



Original Research Article

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ETHNO BOTANICAL USES OF *LEEA MACROPHYLLA* ROXB. AND *LAGERSTROMIA PARVIFLORA* ROXB.

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ABSTRACT: *Leea macrophylla* Roxb. and *Lagerstromia parviflora* Roxb. are important traditionally used medicinal plants from ancient time period. In present work, medicinal significance and the pharmacological effects of the plant are discussed. It is essential to study the uses of plants and other associated knowledge which will help for researchers to introduce new phytoproducts for scientific validation. Besides, the present work suggests that the more scientific data is required to explore its chemical constituents in the treatment of diseases and disorders for making new therapeutic drugs. It is also suggested that both species are under threat of extinction so need to be protected.

Keywords: *Leea*, *Lagerstromia*, phytoproducts, medicinal plants, traditional medicine.

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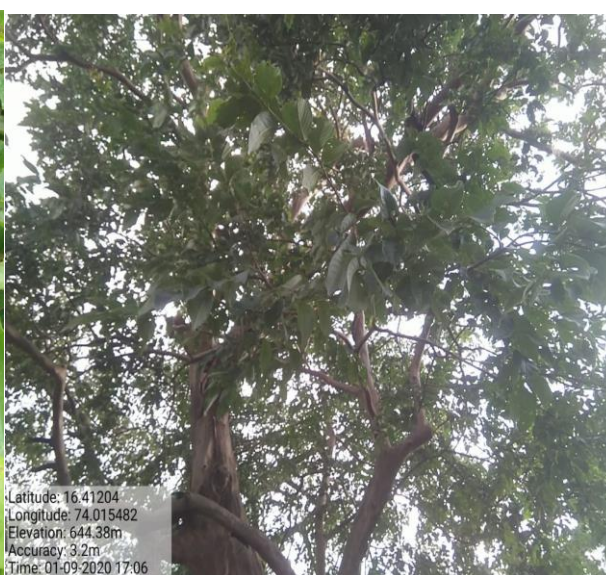
1. INTRODUCTION

Western ghat within Maharashtra is a known to have good repository for plants that have preventive and curative effects on human health, thereby have been used as traditional medicine (TM) for different ailments since ancient times. TM is popular in parts of the African and Asian countries. According to World Health Organization (WHO), more than 80% of the world populations depend on TM for their primary health care needs. Plant-based medicinal systems continue to play an

essential role in healthy life. According to WHO, near about 20,000 of plants used for treatment of several human diseases. The studies on active components derived from these medicinal plants have increased the interest in these plants recent years [1]. The genus *Leea macrophylla* Roxb. belongs to the Vitaceae family and commonly known as Hattikaan or Gajkarni (due to appearance of leaves like elephants ear) is an erect herbaceous shrub widely distributed to sub-Himalayan tract and Western Ghats of India. *Lagerstroemia parviflora* Roxb. belongs to Lythraceae family and commonly known as Landia in India. Various studies claimed to possess the active components derived from leaves, roots and flowers of these plants [2][3]. Hence the present review is conducted to provide traditional knowledge for researchers regarding both plant species which have potency to treat many diseases.



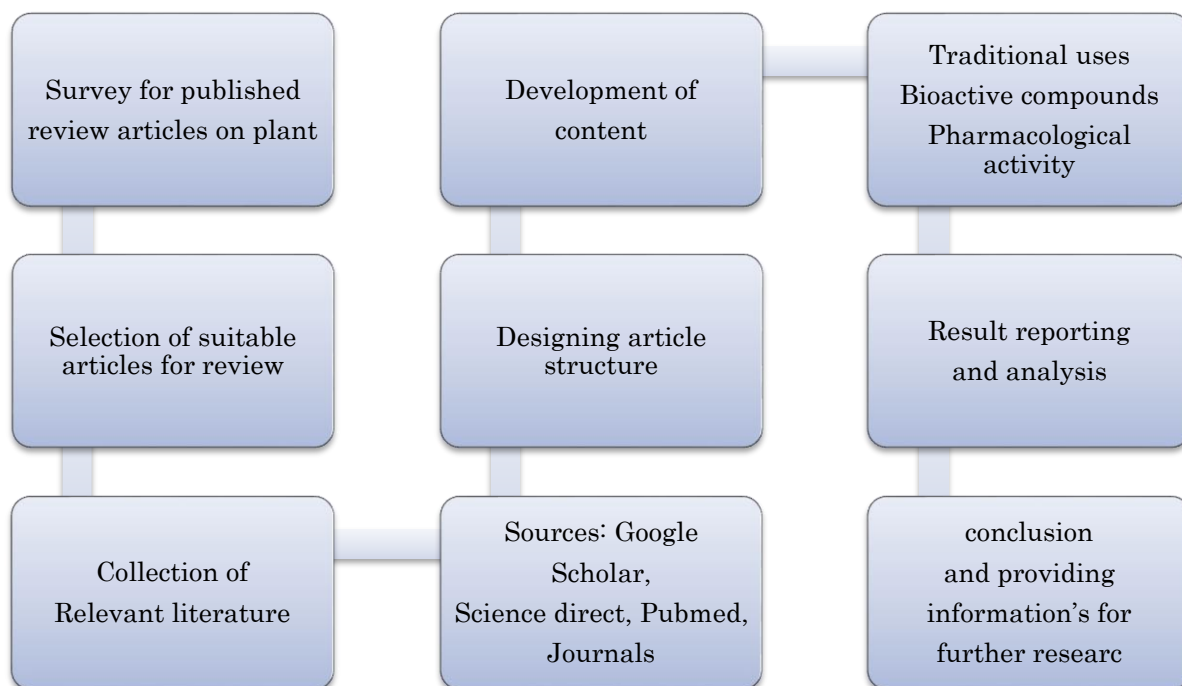
Leea macrophylla Roxb.



Lagerstroemia parviflora Roxb.

2. MATERIALS AND METHODS

Review articles help to provide platforms for new conceptual frameworks to synthesize diversified results, and generally give research scholars a new window for further research regarding phytochemical constituents, medicinal uses, characterization and isolation of interested compounds for novel drug discovery like nanoparticles. Literature review was carried out by referring flora, journals and by using several search engines like Google scholar, Science direct, PubMed, Research gate, etc.



3. RESULTS AND DISCUSSION

The review of plant *L. macrophylla* and *L. parviflora* provides its ethnobotanical uses scientific information for many diseases and disorders. The various plant parts exhibit anti-inflammatory, hepatoprotective, antimicrobial, antidibetic, antiurolithiatic effect, wound healing, cytotoxic, anti-thrombotic, neuroprotective, cardi tonic and gastroprotective action etc. (table no 1). But the continues use results in reduction of vegetation of plants. It is also noted that medicinally and henceforth economically important plants should be protected [15]. Various threat factors like uncontrolled exploitation, loss of habitat and trading for various purposes, most of the species are struggling for their existence [16]. *Leea macrophylla* plant is also as per recorded IUCN list in Harda district of Madhya Pradesh [25]. The *Lagerstomia parviflora* is considered as rare and endangered [26]. The plant is considered as endangered and rare Hence, more scientific data is required to explore its chemical constituents in the treatment of diseases and disorders for making new therapeutic drugs as well as create awareness regarding these plant conservation.

Table 1. Ethnobotanical uses of *L. macrophylla* Roxb. and *L. parviflora* Roxb.

Plant Name	Plant Part	Ailment	Region	Reference
<i>Leea macrophylla</i> Roxb.	Root	Fracture rheumatism	Bangladesh	[3]
	Leaf	Tetanus	Bangladesh	[3]
	Root	Piles	Rajshahi district, Bangladesh	[3]
	Leaf and root	Body pain, paralysis, throbbing pain	Bangladesh	[3]
	Stem and root	Typhoid	Bangladesh	[3]
	Root	Healing cut injury	Bangladesh	[3]
	Root	Cancer, dysentery, body-ache	Rajasthan, India	[3]
	Root	Tetanus, nephrolithiasis, rheumatism, arthritis, snake bite, pain, blood effusion	Chittagong Hill Tracts, Bangladesh	[3]
	Root	Sexual weakness, tumour	Bangladesh	[3]
	Root, leaves	Antibacterial and antifungal	India	[5]
		Anti-inflammatory	India	[6]
	Crushed seeds	Snake bite (Viper snake)	Pawra tribe, Maharashtra, India	[17]
	Crushed leaves	Rheumatic pain	Folk people, Bangladesh	[18]
	Leaves paste	Stop bleeding	Eastern Sikkim, Himalaya	[19]
	Roots	Arthritis	Lepchas of West Bengal	[20]
Leaves	Increasing sperm count, fractured bones	Chonia and Jolchotra, Tangail, Bangladesh	[21]	
Whole plant	Anti-thrombotic activity	India	[5]	
Roots	Neuroprotective	Kerala, India	[7]	
Flowers	Honey preparation	Nepal	[7]	

<i>Lagerstroemia parviflora, Roxb.</i>	Leaves	Antimicrobial	Uttar Pradesh, India	[8]
	Bark	Cold and cough	USA	[9]
	Seed oil	Diabetes	Mumbai,	[9]
		Leprosy	Maharashtra	[10]
	Bark	Stomach-ache	Karnataka, India	[10]
	Leaf juice	Fever	Jharkhand, India	[11]
	Leaf powder	Antibacterial, anti-asthmatic	Chhattisgarh, India	[12]
	Leaf	Anticancer	Iraq	[22,23,24]

4. CONCLUSION

The present review will be helpful to study the numerous uses of both the plants. It is also suggested that more investigative work regarding isolation and characterization of phytochemicals is required to study which are having potent ability to cure several ailments as the mentioned in literature review.

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ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

HUMAN AND ANIMAL RIGHTS

No Animals/Humans were used for studies that are base of this research.

CONSENT FOR PUBLICATION

Not applicable.

AVAILABILITY OF DATA AND MATERIALS

The author confirms that the data supporting the findings of this research are available within the article.

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CONFLICT OF INTEREST

There is no conflict of interest.

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