

Mesua ferrea L. var. ferrea T. Anderson

Synonyms : *M. ferrea* auct. non Linn., *Mesua nagassarium* (Burm. f.) Kosterm.

Family : Clusiaceae

Parts Used : Root , Leaf, Bark

Vernacular Names

English : Mesua

Malayalam : Nagappoomaram, Nagakesaram, Churuli

Hindi : Nagakesar

Sanskrit : Nagapuspah, Nagakesarah



Distribution and Habitat:

The plant occurs in sub-tropical to tropical areas of East India, Andaman Islands and Western Ghats, upto an altitude of 1500 m.

Botany: It is a medium sized to large evergreen tree, 18-30 m in height and with reddish brown bark which peels off in thin flakes.

• **Leaves:** Simple, opposite, thick, lanceolate, coriaceous, covered with waxy bloom underneath, and red when young.

• **Flowers:** Large, white, very fragrant, axillary or terminal, solitary or in pairs. Stamens are numerous, golden yellow, much shorter than the petals.

• **Fruits:** Ovoid with persistent calyx.

• **Seeds:** 1-4 in number, angular, dark brown, oily and smooth.

Properties: Mesuaxanthones A and B and euxanthone are antiinflammatory, CNS depressant and antimicrobial.

• The essential oil from the stamens is antibacterial, antifungal, anthelmintic and that from fruit is antifungal.

• Oral administration of a compound preparation containing *Mesua ferrea* (flowers), *Foeniculum vulgare* (seeds), *Curcuma zeodaria* (tubers), *Nigella sativa* (seeds), *Terminalia chebula* (seeds) and *T. arjuna* (stem-bark) exhibited anti-implantation activity in rats.

• An Ayurvedic preparation containing *M. ferrea* has haemostatic and astringent properties and is particularly useful in uterine bleeding.

• Aerial part is spasmolytic and diuretic.

• Bark is used as tonic after childbirth. Bark and unripe fruit is sudorific.

• Leaf and flower is an antidote for snakebite and scorpion sting.

• Flower bud is antidiysenteric. Flower is stomachic and expectorant.

• Seed oil is antirheumatic. Phenol containing fraction of seed oil is antiasthmatic and antianaphylaxis.

• Unripe fruit and flower is astringent .

Chemical constituents:

• Seed oil gives 4-phenyl coumarin analogues-mesuol, mammeigin, mesuagin, mammeisin and mesuone.

• Bark gives ferruols A and B.

• Heartwood gives xanthones-euxanthone, mesuaxanthones A and B and ferrrxanthone.

• Seed oil is rich in fatty acids.

Uses: Mesua finds varied uses in Ayurveda, Siddha and Unani.

• Leaves are used in the form of poultice that is applied to head in severe colds.

• Bark and roots in decoction or infusion or tincture is a better tonic and are useful in gastritis and bronchitis.

• Fixed oil expressed from seeds is used as an application for cutaneous affections, sores, scabies, wounds, etc. and as an embrocation in rheumatism.

• Dried flowers powdered and mixed with ghee, or a paste made of flowers with addition of butter and sugar, are given in bleeding piles as well as dysentery with mucus.

• In Ayurveda, it is an ingredient of "*Nagakeshara-adi-Churna*", used for bacillary dysentery and in "*Naga Keshara Yoga*", for piles.

• In Unani system, the drug is an ingredient of large number of recipes like, "*Jawarish Shehryaran*" a stomach and liver tonic, "*Hab Pachaluna*", an appetiser and "*Halwa-i-supari pack*" a general tonic.

Formulations: Nagakeshara-adi-Churna, Naga Keshara Yoga, Jawarish Shehryaran, Hab Pachaluna, Halwa-i-supari pack, Brahmi vati, Ashvagandharishta, Chyavanprasha

Agrotechnology

Soil and climate: The plant prefers plains, riverbanks or places which do not experience moisture stress for its luxuriant growth. Silty loam soil is suitable for its cultivation.

Propagation: The plant is propagated by seeds. Seed formation occurs in November-March. Seeds are to be collected and sown in seedbeds or polybags.

Manures and Irrigation: Farm yard manure is to be applied twice a year. Regular irrigation and weeding are to be done.

Harvesting: The tree flowers in the fourth year. Flowers can be collected, dried in the sun and marketed.

