



A REVIEW ON SOME TRADITIONAL MEDICINAL PLANTS OF NASHIK DISTRICT OF MAHARASHTRA

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ABSTRACT Medicinal Plants have been used from ancient time from thousands of years. They used to treat and prevent many type of diseases. Almost every portion of the plant has medicinal property. various secondary metabolites found in plants play important role for curing diseases. Plant shows properties like antibiotic, antiparasitic, anti-hemolytic, anti-oxidant, anti-inflammatory, anti-insecticidal etc. The traditional medicinal uses of 15 plant species belonging to 12 different families are reported in this article. They are used by Kokana tribes and rural folks of Nashik district, Maharashtra, for the treatment of various human ailments and disorders.

KEYWORDS : Traditional Medicinal Plants, Kokana community, Human health.

INTRODUCTION-

Since the Origin of human civilization medicinal plants and there by-products are used by tribal peoples for various purposes such as medicine, food, clothing, shelter, agriculture, pharmaceuticals, narcotics etc. More than 7000 plants are used in Indian systems of medicine such as Ayurveda, homeopathy, Unani, Siddha etc. in India there are over 300 major tribal communities. Tribal Population in Maharashtra is about 9 million. Which is of 9% of general population. The tribal have developed their own pharmacopoeia of their traditional knowledge about the medicinal uses of plants by trial and error methods. It is very Necessary to preserve the data of the traditional medicine for the benefit of present and future generation. The same research work has been done on the inventorisation and documentation of traditional knowledge, especially plant base medicine used by various tribes of India including Maharashtra. Kokana tribe it is one of the major tribe from Nashik district. In view of this the survey of medicinal plants used by Kokana tribe was undertaken.

Most of the areas of Nashik district is occupied by hilly region which have rich with diversity of vegetation mostly tribal and rural communities, depending on plant resources for their day to day life. The rural communities are well practiced with traditional knowledge and are using various parts of major, minor plants and tree species extensively for health care and other purposes. The present study, therefore intended to emphasize 15 ethno medicinal plant species belonging to 10 families with their local name of plant parts used as medicine in Deola, Kalwan and Surgana, regions in Nashik District of Maharashtra.

MATERIALS AND METHODS-

For the collection of information on plants used as traditional medicine by the kokana tribe. A questionnaires' was prepared and before interviewing their consent was taken from knowledge provider. For survey and collection of information frequent field visits was arranged. During field visits data on the medicinal uses was collected from local medicine men called Vaidu and Mukhia of the tribal settlement at Deola, Kalwan and Surgana regions of District in Maharashtra.

The medicinal plants collected during the survey were properly identified with help of floras preserved in the form of herbarium. The recorded data compared with Study of Dwivedi (2004), Jain (1991), Verma et.al. (1995), Maheshwari et. al. (1986) etc. During the study total number of 18 tribes were observed (Ref. Gazetteer of India, Maharashtra State, Rev. February, 5th, 2016) were visited which are spread in the Tahasils like Peth, Surgana, Igatpuri, Trambakeshwar, Kalwan, Dindori, Deola and Niphad.

DEMOGRAPHY-



MAP OF NASHIK DISTRICT

RESULTS AND DISCUSSION-

The Present Study Includes Information About 15 Plants Belonging To 15 Genera And Families Which Are Commonly Used By Tribal People For Regular Remedies.

The traditional systems of medicine together with Homeopathy and folklore medicine continue to play significant role in the health care system of population. The tribal population of India mostly dependent on use of medicinal plants therapy for the health care needs. The present work has attracted the potential use of several medicinal plants to cure many serious diseases of mankind and animals. The practice Aurvedic medicines recorded in Sanskrit by legendary figures of Indian medicine, like Charka, Sushruta, Nagarjuna, Atreya and Jeevaka. India has 15% of medicinal plants out 20,000 medicinal plants of the world. Well-known medicinal plants of India and there uses have been recorded in the important Indian medicinal plants' literatures (Kirtikar and Basu, 1935, Chopra et. al 1956, Jain, 1991 & 1993, Chaudhari et. al. 1989, Trivedi, 2002, Binu et. al 1992, Rastogi and Mehrotra, 1993). Total 62 medicinal plants used in Homeopathy and Ayurvedic preparations (Kulkarni D. K. and Upadhye A. S; 2007).

Ethnomedicinal study was conducted to document the indigenous medicinal plant knowledge used by traditional healers in South-Western Ethopia (Haile Yineger, Delenasaw Yewhalaw and Demel Teketay, 2008)

173 herbal plants with respective to local plant name, family use, plant parts used in different ailments by tribal local community of Jhunjhunu District of Rajasthan (Sharma O. P. et.al. 2007). Tribal people have lack scientific knowledge use the medicinal plants because they suffers from nutritional and health problems due to malnutrition, lack of educational facility and job opportunities (Sonowal C. J. 2010). 26 number of antipyretic plant species belonging to 20 families and 23 genera have been recorded (Manbendra Dutta Chaudhari, Meenakshi Bawari, L. Shyamali Singha 2010)

The study of Conservation of Ethno-medicinal plants of Mangrove forest in North Sumatra with conservation of total 48 medicinal plants, belonging to 23 families were studied by Onrizal and Mashhor Mansor, 2010.

The present article is focuses on 15 species of traditionally used medicinal plants which belongs to 12 families. The species like, *Mangifera indica* L -Amba (Family-Anacardiaceae), *Murrayakoenigi* (L.) Spreng- Kadipatta, (Family-Rutaceae), *Ocimum sanctum* L. -Tulas (Family-Lamiaceae), *Oxalis corniculata* L-Ambuti (Family-Oxalidaceae), *Pongamiapinnata* (L) Pierr. -Karanj (Family-Fabaceae), *Plumbagozeylonica* L -Chitrak (Family-Plumbaginaceae), *Polygonum glabrum* Willd. (Family-Polygonaceae), *Psoraleacorylifolia* L. -Bawanchi (Family-Fabaceae), *Ricinus communis* L-Erand (family-Euphorbiaceae), *Santalum album* L-Chandan (Family-Santalaceae), *Sapindus laurifolius* Vahl. Symb. -Ritha (Family -Sapindaceae), *Sida acuta* Burm.f.-Bala (Family -Malvaceae), *Solomon xanthocarpum* Schrad & Wendl. -Bhuiringni (Family-Solanaceae), *Semecarpusana cardium* Linn F. Suppl. -Biba (Family-Anacardiaceae), *Syzigium cumini* (L.) Skeels Jambhal (Family-Myrtaceae)

Sr. no.	Botanical Name	Common Name	Family	Habit	Part Used
1	Mangifera indica L	Amba	Anacardiaceae	Tree	All Parts
2	Murraya koenigi (L.)- Spreng	Kadipatta	Rutaceae	Tree	All Parts
3	Ocimum sanctum L.	Tulas	Lamiaceae	Herb	All Parts
4	Oxalis corniculata L	Ambuti	Oxalidaceae	Herb	All Parts
5	Pongami apinnata (L) Pierr	Karanj	Fabaceae	Tree	All Parts
6	Plumbago zeylonica L	Chitrak	Plumbaginaceae	Herb	Leaves
7	Polygonum glabrum	Willd	Polygonaceae	Herb	All Parts
8	Psorale acorylifolia L.	Bawachi	Fabaceae	Herb	Root, Stem & Leaves
9	Ricinus communis L	Erand	Euphorbiaceae	Shrub	All Parts
10	Santalum album L	Chandan	Santalaceae	Tree	All Parts
11	Sapindus laurifolius Vahl. Symb.	Ritha	Sapindaceae	Tree	All Parts
12	Sida acuta Burm.f.	Bala	Malvaceae	Herb	All Parts
13	Solonum xanthocarpum Schrad & Wendl.	Bhuiring ni	Solanaceae	Herb	All Parts
14	Semecarpus acardium Linn F. Suppl.	Biba	Anacardiaceae	Tree	Fruit
15	Syzygium cuminii (L.)	SkeelsJamhul	Myrtaceae	Tree	Fruit

1. Mangifera Indica L-amba (family-anacardiaceae)

Morphological Description:

Habitat - Terrestrial; Habit - Large tree, evergreen; Root - Tap root system; Stem - Erect, branched, woody, cylindrical and solid; Leaf- Leaves simple, petiolate, leaves oblong- lanceolate 8-20x4-6 cm, rounded or narrowed at base, entire acute or acuminate, glabrous; Petioles 1.5-5 cm long; Inflorescence- Terminal or axillary panicles; Flower - Bisexual, sometimes unisexual, pentamerous, bracts ovate, small; Calyx - Sepals 3-5, gamosepalous, sepals adnate to the ovary wall; Corolla - Petals 3-7 dull white, oblong 4-5 mm long deflexed with 3 strong orange, coloured ridges on inner face, disc fleshy, 5 lobed; Androecium - Stamen solitary, ditheous; Gynoecium - Carpels 3, out of three one remain functional, ovary superior, only one ovule matures and becomes seed; Fruit - Drupe., Flowering and Fruiting- Jan to June.

Uses:

- To brush our teeth with tender mango leaf and a pinch of salt granules which is supposed to clean the germs and keep the mouth fresh and odourless.
- Mango leaves included in all the poojas and festivals.
- Chew tender leaves to avoid bleeding in the gums which reduces pain in the tooth.
- Soak few tender leaves in water overnight and drink the water. This is supposed to help patients with diabetes.
- Eat a piece of raw sour mango with salt and honey, to overcome loose motion, constipation and indigestion.
- Eat raw mango pieces with black pepper and honey to avoid jaundice and other diseases related to stomach and liver.
- Eat mango with salt to overcome thirst and reduces the effects of sun stroke during summer. This is the reason during season, roasted or raw mango pulp mixed with sugar, water and cardamom is served as a drink.
- Raw mangoes contain more Vitamin C and B compared to ripe mangoes. It is advise to eat one raw mango a day for better blood circulation during the mango season. It also helps to overcome nervous disorders and helps in improving memory.
- One bowl of mango juice with a pinch of pepper serves as energy source to the body, increases inner glow of the skin and acts as diuretic.
- It also improves eye sight and immune power of the body, Mango can be used in pickles, chutney with daily meals. Kids love the jam that is prepared from Mangoes and sugar.
- Mango seeds mixed with buttermilk taken twice a day helps people with relief in piles and such disorders.
- During the mango season, drink a cup of milk after eating one ripe mango. The Sugar of mango and protein in the milk helps improving overall health.
- A milk mango shake used in the summer help people gain weight.
- Some of the flavonoids present in the fruit are believed to strengthen the immune system of human body.
- Dead bark pieces soaked in water for overnight and used in to cure jaundice.

2. Murraya Koenigi (L) Spreng- Kadipatta(family-rutaceae)

Morphological Description:

Habitat -Terrestrial; Habit - Shrub or small trees; Root- Tap root system; Stem - Erect, cylindrical, grey, solid; Leaves - Compound, imparipinnate, 15-30 cm long, petioles terete, pubescent; Leaflet 11-25, alternate, obliquely ovate or some what rhomboid, 2-5x1.2 cm, acuminate, minutely crenate; Inflorescence- Axillary or terminal corymb: Flower-Pedicellate, complete, 1-1.5 cm across, peduncles and pedicels 2-3 cm long, pubescent, white; Calyx - Sepals 5, 5/7 aduceu, triangular acute lobes, pubescent outside, Corolla-Petals 5, polypetalous, white, linear-oblong, 5-6 cm long, rounded at apex, Androecium

10 stamens, filament filiform, dilated at base, Gynoecium - Ovary with 1 or 2 ovules in each locule, Fruit-Berry ovoid, 8-10 mm long, rough with glands, purplish black, and berry, Flowering and Fruiting-Feb-June.

Uses:

- The green leaves are for curing dysentery, and the infusion of the washed leaves control the vomiting.
- The leaves, the bark and the roots of Murraya koenigi (L) Spreng. Can be used as a tonic and a stomachic.
- The leaves are extensively used for flavouring curries, chutneys, soups etc.
- The bark and root are used as stimulant and externally they are used to cure eruptions and the bites of poisonous animals.
- In Assam, juice of root is said to be good for pain associated with kidney.
- Leaves and root cure piles, allay heat of the body, thirst, itching and useful in leucoderma and blood disorders.
- The plant is credited with tonic and stomachic properties.
- The leaves of Murraya koenigi are highly valued cooking in curries with fish or coconut milk.
- Curry leaves are also known to be good for hair, for keeping them healthy and long.
- The green leaves are stated to be eaten raw for curing dysentery, and the infusion of the washed leaves stops vomiting.
- Although most commonly used in curries, leaves from the curry tree can be used in many other dishes to add spice.
- Their properties include much value as an antidiabetic, antioxidant, antimicrobial, anti-inflammatory, hepatoprotective, anti-hypercholesterolemic etc. Curry leaves are also known to be good for hair, for keeping them healthy and long.

3. Ocimum sanctum L. -Tulas (Family-Lamiaceae)

Morphological Description:

Habitat - Terrestrial; Habit - Erect herbs or undershrubs, 30-60 cm tall; Root - Tap root system; Stem - Erect, quadrangular branched, solid smooth, purplish; Leaf- Leaves simple, elliptic oblong, 2-8 x 1.5-5 cm, acute or sub acute at base serrate, obtuse or acute minutely gland dotted, pubescent on both the surfaces; petiole slender, hairy; Inflorescence - Verticillaster; Flower - In 15-20 cm long racemes of six flowered whorls closely disposed on pubescent axis, sweet scented, floral bracts broadly ovate, almost as long as road, sessile, pedicelate; Calyx bilabiate, upper lobe - 1 lobed, lower 4 lobed, ubular violet-green; Corolla - Bilabiate, upper lip of 4 petals and lower one netals, pink or purplish; Androecium - Stamen 4 didynamous, epipetalous, veper pair with small bearded appendages at the base; Gynoecium - Bicarpellary, syncarpus, style long, gynobasic, tetralocular with one ovule; Fruit - schizocarpic, consisting 4 nutlets; Flowering and Fruiting - almost throughout the year

Uses:

- A juice of 10-15 leaves with honey cures fever, cold with pain in ribs.
- Daily intake of 10-15 leaves gives relief from all the diseases.
- Juice of basil leaves along with ginger and betel leaf juice mixed in honey cures cold and cough.
- Seeds having cooling effect which is used in preparation of sharabat in summer.
- Whole plant used in asthma, bronchitis, piles, dysentery headache.
- Tulsi can give relief in cardiac pain and low B.P.
- Juice of 10-12 leaves with honey cure fever, cold with pain in ribs, thrice a day.
- For all type of cancer regular intake of 15-20 basil leaves is useful.
- A decoction of 15 leaves with rock salt is effective in stomachache, gas troubles and gastro-enteritis and asthma.

10. In case of toothache tulasi leaves with black pepper is used externally.
11. Juice of basil leaves along with ginger and betel leaf juice mired in honey can be taken to cure cold and cough.
12. Leaf juice is used as an antiperiodic, skin diseases and cure ear-ache.
13. Oil is antibacterial and insecticidal property.

4. *Oxalis Corniculata* L.-ambuti (family-oxalidaceae)

Morphological Description:

Habitat- Terrestrial; Habit - Perennial herbs; Root - Tap root system; Stem - Creeping and rooting at the nodes; branches erect or ascending 10-20 cm all; Leaf Leaves compound 3 - foliate, leaflet subsessile, obovate, 0.5-2x1.2-2.5 cm, cuncate at base hairy, petioles 3-8 cm long; Inflorescence - Cymose; Flowers- 2-8, in umbellate cymes borne on 0.5-8 cm long peduncles; yellowish; Calyx -5 sepals lanceolate - oblong, obtuse, hairy outside; Corolla - Petals yellow, 5 petals free or basally connate; Androecium - Stamens 10 in two alternate whorls, filament long and shoot alternating, connate at base; Gynoecium-Pentacarpellarysyncarpus, with a superior five locular ovary; styles 5. free and persistent, Fruit - Capsule; Seeds- transversely ribbed; Flowering and Fruiting-Almost throughout the year.

Uses:

1. The plant is used as convulsions in childrens and for healing fractured bones.
2. The ground leaves are eaten as chutney to help purify the blood, in treating, dizziness, caduceus and dysentery.
3. The juice of leaves is applied to open wounds.
4. The crushed leaves are used to treat children with mouth infections as well as treat infected navels of babies.
5. An infusion of leaves is used to treat induration of the breasts and watery vaginal discharges.
6. Use of leaves to treat body pains and internal bleeding.
7. Leaves used to treat wounds, sores and swelling beneath tongue.
8. An infusion of the leaves is used to cure convulsion in infants.
9. The whole plant is used in the treatment of influenza, fever, urinary tract infections, enteritis, traumatic injuries, sprains and poisonous snake bites.
10. The juice of the plant, mixed with butter, is applied to muscular swellings, boils and pimples.
11. The plant is a good source of vitamin C and is used as an antiscorbutic in the treatment of scurvy.
12. The leaves are used as an antidote to poisoning by the seeds of Daturaspp, arsenic and mercury.
13. The leaf juice is applied to insect bites, burns and skin eruptions.
14. A slimy substance collects in the mouth when the leaves are chewed, this is used by magicians to protect the mouth when they eat glass.
15. Yellow, orange and red to brown dyes are obtained from the flowers.
16. Leaf extract (15 ml.) is prescribed in the treatment of blood dysentery.

5. *Pongamia pinnata* (L) Pierr. -Karanj (Family-Fabaceae)

Morphological Description:

Habitat - Terrestrial; Habit - Smaller or middle sized tree; Root Tap root ntem, Stem - Erect, hard branches drooping glabrous; Leaf Leaves compound, pinnate 10-20 cm long, petioles 3-5 cm long stipules small, 5-7, opposite, ovate oblong or elliptic, 4-93-5 cm, acute or rounded at base, shortly acuminate, Inflorescence- Recemose; Flowers - In axillary racemes, shorter than leaves, pedicels 2-4 together, 4-6 mm long; Calyx - Sepals truncate or obscurely toothed, 3 mm long brown pubescent outside; Corolla - Petals pinkish white, 10-12 mm long; Fruit - Pods, woody, oblong- ellipsoid compressed, recurved mucronate; Seeds solitary, reniform, brown; Flowering and Fruiting-March to Aug.

Uses:

1. Root juice is used for curing sores and cleaning foul ulcers.
2. Root juice is given internally with equal quantities of coconut milk and lime water for treating gonorrhoea.
3. 5 gm of root powder mixed with honey and taken twice for 15 days which cure typhoid.
4. Oil extracted from seeds used in all types of skin diseases.
5. A bath taken from adding leaves removes rheumatic pains.
6. Root juice is used for strengthening gums and sores.
7. Root juice is used for cleansing foul ulcers and cleaning teeth strengthening gums and sores.

8. Fresh bark is used internally in bleeding piles.
9. A Root paste is used for to local application in scrofulous enlargements.
10. A hot infusion of the leaves is good for rheumatologic and for cleaning ulcer and wounds.
11. A bath prepared from leaves is used for relieving rheumatic pains.
12. Finding of an essential oil in seeds is significant in view of the popularity of seeds as a remedy for troublesome cough and the oil causes slight rise in blood pressure and slight relaxation of bronchial muscles.
13. Oil extracted from seeds is used in scabies, harps and other cutaneous diseases.
14. Flowers are useful in diabetes.
15. Seeds are useful in hydrocoele, anaemia, chronic fever and Inflammations.
16. Seeds are crushed and applied in hair to kill lice.

6. *Plumbago Zeylanica* L.-chitrak (family-plumbaginaceae)

Morphological Description:

Habitat- Terrestrial, Habit - Glabrous, undershrub, 1-15 tall, Root-Tap, 2.5-7.5x3-3.5 cm, rounded at base; above, petioles 8-10 mm long, with 2 basal stipuloid auricles; inflorescence Recemose; Flower- In axillary and terminal racemes combined into 20-30 cm long panicles; Calyx 8-10 mm long, glandular hairy outside, , very short; Corolla- White with 2-2.5 cm long narrow tube and lobes oblong, apiculate style glabrous, 5- fid, Fruit- Capsules, oblong, 5-6 mm long long acute, enclosed in calyx Seeds - Solitary, ellipsoid; Flowering and Fruiting-July to Oct.

Uses:

1. The roots are useful in theumatism, diseases of spleen, leucoderma, ringworm and scabies (Yunani).
2. Root increases digestive power.
3. It is made into paste with milk, vinegar or salt and water such paste may be applied externally in leprosy and other skin diseases.
4. Plumbagin has powerful germicidal action on bacteria and unicellular organisms.
5. Principle action of plumbagin is on the muscular tissue which stimulates in ones.
6. It stimulates the contraction of the muscular tissue of the heart, intestine and uterus.
7. It stimulates the secretion of sweat, urine and bile.
8. Root and root bark are bitter, cure intestinal troubles, dysentery, leucoderma, piles, bronchitis, vata and kapha.

7. *Polygonum glabrum* Willd. (Family-Polygonaceae)

Morphological Description:

Habitat- Aquatic or semiaquatic; Habit- Perennial herb; Root-Tap root system; Stem- Erect, herbaceous, weak branched solid, glabrous, 40-100 cm tall green with reddish brown tinge at base; Leaf- Leaves alternate, simple sessile, lanceolate, 7-25 x 1-3 cm, tapering at base, entire, finely acuminate, glabrous, gland dotted, petioles 3-12 mm long, stipular sheath, 2-3 cm long conspicuously veined; Inflorescence-Recemose; Flower-Pentamerous, in panicle slender racemes, peduncles glabrous; pedicels short, bract ovate with membranous margins; pinkish; Perianth-Tepals 5, polytepalous, segments oblong, obtuse; Androecium-Stamen 6-8 polyandrous, Gynoecium-Tricarpeal, syncarpus, ovary superior, unilocular, stigma trifid, style-2 connate at base; Fruit-Nut, nutletsbroadky ovoid, compressed, biconvex, black; Flowering and Fruiting- Sept. to April.

Uses:

1. An infusion of the leaves is used by the people to relieve pain in colic.
2. It is employed and remedy for fever.
3. Root stocks used for piles, jaundice, debility and consumption.
4. Infusion of leaves is given colic and as a febrifuge.
5. Fruits purchased and made into a kind of sattu.
6. The sun-dried and ground aerial parts Anti-inflammatory activity.

8. *Psorale Acorylifolia* L. -bawanchi (family-fabaceae)

Morphological description:

Habitat - Terrestrial; Habit -Erect annual herbs; Root-Tap root system - was Leaves compound petioles 6-10 mm long, gland-dotted, hairy, stipules lanceolate, persistent, leaflet ovate, lanceolate or elliptic 3.5-10.525-Inflorescence - Recemose; Flower - In dense, short axillary racemes, pedicels very short; Calyx 3-4 mm long hairy outside, upper teeth linear, lanceolate, lower ones ovate, twice as long as the upper; Corolla - Twice long as the sepals Pods ovate oblong compressed, black, Seeds solitary. unooth adhering to the pericarp; Flowering and

Fruiting-Sept. to Nov.

Uses:

1. The plant contains psoralens, which is used in the treatment of leucoderma or vitiligo.
2. It is recommended in the treatment of leucoderma, leprosy, psoriasis and inflammatory diseases of skin.
3. It is taken oral route of administration or applied externally in the form of ointment or paste.
4. Seeds are used as diuretic, anthelmintic and laxative.
5. Psoralens are photosensitizing agents and develop pigments in the skin under UV rays.
6. It is used as a hair tonic.
7. Root is useful in carries of teeth whereas leaves are good for diarrhoea.
8. Seed is also used externally to treat various skin ailments including leprosy, leucoderma and hair loss.
9. It improves hair growth, Psoralea fruit is the dried ripe fruit of Psoralea corylifolia. Psoralea is used externally to treat skin pigmentation and hair loss and internally for impotence, incontinence, frequent urination, asthma. The fruits are used as an aphrodisiac. The seeds are antiseptic and can heal wounds. On applying the extracts of the seeds, the tissues indenture and unite.
10. The fruits are used as an aphrodisiac. The seeds are antiseptic and can heal wounds.

9. Ricinus communis L-Erand (family-Euphorbiaceae)

Morphological description:

Habitat- Terrestrial; Habit- Small trees, 3-5 m tall; Root- Tap root system Stem: Erect, branched, herbaceous, terete, hollow, green purple; Leaf- Leaves imple alternate, palmately lobed (5-11), lobes ovate oblong, crenate- serrate, petioles 3.5-50 cm long with 1-3 apical glands; leaves suborbicular in outline 20- 40 cm across; stipules Inflorescence-Panicle cyme (male lower and female at apex); Flower- In terminal panicles consisting of subsessile cyme. incomplete, unisexual; Male flower-Staminate, male cymes 3-20 flowered perianth 5, polytepalous, slightly connate at base; Androecium-Stamens 5, polyandrous, stamen profusely branched with anthers, monotheous, basifixed, introse; Gynoecium-Absent; Female flower -Pistillate, female cyme 1-7 flowered; Perianth-Tepal 3, polyphyllous Androecium - Absent; Gynoecium- Tricar pellery syncarpous, trilocular with one ovule, style absent, stigma 3 and each is bifid, stigma red; Fruit - Regma, obtusely trigonous, schirocarpic, seeds 6, ellipsoid, carunculate at base, smooth, shining: Flowering and Fruiting Feb. to June.

Uses:

1. Seed oil is purgative used in skin diseases and antitode in food poisoning.
2. Oil is cathartic and mild laxative.
3. Oil is as abortifacient paste and ricinoleic acid used in contraceptive creams and jellies.
4. Atropine and cocaine for purpose are suspended in castor oil strong bactericide.
5. Oil is used in preparation of sulphorecinolate in tooth formulation being strong bactericide.

10. Santalum album L-Chandan (Family-Santalaceae)

Morphological description:

Habitat- Terrestrial; Habit-Small evergreen trees; Root- Tap root, which out suckers or haustoria into root of host plant (Partial root parasite); Stem Erect, drooping branches, woody, with brownish bark: Leaf- Leaves simple, opposite, elliptic lanceolate, 3-6x2-3 cm, acute at base entire, glabrous. petioles, Inflorescences-Cymose; Flower- in terminal or axillary panicle, cyme; peduncle and pedicels short purple; Perianth uniseriate. petaloid, distinct, brownish purple; Androecium- Stamens as many as perianth lobe, opposite and epiphyllous, filament short, Gynoecium Carpels 3-5, syncarpous, unilocular, style-; Fruit - Drupes, globose 8-10 mm in diameter. Purple black, shining seeds solitary globose; Flowering and fruiting. March to Oct.

Uses:

1. Leaf and stem are useful in jaundice, liver diseases, cardiac tonic and skin diseases.
2. Sandal oil used in diuretic, diaphoretic, refrigerant, expectorant complaints.
3. It is mainly used in the preparation of cosmetics, perfumes and incense sticks.

4. Sandal oil is strong antiseptic.

11. Sapindus laurifolius Vahl. Symb.-Ritha (Family -Sapindaceae)

Morphological description:

Habitat - Terrestrial; Habit- Middle sized tree; Root-Tap root; Stem-Erect, young parts rusty hard woody: Leaf- Compound, pinnate, 10- 25 cm long petiole short, pubescent, leaflets sub-opposite, 2-3 pairs, 5-18x2-10 cm, acute or obtuse at base; Inflorescence - Cymose; Flower- Regular, terminal, rusty tomentose panicles shorter than the leaves, males numerous, bisexual few. pedicels short, pubescent; Calyx - Sepals rotund- ovate, 5 cleft, 3-4 cm; Corolla - Petals white, lanceolate, slightly longer than the sepals, clawed and with lateraville 1 scales above the claw, disc concave with hairy margin; Androecium- Stamens 8, filaments, us; Gynoecium- Stigma 2-4 lobed, disc annular fleshy, ovary densely hairy, Fruit-Drupe, 2-3 lobed, clothed, glabrous, wrinkled when ripens, dark brown, 2-3 seed; Seeds blackish, smooth, 6-8 mm in diameter Flowering and Fruiting-Oct to Feb.

Uses:

1. Soapnuts have been used for washing in cosmetics and detergents.
2. Soapnuts have gentle insecticidal properties and are traditionally used for removing lice from the scalp.
3. Kernal extracts of Soapnut, disrupts the activity of enzymes of larvae and pupae and inhibits the growth of Aedesaegypti, a mosquito that spreads viral diseases.
4. The root is expectorant, used as collyrium in sore eyes and ophthalmia.
5. The fruit has a bitter bad taste useful in chronic dysentery, , cholera, tubercular glands and paralysis.
6. Seed used locally to stimulate the uterus in childbirth and to increase menstruation.
7. Root bark and stem bark contain saponin.
8. Fruit cures Tridosha", sedative to uterus.
9. Fruit is used as remedy in asthma, hysteria and epilepsy.

12. Sida acuta Burm.f.-Bala (Family -Malvaceae)

Morphological description:

Habitat- Terrestrial; Habit-Erect, branched, annual; Root- Tap root system Stem- Woody, much branched 0.3-1m tall; Leaf- Leaves lanceolate, serrate aneopules linear, lanceolate, longer than the petioles; Inflorescence cyme, Flower- Yellowish green, 0.2-2cm long, pedicels 1-2 axillary. complete: Calyx- 6-7mm long, lobes ovate, triangular, Corolla- Yellow, petals, cuneate, longer than sepals, polypetalous; Androecium- Stamens many monoadelphous, anthers reniform, monotheous; Gynoecium- Carpels Seeds- Hard, reniform, abovoid with endosperm: Flowering and fruiting-September to January.

Uses:

1. The pounded are applied locally to relieve cuts and bruises.
2. Sida plant is widely used in Indian alternative medicine philosophy since the time immemorial. Ayurvedic physicians prescribed the decoction of sida roots with ginger in intermittent fever.
3. The powdered root bark is administered with milk and sugar as treatment for urinary urgency and leucorrhoea.
4. Fresh extract of leaves of sida is used in dropsy and chronic renal failure in a dose of 20ml, two to three times a day.
5. Roots boiled in milk are used in a single daily dose for maintaining health. Paste of roots is used topically for treating inflammation.
6. Its extract is consumed to reduce body weight.
7. Crushed leaves of the plant are used as astringent for the treatment and dressing of wounds or skin injuries.
8. The extract of roots of sida plant is useful in healing wounds. The extract of the whole plant is reported to be beneficial in spermatorrhoea.
9. The consumption of the juice of sida is reported to improve sexual strength.
10. Roots are useful in nervous and urinary diseases, fever complaints.
11. Leaves are applied into cure testicular swelling and elephantiasis.
12. Decoction of leaves and root emolient; used for hemorrhoids and impotence.
13. Root removes tridosha; digestive and diuretic useful in fever, burning and urinary discharge (Ayurveda)
14. It is prescribed in infusion and in conjunction with ginger in case of intermittent fever.
15. The leaves when bruised are slimy and are put on the hand of midwives, when they are remove dead children from womb.

- Leaves are marshed in water and used for paralysed Children to help them to walk.
- Leaves are frequently used to cause abortion.

13. Solanum Xanthocarpum Schrad & Wendl. -bhuringni (family-solanaceae)

Morphological description:

Habitat-Terrestrial; Habit-A wild herb or undershrub, Root-Tap root system, Stem-Procumbent or trailing, yellowish green, branches many densely clothed with long sharp, 10-15 mm long prickles young parts stellate hairy: Leaf-Leaves simple elliptic to oblanceolate, 5-10 x 2-6 cm sinuate or subpinnatifid, prickly on both surfaces, petiole 1-2.5 cm long, prickly, Inflorescence - Cymose, flower - In extra axillary, few flowered cymes, peduncle and pedicels short, hairy, violet purple, Calyx - Densely stellate hairy, prickly outside; tube short, Teeth 7-10 mm long, acute; Corolla - Violet purple, 2-2.5 cm long, lobes deltoid - acute, hairy outside; Androecium - Anthers yellow oblong: Gynoecium syncarpus: Fruit-Berry, globose, yellow or white with green veins; Seed subreniform, 2-2.5 mm in diameter, glabrous, Flowering and Fruiting- June to Jan.

Uses:

- The roots, fruits and the whole plant are used for medicinal purpose. Externally, the instillation of vyaghrithaila into nostrils is effective in chronic sinusitis. Also, nasal administration of kantakari is beneficial in migraine, asthma and headache.
- The dried fruits are smoked in the form of cigarette and the smoke held up in the mouth cavity for some time ameliorates the dental infections.
- The fumigation of kantakari is helpful in piles.
- The paste applied on swollen and painful joints in arthritis, reduces the pain and swelling effectively.
- The decoction of the roots works well in cough, when given with honey. In colds and cough associated with bronchospasm.
- The combination of kantakari, jiraka and amalaki powders given along with honey effectively alleviates the acute broncho spasm.
- In women for irregular menstruation and dysmenorrhoeal. The white flowered Variety of kantakari (Laksmna) helps to promote conception in females.
- The herb is a stimulant to the heart and is a blood purifier, it is extremely beneficial in the treatment of cardiac diseases associated with edema.
- Half spoonful powder consumed at the morning which cure asthma.
- Leaves are good application for piles.
- The fruit has a bitter bad taste, laxative good in inflammations, asthma, and stone in bladder and sterility in women.
- Root in much esteemed as an expectorant and is used in cough, asthma, catarrhal fever and pain in chest.
- A decoction of root is given with addition of long pepper and honey in cough, and catarrh, with rock salt and asafoetida in spasmodic cough.
- Juice of the berries is also useful in sore throat.
- 2-Tolas of juice of fresh plant with 2- tolas of Hemidesmus juice are given in whey or diuretic and root with chiretta and ginger is given in decoction as a febrifuge.
- Steroidal alkaloid used in chest infections and rheumatism.
- The roots are used in asthma pains and cough.

14. Semecarpus anacardium Linn F. Suppl. -Biba (Family-Anacardiaceae)

Morphological description:

Habitat - Terrestrial; Habit- A moderate sized tree; Root-Tap root system; Stem - Erect, woody with resinous bark; Leaf - Leaves 7-24 by 4-12 in. obovate - oblong, rounded at the apex, apex coriaceous, glabrous above, ashy- Bey or buff or less pubescent beneath, with cartilaginous margins, base rounded, cordate or cuneate, Main nerve 15-25 pairs making a large angle with costa, petioles 1/2- 1 (1/2) long. Inflorescence - Panicles; Flower-Greenish white subsessile, fascicled in pubescent panicles which are equal to or shorter than the leaves, female panicles shorter than the males, pedicels short, bracts unceolate, pilose; Calyx - Segments about 1/24 in long pilose outside, Corolla - Petals 1/6-1/5 inch long by 1/12 in broad, ovate, acute; Androecium - Stamens 5- 6 inserted at the base of the broad annular disc; Gynoecium-Ovary in the male flowers rudimentary, hairy, in the female sub-globose densely pilose, crowned with 3 styles: Fruit - Drupe one inch long, obliquely avoid or oblong, smooth and shining, black when ripe, seated on fleshy receptacle or hypocarp about % in long, smooth and yellow when ripe; Flowering and fruiting-

September-January.

Uses:

- Single fruit is heated on flame of lamp and oil is dropping in the half cup of milk this is given in daily in cough.
- Hot needle penetrated into fruit and such oily needle apply on scratches of feet.
- Sweet fruits are given in fever and weakness.
- Fruit is acrid, hot, sweet, stays looseness of bowels, it removes "Vata", Kapha", ascites, skin diseases, piles, dysentery, tumours, fever, strengthens teeth and asthma.
- Rind of fruit cures "Vata", leprosy, bronchitis, ulcers, piles, tumours, ulceration (Ayurveda)
- The sweet fruits are carminative tonic, it lessens inflammation, stomatitis, piles, fever, weakness and paralysis.
- Pulp is tonic for piles.
- The oil is hot and dry, good for epilepsy and other nervous diseases (Yunani).
- The drug (Oil) is also of great value in asthma and more or less beneficial in secondary syphilis, haemorrhoids, neuralgia, epilepsy, anaesthesia, paralysis, psoriasis and little other cutaneous affection.

15. Syzgium cuminii(L.) Skeels Jambhul (Family-Myrtaceae)

Morphological description:

Habitat - Terrestrial; Habit-Large tree, reaching 20 m in height, evergreen; Root-Tap root system; Stem - Erect, woody, branched; Bark - Ash white: Branches - Terete, glabrous; Leaf- Leaves simple, opposite, oblong- elliptic, 8-16x4-6 cm, rounded or acute at base; glabrous on both surfaces; inflorescence - Panicle cyme: Flower - Small, in panicle cymes, peduncle short, pale green, subsessile, epigynous; Calyx-Calyx tube adnate to the ovary, funnel shaped, 4 - toothed: Corolla- Petals 4, rounded, white ovate -orbicular, 2-3mm long: Androecium-Stamen numerous, longer than petals, exerted, resent around mouth of calyx-tube, Gynoecium-Bicarpellary, syncarpous, 2 celled, Fruit-Berry, dark-violet, globose or ellipsoid; Seeds solitary, globose; Flowering and Fruiting - March to July.

Uses:

- Fresh juice of bark is given with goat's milk in the diarrhoea of children.
 - Fruit removes bad odour from mouth.
 - Dried seeds powder is said to control the sugar level (diabetes).
 - Seeds in combination with mango used in dysentery.
 - Ash of leaves used for strengthening the teeth and gums.
 - The fruit is sour, acrid sweet and used in enriches the blood, liver tonic, strengthen teeth and gums.
 - Recently the seeds have been used in diabetes.
 - Powder of dried seeds is said to diminish quantity of sugar in urine in diabetes (Ayurveda)
 - Seeds in combination with mango are astringent and used in dysentery.
 - Fruit removes bad smell from mouth.
- Fruit juice and seeds are used in diabetes.

Plate - 1



Mangifera Indica
L (Amla)



Murraya koenigi (L.)-Spreng
(Kadipatta)



Ocimum sanctum L. (Tulas)



Oxalis corniculata L (Ambuti)

Plate – 2



**Pongamia pinnata (L) Pierrs
(Karanj)**



**Plumbago zeylanica L
(Chitrak)**



Polygonum glabrum (Willd)

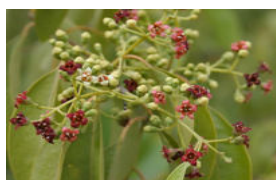


**Psoralea corylifolia
L.(Bawanchi)**

Plate – 3



Ricinus communis L(Erand)



Santalum album L(Chandan)



**Sapindus laurifolius Vahl.
Symb.(Ritha)**



Sida acuta Burm.f. (Bala)

Plate – 4



**Solonum xanthocarpum
Schrad & Wendl (Bhuiringni)**



**Semecarpus anacardium Linn
F. Suppl.(Biba)**



Syzgium cuminii (L.) (Skeels Jambhul)

REFERENCES-

- Betti, J. L. and S. R. Mbere Yemefa'a (2011): An ethnobotanical study of medicinal plants used in the Kalamaloué National Park, Cameroon, Journal of Medicinal Plants Research Vol. 5(8), pp. 1447-1458.
- Binu, S.; Nayar T.S. and Pushpagandan, P.(1992): An outline of ethnobotanical research in India; Jour. Eco. Taxon. Bot (additional series) 10, 405-428.
- Chaudhari, B.; Dasgupta, D. and Chatterjee (1989): Tribal Medicine, Regional Research and study centre, West Bengal
- Chopra, R.N.; Chopra I. C. & Verma B.S. (1956): Supplement to the Glossary to of Indian Medicinal Plants, Published and Information Directorate, CSIR, New Delhi.
- González JA, García-Barriuso M, Amich F (2010): Ethnobotanical study of medicinal plants traditionally used in the Arribes del Duero, western Spain, J Ethnopharmacol. 2010 Sep 15; 131 (2):343-55.
- Haile Yineger, Delenasaw Yewhalaw and Demel Teketay (2008): Ethnomedicinal plant knowledge and practice of the Oromo ethnic group in southwestern Ethiopia, Journal of Ethnobiology and Ethnomedicine 2008, 4:11
- Himanshu Sharma and Ashwani Kumar (2011): Ethno botanical studies on medicinal plants of Rajasthan (India): A review, Journal of Medicinal Plants Research Vol. 5(7), pp. 107-1112, 4 April, 2011.
- Lenin Bapuji j. and S. Venkat Ratnam (2009): Traditional Uses of Some Medicinal Plants by tribals of Gangaraju Madugula Mandal of Visakhapatnam District, Andhra Pradesh, Ethnobotanical Leaflets 13: 388-98, 2009.
- Jain, S. K.(1991): Dictionary of Indian folk medicine and ethnobotany, Deep Publ., New Delhi.
- Kirtikar, K. R. & Basu, B.D.(1935): Indian Medicinal plants, Vol.1-4 second edition, Lalit Mohan Basu Publ., New Delhi.
- Kulkarni D.K. and Upadhye A.S. (2007): Human Resources Development in Tribal areas of Maharashtra through potential medicinal plants, Ethnomedicinal plants of India edited by P.C. Trivedi, Aavishkar Publ., Distributors, Jaipur pp. 255-267.
- Madhuri Sharma and Pandey Govind (2009): Ethno medicinal plants for prevention and treatment of tumours, Int. Journ. Of Green Pharmacy, Year: 2009, Volume: 3 Issue 1, Page- 2-5 Maharashtra, Ethno Med, 4(1): 21-36 (2010).
- Manabendra Dutta Choudhury, Meenakshi Bawari, L. Shyamali Singha (2010): some Antipyretic Ethno-medicinal Plants of Manipuri community of Barak Valley, Assam, India, Ethno botanical Leaflets 14: 21-28, 2010.
- Meena K.L. and Yadav B.L. (2007): Some Ethnomedicinal plants of Rajasthan, ethnomedicinal plants of India edited by P.C. Trivedi, Aavishkar Publ., Distributors, Jaipur pp. 33-44.
- Nath, Subhan C. and Borah, Tuls (2007): Folklore medicinal uses of some plants in Golghat District of Assam, Ethnomedicinal plants of India edited by P.C. Trivedi, Aavishkar Publ., Distributors, Jaipur pp. 51-59.
- Onrizal and Mashhor Mansor, (2010): Ethnobotanical Study of Medicinal Plants from Mangrove Forests in North Sumatra, Indonesia, WETECOL @ (Wetland Ecologist), Assam, India, Ethno botanical Leaflets 14: 21-28, 2010.
- Patil D.A. (2007): Anti-inflammatory plants in Khandesh region of Maharashtra, Ethnomedicinal plants of India edited by P.C. Trivedi, Aavishkar Publ., Distributors, Jaipur, pp. 268-274.
- Rastogi, R. P. and Mehrotra, B.N. (1993): Compendium of Indian Medicinal Plants, Vol. II, CSIR, New Delhi.
- Survase S.A. and S.D. Raut (2011): Ethnobotanical Study of some Tree Medicinal Plants in Marathwada, Maharashtra, Journal of Ecobiotechnology, Vol 3, No 2 (2011).
- Sarkar S. and Sarma C.M. (2007): Ethnomedicinal plants used by muslims of Barpeta District of Assam, Ethnomedicinal plants of India edited by P.C. Trivedi, Aavishkar Publ., Distributors, Jaipur pp. 67-76.
- Sharma, O.P., Pareek, Aparna; Sharma Neelu and Pareek L.K. (2007): Medicobotanically important plants of Jhunjhunu, Rajasthan, Ethnomedicinal plants of India edited by P.C. Trivedi, Aavishkar Publ., Distributors, Jaipur pp. 367-391.
- Sonowal C.J. (2010): Factors Affecting the Nutritional Health of Tribal Children in Maharashtra Ethno Med, 4(1): 21-36, 2010.
- Trivedi, P. C. (2002): Ethnomedicinal plants of Rajasthan state, India, Ethnobotany, Aavishkar Publ., Distributors, Jaipur pp. 412-439.
- Studies on plants used in traditional medicine by bhilla tribe of Maharashtra:- S.Y. Kamble, S.R. Patil, P.S. Sawant, Sangita Sawant, S.G. Pawar & E.A. Singh.
- Study of tribal medicinal plants of Maharashtra:- Rupali N. Agme, Vaishali N. Agme.