

**ETHNOMEDICINAL STUDY OF SOME NATURALIZED HERBS AND SHRUBS
GROWING IN AGRA DISTRICT OF INDIA**

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ABSTRACT

An ethnomedicinal survey was conducted at some sites of Agra district of Uttar Pradesh, The studies revealed information about 23 plants used in the treatment of various ailments by the local people. These folk claims are reported by botanical and local names of plants together with their respective families, habits, habitats, description and their medicinal uses.

Figure : 00

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Introduction

Agra district is situated between 26⁰44¹ and 77⁰55¹N and 78⁰32¹ E on the southwest corner of Uttar Pradesh. The location of the sub-division has been, since long, very significant from the geographical, historical and strategic point of view. Of the two important rivers of Northern India, the Ganga and the Jamuna, it is Jamuna which passes through the district for a distance of nearly 71 km. The total area is 4835.5sq km. The important geological feature of the district is the great boundary fault that separates the Aravallis in the West from the Vindhya in the East. Though not visible on the surface, it may be traced with in the boundaries of district below the Alluvium.

There are several thousand drug yielding

plants all over the world. Most of the plants are known and utilized by herb doctors and ayurvedic vaid. Only a few drug plants are cultivated. These drug-yielding wild plants are popularly known as Jari-butis in India. The medicinal value of drug plants is due to the presence of some chemical substance in the plant tissue which produced a definite physiological action on the human body. The most important chemical substance are Alkaloids, Carbon compounds; Hydrogen, Oxygen, Nitrogen, Glucosides, Essential oil, Fatty acid, Resin, Mucilage. Tannin, gum etc.

The study of drug and drugs plants is called Pharmoco-gnosy and study of action of drug on an organ or Organisms is called Pharmacology. Ethnomedicinal Explorations Carried out with good Scientific base have led to the publication of many

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useful accounts of plants with medicinal properties¹⁻¹¹.

This paper gives information about for some naturally growing herbs and shrubs plants in Agra district and along with their, botanical names, plant habitats, plant habit, common name, description and plant parts used for preparation and medicinal uses.

Frequent field Surveys were conducted at 4 Sites Bichpuri (West of Agra), Chhalesar (East), Kailash Yamuna (North), Kheria Air port Area (South) of the district and plant specimens were collected to prepare a herbarium after collection and identification. The classification of drugs is based on the morphology of the plant organ from which the drug is obtained.

(1) *Abutilon indicum* : Distribution = This plant is commonly found in all the 4 sides (Bichpuri, Chhalesar, Kailash, Kheria) in waste open grounds., **Habit** = A Small shrub, 90-120 cm high., **Description** = Flower Orange, Yellow, Ripe Carpels 15-20, Seeds tubercied, black. **Hindi Name** = Kanghi., **Family** = Malvaceae., **Flowering time** = Aug.-Jan., **Fruiting time** = Jan. - Mar.

Uses = Drugs obtained from all parts of plant. In the rural areas, the peoples used leaves in case of bleeding piles. They are used root part in the treatment of **leprosy**. The seed are used in the treatment of Coughs.

(2) *Pedaliium muirex* : Distribution = It is found in moist shady places near Keetham Lake and Pohyia Ghat., Kheria., **Habit** = A diffuse, spreading or ascending, much- branched herb., 20-30cm tall., **Description** = Yellow fruits, Fruits 4-sided, abruptly narrowed at base, with 4, sharp, horizontal spines. **Hindi Name** = Bada Gokru, **Family** = Pedaliaceae., **Flowering Time** = Aug. - Sept., **Fruiting Time** = Sep. - oct. **Uses** = Whole the plant are used in various disease in human being. The fresh plant is given in disordered of urinary system such as **Gonorrhoea, Spermatorrhea, Impotence, Nactural Seminal Emission and Dropsy**. It the fresh plant is not available, the seeds are also used in above disease

(3) *Achyranthes aspera* : Distribution = This plant is found in all 4 sides and also in waste places, gardens and unused grounds. **Habit** = This is erect or subscandent herb, 30-100 cm tall., **Description** = This plant have a grenish white flower, Spike inflorescence, seeds sub-cylindrical, brown., **Hindi**

name = Chirchitta, Latzira., **Family** = Amarantaceae., **Flowering and Fruiting time** = For most part of the year.

Uses = Drugs obtained from all parts of plant. In the rural area, it is used **Piles, Colic, Boils** etc. The root part is used in **Pyrrhoea, Cough and Fever**.

(4) *Datura metel* : Distribution = This plant mainly found in Kailash, Bichpuri and near College Campus. This is also found along road sides and in the wastes places. **Habit** = The plant is erect, Glabrous herbs, 0.5-1.3 cm tall., **Description** = This plant have a large flower which is whitish purple on the outside and white with in funnel shaped, seed light brown, fruits armed with short spines. **Hindi Name** = Dhatura, **Family** = Solanaceae., **Flowering and Fruiting Time** = Dec.-Feb.

Uses = All parts of plant is used. The dried plant (leaves and twings) are smoked as an antispasmodic in asthma. Whooping cough, bronchitis etc. In the rural areas, the Juice of the fruits is a useful dressing for the scalp to check dandruff and falling of the hair. The people also used paste of seeds for decaying **Teeth, Piles, Fistula, Tumor and Parasitic Skin Disease**.

(5) *Solanum xanthocarpum* : Distribution = This is found all the 4 sites (Bichpuri, Chhalesar, Kailash, Kheria) along road sides, in waste places and open grounds., **Habit** = It is a prickly herb plant., **Description** = It have a violet flower and leaver have a spine, Fruits is green at unmatute state when ripe it change in yellow, seeds yellow in colour., **Hindi Name** = Kateli, **Family** = Solanaceae., **Flowering Time** = May-Aug., **Fruiting Time** = Aug. - Sept.

Uses = Whole the plant are used. It decoction is given in **Fevers, Coughs, Asthma, Gonorrhoea, Pain in the Chest, Heart Disease**.

(6) *Solanum nigrum* : Distribution = This is mostly found in Bichpuri Area, Kailash and Kheria Air Port Area and in the moist places of Chhalesar. **Habit** = A much branched herb, 30-100 cm tall. **Description** = This plant have Small, white Flowers, occasionally blue in drooping. It is green, turning red or black when ripe, seed yellow., **Hindi Name** = Makoy, **Family** = Solanaceae., **Flowering Time** = Oct.-Jan., **Fruiting Time** = Jan. - Mar.

Uses = Whole plant is used. In the rural area, It is used as in **Dropsy, Enlargement of Liver & Jaundice**. The leaf juice is used in **inflammation of the kidneys and Enlargement of Spleen**.

(7) *Calotropis pousa* : **Distribution** = This plant is commonly found on the road sides, along the railway lines and in open waste places of all the 4 sites., **Habit** = Perennial under shrub., **Description** = It has a red, pale silvery flowers and follicles recovered, smooth, turgid. Seeds flat, with a silky white coma. It has a white latex. **Hindi Name** = AK, **Family** = Asclepiadaceae., **Flowering Time** = Dec. - Apr., **Fruiting Time** = May - June.

Uses = Whole plant is useful. It is useful in **Skin Disease, Syphilis, Leprosy, Rheumatism** etc.

(8) *Cassia occidentalis* : **Distribution** = This plant found in Bichpuri, Chhalesae and also Kailash Area along the road sides and open waste places., **Habit** = An erect under Shrub, 60-100 cm high. **Description** = It have a yellow flowers, pods 8-12cm long seeds 20-30/ Pod, pale brown. **Hindi Name** = Kasudi, **Family** = Caesalpiniaceae., **Flowering Time** = July - Sept., **Fruiting Time** = Sept.-Oct.

Uses = All parts of plant are used. The root is useful in Ringworm, Elephantiasis, Cure for skin - bite, Heals wounds. The Fruit is a cure for Scorpion sting.

(9) *Croton banplandianum* : **Distribution** = This plant found in Chhalaser, Kailash, Bichpuri Area along the road side and also in open fields. **Habit** = An erect, diffuse, branched Under shrub, 30-100cm tall, **Description** = Seeds oblong, spongy, shining, with a white cap. **Hindi Name** = Kala bhangra, **Family** = Euphorbiaceae., **Flowering Time** = July-Sept., **Fruiting Time** = Sept.-Oct.

Uses = Only seeds is used in disease. It is used as good stimulant in **Bronchitis, Asthma, Paralysis and Joints** etc.

(10) *Argemone mexicana* : **Distribution** = This plant dominantly found in Bichpuri Area and also found in Kheria Air Port Area and along the road side, open waste places., **Habit** = A robust, branched, Prickly herb, 30-100 cm. High., **Description** = Flower yellow, leaves thistle like, spinous veins white, seeds numerous, globose, natted and black in colour., **Hindi Name** = Satyanasi, **Family** = Papaveraceae., **Flowering Time** = Oct. - Apr., **Fruiting Time** = Apr.-May.

Uses = Seeds of this herbs are good remedy for **Boils and Ulcers**. The plant juice is also used in **Leprosy Disease** in the rural areas.

(11) *Ocimum sanctum* : **Distribution** = This herb found all the 4 sites and also in gardens., **Habit** = An erect, much branched herb, 30-60 cm height,

Description = Flower White pinkish or purplish pink, hairy on the back, enlarging in fruit., **Hindi Name** = Tulsi, **Family** = labiatae, **Flowering Time and Fruiting Time** = Feb. - May.

Uses = The leaves part is used. Leaves used in a **Stomachic, Malaria, Liver Disorders**. The leaf juice is also given in Chronic Fever to check Vomiting.

(12) *Doerhaavia diffusa* : **Distribution** = This herb found in Kailash area, Bichpuri and also abundant in waste places, along waysides and on the ridge and also Poiya Ghat., **Habit** = It is more branched ascending herb 0.6 - 0.9 cm (Reaching), **Description** = Flowers Pink, Minute 4-10 together, back, side leaf silvery, **Hindi Name** = Lal Sant, **Family** = Nyctaginaceae., **Flowering and Fruiting Time** = Most part of the year.

Uses = Root pail is used. Its roots are good remedy for **Diarrhoea**. This roots of herb are eaten after Grinding.

(13) *Withania somifara* : **Distribution** = This shrubs found Kheria Air Port Area, Bichpuri, Chhaleser area also found waste land and open ground., **Habit** = A erect, branching under shrub, 60-150 cm high., **Description** = Flowers Greenish Yellow, seed reniform, Wrinkled, Pale brown. **Hindi Name** = Ashwagandha, **Family** = Solanaceae., **Flowering Time** = Jan. - Mar., **Fruiting Time** = Mar. - May.

Uses = root part is used. It is used in **Rheumatic Pain, inflammation of joints and Certain Paralytic Condition**. Root also used in **Hypertension and Nervous Disorders**.

(14) *Chenopodium album* : **Distribution** = This is found all the a sites of Agra District and also found waste places, along way sides and also cultivated for vegetable. **Habit** = An erect herb, about 30-60 cm high., **Description** = Seeds black, shining, smooth, It has a spikes., **Hindi Name** = Bathua, **Family** = Chenopodeae., **Flowering Time** = Dec.-Feb., **Fruiting Time** = Feb. - Mar.

Uses = The root part is used to improves the **Appetite, Abdominal Pains, Eye Disease, Throat Troubles, Pills, Disease of Blood** etc.

(15) *Indigofera tinctoria* : **Distribution** = This found in Bichpuri Campus, Kheria Air Port Area and also found growing as a weed in waste places., **Habit** = An shrub, 0.6-1 m high, **Description** = Flower pink plants Contain pods, which is cylindrical, pointed contained 12-14 seeded., **Hindi Name** = Nil, **Family** = Fabaceae, **Flowering Time** = July - Sept., **Fruiting**

Time = Sept. - Oct.

Uses = The root part is used in Hepatitis, promote the growth of hair, **Heart Disease, Tumours, Lucoderma** and also used by rural people in **Enlarged Spleen**.

(16) Phyllanthus niruri : **Distribution** = This herb mostly found abundantly in moist places of the Poiya Ghat, Kilash Area and also along the edges of irrigation channels and waysides., **Habit** = An erect annual herb, 30-60 cm height with numerous spreading branches., **Description** = Flowers yellowish, very numerous, small hanging down below the branch lets, Seeds trigonous longitudinal regular parallel ribs on the back, Pale brown colour., **Hindi Name** = Jaramla, **Family** = Euphorbiaceae, **Flowering Time** = June - Aug., **Fruiting Time** = Aug. - Sep.

Uses = In the remote area, the people uses its root for the **Jaundice**. The fruit also useful for **Tubercular Ulcers, Wounds, Sores, Scabies, Ringworm** etc.

(17) Eclipta alba : **Distribution** = This herb found in Bichpuri, Kailash Yamuna Water channels and also in the Kheria Air Port area along the water channel and common in waste places and on Road side., **Habit** = An erect, Prostrate annual herb., **Description** = Flower White, Rayed, Winged on the margin with warty excrescences. **Hindi Name** = Kala Bhangra, **Family** = Compositae, **Flowering and Fruiting Time** = Throughout the year.

Uses = The whole plant used in **Asthma and Bronchitis**. The plant also used in **Spleen, Stomatitis and Toothache, Fever and Internal Disease, Pain in the Liver** etc.

(18) Tribulus terrestris : **Distribution** = This herb found in Poiya Ghat, Kheria Air Port Area and also Tajganj Area., **Habit** = A procumbent herb plant, 30-60 cm long., **Description** = Flowers Yellow, Fruit has 3 spines each fruit have 2 seeds. **Hindi Name** = Gokru, **Family** = Zygophyllaceae., **Flowering Time** = July - Sept., **Fruiting Time** = Sept. - Nov.

Uses = The seeds part is used in **Natural Seminal Emission and Impotence** etc.

(19) Amaranthus viridis : **Distribution** = This herb found all the 4 side and also along road side and unused fields., **Habit** = An erect much - branched glabrous herb, 30-60 cm high., **Description** = Flower green in colour, seed black shining, lenticular., **Hindi Name** = Jangli Chauli, **Family** = Amaranthaceae, **Flowering and Fruiting Time** = July - Feb.

Uses = The herb is held in high repute as a remedy for snake-bite in the rural area.

Conclusion

Many people in rural areas or among aboriginals of remote areas have knowledge about the medicinal utility of the local flora. They inherit the knowledge from their elders since people of these areas often observe positive effects of the herbal treatment, they have strong faith in their own recipes. Due to this reason, the acceptability of these herbal drugs is quite high. But now a days man has drastically changed the landscape and disturbed its physical conditions. Some plants have already become extinct and there are many facing danger of extinction. Man has cut down forests for timber and for developing cropland and human habitations. Overgrazing by domestic animals that convert the area into desert. He has converted grassland into villages, cities, factories, tunneled mountains as for constructing roads and buildings. Man has altered biological communities mainly by changing his own relationship with plants.

Due to overgrazing or deforestation by human beings creates a worst situations to these valuable plants. A vast area of waste land, known as usar which is not fit fix vegetation is next to them, which causes the degradation of many medicinal plants. So it is necessary to take special approaches to save the vegetational wealth of the district.

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