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NEPETA HERB- A NUTRIMENTAL POTENT ETHNOMEDICINAL PLANT FROM NORTH WESTERN TARAI FORESTS OF U.P. INDIA.

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ABSTRACT

Plant and plant products have augmented human culture since time immemorial and are an important part of our environment. In ancient time people believed with traditional herbal medicines. We can notice a global trend for revival of interest in the traditional system of medicine. The paper deals with Badaranj Boya- *Nepeta hindostana* herb a nutrimental potent ethnomedicinal plant and all the above ground parts are used in management of various ailments viz copious perspiration, colic problems, restlessness, motion sickness, children nervousness, gastrointestinal disorders, cramping, rheumatism, soft tissue injury, inflammatory conditions, scarlet fever, small pox, muscle pull, tension headache, migraines, insomnia and other sleep disorders, hyperactivity in children, delayed menstruation and to increase tone in the uterus.

KEYWORDS: *Nepeta*, Nutrimental, Ethomedicinal, Northwestern, Tarai Forest Tarai Forest.

INTRODUCTION

India has a glorious tradition of the arts and science of healing. The origin of Indian medicine is shrouded in ‘myths’ and ‘inspired history’. But, organized medicine, Ayurveda emerged from folk medicine at least 2,000 yrs ago with its well developed recorded system and practices, It is reported that over 20.000 plant drug formulations are listed in Ayurvedic pharmacopoeia. In addition, nearly 60,000 are believed to be in existence in the folk and tribal knowledge and practices. Our ancient Literature has references of plants reputed to cure difficult and incurable diseases. The maximum numbers of medicinal plants are used by folk (tribal) traditions. There are over 53 million tribal people in India belongings to 550 communities of 227 ethnic groups. They inhabit about 5,000 forested villages or lead a

nomadic life in the forest. Each tribal community has a distinct social and cultural identity of its own. (Prakash *et al*., 2008).

Bahraich district is one of the district of Eastern Uttar Pradesh, situated in Upper Gangetic Plane. It lies between 27°43′ and 28°51′ North Latitude and 81°8′, and 82°10′, East longitude with a total area of about 6944 sq km. Botanically the area is very interesting. In north the Himalayas rise as a vertual wall beyond the snow line. Above the alluvial plain lies the Tarai strip, a seasonally mashy zone of sand and clay soils. Since this North Tarai region which has higher rain fall than the plains, and the downward rushing rivers of the Himalayas slow down and spread out in the flatter Tarai zone depositing fertile silt and reproductive means during the monsoon season and receding in the dry season. Tarai, as a result has higher water level and is characterized by moist sub tropical condition and a luxuriant turnover of green vegetation all the year around.

The study area is blessed with several floras by nature and it is referred as natural paradise and it is very rich in ethnic and floristic diversity. The Tharu tribes are endowed with vast knowledge of medicinal plant and have strong belief in magicotheropeutic properties of plants for treatment of various ailments. The district is having good population of tribal people mostly Tharus and their knowledge regarding plants has descended from one generation to another as a domestic practice (Brahman,2000). Due to vast area of natural forests the Bahraich is also known as City of Forests.

The land surface is a level tract sloping gently from North West to South East. A remarkable feature fills landscape is the total absence of any hill or hillocks. The soil is composed of Gangetic alluvium. Since much of the ground is liable inundation, low laying in between the ground and to in between liable inundation the particles deposited are very fine. Bahraich enjoys monsoon type of climate, very much influenced by Himalaya being nearer to the region. The climate is markedly periodic and is divided in to three seasons i.e. rainy, winter and summer season. The general temperature range between 3°c to 43°C. The general vegetation of the area is tropical deciduous type. However, some of the trees are evergreen and semi evergreen. The forests are only restricted to Northern portion of the district bordering up to foot hills of Nepal. The middle and southern part of the area are under the influence of human and their domestic animals. Thus the vegetation of this area is being damaged by intense grazing, fire, cutting down of plants for fodder, fuel and for various developmental projects. A vast area is also under cultivation. The vegetation of these areas is

mainly characterized by large number of herbaceous plants growing on variety of habitat along with scattered occurrence of many indigenous and exotic species of trees and shrubs in open areas or cultivated in gardens and along road sides.

Plants have a significant contribution towards the wealth of a country. During recent years exploration of our plant wealth and its economic utilization have rightly been given due importance. The contribution on the economic aspects of our plants are scattered over numerous literatures. The revision of the information based on modern collection and field observation has been advocated by Rao (1958). Gupta (1967) emphasized that the information we already possess on the economic aspect of plants should be revised thoroughly based on personal enquiries and experimentations. India presents colorful mosaic of about 563 tribal communities which have acquired considerable knowledge on the use of plants for their livelihood, health care and other purposes through their long association with the forests, inheritance, practices and experiences. Plants with medicinal properties enjoyed the highest reputation in the indigenous system of medicines all over the world. India has one of the oldest, richest and most diverse cultural traditions called folk tradition associated with the use of medicinal plants. Traditional folk medicine is the application of indigenous beliefs, knowledge, skills and cultural practices concerned with human health. The ethnic people have provided several miraculous plants of medicinal value for modern civilization. Both the ayurvedic and Siddha system of medicine originated more than 300 years ago and are prevalent in North and South India (Lgnacimuthu *et al*., 2006). The traditional definition of medicinal plant is given in Ashtasane Hrdays 2006 A.D. Sutra sihana ch 9, Vrse 10 as i.e. "There is nothing in this universe which is non medicinal which can not be used for many purposes and by many modes"(Shanker *et al*., 2000). India represents one of the twelve mega biodiversity centers of the World, had two of the world's eighteen bio diversity hot spots. North East and Western Ghats ranks first followed by our North West Forests of Tarai region. This Tarai belt, well blessed and inhabited by tribal community in side the forest as well as around the forest area is a natural paradise for ethnobotanical, mycological, plant pathological as well as work related with wildlife alone or interdisciplinary work.

MATERIALS AND METHODS

Before proceeding for any survey and collection trips necessary clearance for the survey and collection of plants samples from the forest area under their control, arrangements for local

forest staff to guide in the forest and for eccommodation in forest rest house had been obtained from the competent forest authority.

Intensive field trips has been carried out during April, 2009 to March, 2013, while collecting information on ethnomedicinal, botanical aspects standard approaches and methodologies have been followed. Information was mainly gathered from the elder villagers, medicinemen, school teachers, forest dwellers, tribals who have the knowledge of utilization of plants as herbal medicine. As the difficulty was faced in communications with tribals as most of the tribal people could not speak other than their own dilectes, selective interpreters were employed, information regarding vernacular name, plant parts used, process of the preparation of medicines for the treatment of particular diseases was collected, from the tharu tribals because they are the real informers. For authentic identification of the flora collected during flowering and fruiting period, different flora and monograplus have been consulted Hooker, 1872-1997, Sharma *et al.*, 1993, a&b, Dubey, 2004 and Saini,2006. The herbarium of flora was prepared according to method described by Jain and Rao, 1976. The identified medicinal plants have been arranged disease wise and provided correct nomenclature followed by the vernacular names. It was maintained in departmental herbarium for record and reference.

RESULTS AND DISCUSSION

Botanically *Nepeta* herb is known as *Nepeta hindostana* (Roth.) Haines belongs to Plantae, Angiosperms, Eudicots, Asterids, Lamiales, Lamiaceae. Synonyms of the *Nepeta* is *Glechoma hindostana* Roth. *Nepeta ruderalis* Buch – Ham ex Benth., *Catares* Adoms, *Saccelabium* Rotb., *Saussuria* Moench., *Oxynepeta* Bunge, *Schizonepeta* (Benth.) Brig, *Afridia* Duthie, *Pitardia* Batt. ex Pit. There are about two hundred fifty species of *Nepeta. Nepeta hindostana* is an errect, softly pubescent annual herb upto 60 cm high. Leaves 2-6 X 1-3 cm, broadly ovate, crenate, obtuse base cordate or truncate, Flowers bluish purple, in axlllary cymes, Nutlets oblong, light brown with while spots, Commonly found on dry ground along railway tracks, road sides as well as in crevices of walls and in graveled soils, Phenolgy December to June.

It is commonly known as Col mint, Cat mint, Cat neps, Cats wort, field balm, Billilotan, Badranj Boya etc. Some *Nepeta* species are cultivated as ornamental plant. They can be drought tolerent, water conserving often deer repellent, with long bloom periods from late

springs to autumn. Some species also have repellent properties to insect paste, including aphids and squash bugs when planted in a garden.

Nepeta species is used as a food plants by the larve of the some *Lepidoptera* (butterfly and moth) species including *Coleophora albitarsella* and a nector source of pollinators such as honey bee and humming birds.

The entire above ground part of the plant is used and can be collected just after full bloom and then dried for later use. The flowering tops are most commonly used in medicinal applications. The folklore states that chewing the root may increase aggreesiveness and irritability.

It is very exciting and enjoyable as exhilarant. It relieves flatulence, an uncommon fortable & feeling caused due to too much gas in stomach, thus it works as carminative., It is being used as tonic for brain as cephalic tonic. It increases perspiration without raising body temperature and thus has a diaphoretic effect. Since it reduces fever it has uses for treating colds and as a house remedy for the symptoms of the flue or influenza.

A mild tea made from the flowering tops is effective for treating pain due to spasmodic contraction of the abdomen ie colic. The tea is prepared by using 1-2 tea spoons of cat mint powder to one cup of hot water. It is striped for ten minutes then strain. It is taken three times daily. The herb helps to relieve many gastrointestinal disorders and cramping thus working as antispasmodic.

The hot poultice of the leaves and flowers are applied twice or thrice so as to reduce swelling due to rheumatism, to cure soft tissue injures and other inflammatory conditions.

The mixture of cat nip and saffron has shown effective remedy in scarlet fever and small pox. Cat nip is also used as a muscle relaxant and mild sedative so it is often used to relieve the headache especially tension, headache and migranes. It is used in insomnia and other sleep disorders.

Because of the mild sedative effect of the herb it is used in the treatment of hyperactivity in children's. The plant is also used to bring about the menses in delayed menstruation as well as to tone in uterus. The plant has shown to be effective as an insect repellant. It also works as an external flea treatment in animals. Cat nip has an intoxicating and promote sexual desire

in cats and thus act as aphrodisiac. They eat the plants and roll in them with great pleasure. The herb is often used for seasoning and meat tenderizing.

Billilotan is a kown herb among Ayurvedic herbs which have direct effect on the functioning of the heart and it is being traditionally used as a cardiotonic to support healthy heart functions. It is being used in vareity of food preparations and thus work as a culinary substance. The *Nepeta* herb posses tons of therapeutic benefits which are documented in traditional Ayurveda. The most important active ingredient in the herb is aldehyde nepehinal which is a triterpenoid that have many medicinal properties. It is being used in angina pectoris, cardiac thrombosis. trachycardia. It is being used in treating as well as preventing the asthma attacks. It is used to reduce chronic anxiety. Nepetalaetone is one of the ingredient of the essential oils which has insect repellant property. The intoxicating and aphrodisiac activity of the cat nip herb is probably due to actinidine a iridoid glycoside which is similar to those found in *Veleriana afficinalis.* Cat nip is used as a herb for seasoning on salads The oils are extracted and taken in capsule form or used externally. The oils or a pot pourii concoction is used for aroma therapy.

Cat nip has also significant role in management of post harvest fruit diseases as a botanical pesticides (Tripathi. 2005). Screening of the oils were done and Twenty essential oils was tested against *Penicillium italicum*. Thirteen oil of plants viz *Artirusia rilagirica, Carsulia axillaris, Chenopodium ambrosioides, Elettarea cardemomum, Eucalyptus citriodora, Eupatorium Camnabinum, Mentha arvensis, Ocimum canum, O.gratissimum, Pogostemon patchauly, Prunus persica, Salvia officinalis and Zingiber officinalis* showed absolute toxicity against the test fungus at 500 ppm. Fungitoxic property of the essenteal oils of the plants belenging to the same family also varied eg. *M.arvensis, O.canum O.gratissimum* and *Salvia officinalis exgibited* 100 percent activity while *Nepeta hindostana* of the same family showed only 70 percent inhibition.

CONCLUSION

There is considerable ethnobotanical evidence that members of the genus contain pharmacologically active components and numerous extracts have shown positive results in a range of bioassay relevant to human health. However, to date, relatively few bioassay-guided isolation studies have been carried out to identify active components for drug or agrochemical discovery.

However the present study offers a great deal of scope for ethnobotanical research not only because of the richness of the flora but also because of good population of tribals in study area. It is hoped that this information will be useful lead for phytochemists and pharmacologists for further study. Once the efficacy of the flora is established, the popularization of the remedies can be recommended in Indian health care system for wider application.

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REFERENCES

1. Brahmam M, Some Ethnomedicinal plants of Akola and Sanganer talukes of Ahmadnagar. J. Indian Bot. Soc., 2000; 81: 213-215.
2. Dubey NK, Flora of BHU Campus, Printed and Published by BHU Publication Cell, 2004; 1-180.
3. Gupta R, Seasonal Flowers of the Indian Summer Resorts, Mussoorie Hills, New Delhi, 1967.
4. Hooker JD. The Flora of British India, Vol 1-7(London), (1872-1897).
5. Ignacimuthu S, Ayyangar M, Shanker SK, Ehhnobolanical investigations among tribes in Madurai district of Tammil Nandu (India). J.Ethnobiol Ethnomedi, 2006; 2: 25.
6. Jain SK, Rao RR, Hand Book of field and Herbarium methods, Today and Tomorrow Printers and Publishers New Delhi; 1976; 33-58.
7. Prakash JW, Raja RDA, Anderson NA, Williams C, Regini Bemsar K, Rajeev R, Kiruba S, Jeeva S, Das SSM, Ethnomedicinal plants used by Kani tribes of Agasthiyar malai biosphere reserve, Southern Western Ghats, Indian Journal of Taraditional Knowledge, 2008; 7(3): 410-413.
8. Rao RS, History and Importance of Indian herbaria. Jour, Ind. Bot. Soc. 1958; 3: 152-159.

9. Saini DC, Flora of Bahraich District, Uttar Pradesh-J Eco Taxon Bot., 2005; 29(5): 843-886.
10. Shanker D, Ved DK Geeta VG, A Green Pharmacy Indian Health Traditions, The Hindu Special issue with the Sunday Magazine, 2000; 1-2.
11. Sharma B D, Balkrishnam NP, Sanjappa M, Flora of India Vol 11 BSI Calcutta Deep Printers New Delhi 1993.
12. Sharma B D, Samjappa M, With assistance from Bal Krishnan NP Ed Flora of India Vol 3 BSI, Calcutta Deep Printers New Delhi 1993.
13. Tripathi P, Botanical Pesticides in the Management of post harvest Fruit Diseases, Daya Publishing House Delhi -35, 2005 Google book.
14. http://books.google.co.in/books?isbn=8170353556.