

Nelumbo nucifera

Nelumbo nucifera, known by a number of names including Indian lotus, sacred lotus, "flower of Hindus and Buddhists bean of India, or simply lotus, is a plant in the Nelumbonaceae family. Botanically, Nelumbo nucifera (Gaertn.) may also be referred to by its former names, Nelumbium speciosum (Wild.) or Nymphaea nelumbo. This plant is an aquatic perennial.



Figure 1: Purple lotus flower

Under favorable circumstances its seeds may remain viable for many years, with the oldest recorded lotus germination being from that of seeds 1300 years old recovered from a dry lakebed in northeastern China.[1], Lotus, Nelumbo nucifera, Nymphaeaceae.

Cultural significance

The roots of Nelumbo nucifera are planted in the soil of the pond or river bottom, while the leaves float on top of the water surface. The flowers are usually found on thick stems rising several centimeters above the water. The plant normally grows up to a height of about 150 cm and a horizontal spread of up to 3 meters, but some unverified

reports place the height as high as over 5 meters. The leaves may be as large as 60 cm in diameter, while the showy flowers can be up to 20 cm in diameter.



Figure 2: Indian lotus

Researchers report that the lotus has the remarkable ability to regulate the temperature of its flowers to within a narrow range just as humans and other warmblooded animals do.[2] Dr. Roger S. Seymour and Dr. Paul Schultze-Motel, physiologists at the University of Adelaide in Australia, found that lotus flowers blooming in the Adelaide Botanic Gardens maintained a temperature of 86 to 95 degrees Fahrenheit, even when the air temperature dropped to 50 degrees. They suspect the flowers may be turning up the heat for the benefit of their coldblooded insect pollinators. The study, published in the journal *Nature*, is the latest discovery in the esoteric field of heat-producing plants. The very few other species known so far to be able to regulate their temperature include Skunk Cabbage and a *Philodendron* known as Elephant Ear..

White and blue lotus ancient times the lotus has been a divine symbol in Asian traditions representing sexual purity, a virtue.

Hindus revere it with the divinities Vishnu and Lakshmi often portrayed on a pink lotus in iconography. In the representation of Vishnu as Padmanabha (Lotus navel), a lotus issues from his navel with Brahma on it. Goddess Sarasvati is portrayed on a white-colored lotus.

Often used as an example of divine beauty, Vishnu is often described as the 'Lotus-Eyed One'. Its unfolding petals suggest the expansion of the soul. The growth of its pure beauty from the mud of its origin holds a benign spiritual promise. In Hindu iconography, other deities, like Ganga and Ganesha are often depicted with lotus flowers as their seats.

Botany

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Figure 3: Lotus flower in Balboa

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Figure 4: White lotus

The traditional Sacred Lotus is distantly related to *Nymphaea caerulea*, and possesses similar chemistry. Both *Nymphaea caerulea* and *Nelumbo nucifera* contain the alkaloids nuciferine and aporphine.



Figure 5: Lotus in our daily life

Jasmine

Jasmine (*Jasminum*, pronounced from Old French *Jasmine* which is from the Persian *yasmin*, i.e. „gift from God”, via Arabic) is a genus of shrubs and vines in the olive family (*Oleaceae*), with about 200 species, native to tropical and warm temperate regions of the Old World. Most species grow as climbers on other plants or are trained in gardens on chicken wire, trellis gates or fences, or made to scramble through shrubs of open texture. The leaves can be either evergreen (green all year round) or deciduous (falling in autumn).



Figure 6: Jasmine
(<http://www.flowerpictures1.com/>)

Cultivation and uses

Widely cultivated for its flowers, jasmine is enjoyed in the garden, as a house plant, and as cut flowers. The flowers are worn by women in their hair in southern and southeast Asia.



Figure 7: Jasmine wreath

The delicate jasmine flower opens only at night and may be plucked in the morning when the tiny petals are tightly closed, then stored in a cool place until night.



Figure 8: Primrose Jasmine

The petals begin to open between six and eight in the evening, as the temperature lowers.

Cultural importance and other information

The White Jasmine Branch, painting of ink and color on silk by Chinese artist Zhao Chang, early 12th century.



Figure 9: Jasmine bush

Jasmine is the national flower of the following countries:

- It is the Philippines' national flower, where it is known as „Sampaguita”, and is usually strung on garlands which are then used to adorn religious images.
- Indonesia, where the variety *Jasminum sambac* is the „puspa bangsa” (national flower), and goes by the name „Melati”. It is the most important flower in wedding ceremonies for ethnic Indonesians, especially in the island of Java.
- Pakistan, where *Jasminum officinale* is known as the „Chambeli” or „Yasmine” is the national flower.

In Syria, it is the symbolic flower of Damascus, which is called the City of Jasmines.

Jasmine *fluminense* is an invasive species in Hawaii, where it is sometimes known by the inaccurate name "Brazilian Jasmine". *J. dichotomum* is also invasive in Florida.



Figure 10: Jasmine fluminense

In Thailand, jasmine flowers are used as a symbol of the mother.

In Okinawa, Japan, Jasmine Tea is known as Sanpin Cha (さんぴん茶).

Varieties of jasmine



Figure 11: Jasminum nudiflorum



Figure 12: Jasminum fruticans

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