



Blue lotus (*Nymphaea nouchali* Burm.f.): An Ancient Treasure of Taxonomic, Food and Medicine

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Abstract

Nymphaea nouchali Burm.f. (Syn. *Nymphaea stellata* Willd.), is a species of perennial aquatic flowering plant with huge round floating leaves and rhizomes and broadly contributed aquatic plant prevalent in tropical and subtropical areas, flourishing in freshwater habitats. It is widely recognized as the water lily. Historically, it has been utilized in several medical systems to address conditions such as liver diseases, urinary tract infection and diabetes. The plant comprises several bioactive substances, including phenolic acids and alkaloids and flavonoids, which enhance its ethano-botanical qualities.

Keywords: *Nymphaea nouchali* Burm.f., Spongy berry, ethano-medicinal uses..

Introduction

Shamli is located at 29.45370 N and 77.32 E. It has an average of 248 meters (813) feet. It is around 92 km from Delhi 38 km from Panipat, 66 km from Meerut, 40 km from Karnal (Haryana) and Saharanpur (Uttar Pradesh). Hence, it has been considered worthwhile to study the angiospermic plants of north-west Uttar Pradesh and the results are presented in the Paper. It lies to east of the Yamuna River which marks the borders of two Indian state Haryana and Uttar Pradesh. The district lies in the fertile doab region between the Ganga and Yamuna. Shamli is located along with Delhi - Saharanpur (National highway -709) Meerut – Karnal (National highway - 709A) and Panipat - Khatima (State highway - 12), highway the district lies in the fertile doab region and hence the major occupation is agriculture. The district was carved out from the Muzaffarnagar district on 28 September 2011 as Parbudh Nagar and renamed Shamli in July 2012. At present, district Shamli is divided in three tehsils viz. Shamli, kairana and Oon, and five blocks viz. Thanabhawan, Khandhla, Shamli, Oon, and Kairana. Field surveys were carried out in Shamli, Block Kairana, Village Kairana Dehat that lie between 29° 41' 0.45" N, 77° 8' 59.70" E. Geographical coordinates were recorded using Nikon D 5300 HD-SLR Camera with Geo Tag simultaneously plant morphological description arranged with the help of DELTA software.

N. nouchali Burm.f., (also known as the **Star lotus, Blue water lily, or Blue lotus**) is an aquatic perennial native to parts of the Southeast Asia and Indian Subcontinent. It serves as the national flower of Bangladesh and Sri Lanka, and the state flower of Andhra Pradesh and Telangana in India. *Nymphaea nouchali* is classified as belonging to the most diverse genus in the family, Nymphaeaceae, under the Nymphaeales order. The botanical family Nymphaeaceae, the water lily family, *N. nouchali* represents as national blossom of Bangladesh and Sri Lanka. He seeds have medicinal and stomachic properties. In ayurvedic treatment, the seeds are also recommended for diabetics as part of a special diet. encompasses a diverse assemblage of aquatic flowering flora.

Water lilies are prehistoric aquatic blooming flora with huge round floating leaves and rhizomes. They are nearly 6 genera and 70 species collectively.

N. nouchali Burm.f., (Family Nymphaeaceae) was formerly referred by synonym *Nymphaea stellata*.

For offspring, humans have chronically depended on plants, animals, and minerals for basic needed such as food, avoid from enemies and hunting, treatment of contamination illnesses, and health concerns. According to the most recent rate, 85% of the world's population relies important on herbal medicines as their major source of therapy and to provide basic medical needs, as herbal medicines have fewer side effects than pharmaceutical drugs.

History: It originates from the Greek for “nymph”. Nymphs were designated as guardians of spring and rivers in Greek mythology. Aquatic lilies was recognize in Portugal in the Mesozoic period. Egyptians spend the rhizomes, flowers, and leaves, while the buds were commonly sketch on antiques, paintings, and ancient monuments. Water lilies are innate to Egypt, and are very much important in their religion and history.

Symbolism: Lord Krishna's dark complexion is likened with Neel Kamal. Based on this, the blue water lily is also known as Krishna Kamal.

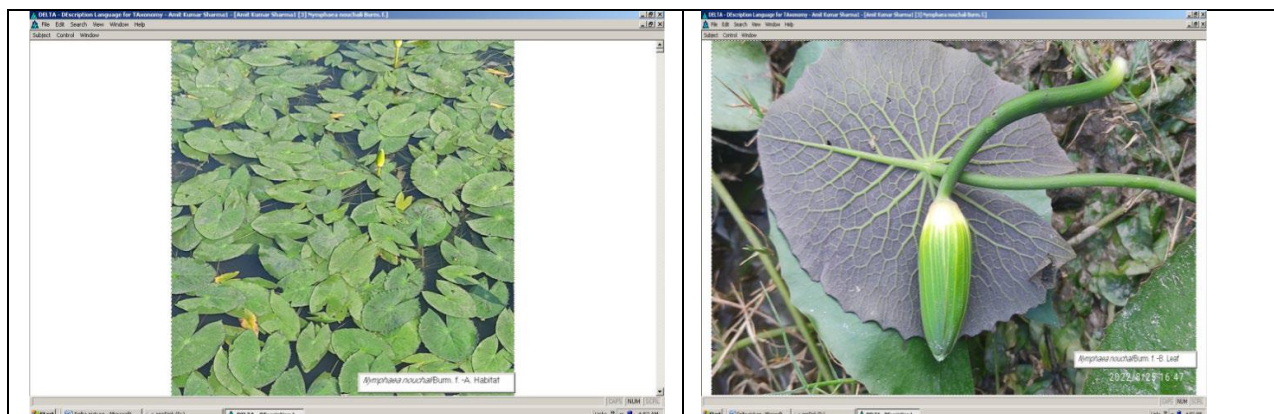
Taxonomic Hierarchy:

The classification of the water lily follows the APG IV system:

- **Kingdom:** Plantae
- **Clade:** Tracheophytes, Angiosperms
- **Division:** Magnoliophyta
- **Class:** Magnoliopsida
- **Order:** Nymphaeales
- **Family:** Nymphaeaceae
- **Genus:** *Nymphaea*
- **Species:** *N. nouchali* Burm.f.

Vernacular names:

- Assamese - Bogabhet, Seluk
- Sanskrit - Kumuda, Nilakamala, Padma, Kamala, Indeevaram.
- English -Blue water lily, Manel flower, Blue star water lily, Red water lily.
- Tamil -Alli, Ambal, Nilotpalam.
- Telugu - Allitamara, Kaluvapoovu, Kaluva, Neelattamara.
- Marathi - Kamoda, Neel Kamal.
- Hindi - Neel Kamal, Kumudinee.
- Malayalam -Ambalpoovu.
- Bengali - Kumud, Sundi.
- Gujarati - Poyanu
- Kannada -Neeltare
- Punjabi - Kamalini
- Urdu -Neelofar



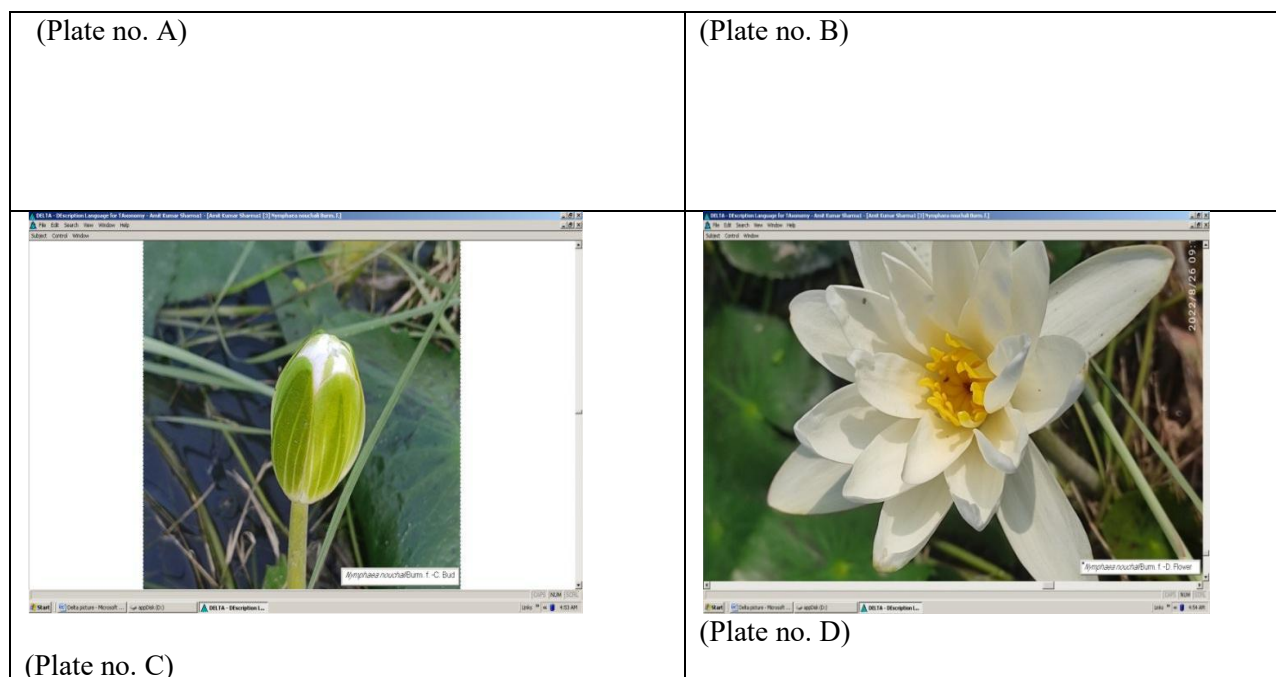


Fig.1: *Nymphaea nouchali* Burm.f.- (Plate no.) A: Habitat, B: Leaf, C: Bud, D: Flower.

Taxonomic character:

N. nouchali Burm.f., Fl. Indica: 120 (1768).

An annual or perennial herbs. Rhizomes erect, unbranched. Stem rhizomatous or tuberous, creeping. Leaves simple or petiolate; submerged, many nerved from the base; upper surface glabrous, lower surface pubescent. Inflorescence solitary, floating or emergent. Flower actinomorphic. Anther without side appendages; filaments dilated at base. Fruit spongy berry, 2–3 cm across. Fruit globose, 1.5-4.5 cm in diam. Seeds ellipsoid-globose, with longitudinal rows of hairs. $2n = 28$.

Fig.1: (Plate no.)- A,B,C,D.

Fl. & Fr.: Jul.- Sep.

Collection: Block Kairana, Village Kairana Dehat.

Location: 29° 41' 0.45" N, 77° 8' 59.70" E.

Note: Common in the area of ponds.

Medicinal uses:

Traditional Uses

- *N. nouchali* Burm.f. is a well-known and prominent herb in Ayurveda and Siddha formulations meant for swelling, hepatic diseases, diabetes, menstruation issues and kidney problems. The whole plant is utilized as medicine for eye problems, indigestion, as a cardiac stimulant and diabetes. Over the dry season, dry plants are harvested from lakes, tanks, and wetlands, and utilised as animal feed in India.
- Rhizome and stem infusions are recommended as emollients and diuretics to treat blennorrhagia, and urinary tract diseases and used for piles, dysentery and dyspepsia.
- Leaves have moderate anesthetic effect and are used to treat insomnia by smearing on forehead. In Philippines, gonorrhoea is treated with the mildly sour liquid from leaves.
- The seeds include alkaloids, glycosides, flavonoids, saponins, and phenols. it has been utilized in several medical systems to address conditions such as liver diseases, urinary tract infection and diabetes. Recently, the compound nymphasterol, an unexplored steroid, has been isolated and identified in the seeds.
- The flower's infusion serves to heal heart palpitation and as a narcotic; and the syrup is employed to treat dysuria, high fevers, apoplexy, and brain inflammation.
- Flowers fibres are astringent in nature and used to calm scorching feeling, hemorrhoids and menstrual issues.
- Petioles - Grinding the petioles with salt, Cuminum cyminum powder, jaggery and ghee mixed with the paste is used to treat heavy menstrual discharge. During pregnancy, stripes with *Pinus longifolia* roots are used to cure fever, diarrhea, sickness, cough, dizziness, discomfort, and bleeding

Edible uses:

In some countries like India and Bangladesh, the seeds are boiled or grounded into flour and substituted with wheat or millet flour in meal preparation or bread production.

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