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 beauty berry a beautiful nutraceutical potent ethno medicinal plant and all the parts of the plant viz. Root, Bark, Leaves, Flower, Fruits and Seeds are used in management of various ailments viz. stomach disorders, arthritis, mouth and tongue sores, burning sensation, tumor, abdominal pain, cuts, ulcers, colic diarrhea, diabetes, stomatitis, conjunctivitis and various skin ailments.

Keywords: Nutraceutical, Ethnomedicinal, North Tarai Forest, Bahraich, Tribals, Tharus.

INTRODUCTION

Bahraich district is one of the districts of Eastern Uttar Pradesh, situated in Upper Gangetic Plain. It lies between 27° 43’ and 28° 51’ North Latitude and 81°8’ and 82°10’ East longitude with a total area about 6944 sq. km. Botanically the area is very interesting. 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. Tharu tribes are endowed with vast knowledge of medicinal plants and have strong belief in magicotherapeutic properties of plants for treatment of various ailments.
The district is having good population of tribal people mostly tharu 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, 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 is to three seasons i.e. rainy, winter and summer season. The general temperature ranges between 3°C to 43°C. The general vegetation of the area is tropical most 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 habit 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 (Ignacimuthu et al., 2006). The traditional definition of medicinal plant is given in Ashtasane Hrdayas 2006 A. D. Sutra Sihana ch 9, Verse 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 world. In India North east and Western ghats ranks as first in biodiversity followed by our North West forests of Tarai region. Due to the biodiversity and tribal community this area is a natural paradise with special reference to ethno medicinal study and as a result we have taken this project.

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 accommodation in forest rest house had been obtained from the competent forest authority. Under the present study the information of the local names, ethno medicinal, economic use of plants has been mostly gathered from the local in habitant’s, local healers, vaidhs and it was noted in the field diary. The information was also gathered from the available literatures (Dubey, 2004 and Saini, 2006). Field survey of the area was done during April 2009-March 2013. The collection of voucher specimen was done during flowering/fruiting periods to facilitate the identification. The information was gathered by making repeated queries time to time through interviewing the tribal’s. The herbariums of plant samples were prepared scientifically following the method as described by Jain and Rao (1976) and the same was deposited in departmental herbarium for record and reference.

RESULTS AND DISCUSSION
Beauty berry botanically known as Callicarpa macrophylla Vahl. Synonym–C. meana Roxb. belongs to Planate, Angiosperms. Eudicots, Asterias, Lamiales, Verbenaceae is an erect shrub up to 2.5 m high. Leaves 5.30 x 2.5–10 cm crate, lanceolate, elliptic, crenate – serrate, acuminate, base cumeate or rounded, upper surface wrinkled stellate pubescent floccose wooly or cottony beneath. Flowers pink in dense auxiliary, dichotomous cymes, Drupes 2-2.5 mm in diameter, white spongy succulent with a fleshy exocarp and a hard endocarp. Seed-1.
It is found frequent, as shrubby undergrowth in forests of sub himalayan tracts from Hazara east words to Assam upto 1500 m. Phenology August–October, November-January. Traditionally, Callicarpa has been included in the family Verbenaceae but some current botanical authorities have concluded that it is more appropriately included among the Lamiaceae, with both of these families being grouped in the order Lamiales. (Jones and Kinghorn, 2009).

It is commonly known as Beauty berry, Perfumed Cherry, Bastra, in Ayurved–Priyangu Priyangukaa, Priyaka, Gandhpapi, Gandhi Priyangu, Phalini, Vanilaa, Kaantaa, Kaantaa haaa, Shyamaa, Anganaapiya, Unani-Habbul-Mihlb, Chokkala Malayalam-Thinpernivelam, Vennthekku, Kannada Ardri, French Mulberry of Western Ghats. Ethnobotanically there are a number of wild plants in the study area which possess beautiful flowers and they can be introduced in gardens for ornamental purposes. Callicarpa macrophylla ranks first among the list.

In ethno medicinal uses of this beautiful plant was found that almost all parts of the plant viz. root, bark, leaves, flowers, fruits and seeds are used as a medicine Root is chewed in rashes on the tongue and mouth, stomach disorders and arthritis. Bark is used in rheumatism and diseases of genitourinary tract, mouth and tongue sores, Burning sensation and as blood purifier. Leaves are smoked to relive headache, the hot poultice of leaves is applied on swollen and rheumatic painful joints and fever. Leaf extract is used to treat rheumatism. The leaves are chewed with salt as an anthelmintic.

Flowers are used for its oil preparation which works as hair tonic so as to promote the hair growth. Flowers are used as eye drops in conjunctivitis. The powder of dried flowers is salutary in dressing. It is being used as a deodorant in excessive sweating, burning sensation of the body and skin ailments, tumor, abdominal pain and cuts.

The fruits are bitter, sweet astringent, acrid, anodyne, digestive and good tonic. It is used in rheumatoid arthritis, asthma, anorexia, headache, foul ulcers, flatulence colic diarrhea, dysentery, skin disease, burning sensation, excessive sweating, diabetes and vomiting. It is used in emesis and giddiness. The juice of the fruit is used to treat fever.

Seed paste is used in Stomatitis and leprosy. Warm paste is applied to rheumatic joints. Seeds are cooling, antidiarrhoeal, It is taken with warm water/milk in constipation. It is being extensively used in oral infections and intestinal complaints.
The genus *Callicarpa* has a rich history of ethnobotanical usage, mainly in India. Several species of the genus *Callicarpa* have documented ethnobotanical uses as traditional ethnomedicine and as fish poisons. Several species have been used to regulate fertility. In our study area no informer has told us about such property in *C. microphylla* either alone or in combination with other plant species.

*C. microphylla* is used extensively in Indian and Chinese system of traditional medicine. In traditional chinese medicine, *C. microphylla* and two other species of *Callicarpa* i.e. *C. pendulata* RBr. and *C cathayana* Chang have been used to stop internal and external bleeding and to treat burns (Bensky et al., 1986). *C. microphylla* is also used in combination with other herbs in a preparation to treat diarrhea, dysentery, intestinal worms, and skin disorder, purify the blood and eliminate the toxins (Khare, 2004).

Various extracts and other preparations of *Callicarpa americana* L. have been evaluated for biological activity in a number of assay systems, including antiviral potential of the freeze dried leaf, oviposition, inhibition activity of an aqueous leaf extract, antialgal activity of the leaf essential oil, mosquito bite deterrent activity of volatile constituents from the leaves and the Cytotoxicity of a Chloroform extract of the combined fruits, leaves and twigs. Ethanolic extracts of *C.microphylla* along with few others were found to lack cyto-toxic activity against K.B. Cells (Jones and Kinghorm, 2009).

**CONCLUSIONS**
Against *C. microphylla* its genus *Callicarpa* has a relatively wide geographic distribution. There is considerable ethno botanical evidence that members of the genus contain pharmacologically active components and numerous extracts have shown positive results in a range of bio assay 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. A few promising chemical constituents have been obtained from mosquito-deterrent activity (Contrell et al., 2005), Cytotoxicity (Jones et al., 2007), antimicrobial activity (Hayashi et al., 1999), among others, but it seems clear that this is just scratching the surface into the elucidation of the potential bio active natural products from *Callicarpa* and much more phyto chemical prospecting is warranted on this promising genus in the future.
The present study offers a great deal of scope for ethno botanical 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 a useful lead for phyto chemists 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.

In addition, in light of the ongoing debate about the taxonomic position of *Callicarpa* a through evaluation of the cytotaxonomy of this genus as compared to members of Lamiaceae and Verbenaceae would help to clarify the relationship among these taxa.

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