



A REVIEW ON SOME MEDICINAL PLANTS OF KERALA

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ABSTRACT

Kerala forests are famous for having variety of medicinal plants, used in the preparation of ayurvedic medicines and also has been known for rich and exotic spices. Musiri, the ancient port of this state became the base of world spice trade, almost ages ago. Jawaharlal Nehru tropical botanic garden and research institute, Spice garden Munnar, Carmelgiri botanical garden, Vaidyaratnam P.S Varier's Arya Vaidya Sala Kottakkal are some important places of the state to visit for the knowledge of medicinal herbs. Piper nigrum, Myristica fragrans, Elettaria cardamomum, Syzygium aromaticum, Saraca asoca are the valuable herbs having healing properties and also promote immunity against several diseases. Brhat Trayi extensively described Piper nigrum as appetizer, carminative and anti –microbial. Elettaria cardamomum is a well documented aromatic condiment in Indian medicine and tradition. In Charak samita, in the context of timira treatment, ela powder is soaked in goat's urine for 3 days and applied as collyrium. Clove oil is used for dental caries and gingivitis and also applied externally to relieve joint pains and headache. Jatiphala and Sunthi kalka is given orally in atisara treatment as mentioned by Siddha Bhesaja Mani- mala. In menorrhagia Chakradata recommends that the bark of Ashoka tree in the form of decoction be given twice daily. In this review we are going to discuss these medicinal plants of Kerala in all aspects.

KEYWORDS: Spices, Piper nigrum, Myristica fragrans, Elettaria cardamomum, Syzygium aromaticum, Saraca asoca, carminative, menorrhagia.

INTRODUCTION

Ancient Indian Knowledge on medicinal plants was wide and comprehensive. Vedic literature stands to the proof of their vast knowledge on herbal medicines. A good number of medicinal plants are found mentioned in the ancient classical ayurvedic texts 'Charaka samhita', 'Susruta samhita' and 'Astanga hridaya samhita'.^[1] Largest hub of high potential medicinal plants in the world is the Kerala. The soil structure, and climatic conditions of this state is well suitable for creating high utility herbs. Kerala lead in the global spices market is an example for this. Even our spices were the primary factor for attracting foreigners to India in the ancient times.^[2] Medicinal plants which are seen during visit to the Kerala are - Piper nigrum, Eupatorium triplinerve, Artemisia parviflora, Baliospermum montenum, Coscinium fenestratum, Aristolochia bracteata, Coffea arabica, Theobroma cacao, Myristica fragrans, Elettaria cardamomum, Syzygium aromaticum, Saraca asoca, Cinnamomum Cassia, Operculina turpethum, Alpinia calcarata, Curculigo sumatrana, Clerodendrum serratum, Costus igneus, Ananas comosus, Hedychium coronarium, Vanilla planifolia, Calophyllum inophyllum,

Persia americana, Prunus dulcis, Areca catechu, Manihot utilissima, Caesalpinia sappan, Leptadenia reticulata, Embelia tsjeriam, Bauhinia acuminata, Bauhinia tomentosa, Sarcostigma kleinii, Scoparia dulcis, Rotula aquatica. Homonoia riparia, Chlorophytum malabaricum, Curculigo orchioides, Chlorophytum orchidastrum etc .It's a huge task to describe all these valuable plants in detail. So presently the effort is to elaborate few of them.

1- Marica (Piper nigrum): Known as the king of spices for many hundreds of years, pepper (*Piper nigrum*) is a trademark spice product of Kerala, which is exported to almost all parts of the world.^[3]

Vernacular name^[4]

Sanskrit- Dharmapattana, Dharmavartana, Katuka, Krishna, Ushana, Vallija, Vrittaphala.

Hindi- Golmirch, Kalimirch

English- Black pepper, Pepper

Gujarat- Kalamari, Kalomirich

Urdu- Kalimarich

Marathi- Kalimirch

Tamil- *Aguttam, Arisu, Irambivam*
Bangali- *Golmorich, Kalamorich, Kolukung, Murichung*

Botanical classification^[5]

Kingdom	Plantae
Order	Piperales
Family	Piperaceae
Genus	Piper
Species	P.nigrum

Morphology^[6]: A perennial Climber herb. Leaves large, broad, ovate, and round. Flowers appear in long spikes. Fruit, a berry gathered from ripe and dried, forms a black pepper corn.

Geographical distribution^[6]: It occurs in hot and moist parts of southern India. It is propagated by root cuttings.

Ayurvedic properties^[7] and Pharmacological effect^[8]

Rasa- Katu, **Guna-** Laghu, Tiktsna
Vipaka- Katu, **Virya-** Usna
Karma- Kapha –Vatahara, Deepana

Chemical Constituents^[9]: The thin pungent skin of the fruit contains piperine, a volatile compound 5.9%, piperidine 5%, an aromatic oil 1-2% and 7% fatty acids. The fruit pulp has a bitter resin called chavicin, starch, oil, gum, fats 1%, protein 7% and alkaloids 4%.

Formulations^[10]: Maricyadi taila, Maricyadi curna, Agnitundivati,

Part Used^[10]: Fruit.

Dose^[10]: Powder 0.5-1g.

Medicinal uses^[11]: Marica is used in the form of nasya in cases of epilepsy.

Powder is used in puerperal fevers along with honey.

Oil prepared of it relieves itching and skeletal pains.

Gargling its decoction cures tooth-ache.

2- Ela (*Elettaria cardamomum*): Cardamom is known as the queen of spices which was 200 years ago grown wild in south western India. Kerala is the biggest producer of *cardamomum* and supplies both for the local and the international market. The cardamom seed is the most common seasoning agent which is used in the cooking of India and mid eastern countries. Cardamom flavoured tea is very famous across the country.^[12]

Vernacular name^[13]

Sanskrit- Bahula, Dravidi, Ela, Gandhaphalika, Gaurangi, Korangi, Kunati, Upakunchika.
Hindi-Chhotielachi, Ilayechi.
English –Lesser cardamom, Malabar cardamom.
GujaratI- Elchi.
Urdu-Ilayachikhurd.
Marathi-Velloda.

Tamil- Anji, Elam, Iravadi, Kalindam.
Bangali- Elachi, Elaich, Ilachi.

Botanical classification^[14]

Kingdom	Plantae
Order	Zingiberales
Family	Zingiberaceae
Genus	Elettaria
Species	E. cardamomum

Morphology^[15]: An erect perennial herb upto 3 m tall. Leaves are large, narrow, with strong medium nerves. Flowers are white or pale green in colour and appear from near the base of the stem and lies on the ground.

Geographical Distribution^[15]: In India it occurs wild in moist forest and hilly regions of Karnataka and Kerala. It is commercially cultivated in Kerala, Karnataka, and Tamil Nadu. It is propagated by seeds.

Ayurvedic properties^[16] and Pharmacological effect^[17]

Rasa-Katu, Madhura **Guna-**Laghu, Ruksa
Vipaka-Madhura **Virya-** Sita
Karma- Kapha, Vata har; Swas-Kasa nashak.

Chemical Constituents^[18]: a-pinene, b-pinene, sabinene, myrcene, a-phellandrene, limonene, 1,8-cineole, y-terpinene, p-cymene, terpinolene, linalool, linalyl acetate, terpinen-4-oil, a-terpineol, a-terpineol acetate, citronellol, nerol, geraniol, methyl eugenol and trans-nerolidol.

Formulations^[19]: Eladi curna, Eladyarista, Eladi kasaya.

Part used^[19]: Seeds.

Dose^[19]: Powder 0.5-1g.

Medicinal uses^[20]: In cases of palpitation, it is given along with pepper root.

In vertigo hot infusion is given with jaggery.

Used as an aphrodisiac with sugar, milk and ghee.

3 -Lavang (*Syzygium aromaticum*)

Clove is a small dark red brown flower bud of an evergreen tree, which is abundant in the state of kerala. it is known for its strong aroma and spicy, pungent taste.^[21]

Vernacular name^[22]

Sanskrit- Lavangam, Devakusumam
Hindi- Lavamg, Laumg
English- Clove tree, Cloves
Tamil-Kirampu
Kannada-Lavanga
Telugu-Lavangamu, Devakusumamu

Botanical classification^[23]

Kingdom	Plantae
Order	Myrtales
Family	Myrtaceae
Genus	Syzygium
Species	S.aromaticum

Morphology^[24]: An evergreen tree with straight trunk upto 10 m high. The flower buds have a slightly cylindrical base and is surrounded by corolla which is surrounded by the four toothed calyx. The flowers are fleshy purplish in colour.

Geographical distribution^[24]: In India it is cultivated in Kerala and Tamil Nadu. It is propagated by seeds.

Ayurvedic properties^[25] and Pharmacological effect^[26]

Rasa-Tikta , Katu	Guna -Laghu, Snigdha
Vipaka -Katu	Veerya -Situ
Karma - Kapha –Pitta har; Dipana- Pachan; Kasa-Swas har.	

Chemical Constituents^[27]: Gum and volatile oil 16-20%, resin 6%, euginine or caryophyllin, tannin. Clove oil contains 85-92% eugenol.

Formulations^[28]: Avipattikara curnam, Lavangadi vati, Khadiradi gutika, Lavangadi curna.

Part used^[28]: Floral bud, Clove oil.

Dose^[28]: Powder 1-2g, Oil 1-2 drops.

Medicinal uses^[29]

1. Used as diuretic to relieve irritation.
2. Powder along with betel leaf is chewed in oral cavity diseases and throat congestion.
3. Tooth ache due to caries is controlled by direct application of clove oil.

4- Jaiphal (*Myristica fragrans*) : Nutmeg has tremendous potential in the spice industry, as flavour in food and also as ingredient in many value added products. Due to medicinal properties, it is used immensely in the pharmaceutical industry. Oil, oleoresin and fixed oil are extracted from dried nutmeg as also mace.^[30]

Vernacular name^[31]

Sanskrit- Jaiphala, Jatikosha, Jatiphala, Malatiphala,
Ghatastha
Hindi- Jaiphal
English- Common nutmeg, Mace tree, Nutmeg, Fragrant
nut tree
Telugu-Jaji, Jajikaya, Jatiphalamu
Tamil- Adipalam, Attigam, Kosam
Uriya-Jaiphola, Jaitri.

Botanical classification^[32]

Kingdom	Plantae
Order	Magnoliales
Family	Myristicaceae
Genus	Myristica
Species	M.fragrans

Morphology^[33]: A Evergreen tree with leafly undivided trunk of 10 m tall. Leaves are shining, deep green, alternate, oblong, entire and aromatic . Flowers are white or pale yellow, small, fragrant, borne in cluster from the axils of leaves. Fruits are pear shaped, golden yellow in colour seeds are covered by red fleshy part, known as aril which are dried and sold as mace.

Geographical distribution^[33]- It is cultivated in Tamil Nadu, Kerala and Assam. It is propagated by seeds or cuttings.

Ayurvedic properties^[34] and Pharmacological effect.^[35]

Rasa- Tikta, Katu;	Guna- Laghu, Tikсна
Vipaka- Katu;	Veerya- Usna
Karma- Kapha- Vatahar,	Dipana, Rocana, Kasa-
Svasahar.	

Chemical Constituents^[36]: It contains 2.8% volatile oil, protein, fats, starch, slimy mucilage, alkaloid. Jaipatri has 8.17% volatile oil, resin, fats, sucrose and slimy mucilage. Stable oil in nutmeg is known as butter of nutmeg. It contains myristin, myristic acid and essential oil. Mace has yellow aromatic oil having fragrance like nutmeg, which contains macin.

Formulations^[37]: Jatiphaladi curna, Jatiphaladi vati.

Part used^[37]: Seed, Seed coat(jaipatri).

Dose^[37]: Powder-0.5-1g, Oil- 1-3 drops.

Medicinal uses^[38]

1. Nutmeg powder is used in respiratory diseases, diarrhoea and oral problems.
2. Nutmeg powder is used to control premature ejaculation.
3. Mace is used to treat gum diseases, diarrhoea, and used as an aphrodisiac.

5-Ashoka (*Saraca asoca*): Ashoka tree has been an integral part of Indian history. It is commonly called a tree which is important to decrease your sorrows. It has got great religious significance and is also worshiped by some people of India. It is primarily used for the management of female reproductive problems.^[39]

Vernacular name^[40]

Sanskrit- Hemapushpa, Kankali, Vanjula, Tamrapallava,
Pindipushpa, Nata, Gandhapushpa, Karnapura.
Hindi- Ashok, Asok
English- Asoka tree

Gujarati- Ashopalava
 Bengali- Asok, Asoka
 Marathi- Ashoka, Jasundi
 Tamil- Asogam, Asogu, Anagam, Malaikkarunai,
 Sasubam
 Telugu- Asokamu, Vanjulamu

Botanical classification^[41]

Kingdom	Plantae
Order	Fabales
Family	Fabaceae
Genus	Saraca
Species	S.asoca

Morphology^[42]: A medium sized evergreen tree, reaching upto 10 m with spreading branches. Bark is dark brown. Leaves are alternate, compound upto 30 cm long with 6-12 leaflets which are oblong, lanceolate, acute, short petiolate. Young shoots are pendent. Flowers are yellow or orange and gradually turn vermillion and scented at night.

Geographical Distribution^[43]: In India it is distributed in evergreen forests of up to an elevation of about 750 meters. It is found throughout India, especially in Himalaya, Kerala, West Bengal, Tamil Nadu and whole

Flowering and Fruiting of some medicinal plants of kerala.

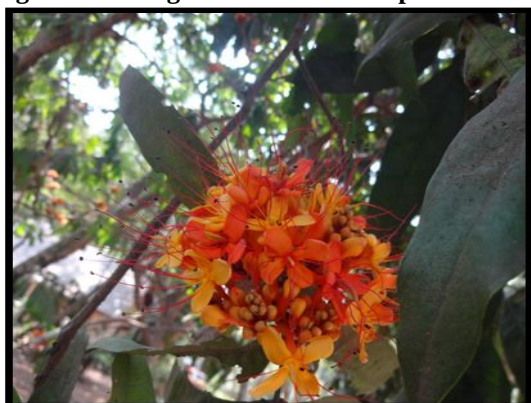


Figure 1: *Saraca asoca*.



Figure 2: *Elettaria cardamomum*.



Figure 3: *Piper nigrum*.



Figure 4: *Myristica fragrans*.

southern region. In Kerala state it is found in Patagiri, Kaikatty and Pothundi of Palakkad, Thirur, Kollam and Kannur districts.

Ayurvedic Properties^[44] and Pharmacological effect^[45]:

Rasa-Kasaya, Tikta

Guna-Laghu, Ruksha

Vipaka- Katu

Veerya-Sita

Karma- Varnya, Grahi

Chemical Constituents^[46]: The bark contains an active component, haematoxylin. It also contains tannin and catechin in substantial amount and ferrous compounds in a smaller quantity.

Formulations^[47]: Asokaristam, Asokaghrtam.

Part used^[47]: Bark, Seeds.

Dose^[47]: Decoction 50-100ml, Seed powder 3-6g.

Medicinal uses^[48]

1. Decoction of the bark is used in amenorrhoea, leucorrhoea, and other gynaec problems, to tone up the muscle.
2. Used as an antispasmodic in dysmenorrhoea.



Figure 5: *Syzygium aromaticum*.

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