

## SHORT COMMUNICATION

# ***Nyctanthes arbor-tristis* L. (Oleaceae): An effective ethnomedicine for the treatment of sciatica**

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### Key Words

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### ABSTRACT

*In our continued ongoing pursuits to map and document ethnomedicinal properties of lesser known medicinal flora of Ratlam District of M.P. (India), information about an interesting and hitherto unknown ethnomedicinal use of Nyctanthes arbor-tristis L. (Oleaceae) was recorded from the urban and rural folklore of Ratlam district. It has been observed that the plant species is being used as a drug to relieve sciatica pain. This is a new ethno-medico record that deserves close scientific scrutiny.*

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## INTRODUCTION

Ratlam District lies in the western part of the Malwa Plateau in Madhya Pradesh. The mathematical limits of the District extend from 23° 05' North to 23° 55' North and from 74° 30' East to 75° 42' East. The greatest length of the District extends about 122 km. from southwest to northeast. The elevation generally varies from 434 to 549 m. above mean sea level. The district comprises an area of 4861 sq. km. inhabited by 1214536 persons according to Census 2001.

During extensive field trips in some urban and rural tribal areas of the district Ratlam, the author has recorded new and interesting ethno-medicinal uses of plants used by the local rural and tribal communities. Ethnobotany has introduced numerous little-known or unknown uses of plants (Jain, 1981, 1991, 2002, 2004). Likewise the author

has also recorded ethnomedicinal uses of several lesser known plants in this district, (Jadhav, 2006, 2009). The present paper provides a very effective and hitherto unknown ethno-medicinal use of *Nyctanthes arbor-tristis* L. (Oleaceae) in the treatment of sciatica pain by the local people of Ratlam.

## MATERIALS AND METHODS

Extensive field trips were organized for collecting the plant species and data using an integrated approach of botanical collections, interviews and questionnaires. These trips were carried out between August 2004 to March 2005 in some urban and rural area of the Ratlam District. The knowledgeable persons were contacted for collecting information about ethnomedicinal plants. During the survey these person were contacted and taken to the field for collecting information about

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ethnomedicinal plant, local names and method of preparation of the drug and approximate dosage of administration. Voucher specimen was collected for authentication of information and future reference. With the help of local name and specimen it is possible to verify the uses with other inhabitants and the data are considered valid if at least 2 informants provided similar uses about a medicinal plant. Herbarium specimens were prepared following the standard method (Jain and Rao, 1978) and were deposited in the herbarium of Botany department, Govt Arts & Science PG College, Ratlam (M.P.).

## RESULTS AND DISCUSSION

### **Botanical description of *N. arbo-tristis* L.**

*Nyctanthes arbor-tristis* L. (Oleaceae) occurs commonly in and around Ratlam. The species is known as 'Tamath' in Bhil tribe. It is also known as 'Harshringaar' in Hindi, as "Sheuli" in Bengali, as "Jayaparvatai" in Gujarati, as "Parijata" in Kannada, as "Parijatam" in Malayalam, as "Parijatak" in Marathi, as "Pavilamalligai" in Tamil, as "Pagadamalli" in Telugu, as "Night jasmine" in English and as "Sephali" in Sanskrit.

**Taxonomic description:** The plant is a large shrub, with 4-angled branches and ovate or ovate-lanceolate leaves. Flowers are white to orange and fragrant. Capsule orbicular, compressed; Fruiting occurs during August-November.

**Chemical constituents:** Leaf & stem contains  $\beta$ -Sitosterol, Nyctanthic acid, Iridoid, Glycosides-Arbortristosides A, B, C, D & E Glucomannan, Glycerides of Lignocetric, Linocetric, Myristic acid, Oleic acid, palmitic acid. Seeds are rich in stearic acid, Astragalin, Nictoflorin, Nyctanthoside, Arborsides, Ascorbic acid, Carotene, Glucose, Fructose and Manitol.

**Medicinal properties:** Leaves have anthelmintic, antibacterial, anti-inflammatory, bitter, depurative, digestive, diuretic, expectorant, febrifuge, laxative, thermogenic properties. Flowers are astringent, bitter, carminative stomachic (Warrier et al., 1994). Leaves are used in Baldness,

bronchitis, constipation, cough, dyspepsia, fever, helminthiasis, inflammation and pruritus. Seeds are used in treating scurvy (Warrier et al., 1994).

### **New ethno-medicinal record of *N. arbor-tristis***

During the course of this study, a very effective and interesting ethnomedicinal use of the *Nyctanthes arbor-tristis* L. was recorded in Ratlam district. The urban and rural people use this plant for the treatment of sciatica. Fresh four juvenile leaves of the plant are collected in early morning after Sun rise and chewed with jaggery. This dose has to be taken early in the morning by the patient on empty stomach. The dosage is to be taken only three days continuously. If the disease is not cured, then they have to take the same dose again for three days after giving a break of one day. This can only be repeated three to five times, until the patient becomes healthy. The above reported use of this plant species has not been recorded earlier by any other worker. The natives of the Ratlam district have been using this therapy since a very long time.

The ethnomedicinal plant-based therapies play a vital role in the primary healthcare of urban and rural population, and have great potential for the discovery of new drugs of herbal origin. *Nyctanthes arbor-tristis* L. (Oleaceae) exhibits highly potent medicinal properties in relieving sciatica pain. This traditional knowledge system of the urban and rural communities needs to be studied, documented, preserved and used for the benefit of mankind. Moreover, the people of all communities are rapidly acquiring the modern culture and custom. Thus, there is an urgent need to document their empiric and endemic knowledge before it is completely eroded. Such ethno medicinal data urgently needs verifications on chemical and pharmacological grounds. They also deserve to be prospected scientifically for other biological activities for improvising their efficacy and safety.

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