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Litsea cubeba (Lour.) Pers. – A Multi-Dimensional Medicinal Plant Species of Nagaland

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Abstract

The paper discusses with a medicinally significant, yet untapped plant species - *Litsea cubeba*, found in the state of Nagaland with a number of multiple medicinal values, which can lead to various interesting scientific findings if studied in a detailed research.

Key words: *Litsea cubeba,* Nagaland

Introduction

The state of Nagaland is situated in the North Eastern region of India and covers an area of 16,579 sq. Km. Nagaland is situated between 25º06' – 27º04' N latitude and 93º20'–95 º 15' E longitudes. It borders with the state of Arunachal Pradesh in the north, Assam in the west, Manipur in the south and Myanmar on the east. The altitude varies between 194 m and 3048 m from sea level with the highest peak in Saramati, located at Kiphire district bordering Myanmar. Nagaland harbours rich biodiversity hence can be termed as a state of true Mega bio-diversity.

As a result of their close bondage with nature, the *Nagas* possess immense knowledge medicinal aspects of plants. The local traditional healers possess immense knowledge on medicinal plants and they still serve as a significant property for their health-care system. However, with the advancement in allopathic medications, this rich traditional knowledge has taken a back-seat in the present scenario. The present study was aimed to –

- Identify the potential of ethnomedicinal properties of *Litsea cubeba* (Lour.) Pers. (*Syn. Litsea citrata* Blume) among the *Nagas* in Nagaland.
- Bring to light on the importance to preserve this precious traditional knowledge on the plant studied.
- Create awareness among the locals on the need for bioprospecting and further phytochemical analysis on the plant.

Litsea cubeba (Lour.) Pers. is an evergreen, aromatic tree with dioecious flowers and small pepper-like fruits. It reaches a height of 8 - 10 metres, leaves are aromatic when crushed, lanceolate, long acuminate, base cuneate. Inflorescence in umbels. Fruit is a sub-globose. Flowering is observed in November to March and fruiting from February to July.

In India, the species grows abundantly in the Himalayas and reported from Arunachal Pradesh,

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Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Uttaranchal, Uttar Pradesh and West Bengal. It can grow in different types of non-sandy soils, preferably in shades under more dominant larger trees. The plant grows in wild in all the districts of Nagaland ranging from 800 to 2300 m above sea level. A variety of essential oils extracted from *Litsea cubeba* and having medicinal properties have been reported by various authors (Chopra *et al.,* 1956, Choi & Hwang, 2004 and Bhuinya *et al.,* 2010). Approximately 29 active essential oil compounds have been reported to be extracted from *Litsea cubeba* (Hu *et al.,* 2014). Fruits on distillation yield a pale yellow essential oil, containing citral, methyly heptenone, d-limonine, I-sabinene and terpenes and lauric acid.

The major constituent of *Litsea cubeba* oil is Citral, constituting about 70-85% of the oil. Citral has antimicrobial, antiseptic, anti-inflammatory, sedative, carminative and relaxant properties. Other constituent of the plant includes methyl laurotetanine and laurothetanine (Choi & Hwang, 2004, Wang & Liu, 2010). The plant is used widely as a medicine by various *Naga* tribes in Nagaland (Lanusunep and N.S. Jamir, 2010, N.S. Jamir *et al* 2011, Rongsensashi *et al,* 2013 and N.S. Jamir *et al,* 2016).

Common/Vernacular name

Mountain pepper, Exotic verbena (Common name), *Entsürem* (Ao), *Cei* (Angami), *Chona* (Chakhesang), *Sherithi* (Lotha), *Vothing* (Konyak), *Atazi* (Rengma), *Khamthi* (Sumi), *Niantrüng sang* (Yimchunger)

Materials and Methods

Field surveys were conducted to different localities of the state during the year 2014-2017. The treatment of various diseases and ailments by *Litsea cubeba* were collected through interviews with local medicine-men (*Kobi-raj*), Gaon Bora, village elders, etc. The distillation process was carried out at Kezhakenoma village under Phek district through traditional means.

Harvesting and yield

Litsea cubeba begins to bear fruit when the plants attains the age of 3-4 years. Seeds are harvested by cutting the fruit bearing branches preferably in the month of June to August before the seeds get ripened as immature seeds yield maximum amount of oil with better quality. An average tree yields approximately 15-20 kgs.

Distillation

Distillation takes about 20-24 hours in fire-woods until the oil gets separated from the water, the oil separated from water is utilized for medicinal purposes by the local *kobiraz.* The plant is aromatic in nature having the aroma of Lemongrass. Distillation of plant parts yields a yellow coloured oil with fresh lemony fragrance (Trina Bhuinya *et al,* 2010).

Traditional uses of *Litsea cubeba*

1. Purest form of *Litsea* oil is an effective remedy for gastritis and bowel movement.
2. Oil of *Litsea* is applied externally on ringworm and as mosquito repellant.
3. It is also soaked in cotton and apply during toothache on the affected area; it also gives soothing effect to the skin
4. Paste of the leaves is applied on cuts and injuries as haemostatic; leaf pastes are also rubbed externally for skin diseases and allergy on the affected area.
5. Fruits are consumed as a carminative.
6. The fruits' decoction or infusion is taken orally for treatment of paralysis and loss of memory.

7. Other than its medicinal properties, *Litsea* oil is also a fine remover of stains on clothes and paint remover.

Discussion and Conclusion

The plant can prove to be a boon for the locals if it can be utilized for generation of income especially for the rural folks as it serves a number of significant ailments and diseases. The practice of *Jhum* cultivation is having a negative effect on the plant species as it possesses a serious threat on the decrease in population of *Litsea cubeba*. It is a pity to note that rampant deforestation, fire-woods, concrete roads and other human socio-economic development activities, the plant species is facing depletion at an alarming rate in our state.

The economic prospect of this potentially prospective plant is highly promising. The locals can utilize this plant species as a means of livelihood income. The researchers can also dwell in-depth and study on the medicinal aspects of this plant by studying its phyto-chemical constituents and their application on human beings as a source of medicine.

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***Figure 1 : Litsea cubeba* (Lour.) Pers. flowering twig.**

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