

## ETHNOMEEDICINAL PLANTS OF FAMILY RUBIACEAE OF EASTERN U.P.

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### ABSTRACT

The present paper deals with some ethnomedicinal plants of family Rubiaceae of eastern Uttar Pradesh used for most frequently and traditionally in human health care of different ailments. In this work, 26 plant species were explored which belong to family Rubiaceae out of which some are herbaceous while most of them are woody shrubs and trees.

**KEYWORDS:** Rubiaceae, herbal medicines, ethnobotany, Eastern U.P.

Plants have since ever been a rich source of medication among the human civilizations. In India there exist several highly civilized communities residing near or in the holy lap of nature. The people of such civilizations mostly depend on plants for their daily needs as well as for their medication also. Use of Plants as traditional medicine is widely accepted and practiced by the Villagers, Vaidyas, Ojhas, and some other elderly people and the knowledge of it is culturally forwarded to the next generations.

This ethnobotanical exploration was done in eastern Uttar Pradesh to collect information about the plants generally used as medicaments among the people of this area. Eastern Uttar Pradesh forms a part of the middle Ganga plains between the Himalayan ramparts in the north and peninsular block in the south. It extends from 80°41'to 84°30'E and 23°45'to 28°30' N and cover an area of about 80,855 sq. km. It includes the administrative divisions of Varanasi, Gorakhpur and Faizabad (excluding Barabanki district) alongwith three tehsils viz. Soraon, Handia and Phulpur in Allahabad district. The eastern and south western boundary of the area is demarcated by the state boundaries of Bihar and Madhya Pradesh respectively while in north it is bound by the international boundary between India and Nepal. In the west, the western boundaries of Bahraich, Faizabad, Sultanpur and Pratapgarh district marks its limits.

The area is situated in a subtropical, continental interior belt of India where the year may be broadly divided into rainy, winter and summer seasons on the basis of meteorological conditions. This condition causes a rich biodiversity in such areas and a lot of plants tend to grow and it becomes necessary for us to know them well. The plants can very easily be known by their peculiarities and special features.

During the last three decades or so work has been initiated in several countries for the identification of useful plants. In India, institutions like National Botanical Research Institute (NBRI), Central Institute of Medicinal and Aromatic Plants (CIMAP), Central Council of Research in Ayurveda and Siddha (CCRAS), Central Council of Research in Unani Medicine (CCRUM) etc. are working very proficiently in this field. A number of workers have provided useful ethnobotanical information through their publications. Works of Ali ,(1996); Ali and Dixit, (1989); Ansari and Chandra ,(1992); Balodi (1988) ; Beg et al., (2005); Bhattacharya ,(1964) and Chopra et al.,(1956) have emphasized on ethnomedicinal uses of many plants.

This piece of work is a part of taxonomic and ethnobotanic study of family Rubiaceae found in eastern Uttar Pradesh. A very poor attention has still been paid on this family regarding its medicinal properties. Ali ,(1996); Beg et al., (2006); have explored and worked out on family Rubiaceae.

### MATERIALS AND METHODS

During a tedious survey of Rubiaceae taxa in the region it was investigated that most of the plants of this family are of great medicinal value. For the purpose the survey of plants of family Rubiaceae was made fortnightly for a year. The preference was given to those which are used as Ethno-medicines by the people of eastern Uttar Pradesh. For the purpose the investigations were made with rural persons who use these plants, so as to collect information about the usage of those plants. The plants were collected and their taxonomy was studied for their clear identification following Duthie ,(1960) and Hooker ,(1973).

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**OBSERVATION**

During the survey of Rubiaceae taxa in the region it was investigated that most of the plants of this family are of great medicinal value. Several ailments like ulcers, dysentery, athlete's foot, diabetes, whooping cough, bronchitis, asthma, migraine etc. are successfully cured by the use of plants. Some plants of family Rubiaceae are of miraculous importance which are used in treatment of snake bite, scorpion sting, regulation of menses and securing the birth of male child.

In this survey, carried out among the villagers of eastern Uttar Pradesh 26 such plants were explored which belong to family Rubiaceae out of which some are herbaceous while most of them are woody shrubs and trees. The plants of this family and their medicinal properties are discussed.

**ENUMERATION OF PLANTS*****Anthocephalus chinensis* Lam.**

It is a commonly known medicinal plant. Bark of this plant is used as tonic, febrifuge, antidiuretic and astringent.

***Borreria articularis* Linn. f.**

The root of this plant is used to cure stomach pain and regulates excessive discharges during menses, seeds have wormicide property and treat toothache.

***Borreria stricta* Linn. f.**

Root decoction of this plant is prescribed as emetic in poisoning cases. Leaf juice is used to cure ear pain. Leaf is used as poultice. Paste of flower buds is used as ointment on cuts and wounds.

***Catunaregam nilotica* Stapf.**

Fruits are used as safest emetic in alternative system of medicine as well as is used as a remedy of diarrhea and dysentery. The roots are frequently prescribed as paste in headache cases.

***Catunaregam spinosa* Thub. Tirveng.**

Root of this plant and fruits are used to lighten and consequently remove the scars of pimples. Some maids use it as purgative.

***Dentella repens* Linn.**

The leaves are used in case of blood ailments to purify the blood. It is also used to improve the eyesight and in constipation is prescribed as laxative.

***Gardenia gummifera* Linn.**

The plants as a whole are pasted and applied in bone fracture and dislocation on the suffered part as fomentation to reduce pain as well as to enhance the callus formation. In veterinary the paste of this plant is applied on the sores of cattle to repel insects from there. Gum released from stem and bark is very frequently used to treat toothache, dyspepsia and to disinfect the septic wounds. Gum is used to protect food grains from insect and mites.

***Gardenia jasminoides* Ellis.**

Root of this plant is used as purgative, an effective cure for indigestion and nervous disorders. It is also reported as antiseptic and antispasmodic.

***Gardenia turgida* Roxb.**

This plant is a remedy for indigestion in children. Bark juice is given orally to snake bite victims as an antidote and the paste is applied externally.

***Haldina cordifolia* Roxb.**

Bark of this plant is used as febrifuge, antiseptic and aphrodisiac. It cures inflammation, diseases of blood and skin. The juice of this plant is applied on sores to kill worms. The basal part of the stem is used as hepatoprotective in jaundice and other types of hepatitis. Root is given after menstruation to secure birth of male child.

***Hamelia patens* Jacq.**

The syrup of the berries is very effective in curing dysentery.

***Hedyotis verticillata* Linn.**

Paste of flower is applied to skin diseases like athlete's foot.

***Hymenodictyon orixense* Roxb.**

Powder of the root is given with cow's milk in bodily inflammation. Bark is used as powder to kill tapeworms and to cure dysentery.

***Ixora arborea* Roxb.**

Root and fruits are used by tribals to cure micturation and urinary problems of females. Root bark is effective in skin diseases and chest pain. Juice of roots and fruits is acclaimed as cure for nerve problems. Flowers pounded in fresh milk and is given to the patients to treat whooping cough. All the areal parts are effective in diabetes management.

***Ixora coccinea* Linn.**

Roots and flowers are used as curative for dysentery and ulcer. Upper parts of the plants are used to treat diabetes among most of areas.

***Meyna spinosa* Roxb.**

The decoction of whole plant is used by tribals in vertigo. In tetanus infection the root bark decoction is very much effective. Root paste is applied in painful urination. Leaf powder is an effective prescription to kill intestinal worms. It is also prescribed with black pepper to cure diphtheria. The powder of seeds has narcotic effect.

***Mitragyna parviflora* Roxb.**

Decoction of root has an efficiency to cure diabetes. The bark of this plant is prescribed in cases of colic pain and problems like peptic ulcers. The paste of bark is locally applied in muscular pain and leaf paste in case of swelling due to sprain.

***Morinda coreia* Buch-Ham**

Leaves locally applied to wounds and juice of leaves to gout. Fruit is very useful in asthma and dysentery. Fried fruits are taken to control the raised blood sugar level. Similarly the fruit juice is useful in diabetes. The decoction is useful as emmenagogue.

***Mussaenda glabrata* Hook.f.**

Root, leaves and flowers of the plant are ethnomedicinally very important. Roots are given with cow's fresh milk in white leprocy. Leaves are useful to cure jaundice. Whole plant is useful and curative for diabetes patients. Flowers are used to cure swellings and conjunctivitis and asthma also.

***Oldenlandia corymbosa* Linn.**

Decoction of plant is given in intermittent fever with gastric irritation and nervous depression. Plant is given in jaundice, hepatic diseases and as anthelmintic. Leaves as paste in burning sensation of soles and palms.

***Oldenlandia umbellata* Linn.**

Root and leaves are expectorant and given bronchial disorders.

***Paederia scandens* Lour.**

This whole plant is used, mostly leaves with tender twigs are used as anti arthritis, anti-spasmodic, astringent, carminative, anti emetic, emollient, expectorant. It is also indicated in asthma, diarrhea, diabetes, gout and seminal

weakness. Root ash is applied in various skin diseases. Leaf paste in a composition is taken leucorrhoea.

***Pavetta crassicaulis* Bremek.**

The root of this plant is bitter and is given in visceral problems and dropsy. The bark is used on the victims of epilepsy. Decoction and boiled leaves are used to cure hemorrhoids.

***Rubia cordifolia* Linn.**

The plant is very important and much valued ethnomedicine. It has properties like antidysentric, anthelmintic, astringent, carminative, expectorant and is used in cough, hepatic obstructions, indigestion, jaundice, ulcers, fracture, mental agony, obstructions in urinary passage and paralytic affections. The whole plant is used in diabetic treatment. Decoction of roots is given to relieve cough, cold and respiratory problems especially in infants. The oil extract of whole plant is used to cure eczema.

***Spermadictyon suaveolens* Roxb.**

Roots are used with mustard oil and applied on wounds. Roots are also used in treatment of diabetes and rheumatoid arthritis.

***Thecagonum biflorum* Linn.**

The whole plant is used for malarial fever and body pain. Plant decoction with paste of long peppers is prescribed for treatment of anemia. Plant decoction with common salt is used in migraine (Nervous disorder accompanied with vomiting). Leaf is boiled with mustard oil and is dropped in ear to cure purulent discharges.

**RESULTS AND DISCUSSION**

Rubiaceae is an essentially tropical woody family. It comes among the six largest angiosperm families having 637 genera and 10700 species. It occupies 4<sup>th</sup> position in India and does not find a place among the top ten families in Gangatic plain region.

Nevertheless, the total genera reported from our area (26) belong to 18 different tribes out of a total 44 tribes. The tribals use these genera as there general utility like food, fodder, medicine etc. Ethnobotanical data shows that most of the members of the family have great medicinal value and are being used since ages for the cure of various human ailments.

During this work it was realized that very little attention has so far been paid to the study of this important family. In this region and there is a dearth of literature on this subject. Thus there is a need for the revision of this family.

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