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### RESEARCH ARTICLE

#### ETHNOBOTANICAL USE OF PLANT IN ALIGARH DISTRICT (U.P.) FOR TREATING THE SOME COMMON DISEASES.

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#### Abstract

Ethnobotany is the study of how people of a particular culture and region make use of indigenous plants. The importance of medicinal plants in traditional healthcare practices, providing clues to new areas of research and in biodiversity conservation is now well recognized. However, Ethnobotanical information's on the medicinal plants were lacking from many interior areas of Aligarh district (U.P.). The present paper provided these informations related 62 plant species belonging to 35 families and 52 genera, which were being used for treating the different common kinds of ailments, pain, vomiting and also leprosy by the local and rural communities of Aligarh district. The mode of administration of different plant species were presented here with their family and local name.

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#### Introduction:-

From ancient times, the plants have been used as sources of medicines by the tribal or human being. The traditional medical knowledge of plants and their use by indigenous cultures are not only useful for conservation of cultural traditions, but also for community health care and drug development the present and future (Pei, 2001). The present paper relates to the traditional practice to the treatment of various diseases. A number of plant species were used in traditional medicine for getting the relief in pain like headache, ear ache, toothache, colic pain and in curing the other ailments such as eczema, dysuria, leprosy etc.

#### Material and methods:-

The ethnobotanical informations are gathered during regular field trips through interviews and discussions with herbal medicine practitioners locally called as "Vaidhya", "Hakim", "Kabiraj" and other experienced old men. While noting the information, every care is taken to record the local name of plants and their parts, method of drug preparation and their uses. The modes of application of the different plant species are different for the treatment of various diseases. Plant species are identified by using relevant flora (Duthie, 1903-1929). The ethnomedicinal uses of the plants are compared with available Scientific Literatures (Chantia, 2003), (Chaudhry et al. 2006), (Singh and Huidrom, 2013), (Kumar and Chauhan, 2005), (Ranganathan et al. 2012), (Upadhyay and Singh, 2005).

#### Results and Discussions:-

The ethnomedicinal information regarding treatment of various pain and some common diseases collected in the course of field study was presented in tabular form. 62 ethnomedicinal plant species belonging to 35 families and 52 genera were enumerated in the present work. 44 plant species and 18 plant species were used for single drug

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treatments and multidrug treatment respectively. All plant species had been arranged alphabetically with botanical name, family, vernacular name, parts used, disease and mode of use (Table-1). In the present study, out of 35 families, Euphorbiaceae was mostly used in the treatment of diseases and pain. Leaf constitute was the highest (30) of utilization followed by seed (13), root (12), whole plant (11), stem (9), flower (3) and bud (2).

### Conclusion:-

The present study helped list out various ethnomedicinal plants. The paper provided here can be utilized to further studies on conservation and cultivation of ethnomedicinal plants. The youth should also be encouraged to learn the traditional medicinal knowledge to preserve it from being lost with the older generation. The present paper revealed the various mode of drug preparation related to 62 ethnomedicinal plant species.

**Table-1:-** Result of field survey

Botanical name/Family & local name	Fls/Frts Time	Parts used	Disease	Preparation and mode of use
<i>Abrus precatorius</i> L. (Fabaceae), "Ghumch".	Aug-Sep/ Sep-oct	Seed	Headache	Seed powder is sniffed for getting relief in <b>headache</b> .
<i>Acalypha indica</i> L. (Euphorbiaceae), "Kuppi".	Sep/Feb	Leaf	Eczema  Headache	Fresh leaf extract addition with a little common salt is applied externally on the affected part of the body in case of <b>eczema</b> . A piece of cotton is saturated with expressed leaf juice and inserted into each nostril, relieving head symptoms in congestive <b>headache</b> .
<i>Achyranthus aspera</i> L. (Amaranthaceae), "Chirchitta".	Through out of year	Whole  Leaf	Headache  Ear ache  Toothache	Whole plant is ground to make into a paste and applied on the forehead at the time of <b>headache</b> due to cold. Whole plant is burnt to get the ash. The ash mixed with sesamum oil is applied as ear drops in the treatment of ear problems. Leaves or roots are chewed gently in the cases of <b>toothache</b> to remove the pain.
<i>Adhatoda vasica</i> Nees. (Acanthaceae), "Piyabans".	Oct-Jan/ Jan-Mar	Leaf	Vomiting	Fresh flowers are boiled in little water to make a decoction. It is given orally once a day to cure <b>vomiting</b> .
<i>Adina cordifolia</i> Hook.f. (Rubiaceae), "Hald".	Jun-Oct	Buds	Headache	Small buds ground with black pepper are sniffed into the nose in severe <b>headache</b> .
<i>Aegle marmelos</i> Hook. F. (Rutaceae) "Bel Patther".	Apr-May/ May-July	Root	Ear ache	Root is being used as a home remedy for curing ear problems such as <b>ear ache</b> . The stiff piece of root is dipped in Neem oil (seed oil of <i>Azadirachta indica</i> ) and burn end. The oil that drips from the burning end is applied into the ear as an ear drops.
<i>Albizia labback</i> L. (Mimosaceae), "Siras".	Apr-Jane	Bark	Toothache	Bark decoction (50–100 ml) is being used in gargling to treat the <b>toothache</b> and gum ache.
<i>Allium cepa</i> L. (Liliaceae), "Piyaj".	May-June	Bulb	Ear ache	Bulb extract obtained by heating and squeezing is applied into ear for <b>earache</b> .
<i>Allium sativum</i> L. (Liliaceae), "Lahsun".		Bulb	Eczema	Bublets are crushed to make paste, which is placed over the <b>eczema</b> twice a day.
<i>Alstonia scholaris</i> L. (Apocynaceae),	Winter	Bark	Colic pain,	Bark is ground with water is strained off and some of the bark decoction is given to patient

“Chitwan”.		Whole	Ear ache	and residue is rubbed over the pit of abdomen for <b>colic pain</b> . Plant juice mixed with the mustard oil is boiled. The lukewarm extract is applied into ear in case of <b>earache</b> as ear drops.
<i>Amaranthus spinosus</i> L. (Amaranthaceae), “Kanta chouli”.	Aug-Jan	Root	Eczema	Roots ground in water are applied externally on <b>eczematous</b> skin.
<i>Anethum graveolens</i> L. (Apiaceae), “Sowa”.	Winter	Seed	Ear ache	1–3 drops of the seed oil is applied into ear as a good remedy for <b>earache</b> .
<i>Argemone mexicana</i> L. (Papaveraceae), “Satyanasi”.	Oct-Apr/ Apr-May	Whole	Leprosy	Plant extract is being used to cure <b>leprosy</b> and it is also useful as blood purifier.
<i>Azadirachta indica</i> A.Juss. (Meliaceae), “Neem”.	Mar-May/ May-June	Leaf	Eczema	Leaf extract is applied externally over the body in the case of <b>eczema</b> .
		Leaf & Flower	Leprosy	Leaves and flowers are crushed in equal quantity of each. This is given orally to cure <b>leprosy</b> .
		Stem	Toothache	Twig is being used as a toothbrush to cure the <b>toothache</b> and gum problems.
		Bark	Vomiting	Bark juice is given orally mixing with little black salt and honey to allay the <b>vomiting</b> .
<i>Bacopa monnieri</i> L. (Scrophuliaceae), “Vermin”.	Aug-Oct/ Oct-Nov	Leaf	Dysuria	Leaf juice mixed with seed powder of <i>Cuminum cyminum</i> and mishri (sugar candy) is given while the soaked cloth in its juice is kept on the navel in case of <b>Dysuria</b> .
<i>Barleria prionitis</i> L. (Acanthaceae), “Katsareya”.	Oct-Feb/ Mar-Apr	Leaf	Colic pain	Whole plant (About half kg) is kept in one liter of cold water for 5 – 6 days. The filtrate is given in the dose of 5 ml. twice a day for a week in case of <b>colic pain</b> .
<i>Boerhavia diffusa</i> L. (Nyctaginaceae), “Santh”.	Most Months	Leaf & Stem	Eczema,	Fresh stem and leaves are pounded to make into a paste. This paste is applied to the infected part daily for 3 –4 weeks, for the treatment of <b>eczema</b> .
		Seed	Vomiting	About 6 gram seed powder is given orally to allay the <b>vomiting</b> .
<i>Brassica campestris</i> L. (Brassicaceae), “Sarson”.	Nov-Dec	Seed	Ear ache	Some lukewarm oil drops of seed are applied into the ear for curing <b>ear ache</b> .
<i>Calotropis procera</i> Ait. (Asclepiadaceae), “Aak”.	Dec-Apr/ May-Jun	Root & Latex Root	Leprosy, Toothache	Root and dried milk sap (latex) is being used in small doses in <b>leprosy</b> . Fresh root is being used as toothbrush to cure <b>toothache</b> .
<i>Cannabis sativa</i> L. (Cannabinaceae), “Bhang”.	Feb-Apr	Leaf	Eczema	Aqueous paste of fresh leaves is applied on the affected portion to cure <b>eczema</b> .
<i>Capparis decidua</i> Forsk. (Capparidaceae), “Karil”.	Mar-Jun/ Jun-July	Leaf & Buds	Toothache	Buds and new born leaves are chewed in the cases of <b>toothache</b> .
<i>Cassia fistula</i> L. (Caesalpinaceae), “Amaltas”.	Apr-Jun/ Aug-Sep	Leaf	Headache,	Leaf paste is applied externally on the forehead to relief in <b>headache</b> .
		Root	Headache	Root (without bark) is washed and pounded mixed with black pepper. The juice of the mixture is dropped into the nostril to cure

				<b>headache.</b>
<i>Cassia tora</i> L. (Caesalpiniaceae), "Panwar".	Aug-Oct/ Oct-Nov	Seed	Leprosy	Seeds decomposed in curd are ground in lemon juice and lapped on leprosy. Leaf juice (5–10ml.) is also given orally during treatment.
<i>Cichorium intybus</i> L. (Asteraceae), "Kashni".	Jan-Apr/	Leaf	Headache	Leaf paste is applied externally on the forehead to get relief in <b>headache</b> .
<i>Commelina benghalensis</i> L. (Commelinaceae), "Kankaua".	July-Oct/ Oct-Nov	Whole	leprosy	Entire plant sap is applied on the skin eruptions such as <b>leprosy</b> .
<i>Coriandrum sativum</i> L. (Apiaceae), "Dhania".	Jan-Mar	Seed	Dysuria,  Vomiting	Seed (250gram) is boiled with the plant of <i>Tribulus terrestris</i> (Gokhru, 250) in water (4 liters) until it is remained 1 litre. After filtration, the extract is mixed with 250 gram ghee. The mixture (6gram) is given along with a cup of milk in the morning daily in case of <b>dysuria</b> . 10 gram seed crushed with water and sugar is given to allay the <b>vomiting</b> .
<i>Cucumis melo</i> var. <i>agrestis</i> Naud. (Cucurbitaceae), "Sainda".	Jul-Aug/ Aug-Sep	Seed	Dysuria	Seed powder is useful in painful discharge and suppression of urine.
<i>Datura metel</i> L. (Solanaceae), "Dhatura".	Nov-Feb	Leaf	Eczema	Leaves crushed in latex of <i>Euphorbia noriifolia</i> and <i>Calotropis procera</i> is mixed with urine of cow. The extract is very useful externally in curing the <b>eczema</b> .
<i>Eclipta prostrata</i> L. (Asteraceae), "Kala Bhangra".	Most part of year	Whole	Eczema,  Headache	Plant juice (5 grams) mixed with 50 ml milk and some sugar is given twice a day for 8 days to the patient suffering from <b>eczema</b> . Fresh plant juice mixing with a little sesamum oil is applied on the forehead for <b>headache</b> .
<i>Euphorbia hirta</i> L. (Euphorbiaceae), "Dugdhi".	Most parts of year	Whole	Vomiting	Plant juice is given orally to allay vomiting.
<i>Euphorbia neriifolia</i> L. (Euphorbiaceae), "Senhar".	Nov-Jan/ Jan-Mar	Stem latex	Dysuria,	Latex mixed with flour of gram ( <i>Cicer arietinum</i> ) is made into small pills in <b>dysuria</b> .
<i>Euphorbia prostrata</i> Sims. (Euphorbiaceae), "Gonemchi".	Most part of year	Whole	Eczema	20 gram plant is ground and mixed with 10 gram butter. This material is applied on the affected part in the cases of <b>eczema</b> . After 3–4 hours, it is washed with water. This treatment should be continued for some days.
<i>Ficus benghalensis</i> L. (Moraceae), "Bargad".	Mar-Jun	Root	Toothache	Milk juice of aerial root is good remedy for toothache.
<i>Ficus religiosa</i> L. (Moraceae), "Pipal".	Mar-May	Leaf	Vomiting	Old leaves of <i>Ficus religiosa</i> soaked in water, is being used orally to allay the <b>vomiting</b> .
<i>Foeniculum vulgare</i> Mill. (Apiaceae), "Sounf".	Jan-Feb/ Feb-Mar	Seed  Whole	Dysuria  Colic pain	Seed decoction of <i>Foeniculum vulgare</i> kept into the batasha (a spongy cake of sugar) is given orally for some days in <b>dysuria</b> . A constituent liquorices powder of whole plant is being used for allaying griping in stomach in case of <b>colic pain</b> .

<i>Heliotropium eichwaldi</i> Steud. (Boraginaceae), "Kadhera".	Dec-Apr/ Apr-May	Leaf	Ear ache	Some drops of leaf extract are applied into the ear to cure <b>ear ache</b> .
<i>Holoptelea integrifolia</i> (Roxb.) Planch. (Ulmaceae), "Papri".	Fab-Apr	Leaf	Leprosy	Leaf extracts (100 grams) is given orally daily in case of <b>leprosy</b> .
<i>Jatropha gossypifolia</i> L. (Euphorbiaceae), "Verenda".	Aug-Sep/ Sep-Oct	Stem	Headache	Stem extract is squeezed into the nostrils, causing the patient sneeze and effectively curing <b>headache</b> .
<i>Melia azedarach</i> L. (Miliaceae), "Bukain".	Mar-Apr/ Apr-Jun	Leaf & Flower  Leaf & Bark	Headache  Leprosy	Flower and leaves are applied externally on the forehead as a poultice to relive nervous <b>headache</b> . Leaves and stem bark is being used internally and also externally to <b>leprosy</b> patients
<i>Mentha piperita</i> L. (Lamiaceae), "Peperment".	Oct-Nov/ Nov-Dec	Leaf  Whole	Toothache,  Colic pain	Leaves are chewed for the treatment of <b>toothache</b> . A hot herb infusion is given as tea, soothes <b>colic pain</b> .
<i>Mentha spicata</i> L. (Lamiaceae), "Jangli Podina".	Oct-Nov/ Nov-Dec	Leaf	Vomiting	Sauce prepared by mixing the leaves with some black pepper and black salt is given in condition of anorexia and also to allay the <b>vomiting</b> . Sweetened infusion of leaf is made by mixing with some drops of honey, given as a remedy to allay <b>vomiting</b> at the time of pregnancy.
<i>Mimusops elengi</i> L. (Sapotaceae), "Maulsari".	Apr-May/ May-Jun	Flower	Headache	Powder of the dry flowers snuffed gives relief in case of <b>headache</b> after some time.
<i>Mucuna pruriens</i> L. (Fabaceae), "Konch".	Aug-Oct/ Oct-Nov	Root	Dysuria	Root decoction (50–100 ml) is given to the patient for curing <b>dysuria</b> and other kidney diseases
<i>Nerium indicum</i> Mill. (Apocynaceae), "Kanner".	Jun-Jul/ Jul-Sep	Leaf  Root  Seed	Headache,  Leprosy,  Colic pain	Snuff prepared from dry leaves is being used to cure <b>headache</b> . Root oil mixed with seed oil of <i>Dalbergia sissoo</i> is applied externally to <b>leprosy</b> patient to get relief. Seed or the root bark sap (60 mg) is applied externally on the abdomen as an ointment to get relief in <b>colic pain</b> .
<i>Ocimum basilicum</i> L. (Lamiaceae), "Kali Tulsi".	Nov-Dec/ Dec-Jan	Leaf	Toothache,  Eczema	When the leaves are chewed, they are very useful to remove the <b>toothache</b> . The paste prepared by equal leaf quantities of <i>Ocimum basilicum</i> and <i>Psidium guajava</i> is externally used over the infected portion for a few days.
<i>Ocimum sanctum</i> L. (Lamiaceae), "Tulsi".	Nov-Dec/ Dec-Jan	Seed	Dysuria	Seeds soaked in water is taken with sugar, relieves urinary complaints such as <b>dysuria</b> .
<i>Oxalis corniculata</i> L. (Oxalidaceae), "Khatti Mithi".	Dec-Feb/ Feb-Apr	Whole  Leaf	Headache,  Colic pain	Plant paste is massaged on the forehead for getting the relief in <b>headache</b> . Leaf decoction added some roasted hing ( <i>Asafoetida</i> ) is given orally to the patient in case of <b>colic pain</b> .

<i>Plumbago zeylanica</i> L. (Plumbaginaceae), "Chirchitta".	Oct-Jan/ Jan-Feb	Bark  Root	Eczema  Leprosy	Bark Powder mixed with two times of butter is kept in copper bowl. This bowl is kept into sunlight for 5 hours. This melting butter is applied externally for a long time to remove <b>eczema</b> . Root paste prepared by mixing with milk, vinegar or salt and water is being used as an external application in <b>leprosy</b> .
<i>Polygonum glabrum</i> Hook.f. (Polygonaceae),	Oct-Dec/ Dec-Jan	Leaf	Colic pain	Leaf infusion is given orally to the patients to get relief in <b>colic pain</b> .
<i>Polygonum plebeium</i> R.Br. (Polygonaceae), "Machechi".	Most of the year	Whole	Colic pain	Whole plant is crushed with about 500 ml water and gently heated for 5 – 10 minutes. The decoction is given twice a day to treat bowel complaints (such as colic pain).
<i>Pongamia pinnata</i> (L.) Pierra. (Fabaceae), "Karanz".	Mar-May/ May-Jun	Leaf	Eczema	Leaves juice is applied externally over affected part of the body to cure <b>eczema</b> .
<i>Psidium guajava</i> L. (Myrtaceae), "Amroud"	May-Jul	Leaf	Toothache	Leaf decoction is being used as gargle to relief in toothache. It is also useful in gum boils.
<i>Ranunculus scleratus</i> L. (Ranunculaceae), "Jal Dhania".	Jan-May/ May-Jun	Leaf	Toothache	Leaf pulp made into a little of wine is applied on teeth to relieve pain.
<i>Ricinus communis</i> L. (Euphorbiaceae), "Arund".		Seed	Headache	Seed oil is lapped externally on forehead as a massage cream in severe <b>headache</b> .
<i>Sesbania sesban</i> (L.) Merr. (Fabaceae), "August".	Sep-Oct	Root	Leprosy	Root juice (10–20 ml.) is given to the patient along with milk in <b>leprosy</b> .
<i>Sisymbrium irio</i> L. (Brassicaceae), "Khumbkalan".	Mar-Apr	Seed	Vomiting	Seed decoction (8–10 ml) is given orally to allay diarrhoea and <b>vomiting</b> in cases of cholera.
<i>Solanum indicum</i> L. (Solanaceae), "Terri Baigan".	Aug-Oct/ Oct-Nov	Fruit  Leaf	Vomiting,  Vomiting	Fruit juice admixing with ghee and honey is given to allay the <b>vomiting</b> . Leaf juice mixed with little ginger powder is administered to stop <b>vomiting</b> .
<i>Solanum nigrum</i> L. (Solanaceae), "Makoi".	Oct-Jan/ Jan-Mar	Leaf	Colic pain	Three teaspoonfuls leaf extract is given twice daily for 3–5 days to cure <b>colic pain</b> .
<i>Solanum xanthocarpum</i> Schrud. (Solanaceae), "Kateri".	May-Aug/ Aug-Sep	Seed  Root	Toothache,  Vomiting	Past (prepared by the mixing of seed paste of <i>Solanum xanthocarpum</i> and bulb paste of <i>Allium cepa</i> ) is being used externally as a cure for <b>toothache</b> . Root is pounded and mixed with some wine is given for checking the <b>vomiting</b> .
<i>Terminalia arjuna</i> Roxb. (Combretaceae), "Arjun".	May-Jun/ Jul-Aug	Leaf	Ear ache	Leaf juice is used as ear drops to remove the pain.
<i>Tribulus terrestris</i> L. (Zygophyllaceae), "Gokhru".	Jul-Sep/ Sep-Nov	Fruit	Dysuria	Fruit power (3–6 gram) is given thrice a day in <b>dysuria</b> .
<i>Vernonia cinerea</i> L. (Asteraceae), "Phulni".	Sep-Feb/ Feb-Mar	Root	Colic pain	Root juice (10–20 ml) is given orally to cure cold, cough and also <b>colic pain</b> .

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