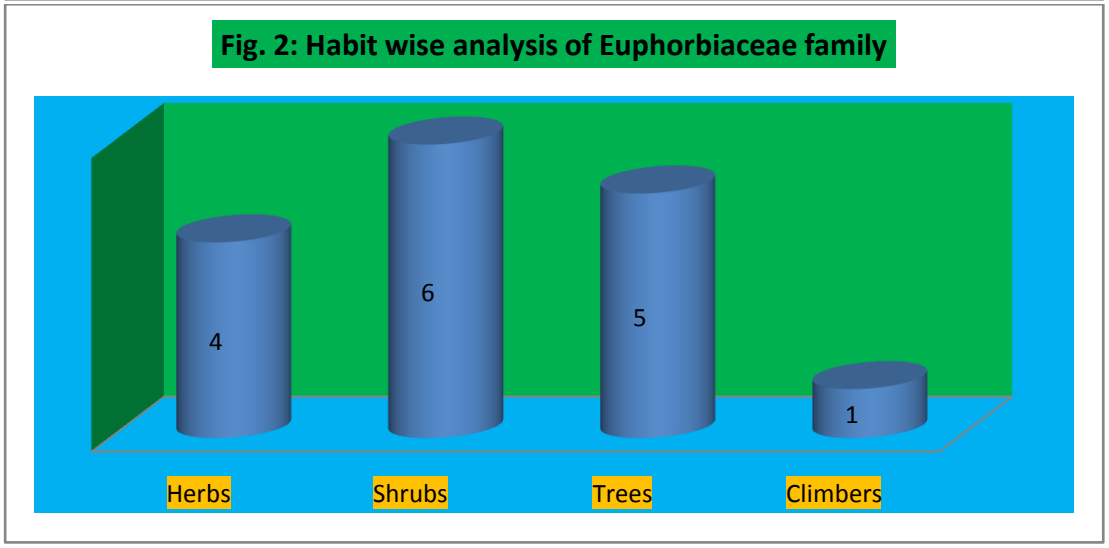
***WARD OFF EVIL SPIRITS**: Ash is kept on the leaves to take out evil spirits from the forehead of the patient by the witch doctor.

Seed oil is used as hair oil regularly to keep **hair strong and black**.

5. RESULTS AND DISCUSSION

Our study provides information based on 16 species belong to 9 genera of Euphorbiaceae families, commonly used for varies diseases by the tribal people of Koyyuru Mandalam, Visakhapatnam district, Andhra Pradesh, India. Leaves are the most frequently used plant part followed by fruits, latex, seed and oil, roots and stem bark (**Fig. 1**).





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 16 flowering species, 5 are trees, 6 shrubs, 4 herbs and climber 1. (**Fig 2**).

However, we feel that the indigenous knowledge and practices of the Koyyuru Mandalam 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. 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 varies diseases which may also be a potential source of modern drug industries.

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