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Use of Traditional plants in Tarai belt of Pilibhit and adjoining districts of Western Uttar Pradesh, India

Shazia Bi

Department of Botany, GF College Shajahanpur - 242001 (India)
Shazia.amu@gmail.com

Abstract

The study explore aromatic plants of terai region of Uttar Pradesh state in India with the chief intention of identifying different aromatic medicinal plant species of district Pilibhit and its adjoining area. Here the information were gain by tribes of that area which are the Tharu community (A tribal community of Nepal and Indian terai region specially nearby areas of districts Pilibhit and its adjoining districts also) The plants data were collected through questioners by interviewing local communities Tharu and Dhimal tribes and local peoples and practitioners as Hakims and Vaidhs. The therapeutic practitioners were treating the common diseases like cough cold, fever, toothache, Snake bite, wounds, diabetes, and the antitumor movement. In total 20 species belonging to 15 Families from 18 Genera were recorded which were used by population and tribes of the region.

Key words : Medicinal plants; Aromatic plants; wild plants; Tribes; Plants; district Pilibhit Uttar Pradesh.

In northern India Terai area spread over the Ymuna revers eastward across Haryana, Uttar Pradesh, Uttarakhand West Bengal and Bihar covered almost 21 districts from the different stats where the Tharu and Dhimals People are indigenous inhabitants of the terai forests and here are the several Tharu subgroups scattered over the Nepal and Indian terai specially near the Pilibhit district of Uttar Pradesh India. Traditional knowledge of plants and their properties has always been transmitted from generation to generation through the natural course of everyday life. Knowledge and information through botanical studies of related area is important for the protection and exploitation of natural resources. Therefore, establishment of the local names and local uses of plants has significant potential community profit. In recent years, traditional use of plants used for medical purposes has strained the concentration of researchers in our nation as well. World over tribal population still store a vast knowledge of using local plants as food material and other specific uses. As botanical field study reveal that the literary people have significant traditional knowledge of wild-type plants and their use. The literacy proportion among stuck between total people, ethnic only

0.4% is found. They live in r crowd comprise 8-10 families speckled over a wider range in terai region. The Tharu tribal inhabiting widely estranged hamlets in the terai region were studied for the first time for collection of aromatic medicinal plants data. The plants rising in these forests plays a vital role in the life and fitness of the local and tribal community. For the preparation of the manusaript relevant literature[1-34] has been consutted.

The Pilibhit district situated at Western region of Uttar Pradesh referred to as the adjoining area of Terai belt as well as nearby regions of tarai belt district's like Lakhimpur, Bareilly, Rampur and Saharanpur trai area. Uttar Pradesh state is located between latitude 26.84'N and longitude 80.94'E. The annual average rainfall of the state is 1025 mm and the soil is fertile alluvial and sandy to clayey loamy in general. Here my studies, western part of Uttar Pradesh, was divided in four regions *i.e.* Bareilly, Pilibhit, Saharanpur and Rampur, regions, were selected for the study. The Aromatic medicinal plants of this region in different habitats such as forest land, orchard lands, crop lands, agricultural land, near the road side, near the houses, adjoining forest of population and buildings, from anywhere of medicinal plants were located and identified. recognition of the collected (non-identified plant species) small aromatics plants was done at the laboratory by observing their morphological characters with experts when its necessary the plants were identified with the help of clear closer photograph also which clicked over the in the field during study. The study tour was under take throughout year of March 2023-March 2024 casing diverse areas in the remote tribal populated areas. Plants of ethno-economic importance were recorded from knowledgeable local people, especially the village leaders, Thar u's community (tribals of locals) Baidyas and Hakims who accompanied the authors in the field. The information obtained was cross-checked with other persons. Some plants were already known, but the modes of their uses are different and quite interesting. It was confirmed with the available literature. The voucher specimens were collected, processed and have been deposited in the botanical herbarium, Department of Botany in college for students study purpose. The vernacular name. phenology, scientific names, part obtain from and their mode of consumption are also given.

The current study have recorded 20 aromatic medicinal plant species used by villagers and tribal communities in north eastern part of western Uttar Pradesh and Pilibhit District. Our study shows that many households living close to eastern parts as well Terai region of adjoining area and that it is a relatively gainful activity. The aromatic medicinal data presented herein are only one major head namely; medicinal species used by local people and tribe for various purposes Table-1. Medicinal plants are common and medicinally significant to cure various diseases. The local people preferred preparing the medicines by plants either as single or as in a mixture with two or more than a few plants and plant parts, since the mixture rapidly treat the diseases and also improve the resistance power of the patients. We saw in case of decoction of *Cordia dichotoma* foliage part is used to treat cough but is also treat in hair oil. While identical quantity *Tamarindus indica* and *Ficus racemosa* stem bark residue mix in coconut oil and applied on just burned skin with help of feathers of hen.

S. N.	Botanical name	Family	Common name	Life form	Pheno-logy	Plants part used for extraction of chemicals	Mode of use
1.	*Abrus precatorius* Linn.	Fabaceae	Gumachi	Climber	July / November	Two new stero-ids-abricin and abridin isolated from seeds	Root powder is used for the treatment of scorpion bite.
2.	*Abutilon indicum* (Linn.) Sweet	Malva-ceae	Kanghi	Shrub	September November	Amino acids, glucose, fructose, and galactose isolated fromleaves	Eat the four to five leaves forregularity in Menstrual cycle.
3.	*Achyranthes aspera* Linn	Amarant-haceae	Aghada	Herb	October/ March	Ecdysterone (Polypodine-A) from roots and two oleanolica-cid based Saponin from fruits	The plant is used in eye diseaseand antifertility.
4.	*Adhatoda zeylanica* Medik	Acan-thaceae	Arusa	Shrub	October/ April	Four new quinozoline alkaloids-vasicoline, adhatodine, vasicolinone and anisotine isolated from inflorescence	Leaf power is cooked then afterused in cold and cough.
5.	*Aegle marmelos* (L.) Corr.	Rutaceae	Bel	Tree	April/ August	6',7'-epoxyaurapten, marmesin-1''-α-L-rhamnoside andpalmitic, oleic, linoleic, lienolenic & stearic acid	Crushed leaves applied onknee joint pain. The ripe fruitsare eaten.
6.	*Andrographis paniculata* (Burm.f) Nees	Acan-thaceae	Kalmegh	Herb	September /December	Stereo structure of a diterpene glucosideneoa-ndro grapholide; Caffeic,	Plant is used in malarial fever.

						chlorogenic and dicaffeoylquinic acids isolated from leaves	
7.	*Aristolochia indica* Linn.	Aristolo-chiaceae	Israul	Climber	September /December	Two new sesquiterpene hydrocarbons-ishwarane and aristolochene from roots	Leaf and fruit juice is used infever.
8.	*Boerhavia diffusa* Linn.	Nyctagi-naceae	Gada-purna	Herb	Major part of theyear	β-ecdysone, triacontanol and β-sitosterol 5,7-dihydroxy, 3,4'-dimethoxy and 6,8 dimethyl flavone	Root is used in Jaundice.
9.	*Datura innoxia* Mill.	Solan-aceae	Datura	Shrub	July/ December	Alkaloid rich species, such as tropinone, tropine, scopine pseudotropine, scopoline, etc.	Seed paste along with Koina oilis used in arthritis.
10.	*Carissa opaca* Stapf	Apocyn-aceae	Karau-nda	Shrub	March/ October	Carissone	Root paste is used as body pain.
11	*Cassia fistula* Linn.	Caesalpi-niaceae	Ahiroga	Tree	April/ October	Rhein, glucose, sucrose and fructose isolated from bark	Dry fruit is making powder then used like toothpaste.
12.	*Cordia dichotoma* Forst.	Boragin-aceae	Lasoura	Tree	March / May	Macrophylline-β-sitosterol, α-lienolenic, palmitic, linoleic andoleic acids	Leaf power is used as coughand cold
13	*Dillenia pentagyna* Roxb.	Dillen-iaceae	Agai	Tree	April / June	Alkaloids, flavonoids, tanins and Saponin are isolated fromfruits	The leaf extract isused asanticancer diseases.

14	*Ficus religiosa* Linn.	Moraceae	Pepal	Tree	April / September	Tannins, saponin, flavonoids, steroids, terpenoids andglycosides	Fruit along with milk is used insterile women.
15	*Ficus racemosa* Linn. // [27].	Moraceae	Gular	Tree	April / July	β– Sitosterol glucoside, Friedelin and lupeol isolated fromstem bark	Bark power is used as medicine.
16	*Scoparia dulics* Linn	Scrophu-lariaceae	Bundi-ghas	Herb	Most part of theyear	Friedelin, glutinol, α-amyrin, betulinic, iffaionic and dulceoic, coixol and betulinic acid isolated from roots	The leaf paste is applied boiledand skin disease.
17	*Solanum surattense* Burm F.	Solan-aceae	Bhatkoya	Herb	December / June	Solasodine isolated from berries of both normal and albinostrains	The root and stem is used foreasy delivery.
18	*Solanum nigrum* Linn. // [28].	Solan-aceae	Makoia	Herb	Most part of the year	Fatty oil isolated from seeds contained palmitic, stearic, oleicand linoleic acid along with linolenic acid	The leaf decoction is given towomen twice a day in deliveryfever.
19	*Tamarindus indica* Linn.	Caesalpi-niaceae	Imli	Tree	May / April	Polysaccharide isolated from seeds contained glucose, galactose and	Stem bark and leaf are used asmedicine for joint pain. xylose
20	*Ziziphus xylopyrus* Willd.	Rham-naceae	Kathber	Tree	April / November	Betulinic acid from Wood and bark.	The fruits and bark is used as tonic.

This is constant with the other general observation which has been reported earlier in relation to therapeutic plant studies by the Indian customary System of drug like Siddha and Ayurveda[5]. The ethanol extract of *Dillenia pentagyna* showed the most potent antitumor action, *i.e.* %ILS ~ 55% and % ILS ~ 48% at a dose of 50 and 100 mg/kg/day. Different plant parts of these species, such as, fruit, leaf, root, seed and bark were used as drug by tribs and local practitioners.

Now, our data and servey work done with limited population and scarce distribution the species like *Aegle marmelos*, *Achyranthes aspera*, *Andrographis paniculata*, *Carissa opaca*, *Cordia dichotoma*, *Tamarindus indica, Ziziphus xylopyrus* and *Dillenia pentagyna* were observed locally endangered in the area need both, *in-situ* and *ex-situ* urgent protection and conservation for sustainable utilization. The species like *Dillenia pentagyna*, *Cordia dichotoma*, *Ficus racemosa*, *Tamarindus indica, Scoparia dulics*, *Solanum surattense, Achyranthes aspera, Boerhavia diffusa,* and *Aegle marmelos* were observed with important therapeutic values. Cultivation is often proposed as an alternative to wild harvesting to reduce pressure on local populations and get better local lively hood of these highest numbers of plants belong to the family *Rhamnaceae* and *Moraceae*, which shows a important medicinal botanical diversity in various regions of north eastern part of Pilibhit and adjoining terai belt from others districts like Bareilly, Rampur, Saharanpur and Lakhimpur.

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