

ETHNOMEDICINAL USES OF SOME WEEDS OF UTTAR PRADESH, INDIA

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Abstract: The present paper deals with the economic potential of plants growing as weed and unwanted plants. These are frequently used by the rural communities and urban poor people of Uttar Pradesh for various ailments. A total of 41 species of plants belong to 38 genera under the 22 families are enumerated from the state. Majority of such species are used for asthma, arthritis cuts & wounds, dysentery, skin disease, cough, cold, piles, fever, weakness, kidney disorder, diarrhea, eczema, snake bite, eye-ear trouble, nervous disorder, blood purification, gastric problems, swellings, leucoderma, liver disorder, hair disorder, gonorrheal disorder, urogenital disorder, jaundice, intestinal worms, aphrodisiac, chronic dysentery, old ulcer, toothache and stomach disorders. The data presented here include their botanical name with authority followed by family to which it belongs, local name, acronym of herbarium, where specimens are deposited with number, habit, flowering / fruiting period, plant parts used with purpose and mode of uses.

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Introduction

India, as a subcontinent harbours greater number of weeds as compared to any other adjacent country. This is primarily due to vast array of ecological habitats, climatic, edaphic and topographical factors. Weeds are unwanted plant growing in places where they are not required but majority of them are useful medicinally and economically. Several weeds spread like wildfire and grow abundantly and gregariously in the open spaces, roadsides and crop fields etc. and grow in all type weather conditions but winter and rainy seasons are most conducive for their growth. These weeds would be of great source of herbal medicines. The World Health Organization estimated that 80% of the world's population relies on traditional healing modalities and herbs (2002). Most of the traditional medicinal herbs usually grow as weed. According to Bell (1905) weed is a plant of outside places. Many weeds are aggressive, troublesome and undesirable elements of the world's vegetation.

Shaw (1956) stated that weed grow in places, where they are not desired. No plant is useless in nature. In fact, weeds are important from the standpoint of medicinal, allelopathic and food values (Oudhia and Tripathy, 1999). Maheshwari *et al.* (1981, 1986); Saxena and Vyas (1981); Dixit and Pandey (1984); Singh and Maheshwari (1985, 1989); Pandey and Verma (2002); Khanna (2002); Kumar *et al.* (2003); Maliya (2004, 2007); Prajapati and Verma (2004); Nigam and Kumar (2005); Upadhyay and Singh (2005);

Singh *et al.* (2007) and Prasant *et al.* (2010) contributed to the knowledge of medicinal plants including medicinal values of weeds of Uttar Pradesh.

Uttar Pradesh, at present, the fourth largest state of India lies between 23°52' - 30°25' N latitude and 77°3' - 84°39' E longitude. The state covers a geographical area of 2, 36,286 sq km and is divided into 71 districts (Figure.1). It can be physically divided into three regions *viz.*, Terai, Gangetic plain and Deccan plateau. The soil near the foothills in the Terai region is known as terai soil. The present study was carried out to provide a comprehensive account of these weeds having medicinal value in order to protect and propagate their utilization and cultivation with due consideration and proper planning. Besides the, objective of the study is to gather and prepare database on various aspects of medicinal weeds of the area.

Methodology

The study was carried out during the last two years (2010-2012) with field studies, herbarium consultation, interaction with the local peoples, ethnic communities, Vaidyas and Hakims with emphasis to the record and known the medicinal uses of weed found in different climatic zones of the state. The collected information was cross checked with the help of available literature. Detailed information regarding local names, part used and mode of administration was recorded in field note books. In addition to this field data including ethno-medicinal uses of plants available

on the herbarium sheets label housed in the herbarium of BSI, CRC Allahabad (BSA) have been recorded and the available information in this regards if any have been provided and specified. It is hoped that this data will be useful in control of weeds as well as amelioration of poor people living in villages/ rural/ remote areas, where health seines are still inadequate and if taken up for cultivation, may prove to be a source of earning and upliftment of their economic condition.

Enumeration

The data presented here include their botanical name with authority followed family to which it belongs, local name, acronym of herbarium, where specimens are deposited with number, habit, flowering/ fruiting periods, plant parts used with purpose and mode of uses.

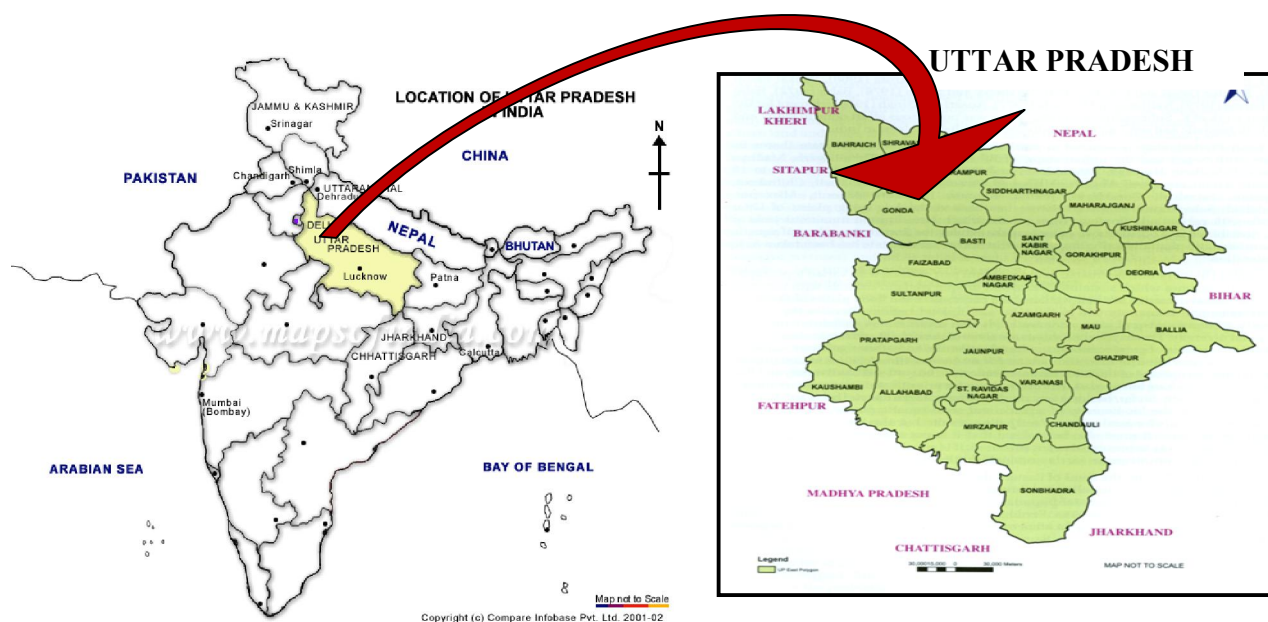


Figure1. Map of India (Left) and map of state Uttar Pradesh (Right) covered by the medicinal weed flora.

Discussion and conclusion

A total of 41 species distributed in 38 genera, belonging to 22 families were documented for medicinal purpose study. The most common families are found in Amaranthaceae (7 species), Asteraceae (5 species) and Fabaceae (5 species), Euphorbiaceae and Solanaceae (3 species each) and Acanthaceae (2 species). Rest of the families were represented by single species. The information documented 31 elements, such as diarrhea, dysentery, fever, stomach disorders, piles, asthma, jaundice, skin disease, rheumatism, diabetes, liver disorders, etc. Weeds are tremendously grow in crop fields and these problems are almost always face the every farmer but now a days these problematic, unwanted weeds can one of the major additional source of the Ethnomedicinal importance of the human diet. These weeds are also used vaidyas for different formulation and maximum pharmaceutical industries to synthesis different drug from weeds. Those plants we call the unwanted weeds now in future that plant we will have been call edible food or medicinal plant and they are not going to cut and cultivate fields. Therefore, automatically increase the biodiversity of weeds and used for the welfare of human health and will be able to cure different major and miner diseases.

Table: Enumeration of weeds with botanical name and other details					
Botanical name/Family/Local name / Herbarium acronym; Coll. No.	Habit	Flowering /Fruiting Periods	Parts used	Type ailments of Treated	Mode of administration and dose.
Abutilon indicum (L.) Sw./ Malvaceae/ 'KANGHI'/ BSA-48883	Shrubs	September - April	Leaf	Dysentery	Fresh leaves are crushed and 5 ml of the extract is mixed with one tea spoonful of honey and taken orally thrice daily for 3 days.
			Root	Weakness	10 g fresh roots are crushed and taken along with milk for few weeks.
Aerva lanata (L.) A.L. Juss. ex Schult / Amaranthaceae/ 'GORAKH GANJA'/ BSA-61162	Herbs	July - April	Root	Kidney disorder	15 ml decoction of fresh roots is taken orally twice daily for two weeks or depending upon the relief/cure.
Ageratum conyzoides L. /Asteraceae/'BHANGRA'/BSA-50735	Herbs	September - March	Leaf	Sore and cuts	Fresh leaves are crushed and externally applied on affected parts for few days.
Alternanthera sessilis L./ /Amaranthaceae/'GURRA BHAI'/ BSA-57542	Herbs	Throughout the year	Whole plant	Diarrhoea	Whole plant is crushed and mixed with one tea spoonful honey and taken twice daily for 5 days.
				Skin diseases	Paste of whole plant is externally applied on the skin.
Alysicarpus monilifer (L.) DC./ Fabaceae/'GABHOLAN'/BSA- 30680	Herbs	August - June	Root	Eczema	Fresh roots are grounded and externally applied on the affected parts.
Amaranthus spinosus L. /Amaranthaceae/'CHAULAI'/ BSA- 69858	Herbs	Throughout the year	Root	Snakebite	Fresh roots are grounded and externally applied on the affected area.
Amaranthus viridis L./ Amaranthaceae/'Chaulai'/BSA- 3806	Herbs	Throughout the year	Leaf	Piles	Cooked fresh leaves taken twice daily for a fortnight for better relief.
Argemone maxicana L./ Papaveraceae/ 'SATYANASHI'/ BSA- 869.	Herbs	January - December	Latex	Eye	Latex of plants is directly applied on the eyes for control of white patches.
			Seed oil	Eczema	Seeds oil is directly applied on affected part.
Bacopa monnieri (L.) Wettst./ Scrophulariaceae/ 'BRAHMI' / BSA- 58430	Herbs	July - April	Whole plant	Nervous disorders	Whole plant dried and made into powder, one tea spoonful powder mixed with cow milk given orally twice daily for few days.
				Fever	15 ml decoction of whole plant is taken twice daily for 7 days.
Barleria prionitis L./ Acanthaceae / 'KATSARIA'/ BSA-13429	Shrubs	December - March	Leaf	Fever	Fresh leaf is taken orally with ginger for 7 days before sun rise.
Boerhavia diffusa L./ Nyctaginaceae/ 'PUNARNAVA'/ BSA-4076	Herbs	October - April	Whole plant	Kidney stone	Decoction of whole plants is prepared, 10 ml of which is taken twice daily for one month.
			Leaf	Piles	7 fresh leaves are directly chewed before sun rise for 7 days.
Cardiospermum halicacabum L./ Sapindaceae/'KANPHUT'/ BSA- 6405	Climbers	Almost throughout the year	Leaf	Ear trouble	2-3 drops of fresh leaf juice put into ears for cure of earache.
Celosia argentea L./ Amaranthaceae / 'MURDHA'/ BSA-66867	Herbs	August - December	Leaf	Blood purification	Fresh leaves are crushed and taken as of porridge in the morning (about 10-15 g) daily for a month.
Cleome viscosa L./ Capparaceae / 'HURHUR'/ BSA-9790	Herbs	Almost throughout the year	Leaf	Cuts/ wounds/swellings	Leaves boiled with ghee, cooled and applied to the affected parts. Leaf paste also applied to reduce swellings.

			Seed	Gastric problems	Decoction of seeds (10 ml) is taken daily once for 7 days.
Commelina bengalensis L./ Commelinaceae/ 'KANKAUA'/ BSA-58403	Herbs	August - January.	Whole plant	Dysentery	Whole plant is crushed and 5 ml extract is mixed with one tea spoonful of honey and taken orally twice daily for 2 days.
Crotalaria hebecarpa (DC.) Rudd /Fabaceae/ 'CHIPKI'/ BSA-1260	Herbs	July - March	Whole plant	Dysentery	Paste of whole plant mixed with curd and orally given once in a day for 2 days.
Cullen corylifolia (L.) Medik./ Fabaceae/ 'BABCHI'/ BSA-68586	Herbs	September - April	Leaf	Skin infection	Fresh leaf paste is externally applied to the affected parts.
			Seed	Leucoderma	About 10 g seeds powder mixed with 5 ml mustered oil and externally applied on infected area for 10 days.
Cynadon dactylon (L.) Pers. / Poaceae/ 'DHOOB'/ BSA-65566	Herbs	Throughout the year	Whole plant	Dysentery	Whole plant is crushed and 5 ml of expressed juice is taken twice daily for 2 days.
Cyperus rotundus L./ Cyperaceae/ 'MOTHA'/ BSA-65537	Herbs	July - April	Rhizome	Fever	200 g of dried rhizome is boiled in 500 ml of water until reduced to 150 ml and given twice a day for 3 days.
Desmodium triflorum (L.) DC./ Fabaceae/ 'TINPATIA'/ BSA 37149	Herbs	September - April	Leaf	Dysentery	Juice of fresh leaves mixed with double quantity of water and take twice daily for 3 days.
Digera muricata (L.) Mart. /Amaranthaceae / 'GARUA'/ BSA- 7929	Herbs	July - April	Flower	Liver disorders	A decoction is prepared, 5 ml of which are taken as a single dose.
Eclipta prostrata (L.) L. /Asteraceae / 'GHAMIRA'/ BSA-11220	Herbs	Most parts of the year.	Whole plant	Cuts and wounds	Extract of whole plant is externally applied to affected parts.
				Hair disorders	Leaf juice boiled with coconut oil, cooled and used for curing hair fall.
Euphorbia hirta L./ Euphorbiaceae / 'DUDHI'/ BSA-30421	Herbs	August - October	Whole plant	Intestinal worms	Whole plants are crushed and 5 ml of expressed juice and take orally.
				Dysentery	Whole plant dried in sunlight and pounded. One tea spoonful of powder is taken along with one tea spoon honey, twice daily for a week.
Euphorbia heterophylla L. / Euphorbiaceae / 'DUDHANI'/ BSA-45074	Herbs	September - October	Leaf	Gonorrheal disorders	A decoction of fresh leaves is prepared, which is taken (10 ml) twice daily for three weeks.
Gomphrena celosioides Mart./ Amaranthaceae /'KASSIA'/ BSA- 62871	Herbs	July - April	Whole plant	Urogenital disorders	A decoction is prepared from fresh plant parts, 15 ml of which taken twice daily for 7 days.
Indigofera linifolia (L.f.) Retz. / Fabaceae /'TORKI'/ BSA-39929	Herb	August - April	Root	Dysentery	Fresh roots are crushed and mixed with 2 spoonful honey, twice daily for 3 days.
Leucas aspera (Willd.) Link. / Lamiaceae / 'GUMA'/ BSA-2030	Herbs	August - April	Leaf	Fever	Decoction of fresh leaves is prepared, 15 ml of which is taken once in a day for 7 days.
				Cold	15 fresh leaves are chewed along with pepar (<i>Piper longum</i>).
Launaea procumbens Roxb./ Asteraceae / 'JANGLI GOBHI'/ BSA-37147	Herbs	December - February	Root	Dysentery	Fresh roots are crushed, 10 ml extract along with 2 spoonful honey taken daily twice for 3 days.
Merremia emarginata (Burm. f) Hall.f./Convolvulaceae/ 'MUSAKANI'/ BSA-50790	Herbs	December - March	Leaf	Aphrodisiac	Fresh leaf are dried and made into powder, one tea spoonful powder mixed with one glass of cow's milk taken at night after food.
Oxalis corniculata L./ Oxalidaceae / 'CHANGERI'/ BSA-68539	Herbs	January - December	Leaf	Chronic dysentery	Fresh whole plant is crushed and mixed with curd and taken orally

					once daily for 3 days.
<i>Physalis minima</i> L. / Solanaceae / 'MAKOI' / BSA- 63883	Herbs	August - January	Fruit	Stomachache	Mature fruits are cooked and consumed.
<i>Phyllanthus amarus</i> Schumach. & Thonn. / Euphorbiaceae / 'BHUE-AWLA' / BSA- 9899	Herbs	August - December	Whole plant	Jaundice	15 ml Juice of whole plant is given twice in a day for 3 to 4 days.
<i>Portulaca quadrifida</i> L. / Portulacaceae / 'CHAULI' / BSA- 1255	Herbs	July - October	Whole plant	Piles	Tender plants are crushed and 5 ml of expressed juice is taken twice daily for 10 days.
<i>Rorippa indica</i> (L.) Heirn. / Brassicaceae / BSA- 21046	Herbs	December - July	Leaf	Asthma	Oral intake of expressed juice from fresh leaves along with one tea spoonful of honey.
<i>Rungia repens</i> (L.) Nees / Acanthaceae / 'NILBA' / BSA-7773	Herbs	November - January	Leaf	Eczema	Leaf paste is externally applied on affected parts.
<i>Senna tora</i> L. / Caesalpiniaceae / 'CHAKAUDA' / BSA-4161	Herbs	August - April	Leaf	Skin disease	Leaf paste is mixed with lime juice and externally applied on infected parts.
			Root	Jaundice	Fresh root is crushed and mixed with 2 spoonful honey, taken in the morning on empty stomach for 7 days.
<i>Solanum nigrum</i> L. / Solanaceae / 'MAKOI' / BSA -50736	Herbs	September - February	Root	Fever	Decoction of root is prepared, which is taken (10 ml) twice daily for one week.
			Leaf	Liver disorders	Juice of fresh leaves about 10 ml is taken twice in day for 15 days.
<i>Solanum virginianum</i> L. / Solanaceae / 'KANTAKARI' / BSA- 192	Herbs	December - June	Root	Cough	Fresh roots of old plant are chewed to relieve cough.
			Fruit	Skin disease	Fruits are boiled in mustered oil and applied on affected parts.
			Seed	Toothache	Seeds are dried and made into powder and applied on teeth with the help of tooth brush for quick relief.
<i>Sphaeranthus indicus</i> L. / Asteraceae / 'Gorakhmundi' / BSA-7836	Herbs	November - March	Whole plant	Arthritis	15 ml of decoction of whole plant is taken twice in a day for fifteen days.
			Leaf	Cuts and wound	Fresh leaves are crushed and externally applied on cut parts.
<i>Tribulus terrestris</i> L. / Zygophyllaceae / 'GOCHUR' / BSA- 3862	Herb	May - June	Fruit	Aphrodisiac	Seeds are dried and made into powder; 5 g powder mixed with one glass cow's milk is taken in night after food for ten days.
				Kidney stone	Decoction of fresh fruits is prepared, which is taken (10-15 ml) twice in a day for fifteen days.
<i>Tridax procumbens</i> L. / Asteraceae / 'PHULANA' / BSA-3120	Herb	Almost throughout the year	Leaf	Cuts and wounds	Fresh leaf juice is externally applied on cut parts.
				Old ulcer	Fresh leaves are crushed and made into the paste and applied to the affected parts.

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