



SOME ETHNO-MEDICINAL PLANTS OF UTTAR PRADESH: A REVIEW

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Abstract: Ethno-botany is the study of the relationship between human beings and plants. Most commonly it refers to the study of indigenous uses of plants that have been proved beneficial both for the prevention as well as cure of various human diseases. The medicinal properties lie in plant roots, stems, leaves, flowers, fruits, seeds and sometimes an entire plant is used to cure various ailments like anemia, jaundice, smallpox, leprosy, antiseptic, cough, skin disease, cancer, piles, diarrhea, diuretic, low blood pressure, dysentery, headache, diabetes, asthma, toothache, purify blood, fever, madness, disorders, ulcer and others. This review emphasizes on the use of ethno-medicinal plants specifically by tribes of Uttar Pradesh.

Keywords: Diseases, Medicinal plants, Parts used, Tribal people, Uttar Pradesh.

INTRODUCTION

Bio resources and humans have intimate relationship since past and depend upon each other for existence. World Health Organization (WHO) defines this traditional or folk medicine as 'the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness' (Prakash and Verma, 2021). In Indian subcontinent, the plants have played crucial role in the socio-cultural development of human species concurrently in different parts of human civilization and exerted larger impact because of varied climatic conditions and diversified socioeconomic conditions (Pandey, 2019).

The traditional medicine is not only a source of healing, but the practice is also an important part of their religion and culture. So far as modern medicine is concerned, it is reported that more than half of the world's modern drugs are of biological sources (Prakash and Prakash, 2021).

The knowledge, which is mostly undocumented, is transmitted orally from generation to generation thereby restricted to a particular practicing family, tribe, or section of society, which has led them to the verge of extinction. Since due to various reasons, both natural resources and tribal culture are depleting at an alarming rate, therefore, there is an urgent need to explore and document this unique and indigenous knowledge before it is lost forever (Prakash and Yadav, 2020).

According to Sharma and Sharma (2014), over 95,00 wild species of plants are used by tribals for their requirements as food, medicine, fodder, fiber, gums, resins, dyes, perfumes and other purposes. A number of natural products have been used as lead compounds because of specific activity and low toxicity (Sanda *et al.*, 2011). *Boerhaavia diffusa* has a long history of uses by indigenous and tribal people and in Ayurvedic or natural herbal medicines (Dher *et al.*, 1968). *B. diffusa* root extract strengthens tones and balances the liver (Rawat *et al.*, 1997). *Catharanthus roseus* has been used to treat several diseases such as diabetes (Swanston-Flatt *et al.*, 1989), high blood pressure, asthma, constipation, and menstrual problem (Das and Sharangi, 2017). Babita and Solanki (2021) explained the benefits of *Prosopis cineraria*.

Traditional knowledge of plants always played a key role in health management of any country (Singh and Kumari, 2019). Nearly 80% of the world population depends upon traditional system of healthcare (WHO, 1993; Hamayun *et al.*, 2006; Kumar and Chandrashekar, 2011). More than 8000 plant species are documented as medicinal plants and are used by various rich heritage of knowledge on plant based drugs both for use in preventive and curative medicines (Singh and Singh, 2009). Hotwani and Mukharjee (2005) studied the medicinal plants of Burdwan, West-Bengal, India and identified 100 species of medicinal plants belonging to 64 families and 114 genera growing in different parts of Burdwan district. Jain *et al.* (2006) reviewed the medicinal flora of Madhya Pradesh and Chattisgarh. During floristic survey by Mishra and Pareek (2015), a total of 133 species representing 99 genera distributed in 46 families were recorded from Kota district of Rajasthan. Out of those species most of the species represent antioxidant, antibacterial, anti-inflammatory, antiulcer and many species also used to cure various diseases such as diarrhea, bronchitis, arthritis, kidney stone, urinary and skin disorders etc.

ETHNO-MEDICINAL PLANTS OF UTTAR PRADESH

Now days, keen emphasis is being laid on the traditional knowledge regarding application of bio resources in the indigenous healing practices

by tribal / ethnic people since ancient time (Prakash, 2017). Human beings have been using plants since long. Research workers are bringing to light additional information on the relationship between plants and man. Humans vital interest in plant is because of its primarily use as a source of food, shelter and clothing dates back to the origin of human civilization (Sharma and Pareek, 2021).

As far as Uttar Pradesh is concerned, its climate is favorable for diversity of medicinal plants. The average temperature that varies in the plains from 3 to 4°C in January; 43-45°C in May and June with three distinct seasons-winter from October to February, summer from March to mid-June and the rainy season from June to September and the tropical monsoon season, the rainfall in the plains is heaviest in the east and decreases towards the north-west, that makes this land rich zone of different medicinal plants.

Mishra *et al.* (2012) studied on ethno-medicinal plants used to cure different diseases by rural folks and tribes of North Eastern Tarai districts of Uttar Pradesh and he reported 68 plant species belonging to 41 families, among them 15 plant species were effective against Jaundice and piles. The people of village Lakshmanpura, district Jhansi (U.P.) normally use 12 plant species to cure various diseases. The leaves are used most frequently to cure wounds and they applied mostly on the external surface of the body (Rahul, 2013). Verma *et al.* (2007) highlighted the study of medicinal plants in an urban environment of Varanasi, Uttar Pradesh and reported that the traditional uses of 72 plant species by local inhabitants. A sum of 42 plant species were used for the treatment of various skin diseases by local folks in and around Pilibhit tiger reserve of Uttar Pradesh (Singh and Khare, 2020). Some indigenous plants act as anticancer agents (Prakash and Upadhyay, 2021).

Now day's importance of immunity booster plants and their products are continuously being enhanced since first wave of COVID-19, which has now been declared pandemic (Kumari and Shukla, 2020; Verma and Prakash, 2020). *Adina cordifolia*, *Azadirachta indica*, *Curcuma longa* and so many plants are used by rural and urban people to enhance the immunity in order to get

protection from COVID-19 pandemic. Author explored and collected the information about a large number of plants having ethno-medicinal

properties throughout the Uttar Pradesh, but only some of them are given in table 1.

Table 1: Some ethno-medicinal plants used by people of Uttar Pradesh, India.

S.N.	Botanical Name	Common Name	Family	Part(s) used	Application
1	<i>Abutilon indicum</i> L.	Kanghi	Malvaceae	Seeds, Root, Leaf	Cough, Dysentery, Fever, Leprosy, Toothache and Ulcer
2	<i>Acacia concinna</i> (Willd.) DC.	Shikakai	Fabaceae	Leaf, Bark, Fruit	Dandruff
3	<i>Abrus precatorius</i> L.	Kaincha	Fabaceae	Seed	Asthma
4	<i>Achyranthes aspera</i> L.	Latjeera	Achyranthaceae	Root, Leaf	Ringworm, Pimples
5	<i>Acorus calamus</i> L.	Safed banch	Acoraceae	Rhizome	Diarrhea, Dysentery
6	<i>Adhatoda vasica</i> Nees.	Adus	Acanthaceae	Flower, Leaf	Cough, Diphtheria, Jaundice, Low B.P.
7	<i>Ageratum conyzoides</i> L.	White weed	Asteraceae	Leaf	Allergic rhinitis
8	<i>Aloe barbadensis</i> Miller	Ghikanvar	Liliaceae	Leaf	Purgative
9	<i>Amaranthus tricolor</i> L.	Tampal	Amaranthaceae	Leaf	Inflammation, Diuresis
10	<i>Andrographis paniculata</i> (Burm.F) Nees	Kalmegh	Acanthaceae	Leaf, Root	Fever, Worm dysentery, Itching
11	<i>Annona squamosa</i> L.	Sitphal	Annonaceae	Leaf	Eczema
12	<i>Argemone mexicana</i> L.	Pili Kateli	Papaveraceae	Root, Latex	Wound, Leprosy
13	<i>Aristolochia indica</i> L.	Indian bertheort	Aristolochiaceae	Leaf, Root	Fever, Gastric stimulant
14	<i>Asparagus racemosus</i> Willd.	Satavar	Liliaceae	Root	Cough, Diarrhea, Anxiety, Dyspepsia
15	<i>Azadirachta indica</i> L.	Neem	Meliaceae	Bark, Leaf	Wound, Pimples, Leprosy
16	<i>Bacopa monnieri</i> L.	Brahmi	Plantaginaceae	Whole plant parts	Leprosy
17	<i>Bauhinia variegata</i> L.	Kachnar	Fabaceae	Bark	Skin ulcer
18	<i>Boerhaavia diffusa</i> L.	Punarnava	Nyctaginaceae	Root	Gonorrhea, Asthma
19	<i>Butea frondosa</i> Roxb.	Palash	Fabaceae	Seed	Leprosy
20	<i>Calotropis procera</i> (Ait.) Dry.	Madar	Asclepiadaceae	Latex, Root	Asthma, Diarrhea, Fever, Eczema
21	<i>Cannabis sativa</i> L.	Bhang	Cannabinaceae	Leaf, Seed	Wound, Dandruff
22	<i>Carissa carandas</i> L.	Karonda	Apocynaceae	Stem, Root	Leprosy, Eczema
23	<i>Cassia fistula</i> L.	Amaltas	Caesapiniaceae	Leaf	Ringworm, Itching
24	<i>Cassia tora</i> L.	Chakunda	Caesapiniaceae	Seed	Herpes, Eczema
25	<i>Catbaranthus roseus</i> L.	Sadabahar	Apocynaceae	Leaf, Flower, Root	Diabetes, Dysentery, Toothache, Low B.P.
26	<i>Chenopodium album</i> L.	Pigweed	Chenopodiaceae	Leaf	Stomach pain
27	<i>Cleome viscosa</i> L.	Wild mustard	Capparidaceae	Whole plant	Round worm
28	<i>Clitoria ternatia</i> L.	Aparajita	Fabaceae	Seed, Root	Purgative, Cathartic
29	<i>Curculigo orchioides</i> Gaertn.	Kali musli	Hypoxidaceae	Rhizome	Wound

30	<i>Curcuma longa</i> L.	Haldi	Zingiberaceae	Rhizome	Wound, Cough, Skin
31	<i>Cyndon dactylon</i> L.	Doob	Poaceae	Whole plant	Wound
32	<i>Cyperus rotundus</i> L.	Motha	Cyperaceae	Tuber	Fever, Diarrhea, Dysentery
33	<i>Datura alba</i> L.	Datura	Solanaceae	Seed	Asthma, Skin ulcer, Whooping cough
34	<i>Datura stramonium</i> L.	Duk	Solanaceae	Seed, Root	Anemia, Fever,
35	<i>Desmodium triflorum</i> L.	Kudaliya	Fabaceae	Leaf	Cough, Bronchitis, Wound, Dysentery
36	<i>Eclipta alba</i> L.	Bhingraj	Asteraceae	Whole plant	Eczema, Anti-ageing
37	<i>E. prostrata</i> L.	False Daisy	Asteraceae	Root	Aphrodisiac, Respiratory diseases
38	<i>Eucalyptus globulus</i> Labill.	Eucalyptus	Myrtaceae	Leaf	Inflammation
39	<i>Euphorbia birta</i> L.	Dudhi	Euphorbiaceae	Plant latex	Cuts, Wounds, Respiratory ailments
40	<i>Ficus benghalensis</i> L.	Bargad	Moraceae	Leaf	Skin burn, Astringent
41	<i>F. glomerata</i> Roxb.	Gooler	Moraceae	Fruit, Bark	Wound, Ulcer, Asthma
42	<i>Gossypium herbacium</i> L.	Kapas	Malvaceae	Seed	Cough, Constipation, Dysentery, Fever, Pain
43	<i>Hibiscus rosa-sinensis</i> L.	Gurhal	Malvaceae	Flower, Root, Leaf	Arthritis, Cough, Diabetes, Headache, Ulcer
44	<i>Hyptis suaveolens</i> Poir	Vilayti tulsi	Lamiaceae	Leaf	Headache, Insect bites
45	<i>Iberis amara</i> L.	Rocket candytuft	Brassicaceae	Seed	Asthma, Bronchitis
46	<i>Ipomea purpurea</i> L.	Tall morning glory	Convolvulaceae	Root	Backache, Sore muscle
47	<i>Jatropha curcas</i> L.	Jangli arandi	Euphorbiaceae	Fruit, Root, Leaf	Anemia, Diarrhea, Fever, Jaundice
48	<i>Lawsonia inermis</i> L.	Henna	Lythraceae	Leaf, Root, Flower	Anemia, Headache, Pain, Ulcer
49	<i>Leucas aspera</i> Willd.	Thumbe	Lamiaceae	Flower	Cough, Cold
50	<i>Mentha longifolia</i> L.	Mint	Lamiaceae	Leaf	Carminative, Stimulant
51	<i>Mirabilis jalapa</i> L.	4 'O' clock plant	Nyctaginaceae	Root	Skin allergy
52	<i>Nelumbo nucifera</i> Gaertn.	East Indian lotus	Nelumbonaceae	Flower	Fever, Cardiac tonic
53	<i>Ocimum sanctum</i> L.	Tulsi	Lamiaceae	Leaf	Ringworm, Earache
54	<i>Ranunculus sceleratus</i> L.	Blister butter cup	Ranunculaceae	Leaf	Asthma, Pneumonia, Skin disorder
55	<i>Rauwolfia serpentina</i> Bent.	Sarpgandha	Apocynaceae	Root	Hypertension, Intestinal disorder
56	<i>Sborea robusta</i> Gaertn.	Sal	Dipterocarpaceae	Stem	Wound
57	<i>Sida acuta</i> Burm.	Bariari	Malvaceae	Root	Cough
58	<i>Solanum nigrum</i> L.	Black nightshade	Solanaceae	Leaf	Dropsy
59	<i>Tamarindus indica</i> L.	Imli	Fabaceae	Fruit, Seed	Skin rashes
60	<i>Tinospora cordifolia</i> Willd.	Guruch	Menispermaceae	Whole plant	Bronchial diseases

61	<i>Terminalia chebula</i> Retz.	Harre	Combretaceae	Fruit	Chest pain
62	<i>Withania somnifera</i> L.	Ashwagandha	Solanaceae	Root	Asthma, Cough, Diabetes, Leprosy
63	<i>Ziziphus jujuba</i> L.	Ber	Rhamnaceae	Fruit	Asthma, Bronchitis, Eye disease, Fever

CONCLUSION

Ethno-medicinal plants contain phyto-chemicals especially alkaloids and proved their significant medicinal properties which are continuously being utilized to cure various diseases such as cough, dysentery, fever, leprosy, toothache, eczema, ringworm, cancer, arthritis, pain, headache, jaundice, eye disease, swelling, asthma, bronchitis, ulcer, insect bites and others. But due to lack of interest and awareness among new generation as well as their charms towards cities, there is possibility of losing this valuable traditional knowledge in future. It is the responsibility of each and every one to promote the conservation of ethno-medicinal plants.

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