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Harsingar: The holistic healer - uncovering the medicinal benefits of the Parijat flower

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Abstract

The Parijat flower, also known as Harsingar or Night-blooming Jasmine (*Nyctanthes arbor-tristis*), has a significant role in Ayurveda and other traditional medical systems and is steeped in cultural and spiritual traditions. This article delves into the historical significance, medicinal properties, and therapeutic applications of Harsingar, highlighting its role in holistic healing practices. By integrating ancient wisdom with contemporary scientific research, we aim to uncover the plant's diverse pharmacological benefits, its bioactive compounds, and its potential applications in modern healthcare. Through this synthesis, we present a comprehensive view of Harsingar's contribution to wellness, offering insights into its uses for treating ailments and promoting overall health.

Keywords: Harsingar, parijat, medicinal properties

Introduction

Nyctanthes arbor-tristis Linn is a member of the Oleaceae family and is also referred to as Harsingar, Parijat, Coral Jasmine, and Night Jasmine (Mishra *et al.*, 2022) [6]. Respected for its wide range of traditional medicinal use, especially among India's rural and tribal people, this plant is also important to the Siddha, Unani, and Ayurvedic medical systems. It is indigenous to India and is found in large quantities in places like West Bengal and the Thai province of Kanchanaburi. It is also extensively dispersed across the sub-Himalayan region, reaching south to the Godavari River. According to Hindu mythology, Parijat is a celestial tree brought to earth by Lord Krishna. Its fragrant flowers, which bloom at night, are easily recognizable by their white petals arranged around an orange-red stem.

The little tree or shrub *Nyctanthes arbor-tristis* has rough, wide leaves and a characteristic grey, flaking bark. It may reach a height of 33 feet. Various components of the plant, such as seeds, leaves, flowers, bark, and fruit, are utilised in traditional folk treatments and have medicinal properties (Sharma *et al.*, 2021) [9]. It is well-known for its ability to filter blood and heal ailments including spleen enlargement, arthritis, malaria, and sciatica (Kumar *et al.*, 2017) [5]. The bitter blossoms are used as a hair tonic, expectorant, astringent, carminative, stomachic, and to cure piles and a number of skin conditions.

Parijat grows well in full sun and moderate shade and thrives in a variety of loamy soils with pH values between 5.6 and 7.5. It needs frequent watering. The plant is one of India's most valued medicinal herbs due to its extensive use and adaptability in traditional medicine.

Taxonomical Classification: (Jadhav and Kumar, 2016; Tripathi *et al.*, 2021) [4, 11]

- **Kingdom:** Metaphyta
- **Division:** Magnoliophyta
- **Class:** Magnoliopsida
- **Order:** Lamiales
- **Family:** Oleaceae
- **Genus:** *Nyctanthes*
- **Species:** *arbor-tristis*
- **Binomial name:** *Nyctanthes arbor-tristis*

Propagation and Cultivation

Harsingar, or *Nyctanthes arbor-tristis*, is a plant that is often grown in gardens all across India, especially for its fragrant blossoms.

In its native environment, it flourishes on rocky and arid hillsides and grows effectively at elevations of up to 1500 meters. Propagation can be done through seeds or seedlings, and the plant adapts well to various soil types and climatic conditions. Known for its fast growth, especially in its native environment, Harsingar is a versatile plant that requires minimal care once established.

Morphology of Harsingar (Jadhav and kumar, 2016)^[4]

- **Leaves:** A few broad, distant spikes and short puffy hairs adorn the oblong, acute or pointed leaves. They are hardy, a little hairy, and arranged in complete opposites. They feature an oval lamina with an acute or pointed tip, and they are 6–12 cm long and 2–6 cm wide. Near the base, the edge is gently undulating and either smooth or serrated. The petiole has silky hairs and is 6 cm long.
- **Flowers:** The flowers of Harsingar are small, fragrant, and sessile, occurring in clusters of 3–5. They are arranged in short terminal cymes and supported by four-

angled, slender, and hairy peduncles. These delicate flowers bloom at night, giving the plant its common name, Night Jasmine.

- **Fruits:** The fruit is a brown, spherical, or heart-shaped capsule that is about 2 cm in diameter. It has two cells, is compressed, obcordate, and splits into two equal carpels with one seed. These fruits have a reticulate vein structure and are smooth.

Chemical Components of Harsingar

Phytochemical investigations of *Nyctanthes arbor-tristis* have identified a number of bioactive substances, including as flavonoids, glycosides, tannins, phenolics, phytosterols, and saponins (Chakraborty *et al.*, 2022)^[2]. The plant is particularly rich in secondary metabolites like glycosides and alkaloids, which contribute to its medicinal properties. These compounds have been studied for their therapeutic potential, reinforcing the plant's importance in traditional and modern medicine.

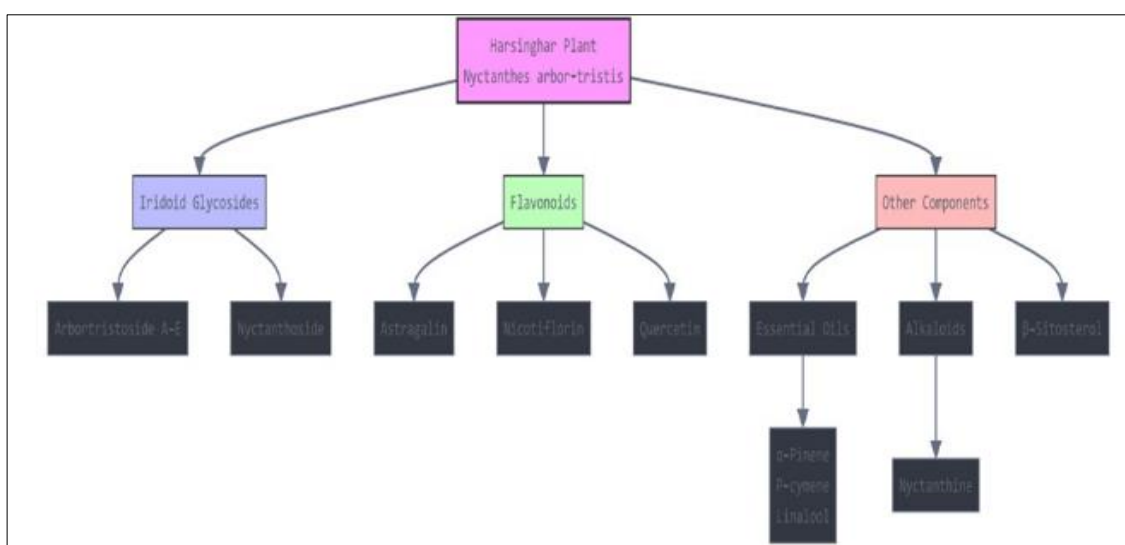


Fig 1: Chemical components of Harsingar

Table 1: Chemical constituents and biological activities of Harsingar plant sections (Mittal *et al.*, 2021; Puri *et al.*, 1994 and Tandon *et al.*, 1991)^[7].

Plant part	Chemical Constituents	Biological activity
Seeds	Arbortristoside A&B, Glycerides of linoleic oleic, lignoceric, stearic, palmitic and myristic acids, nyctanthic acid, 3-4 secotriterpene acid.	Antibacterial, Antileishmanial, Antifungal, Immunomodulatory
Flowers	Essential oil, nyctanthin, d-mannitol, tannin and glucose, carotenoid, β -monogentiobioside- β -D-mannoglucoside ester of α -crocetin, glycosides viz β -monogentiobioside ester of α -crocetin (orcrocetin-3), β -digi-tentiobioside ester of α -crocetin	Diuretic, Antioxidant, Anti-inflammatory, Anti-bilious, Sedative, Antifilarial
Leaves	D-mannitol, β -sitosterole, Flavanol glycosides-Astragaline, Nicotiflorin, Oleanolic acid, Nyctanthic acid, tannic acid, ascorbic acid, methyl salicylate, carotene, friedeline, lupeol, mannitol, Glucose and fructose, iridoid glycosides, benzoic acid.	Antibacterial, Anthelmintic, Anti-inflammatory, Hepatoprotective, Immunopotential, Anti-pyretic, Antioxidant, Antifungal
Stem	Glycoside-naringenin-4''-0- β -glucopyranosyl- α -xylopyranoside and β -sitosterol	Antipyretic, Antioxidant
Bark	Glycosides and alkaloids	Anti-microbial
Flower oil	α -pinene, p-cymene, 1-hexanol, methyl heptanone, phenylacetaldehyde, 1-deconol and anisaldehyde	as perfume

Traditional Uses

Harsingar (*Nyctanthes arbor-tristis*), which has several medicinal uses, is highly prized in Ayurveda. The plant's flowers, foliage, bark, and pods are all used in traditional medicine to treat a variety of illnesses. Every plant region has a distinct healthy pricing and can be used for business purposes. It is therefore regarded as a great source of some

unique medicinal, merchandise formation against a variety of ailments (Chakraborty *et al.*, 2022)^[2]. Some of its notable traditional uses include:

- **Respiratory Health:** Harsingar flowers are frequently used to treat respiratory ailments like asthma, coughing, and colds. They lessen respiratory distress symptoms and aid in clearing airways.

- **Digestive Aid:** Known for its carminative properties, Harsingar is used to enhance digestion and alleviate gastrointestinal discomfort. It helps relieve issues like bloating, indigestion, and flatulence.
- **Anti-inflammatory:** Leaf infusions are traditionally applied externally to reduce swelling and inflammation. These remedies are particularly effective for joint pain, arthritis, and other inflammatory conditions.
- **Fever Management:** Harsingar leaves are used as an antipyretic to help reduce fever. Decoctions prepared from the leaves are a common traditional remedy for treating fevers, especially those associated with malaria and other infectious diseases.
- **Skin Health:** The plant's flowers and leaves are used to treat various skin disorders. Their antiseptic and anti-inflammatory properties make them effective in managing conditions such as rashes, eczema, and other skin irritations.
- **Joint and Muscle Pain Relief:** The bark and leaves are often used in the form of poultices or infusions to relieve pain caused by sciatica, arthritis, and muscle stiffness.

Harsingar's long-standing use in traditional medicine, particularly Ayurveda, demonstrates its versatility as a holistic remedy for a wide range of health concerns. Its multifaceted applications continue to be explored and valued in both traditional and modern healthcare.

Therapeutic Uses

Harsingar (*Nyctanthes arbor-tristis*) is well-regarded for its potent medicinal properties, including anti-inflammatory, antibacterial, expectorant, and bitter tonic effects. Its diverse therapeutic applications extend across various traditional remedies (Bansal *et al.*, 2013 and Saxena *et al.*, 1994)^[1, 8]:

- **Constipation in Children:** The flowers of Harsingar are traditionally used to relieve constipation in children, helping to regulate bowel movements gently.
- **Bitter and Astringent Properties:** The blossoms are known for their bitter and astringent qualities, which make them effective as ophthalmic, stomachic, and carminative agents, aiding in eye health and digestive issues.
- **Relief for Arthritis and Rheumatism:** The leaves' potent anti-inflammatory qualities make them popular for treating painful ailments like rheumatism, fever, arthritis, and joint discomfort.
- **Ringworm Treatment:** Fresh Harsingar leaves, fried in mustard oil, are applied topically to cure ringworm and other fungal infections of the skin.
- **Intestinal Worms:** Leaf juice mixed with a small amount of salt is a traditional remedy for expelling intestinal worms.
- **Fungal Infections and Respiratory Issues:** A number of conditions, including as bronchitis, dry cough, and fungal skin infections, can be treated with coral jasmine. In folk medicine, it is also said to be an antidote for snake bites.
- **Piles, Baldness, and Scurvy:** The seeds of Harsingar are used in traditional remedies to treat piles (hemorrhoids), promote hair growth in cases of baldness, and combat scurvy due to their rich nutrient profile.
- **Gout Relief:** An infusion made from the flowers of Harsingar is a well-known remedy for alleviating gout symptoms, reducing pain and inflammation.

- **Treatment for Multiple Conditions:** The plant is used to address a wide range of issues, including restlessness, headaches, gastritis, hepatitis, diarrhea, vertigo, and menstrual pain (dysmenorrhea), showcasing its broad therapeutic potential.

Harsingar's extensive medicinal uses across various systems of healing highlight its significance as a versatile and valuable natural remedy for numerous health concerns.

Medicinal Uses of Harsingar in Modern Literature (Thokala, 2018)^[10]

Harsingar (*Nyctanthes arbor-tristis*) has garnered attention in modern scientific literature for its diverse medicinal properties. The plant's leaves, petals, bark, and seeds are only a few of its elements that have shown promise as medicines. Among the noteworthy applications backed by current research are:

- **Leaves:** Harsingar herbs are used to cure fevers and infections caused by fungi (mycosis) and are known for their brutal, peppery flavour. They also have antibacterial, anti-inflammatory, and antihelminthic qualities. Leaf extract is a popular therapy for kids because it works especially well against intestinal parasites including nematodes and threadworms.
- **Leaf Sap:** The leaves' sap is used to cure fevers, joint inflammation, and neuropathy in addition to acting as antivenom for snake and reptile attacks. The bitter and astringent properties of the flowers are used in treating eye disorders and as a digestive aid (carminative).
- **Recurrent Sciatica and Fever:** Harsingar leaves are used to address chronic sciatica, persistent fevers, and rheumatic conditions. Their mild purgative action also makes them helpful for relieving constipation in children.
- **Bronchitis and Snake Bites:** The plant is useful in places where snake encounters are common since it is commonly used to treat acute bronchitis and has demonstrated promise as antivenom in snake bite cases.
- **Inducing Menstruation:** In regions like India, Malaysia, and Indonesia (Java), the flowers are traditionally used to induce menstruation, showcasing their role in managing women's health.
- **Bark:** In addition to treating eye infections and ulcers, the tree's bark is used as an expectorant to cure coughs. Additionally, a bark decoction can be used to promote dental health and cure bleeding gums.
- **Hepatoprotective and Immunostimulant Properties:** According to recent research, *Nyctanthes arbor-tristis* seeds, leaves, and flowers contain antileishmanial (against Leishmaniasis), immunostimulant, hepatoprotective (liver-protecting), and antifungal qualities that make them useful for a variety of ailments.
- **Homeopathic Medicines:** The therapeutic uses of the Harsingar plant were further expanded by the frequent use of fresh leaves in the creation of homeopathic treatments.
- **Perfumes and Dyes:** The aromatic flowers of Harsingar are used in the production of perfumes and dyes. A natural colorant extracted from the corolla is used to dye cotton and wool, often as an affordable alternative to saffron (kesar) in the robes of Buddhist priests. The dye imparts shades of yellow, orange, or golden, though it tends to fade quickly when exposed to light.

- **Improving Dye Durability:** Lemon juice or potash alum are frequently added to the colourant solution to increase the dye's resistance to light and washing. This process makes the dye somewhat colourfast by increasing its resistance to light, soap, alkalis, and acids.

Harsingar's medicinal properties, supported by modern research, highlight its versatility in treating various health conditions while also being a source of natural dyes and perfumes. Its use in traditional and contemporary medicine demonstrates the plant's continued relevance in healthcare and industry.

Table 2: Medicinal uses of various parts of Harsingar plant as referenced in Ayurveda (Mittal *et al.*, 2021 and Hiremath *et al.*, 2016)^[7].

S. No	Plant Part	Medicinal uses
1	Flower	Colic, indigestion, Antigas, graying of hair and baldness. Astringent, Stomachics use for flatulence. Carminative, Ophthalmic, Gout treatment, cure faintness & dizziness start menstruation(flow)
2	Seeds	Piles, sparseness, scurvy and hair tonic
3	Leaf	Sciatica bronchitis, joint inflammation, Fevers and other unbearable states of being ringworm (skin contamination) bronchiole skin conditions merry hack, Control over reptile strike
4	Stem	Relieves cerebral headache
5	Bark	Relieves expanding of lungs
6	Oil	Bark extricates oil gives help with discomfort to eyes, scent of herbs can be utilized as an aroma.

Preparation and Usage of Harsingar

Harsingar (*Nyctanthes arbor-tristis*) can be used in a variety of forms, offering a versatile range of applications for both internal and external use. Some of the most common methods of preparation and usage include:

- **Infusions and Teas:** Dried Harsingar flowers can be steeped in hot water to create a calming and aromatic herbal tea. This tea is known to aid digestion, relieve respiratory issues, and provide a soothing effect on the body. It is often consumed for its carminative, expectorant, and anti-inflammatory benefits.
- **Topical Applications:** Fresh leaves of Harsingar can be crushed into a paste or fried in mustard oil to create a topical remedy for various skin conditions, such as ringworm, eczema, and fungal infections. The leaf paste is also applied to inflamed or painful areas to reduce swelling and provide relief from conditions like arthritis and rheumatism.
- **Decoctions and Infusions:** Decoctions made from the leaves or bark of the plant are commonly used to treat fever, cough, and gastrointestinal issues. These decoctions can be consumed orally or used as a gargle for oral infections and bleeding gums.
- **Extracts and Supplements:** Harsingar extracts, available in powdered or capsule form, are sold in health stores and can be easily integrated into daily health routines. These supplements are taken for their hepatoprotective, anti-inflammatory, and immune-boosting properties, and can be used to manage chronic conditions like arthritis, liver issues, and respiratory disorders.
- **Aromatic Oil and Perfumes:** The fragrant flowers are often distilled to produce essential oils, which can be used for aromatherapy, helping to reduce stress and promote relaxation. The oil can also be added to massage oils for muscle relief or used in perfumes for its pleasant fragrance.

Pastes and Poultices: To cure wounds, skin infections, and joint discomfort, an external paste produced from Harsingar stems or bark is administered to the afflicted regions. The paste has long been used in poultices to extract poisons from bug or snake bites and promote quicker recovery. By using Harsingar in these different forms, it can effectively address a wide range of health concerns, from digestive and respiratory ailments to skin conditions and chronic pain, while also offering its fragrant beauty in perfumes and oils.

Conclusion

Harsingar, also known as Parijat, stands as a remarkable symbol of the harmony between nature, culture, and health. With a rich history rooted in traditional medicine, its therapeutic applications have been passed down through generations and are now increasingly validated by modern scientific research. The plant's diverse medicinal benefits from treating respiratory and digestive issues to addressing skin conditions and joint pain make it a versatile healer. Embracing Harsingar not only allows individuals to explore natural remedies for enhancing well-being but also fosters a deeper connection between ancient wisdom and contemporary healthcare. By integrating this powerful plant into modern wellness practices, we continue to bridge the gap between traditional knowledge and scientific advancement, offering holistic solutions for a healthier, more balanced life.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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