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Review Article

Lagerstromia Parviflora: A Brief Review

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ABSTRACT

Many medical systems use Lagerstroemia parviflora (L. parviflora) to prevent and treat a variety of illnesses. The bioactive compounds produced by plants are referred to as phytochemicals. A high concentration of hydroalcoholic extract which provides the presence of carbohydrates, alkaloids, phytosterols, steroids, flavonoids tannins, phenolic compounds, glycosides and cumarines, is found in the phytochemical study of Lagerstroemia parviflora leaves and seeds. Additionally, this plant may effectively treat bronchitis, asthma, fever, and cough. According to traditional wisdom, the entire plant can be utilized to treat syphilis and digestive disorders. Every part of the plant, including the leaves, fruit, bark, and entire plant, is used to treat a variety of illnesses, including diabetes mellitus, rheumatoid arthritis, and urinary disorders. The herb is used by the womens to treat various menstrual and breastfeeding issues. It is a seasonal plant in which Flowering is in month of April to May and Fruiting is in the month of October to December.

INTRODUCTION

The medium-sized tree *Lagerstroemia parviflora* is native to India. In India, *Lagerstroemia parviflora* is a common medium-sized deciduous plant that can grow up to 900 meters in length in the Himalayas. The tree is between 15 and 18 meters tall. In India, this herb has been used to treat a number of illnesses. The leaves of the plant are used by the Santals of Chotanagpur in India to treat chronic wounds and infections. It is commonly believed that the entire plant can be utilized to treat illnesses of the reproductive and gastrointestinal systems. Additionally, this herb effectively treats bronchitis, asthma, fevers, and coughs [1,2]. Phytochemical components including carbohydrates, saponin, terpenoids, steroids, phytosterols, flavonoids, proteins were detected in the leaf extract of *Lagerstroemia parviflora*. Geographical differences may exist in the phytochemical and nutritional makeup of the plant and its therapeutic potential. Crape myrtle or crepe myrtle are popular names for *Lagerstroemia*

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Parviflora. The Antheraea paphia moth feeds on the leaves of *Lagerstroemia parviflora* to create tassar silk also known as tussah a type of wild silk that is valuable for trade in India.[1]

❖ **Phytochemical classification of *Lagerstroemia Parviflora*:**

- **Botanical Name:** *Lagerstroemia parviflora Roxb*.
- **Synonyms (s):** Fatioa nupaulensis DC.
- **Biological Source:** small flowerd crape Myrtle.
- **Geographical source:** Tropical Himalaya , India, Bruma.
- **Family:** Lythraceae.
- **Chemical Constituents:** amyl alcohol, betasitosterol, Lageracetal, tannins, 3-O-methyllagic acid and 3, 3, 4- tri-O-methylellagic acid.

❖ **Taxonomical classification of *Lagerstroemia Parviflora* :** [1,2]

- Kingdom : Plantae
- Phylum : Tracheophyta
- Genus: Lagerstroemia
- Species: Lagerstroemia parviflora Roxb
- Subkingdom : Tracheobionta
- Division: Magnoliophyta
- Class: Magnoliopsida
- Order: Myrtales

❖ **Local Names of *Lagerstromia Parviflora:***

- English : Small flower crape myrtle
- Hindi : Lendia, Bakli, Sidi, Seina
- Marathi- Lendya
- Telugu- Chinangi, Chennangi, Gullakaraka, Chinnagi
- Sanskrit- Siddeshwara
- Odiya : Chhena, Salora, Sidha
- Bengali : Sidha, Sida
- Kannada- Chennangi mara [6]

❖ **Description of Plant:**

"Fig. 1": *Lagerstroemia Parviflora*

1)Plant:

It is called as Tree or sometimes large shrub. *Lagerstroemia parviflora* is a tree that has many uses including for timber, fuel, and medicine. A tasty gum that can be consumed is produced by the tree. Older trees have smooth, grey or reddish bark that peels off in long, thin flakes. [3]

2)Leaves:

"Fig.2": Leaves of Lagerstroemia Parviflora

Leaf characteristics: [3]

Dimensions: 4-8 cm in length and 1-4 cm in width
Base: round

Apex: Obtuse-acute,
Margin: Complete, glabrous, or just beginning to pubescent below.
Veins: Five to nine pairs of lateral nerves that are pinnate, thin and noticeable.

The leaves are narrowly elliptic, oblong or ovate-lanceolate, glabrous above, grey, and somewhat pubescent, particularly along the nerves below.

3) Flowers:

"Fig.3": Flowers of *Lagerstroemia Parviflora*

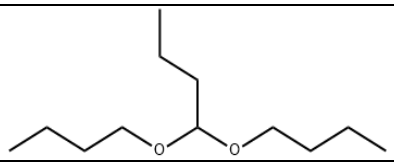
White flowers with terminal downy panicles of 3 to 6 flowering cymes measure 8 to 14 mm across. Six triangular or lanceolate, sharp capsule lobes are embraced by a cupular, smooth, woody calyx tube. There are six ovate-oblong petals with an undulating border. Clusters of three to seven tiny white blooms are produced at the ends of branches and in the leaf axils. The petals are flat and have short claws. The plant flowers from April to May [3].

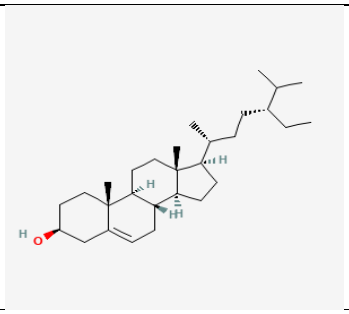
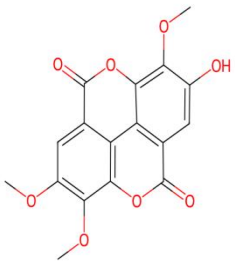
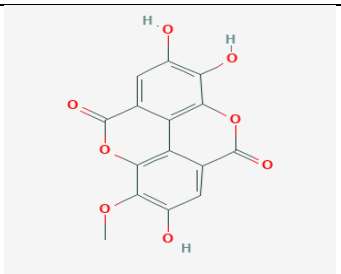
4)Fruits:

"**Fig.4'': Fruits of *Lagerstroemia Parviflora***

An elongated, leathery capsule is the fruit of *Lagerstroemia parviflora*, commonly referred to as the little flowered crape myrtle. It contains winged seeds and is dark brown in colour. It is 2-4 cm in length and 1-3 cm in width. The seeds are released when the fruit breaks along four or six lines. The fruits ripen to a dry state after initially being green and delicious. Fruiting occurs from October through December. [3]

❖ **Chemical Constituents present in *Lagerstroemia parviflora.*** [7]

Sr. no.	Name	structure	Molecular Formula	Molecular Weight
1)	Lageracetal		C12H26O2	202.33 g/mol

2)	betasitosterol		*C29H50O*	414.7 g/mol
3)	3, 3, 4- tri-O-methylellagic acid		C17H12O8	344.275 g/mol
4)	3-O-methyllagic acid		C15H8O8	316.22. g/mol

❖ **Uses**

1. Herbal tea produced from dried fruits has long been used to treat renal diseases, diabetes, and high blood pressure.
2. The Antheraea paphia moth, which creates tassar silk, feeds on the leaves of L. parviflora.
3. A significant tree species for its timber is *Lagerstroemia parviflora*.
4. The wood is incredibly durable and strong. Common uses include agricultural equipment, doors, window frames, rafters, beams, pillars, and carts.
5. Elephants consume this species bark.
6. Black dye is made from the tannins in the bark. The tree yields edible gum with a sweet flavour.
7. Because it produces high-quality charcoal, it is also a great fuel tree.

❖ **Pharmacological Activities:**[7]

Numerous pharmacological actions, including as antioxidant, antibacterial, anti-inflammatory, pain-relieving, and anti-diarrheal properties, make *Lagerstroemia parviflora* a promising candidate for a number of medical uses. Additionally, studies indicate that its leaves may have antitussive properties.

Antioxidant potential:

Studies have shown significant antioxidant activity from extracts of *Lagerstroemia parviflora* which could help combat oxidative stress in the body.

Antimicrobial activity:

Research indicates potential antibacterial activity against certain bacteria like Staphylococcus aureus.

Anti-inflammatory effects:

Extracts from the plant are believed to have anti-inflammatory properties which could be beneficial for conditions related to inflammation.

Pain relief potential:

Some studies suggest *L. Parviflora* has good effect on relive various pains.

Anti-diarrhoeal activity:

Preliminary research indicates potential to help manage diarrhea.

Therapeutic Effects of Plant *Lagerstroemia parviflora*:[7]

Indian medicinal plant	Plant Part	Therapeutic Use
Lagerstroemia parviflora	Aerial Part	Hyperglycemia
Lagerstroemia parviflora	Aerial Part	Nervous system diseases
Lagerstroemia parviflora	Bark	Antipyretics
Lagerstroemia parviflora	Bark	Antirheumatic agents
Lagerstroemia parviflora	Bark	Bronchitis
Lagerstroemia parviflora	Bark	Diabetes Mellitus
Lagerstroemia parviflora	Bark	Gastrointestinal diseases
Lagerstroemia parviflora	Bark	Pruritus
Lagerstroemia parviflora	Bark	General tonic for rejuvenation
Lagerstroemia parviflora	Bark	Snake bites
Lagerstroemia parviflora	Bark	Syphilis
Lagerstroemia parviflora	Bark	Urination disorders
Lagerstroemia parviflora	Bark	Wounds and injuries
Lagerstroemia parviflora	Bark	Rheumatoid arthritis
Lagerstroemia parviflora	Flower	Mouthwashes
Lagerstroemia parviflora	Fruit	Diabetes mellitus
Lagerstroemia parviflora	Fruit	Urination disorders
Lagerstroemia parviflora	Fruit	Wounds and injuries
Lagerstroemia parviflora	Leaf	Abscess
Lagerstroemia parviflora	Leaf	Anthelmintics
Lagerstroemia parviflora	Leaf	Antibacterial mAgents
Lagerstroemia parviflora	Leaf	Antifungal Agents
Lagerstroemia parviflora	Leaf	Antipyretics
Lagerstroemia parviflora	Leaf	Antitussive Agents
Lagerstroemia parviflora	Leaf	Cathartics
Lagerstroemia parviflora	Leaf	Constipation
Lagerstroemia parviflora	Leaf	Diabetes mellitus
Lagerstroemia parviflora	Leaf	Diarrohea
Lagerstroemia parviflora	Leaf	Diuretic
Lagerstroemia parviflora	Leaf	Dysentery
Lagerstroemia parviflora	Leaf	Eye Disease
Lagerstroemia parviflora	Leaf	Pharyngitis
Lagerstroemia parviflora	Leaf	Urination Disorder
Lagerstroemia parviflora	Leaf	Vomiting
Lagerstroemia parviflora	Leaf	Wounds and injuries
Lagerstroemia parviflora	Root	Fever

Lagerstroemia parviflora	Root	Kidney Calculi
Lagerstroemia parviflora	Seed	Leprosy
Lagerstroemia parviflora	Stem	General tonic for Rejuvenation
Lagerstroemia parviflora	Whole Plant Excluding Root	Contraceptive Agents
Lagerstroemia parviflora	Whole Plant Excluding Root	Hypoglycemic Agents
Lagerstroemia parviflora	Whole Plant Excluding Root	Hypothermia
Lagerstroemia parviflora	Plant	Antifungal Agents
Lagerstroemia parviflora	Plant	Astringents

REFERENCES

1. Chaudhari AB. Forest plants of Eastern India, 1993-258.
2. Krishen P. Jungle trees of Central India, a field guide for tree spotters. 2013, 148-149.
3. www.specImens.kew.org/herbarIum/K00111 5236
4. www. theplantlist.org
5. Rahman A, Uddin N et al. Antinociceptive, antidiarrhoeal, and cytotoxic activities of Lagerstroemia speciosa (L.) Pers. Pharmacologyonline 2011;1:604-612.
6. Saxena HO, Brahmam M. The Flora of Orissa, 1994; II: 710.
7. www.Google.com
8. Himani Jaisinghani And Puja Magarde. A Rare Medicinal Herb Lagerstroemia parviflora (ROXB) 2022 ;10(1):27-29.
9. Saumya Dubey, Prashant Maithel, Dr. Satkar Prasad, Dr. Sailesh Kumar Ghatuary
10. Screening of Immunomodulatory activity hydroalcoholic leaves extract of Lagerstroemia parviflora 2022;11(3):11-24.

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