



Nyctanthes arbor-tristis Linn. (Parijat): A Review of Its Botanical Characteristics, Phytoconstituents and Pharmacological Significance

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Abstract

Nyctanthes arbor-tristis, a staple in traditional Indian medicine, is a plant of considerable renown. Its blossoms, a source of delightful fragrance, unfurl under the cover of darkness. The leaves, flowers, and seeds of this plant harbor a wealth of bioactive compounds. Flavonoids, alkaloids, and glycosides are among them, and these constituents are responsible for the plant's anti-inflammatory, antipyretic, and antimicrobial properties. Consequently, the plant finds application in the treatment of fevers, arthritis, coughs, and various digestive ailments. Recent studies show that *N. arbor-tristis* has potential for use in modern herbal formulations and therapeutic research. The present review includes comprehensive information on the chemical constituents, biological activities of important compounds, pharmacological actions, medicinal applications and micro propagation of Night jasmine and emphasizes the need for further exploring available information. According to data from WHO nearly 80% of the total patients using medicine choose traditional medicine. These medicines are used during the pandemic of COVID-19 with great importance due to their immune system boosting potential.

Keywords: Medicinal Plant, Traditional Medicine, Bioactive Compounds, Flavonoids, Alkaloids, Glycosides

Introduction

Since ancient times, humans have relied on plants for medicinal purposes, as they are nature's gift for maintaining health and preventing diseases. The earliest records of medicinal plant use can be found in the *Rigveda* ^[1]. *Nyctanthes arbor-tristis*, commonly known as the "Tree of Sadness," is a notable medicinal plant. It typically grows as a small tree or shrub and produces highly fragrant flowers that bloom at night and fall before sunrise, giving the plant its name. This species thrives in loamy soils with a pH range of 5.6–7.5 and can grow under full sunlight or partial shade. While it requires regular watering, overwatering should be avoided. Being a terrestrial woody perennial, *Nyctanthes arbor-tristis* has a lifespan of 5 to 20 years. It belongs to the Oleaceae family and has

fragrant flowers that bloom at night. Modern studies have shown that this plant contains important natural compounds such as flavonoids, alkaloids, and iridoid glycosides, which give it anti-inflammatory, antioxidant, immune-boosting, and other health-promoting effects. Researchers are now exploring better ways to extract these compounds and study their medicinal benefits. Because of its wide range of therapeutic effects, *Nyctanthes arbor-tristis* is considered a promising plant for developing new herbal medicines and health products^[1,2].

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History

It is distributed widely in sub-Himalayan regions and Southwards to Godavari. is native to southern Asia and is also found in Nepal, Pakistan, India and Thailand. This is mostly found in the tropical and subtropical regions of the world. The flower of this plant is the official flower of the state of West Bengal, India and Kanchanaburi province of Thailand. Parijat is a small deciduous tree with dropping 4-angled branchlets. The leaves shed in February or March and renewed in June-July. Flowering occurs in August with peaking in September-October. Fruit ripens in April-May.

Taxonomical Classification

- Kingdom: Plantae
- Division: Magnoliophyta
- Class: Magnoliopsida
- Order: Lamiales
- Family: Oleaceae
- Genus: *Nyctanthe*

Medicinal value

Treatment of malaria and other fever

Administration of fresh paste of *Nyctanthes arbortristis* leaves for 7 days to cure the malarial and high fever.

Treatment of Arthritis

Arthritis is not only common among old aged people but now a day it also affects young adults. It can be very annoying and can make a person deviate from his daily activities. In severe cases, it also disrupts sleep to a certain extent. In such conditions, *Nyctanthes arbortristis* should be consumed due to its anti-arthritic properties to reduce inflammation and pain. It is recommended to boil the power extracted from plant and mix with a cup of water and consume it immediately for instant relief. People who consumed it regularly usually experience relief after a prolonged usage of this herb.

Anti- Allergic Activity

The pre- treatment of guinea pigs exposed to histamine aerosol with a water soluble portion of the alcoholic extract of *Nyctanthes arbortristis* leaves offered significant protection against the development of asphyxia. Arbortristoside A and arbortristoside C are present in *Nyctanthes arbortristis* were reported to be antiallergic.

Treatment of Piles, Gout and Dry Cough

The seeds of *Nyctanthes arbortristis* are used in the treatment of piles and flowers are used in the treatment of gout. Leaves are used against dry cough. The aqueous paste of leaves is used externally in the treatment of skin diseases, specifically in treatment of ring worm. The young leaves are used as female tonic.

Hepato- protective activity of *Nyctanthes arbortristis*

The aqueous extracts of the leaves and seeds of *Nyctanthes arbortristis* were found to have anti-hepatotoxic activity against carbon tetrachloride (CCl₄) induced hepatotoxicity. Further, it was established that the alcoholic and aqueous extracts showed significant Hepatoprotective activity by reducing the levels of serum glutamic pyruvic transaminase, serum glutamic oxaloacetic transaminase and serum bilirubin.



Fig. 1: Parijat Plant

Different parts of the plant Parijata contains following phyto-chemicals:

Flowers: – Essential oil, nyctanthin, d-mannitol, tannin, glucose, carotenoid and glycosides are present in flowers.

Seeds: – Arbortristoside A and B, glycerides of linoleic, oleic, stearic, palmitic and myristic acids, nyctanthic acid and a water soluble polysaccharide composed of D – glucose and D – mannose are present in seeds. It also contains 15% of a pale yellow-brown oil, nyctanthic acid and beta-sitosterol^[2]

Leaves:- B-Sitosterol, nyctanthic acid, tannic acid, methyl salicylate, mannitol, ascorbic acid, carotene, linoleic acid, glycosides, 6-beta-hydroxyloganin, benzoic acid, glucose, fructose, flavonol, triterpenoids, and some trace of volatile oils are present in leaves,

Flower oil: – α -Pinene, P-Cymene, L-hexanon, phenylacetaldehyde, and I-decanol are present in flower oil of the plant.

Stem: – glycosides, B-glucopyranosyl, α -Xylophranoside and B – Sitosterols are present in stem.

Bark: – Methyl-D-glucose, methyl-D-Mannose, arbortristoside A,B,C and iridoid glycoside-nyctanthaside, glycoside and alkaloids^[2,3]

Traditional and modern medicinal applications

Traditional medicine: In [Ayurveda](#), the plant is used for a wide range of conditions, including fever, arthritis, coughs, and as a tonic^[3]

Modern research: Current scientific reviews are exploring how to harness the plant's bioactive compounds for modern drug development. These reviews emphasize the need for further research to understand the specific mechanisms of action and to develop safer, more cost-effective therapeutic options.

Plant Description

Night Blooming Jasmine is an evergreen, upright and woody glabrous extensive shrub or small tree that normally grows about 2-4m tall. The plant thrives in moist or wet forests including riparian zones, secondary forests and dense lowland forests, scrub, as well as open areas, both natural and disturbed, and is commonly cultivated in gardens, trail sides, forest gaps and landslides. It has also invaded open forests, forest margins, the sides of streams and shrub lands. The plant grows best in well-draining, sandy soil, preferably somewhere with a lot of space for its roots to spread out. Young twigs are thinly finely hairy. Branches are erect or drooping, angular, olive or bluish-green, lenticellate and glabrescent^[2]

Part of *Nyctanthes arbortristis*:

Stems

The branches are somewhat flexuous (bending and twining) and are sparsely finely hairy (pubescent) with simple hairs. The smaller twigs especially, exhibit these hairs.

Leaves

The leaves are long, elliptical and lanceolate (resembling a spear-head), 6-15cm long and 2-7cm wide; smooth and glossy with even margins with petioles about 0.4-0.8cm long. Lateral veins are curving inside the blade margin but not forming definite loops. The mid-rib under surface is finely hairy^[3]

Flowers

The flowers are produced at the ends of the branches where they occur as dense clusters of flowers on short stems that arise from the junctions of the leaves and the twigs. The result is a densely crowded end cluster of both flowers and leaves. The flowers are tubular, greenish white to cream (there is a known yellow variety) and the top of the tube splits into five sharply pointed, triangular lobes or petals. Tubular section of the flower is 2-2.5cm long and the opened flower at night is about 1-1.3cm in diameter. The stamens and anthers are contained within the floral tube.

Although the flowers are not showy to the eye, their sweet scent can overpower. The perfume is distinctly powerful at night – this feature has had its influence on its common name in all languages. The Hindi name translates to queen of the night, while the Manipuri name means moon flower. No fragrant garden is complete without this nocturnal beauty. While night blooming jasmine is a gorgeous plant with charming blooms, the scent also produces severe allergic reactions in some individuals^[3]

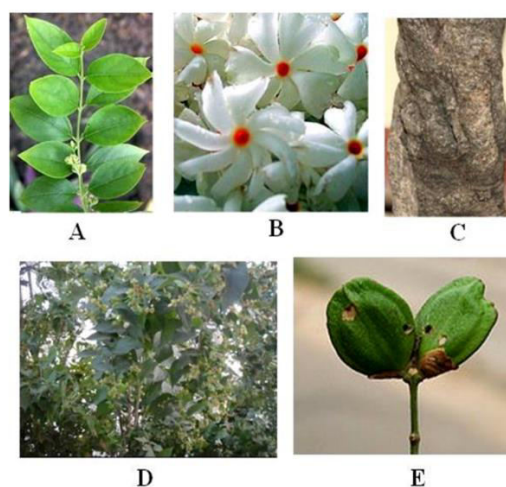


Fig. 2: Various parts of Plant

Chemical constituents

Leaves: The leaves contain D-mannitol, β -sitosterol, flavanol glycosides, astragalol, nicotiflorin, oleanolic acid, nyctanthic acid, tannic acid, ascorbic acid, methyl salicylate, an amorphous glycoside, an amorphous resin, trace of volatile oil, carotene, friedeline, lupeol, mannitol, glucose, fructose, iridoid glycosides, and benzoic acid [6-9].

Flowers: The flowers contain essential oils, nyctanthin, D-mannitol, tannins, glucose, carotenoids, glycosides including β -monogentiobioside ester of α -crocetin (or crocin-3), β -monogentiobioside- β -D monoglucoside ester of α -crocetin, and β -digentiobioside ester of α -crocetin (or crocin-1) [6-9].

Seeds: Seed contain arbortristosides A and B; glycerides of linoleic, oleic, lignoceric, stearic, palmitic and myristic acids; nyctanthic acid; 3,4-secotriterpene acid; and a water-soluble polysaccharide composed of D-glucose and D-mannose [8-10].

Bark: The bark contains glycosides and alkaloids [7-10].

Stem: The stems contain the glycoside naringenin-4'-O- β -glucopyranosyl- α -xylopyranoside and β -sitosterol [7-9].

Flower oil: The flower oil contains α -pinene, p-cymene, 1-hexanol, methylheptanone, phenyl acetaldehyde, 1-decenol and anisaldehyde. [6]

Plant: The plant contains 2,3,4,6-tetra-O-methyl-D-glucose; 2,3,6 tri-O-methyl-D-glucose; 2,3,6-tri-O-methyl-D-mannose; 2,3,-di-O-methyl-D-mannose; arbortristosides A, B, and C; and iridoid glycosides [8].

Pharmacological Applications of Nat

Antioxidant activity

Antibacterial activity

Antibacterial activity of flower, leaf, seed and fruit ethyl acetate and chloroform extract against gram-positive and gram negative bacteria was examined by K. Priya et al, 2007. 300 μ l of both ethyl acetate and chloroform extract showed significant antibacterial activity against the bacteria tested^[11]. Flower ethyl acetate and seed chloroform extract showed broad spectrum antibacterial activity against gram-negative as well as gram-positive bacteria while leaf extract showed antibacterial activity against only but all

the gram-negative bacteria. Fruit and seed ethyl acetate while flower and seed chloroform extract showed inhibitory effect against only *Pseudomonas aeruginosa* and *Klebsiella pneumoniae* [13].

Anti-fungal activity

Different parts of NAT plant were examined for antifungal activity against three most prevalent clinical pathogenic fungi- *Aspergillus niger*, *Penicillium* and *Aspergillus flavus*. Fresh and mature leaves, seeds, stem, bark and flowers were collected and dried, and extraction was performed with distilled water, methanol and chloroform. The antifungal activity of the extracts was measured by well diffusion method in terms of "zone of inhibition" of fungal growth. The results revealed that only distilled water extract of stem and bark of NAT showed antifungal activity against *A. niger* only while chloroform extract of leaves was only effective against *A. flavus*. The study showed that the most effective results for antifungal activity was shown by methanolic extract of leaves, stem and bark of NAT against both *Aspergillus* and *Penicillium* [14].

Wound healing activity

The wound healing activity of NAT was tested on Wistar albino rats by Matadeen et al, 2011. The rats were treated with 2% w/w NAT methanolic extract for 16 days. It was found that the complete epithelization of both incision and excision wounds took about 16 days and wounds were completely healed. It was concluded that 300mg dose/kg of NAT extract can be considered a good solution for healing both the types of wound [19].
Immuno-stimulant activity: Aqueous leaf extract of NAT has been found to be a potent immunomodulator which is evidenced by both humoral and cell-mediated responses. Flower has also shown immune-stimulant activity that activates the cell-mediated immune system [15].

Anti-ulcerogenic and ulcer-healing property

Peptic ulcer, one of the major gastrointestinal disorders, occur due to imbalance between offensive (mainly acid, pepsin, *H. pylori* and bile salts) and defensive (mainly involves mucusbicarbonate secretion and prostaglandin) factors. Reduction in production of gastric acid and gastric mucosal protection are the two major approaches for gastric ulcer disorder therapy. Arbortristoside-A and 7-O-trans-cinnamoyl-

6 β hydroxyloganin from NAT have been reported to possess anti-ulcerogenic and ulcer-healing property. These two not only prevent the formation of irritant-induced gastric ulcers but also increase gastric ulcer healing [16].

Analgesic and anti-inflammatory activity

The pathophysiological response of mammalian tissue towards various hostile agents such as infectious organisms, toxic chemicals, physical injury or tumor growth is called inflammation. Edema formation, leukocytes infiltration and granuloma formation are components of inflammation. Glucocorticosteroids and nonsteroidal anti-inflammatory drugs (NSAIDs) are the two main types of antiinflammatory agents but due to their adverse side effects various alternatives of NSAIDs and opiates are being searched all over the world. NAT was examined for the same and experiments were carried out on various animal models. The methanolic extract of NAT stem bark showed the analgesic and anti-inflammatory activity by preventing stimulation of nociceptive components which may happened due the inhibition of the production of prostaglandin and related compounds [17].

Anthelmintic activity

Parasitic diseases, also known as parasitosis, are infectious diseases caused or transmitted by parasites. Helminths of class Cestoidea and Trematoda are endoparasites (live inside body of the host) and cause helminthiasis, also called worm infection. They often live in the gastrointestinal tract of their hosts but may also burrow into the organs inducing physiological damage. Anthelmintics are the agents which are used to expel out the parasitic worms (helminths) from body, either by stunning or killing them. Alcoholic and aqueous extract of NAT bark was examined for their anthelmintic activity against *Pheretima posthuma*. *P. posthuma* due to its anatomical and physiological resemblance with the intestinal worm of human and easy availability was selected for this assay [16].

Antileishmanial activity

In a study, iridoid glucosides viz arbortristoside A, B, C and 6 β -hydroxy-loganin isolated from NAT were reported for the antileishmanial activity. In another study, calceolarioside A isolated from the methanolic extract of NAT leaves by bioactivity-guided fractionation showed

in-vitro antileishmanial activity, which was determined to be IC₅₀ = 20 μ g/mL while its in-vivo efficacy, when it reduced the hepatic and splenic parasite burden by 79% and 80% respectively, was noted to be 20mg/kg body weight in *L. donovani* Ag83 infected golden hamster model [18].

Anti-viral activity

Anti-viral activity of NAT was examined against encephalomyocarditis (EMCV) and Semliki Forest Viruses (SFV) in Swiss albino mice. The experimental results showed that the crude ethanolic extract, n-butanol fraction and isolated iridoid glycosides (Arbortristosides A and C) showed inhibition of 75% of cytopathic effect caused by both the viruses. In-vivo studies against EMCV at different doses showed that the crude ethanolic extract and n-butanol fraction protected 40% of animals infected with EMCV at 250mg/kg body weight dose while the aqueous fraction protected 50% of animals infected with EMCV at 125 mg/kg body weight dose. Whereas in case of in-vivo anti-SFV activity the result was most promising with n-butanol fraction that provided 60% protection to animals infected with SFV at 125 and 62.5 mg/kg body weight dose and Arbortristoside A that also protected 60% of SFV infected animals but at a much lower dose of 31.2mg/kg body weight [18].

Hypoglycemic and hypolipidemic activity

Diabetes mellitus is a major global disease from which millions of people are suffering. In diabetes, it is important not only to control blood glucose level but also the blood lipid level as diabetes tends to increase low-density lipoprotein cholesterol and decrease high-density lipoprotein cholesterol levels in blood that triggers coronary occlusions and blocks. It has been concluded that the present treatment of diabetes using synthetic hypoglycaemic agents may cause adverse effects resulting in hypoglycaemia, gastro-intestinal disturbances, renal toxicity and hepatotoxicity and this is why plants are been considered as an alternative. Different doses of boiled aqueous extract of fresh NAT flowers were examined for the hypoglycaemic and hypolipidemic activity in mice. 200, 500 and 750mg/kg of the extract was administered in mice and subsequently fasting and random glucose concentration were examined. After oral administration of the extract, the effect

of extract on glucose tolerance, gastrointestinal glucose absorption, liver and skeletal muscle glycogen content, diaphragm uptake, serum lipid profile and in-vitro amylase assay were examined in mice ^[19].

Antihyperlipidemic activity

Hyperlipidaemia is increased level of lipid in blood which is first and for most factor responsible for diseases like atherosclerosis, coronary heart disease, ischemic cerebro-vascular disease, hypertension, obesity and diabetes mellitus (Type II) etc. Methanolic extract of NAT leaves was examined for antihyperlipidemic activity in Wistar albino rats. The extract at the doses of 200 and 400 mg/kg body weight showed significant decrease in lipid profile like triglycerides, total cholesterol (TC), low density lipoprotein (LDL), very low-density lipoprotein (VLDL), and significant increase in high density lipoprotein (HDL) ^[19].

Anti-arthritic activity

Arthritis is a chronic autoimmune disease that affects the synovial joints, causing inflammation, pain, and damage to the joint tissue. It's triggered by inflammatory mediators and infections, leading to chronic inflammation, pain, swelling, and impaired movement. Current treatments include non-biologic disease-modifying anti-rheumatic drugs (DMARDs) like methotrexate, nonsteroidal anti-inflammatory drugs (NSAIDs) like piroxicam, biological therapies like TNF-alpha inhibitors, and glucocorticoids like methyl prednisolone. However, these treatments have adverse effects. NSAIDs can cause stomach ulcers, bleeding, and cardiovascular problems. Non-biologic DMARDs can cause alopecia, rash, nausea, and neurological problems. Anti-TNFs therapy can cause abdominal pain, headache, and respiratory tract infections. Long-term glucocorticoid use can lead to osteoporosis, diabetes, and cataracts. Due to these side effects, many patients are turning to alternative medicines. Researchers have studied the anti-arthritic activity of methyl, ethyl acetate, and n-hexane extracts of mature leaves of NAT in a rat model of FCA-induced arthritis. The study found that these extracts didn't show any hepatotoxic or nephrotoxic effects and were considered safe ^[20].

CNS depressant action

A study was carried out with water soluble portion of ethanol extracts of flowers, barks, seeds and leaves of NAT to evaluate CNS depressant activity of plant. It has been already concluded that the leaves of the plant possess hypnotic and tranquilizing activity whereas its flower possess sedative activity. The ethanol extract of plant was extracted by Soxhlet extraction and the extract was examined for the pharmacological activity in adult male Swiss mice. The study showed that the ethanolic extract of leaves, flowers, seeds and bark (600 mg/kg) of NAT possess significant CNS depressant activity and some muscle relaxant activity. The leaves, flowers, seeds and bark showed significant and dose dependent prolongation of the onset and duration of sleep, which was comparable to chlorpromazine, the standard drug. The highest CNS depressant activity was observed to be possessed by the leaves. It was also concluded that the activity possess by the extract might be due to the decrease in dopamine and increase in serotonin level in brain ^[21].

Hepatoprotective activity

Petroleum ether and methanol extract of NAT bark were examined for the hepatoprotective activity using carbon tetrachloride (CCl₄) induced hepatotoxicity in Swiss albino mice. The hepatic toxicity was induced in the liver of mice by injecting CCl₄ and the level of Serum Glutamate Pyruvic Transaminase (SGPT), Serum Glutamate Oxaloacetic Transaminase (SGOT), Alkaline phosphate (ALP), Direct Bilirubin (DB) and Total Bilirubin (TB) in the serum of mice was measured for determining the function of liver. Silymarin was used as standard drug for the study ^[11,12]

Anti-pyretic activity

Fever is a complex physiological response which is triggered by infectious or aseptic stimuli that results in elevated body temperature which occur due to increase in concentration of prostaglandin E (2) in certain parts of brain that further alter the firing rate of neurons that control thermoregulation in hypothalamus. Antipyretics are drugs that reduce the elevated body temperature. NAT was examined for antipyretic activity in albino rats for potential on normal body temperature and yeast-induced pyrexia. The whole plant extract of NAT showed significant antipyretic activity at the dose of 200 mg/kg by

reducing normal body temperature and yeast-provoked elevated temperature in dose dependent manner. It was also found that the effect of whole plant extract of NAT dose was comparable to that of paracetamol (150 mg/kg), a standard antipyretic agent. In another study the petroleum ether and methanol extracts of NAT bark were examined for the antipyretic activity of the plant against yeast induced pyrexia in mice ^[17].

Marketed and Formulated Products: *Nyctanthes arbor-tristis* extracts are used in the development of the following product forms:

Tablets/Pills: The leaves of *Nyctanthes arbor-tristis* are collected, dried, and processed into fine powder, which is then formulated into tablets using suitable excipients such as methylcellulose and magnesium stearate to facilitate oral administration. Research literature has also reported the development of effervescent tablets containing plant extracts for improved patient compliance ^[22].

Topical Formulations (Gels and Patches). Due to the well-documented anti-inflammatory activity of *Nyctanthes arbor-tristis*, its extracts are widely explored for topical applications. ^[24]

Transdermal Patches: Ethanolic extracts of *Nyctanthes arbor-tristis* leaves have been successfully formulated into transdermal patches for the management of rheumatoid arthritis. These patches have demonstrated effectiveness in reducing joint pain, swelling, and inflammation. ^[24].

Gels/Creams: Gel formulations containing phytosomes of carotenoids isolated from the flowers of *Nyctanthes arbor-tristis* have been developed to enhance skin penetration and bioavailability. These formulations have shown promising anti-aging activity. ^[22].

Herbal Oils/Tonics: Extracts obtained from seeds and flowers of *Nyctanthes arbor-tristis* are traditionally used in the preparation of herbal hair oils and tonics, particularly in Ayurvedic systems of medicine. ^[22].

Herbal Oils/Tonics: Extracts of the plant, particularly from the seeds and flowers, are used in hair tonics and oils in traditional medicine systems.

SBL Nyctanthes Arbor-tristis Dilution 200 CH: SBL Nyctanthes Arbor-tristis Dilution is a

commercially available homeopathic preparation is a commercially available homeopathic preparation indicated in conditions such as bilious and obstinate remittent fever, sciatica, and rheumatism. It is also reported to be beneficial in constipation in children. Additionally, the fresh leaf juice of *Nyctanthes arbor-tristis* is traditionally used as a cholagogue and mild bitter tonic and is administered to children as a remedy for intestinal worms. ^[23].

Natural Dyes: The characteristic orange-colored tubular calyx of the flower contains the natural dye nyctanthin (crocin), which has been traditionally used for dyeing silk and cotton fabrics and continues to hold industrial significance ^[22].

Powders and Crude Extracts: The dried and ground powders of different plant parts such as leaves, bark, and seeds are commercially available in herbal drug stores and are commonly used as base materials for home remedies as well as further pharmaceutical processing ^[22].

Nutraceuticals: Due to its potent therapeutic actions and immune-boosting potential, *Nyctanthes arbor-tristis* is used in some nutraceutical products ^[22].

Nyctanthus arbor tristis useful parts

The *Nyctanthes arbor-tristis* (Night-flowering Jasmine/Parijat) plant has many useful parts, each with its own medicinal properties:

Leaves: Most commonly used for their anti-inflammatory, analgesic, and antipyretic properties. They're used to treat arthritis, fever, and malaria.

Flowers: Used to treat fever, cough, and skin disorders. The essential oil extracted from the flowers is used in aromatherapy.

Seeds: Used to treat alopecia, rheumatism, and skin disorders. The seed oil is used topically for skin conditions.

Bark: Used to treat bronchitis, asthma, and fever. It's also used as a diuretic and expectorant.

Roots: Used to treat fever, rheumatism, and skin disorders.

The plant's bioactive compounds, such as nyctanthoside, arbortristoside A, and arbortristoside B, contribute to its medicinal properties.

Medicinal uses of *Nyctanthes arbor-tristis*:

- The paste of the seeds is applied over the area affected with alopecia.
- The fresh juice of the leaf of *Nyctanthes arbor-tristis* is given in a dose of 5 – 10 ml to treat sciatica.
- The fresh juice of the plant is given in cases of constipation, intestinal worms, hepatomegaly and piles in a dose of 10-15 ml.
- In cases of asthma and cough, the powder of dried leaf or bark of *Nyctanthes arbor-tristis* is given with betel leaf juice in a dose of 2-3 g.
- The paste of the bark or leaf is applied over the area affected with eczema and ringworm.
- In cases of snake poisoning, the juice of the leaf is administered.
- The cold infusion of the leaf is given to treat difficulty in micturition.
- The flowers are used to prepare perfumes and scents after distillation.

Conclusion

Nyctanthes arbor-tristis is a useful and important plant, known not only for its beautiful night-blooming flowers but also for its strong medicinal value. Different parts of the plant—especially the leaves and flowers—show helpful effects such as reducing pain, lowering fever, fighting inflammation, and protecting the body from infections. Because of these benefits, it is widely used in traditional medicine and is also gaining interest in modern scientific research. Overall, this plant is valued for its healing properties, cultural significance, and potential for future medical use.

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