



WWJMRD 2017; 3(121): 387-393

www.wwjmr.com

International Journal

Peer Reviewed Journal

Refereed Journal

Indexed Journal

UGC Approved Journal

Impact Factor MJIF: 4.25

e-ISSN: 2454-6615

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## Sculptures Associated With Indian Lotus (*Nelumbo Nucifera* Gaerten.) In Odisha, India

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### Abstract

Human cultures have always influenced and shaped its environment to enhance the relationship between human, society and nature. Local and indigenous languages are the repositories of traditional knowledge about the environment and its systems. Hindu culture and religion has given profound significance to lotus (*Nelumbo nucifera* Gaerten.) in mythology, epics, scriptures, Sanskrit literature and historical records, and it is the prevailing motif in sculptures, temple carvings, architecture, paintings and cave murals. The present paper has a brief account of faith related to lotus in sculptures of Odisha, India. Our ancestors linked various God and Goddess with lotus for their conservation and named as sacred plant. These ancient beliefs show the human relation with lotus which is also helpful in the conservation of plant species for their valuable qualities.

**Keywords:** Hinduism, Plants conservation, sacred lotus, Traditional knowledge, Religious ritual

### Introduction

Asian sacred lotus *Nelumbo nucifera* Gaerten. (Synonyms *Nelumbium speciosum* Willd. and *Nymphaea nelumbo* L.) is the sole extant genus of the family Nelumbonaceae, placed in the Proteales, an order of the basal eudicots (APG III, 2009). The lotus plant is an emergent aquatic perennial herbaceous species, which is often cultivated for horticulture, food or religion purpose (Wiersema, 1997; Stanley, 2007). The species is widely distributed in Asia, Australia and Russia (Shen, 2002). In India, it occurs from Kashmir in north to Kanyakumari in south, showing huge phenotypic diversity with different shapes, sizes and colours (Sharma and Goel, 2000; Sridhar and Bhat, 2007) and is the national flower of the country. Different names have been mentioned in different languages. In Sanskrit it is called as Padma, Pankaja, Pankeruha, Abja, Ambhoja, Ambuja, Sarasa, Jalodbhaba (all meaning that it grows in water), Satapatra, Satadal or Sahasrapatra (i.e. it has numerous petals), Suryavikasi (flowers in the morning), Shri, Aravinda, Utpala and Nalika. In Bengali and Hindi it is commonly known as Padma, Kamala, Pankaja. It is known as Tamara in Telugu, Aravindam in Malayalam, Nelum in Sinhalese, Nilufer in Arabic and Persian, Nelumbo in French, Pectige Nelumbo in German and Sacred Lotus, Indian or Egyptian Lotus or Pythagorean bean in English (Watt, 1883; Khory and Burn, 1887; Dymock et al., 1891; Dutt, 1922; Kirtikar and Basu, 1933; Anonymous, 1966; Sharma, 1966). In Odisha it is popularly called as Padma. All the Nelumbas live in still or slow water and have a condensed shoot apical meristem underwater close to the substrate. The stems, petioles, and leaves are characterized by wide and efficient tracts of aerenchyma and the leaves, and usually the flowers, float on the water surface due to their high intercellular air content. Their 'homobaric', i.e. widely interconnected, intercellular system enables them to send oxygen-enriched air by 'pressurized ventilation' from the younger leaves to the subaquatic parts which live in an almost anaerobic stagnant environment (Grosse, 1996; Colmer, 2003). The nativity of *Nelumbo nucifera* is still unconfirmed. Shaw (1966) and Germer (1985) mentioned that it was introduced into Egypt in 500 B.C. Bailey claimed that *Nelumbo nucifera* is originated from China (Wang and Zhang, 2005). Fossil record indicates that *Nelumbo nucifera* is indigenous to India (Puri, 1950; Lakhanpal, 1955).

Padma has multipurpose uses in India from the dawn of the civilization. In traditional medicine, intensive studies concerning the use of different parts of *Nelumbo nucifera* for treating vomiting, leprosy, skin diseases, nervous exhaustion, tissue inflammation, cancer, skin diseases, leprosy and as a poison antidote have earlier been highlighted (Duke, 2002; Khare, 2004; Sridhar and Bhat, 2007; Chopra, 1956; Liu, 2004). The use of rhizome and seed for food purposes are well studied (Annonymus, 1982; Chiang and Luo, 2007; Hu and Skibsted, 2007; Zhong et al., 2007; Moro et al., 2013). In Hinduism the Indian lotus is a sacred plant (Beuchert, 2004). As the Hindu believe in polytheism and practice idol worship, there are a large numbers as well as category of gods and goddesses described in "Puranas" and other religious scriptures where the lotus has been represented. The present paper depicts a brief account of faith related to *Nelumbo nucifera* in Hindu religious sculpture.

### Botany of the plant

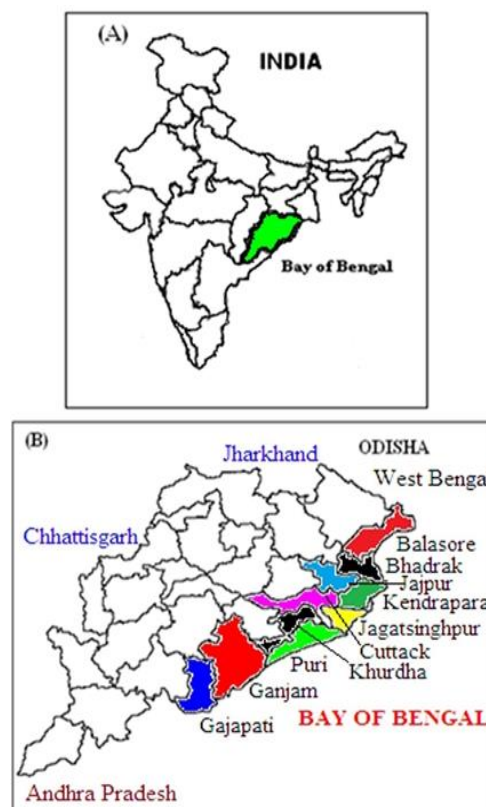
*Nelumbo nucifera* Gaertn. An aquatic perennial herb, rhizome creeping, long jointed. Leaves alternate, when mature raised above the surface of water, orbicular, peltate, entire, prominently nerved from the centre, 20-30 cm across, waxy, glaucous beneath, petiole long, 2 meter, fleshy. Flowers pinkish white, large, solitary, regular on spongy peduncle. Sepals greenish white, ovate, 10-20x5cm. Caduceus. Petals-Numerous, inserted at base of the receptacles. The outer smallest, the intermediates are largest, pinkish white ovate, 6-10x2-5 cm apex obtuse. Receptacles turbinate with flat apex, fleshy 5-8 cm. Stamens numerous, anthers linear, filaments 1 cm, anthers 1-2 cm. Carpels many, free, superior, ovoid loosely embedded in pits of flat top of receptacles: each one one locular, ovule one, pendulous; styles short: stigma pale. Fruit- aggregate, indehiscent, single seeded nutlets (Saxena and Brahmam, 1996)

### Materials and Methods

Odisha, the ninth largest state of India by area and the eleventh largest by population is located in the east coast of India ( $17.48^{\circ} - 22.34^{\circ}$  N and  $81.24^{\circ} - 87.29^{\circ}$  E) with the Bay of Bengal forming its eastern and south eastern frontiers. With the eastern Ghat range of hills, almost passing through the heart of the state, high Similipala hills on its north and around 480 kms of coast line on its east, Odisha having varied ecosystems from marine to semi-arid on the west provides 'niches' for diverse animal and plant communities (Patnaik, 1996). The entire territory lies in the tropical zone as a result of which high temperature is recorded particularly during April-May. However, the sea exercises a moderating influence over the climate of the coastal belt whereas the hill tracts experience an extreme climate. The vegetation found in this region is tropical moist deciduous forest type (Champion and Seth, 1968) Obviously the Odishan people not only depend on this rich floristic resources to fulfill all their basic needs, but it has also influenced the faith, belief, rituals, customs, art, craft, sculpture and other finer expressions of human mind and creativity of this region from time immemorial.

A survey was under taken in coastal districts of Odisha (Fig. 1) from 2012-2016. Before the field study- aims, methods, anticipated benefits of the study were adequately explained to the informants in local language, i.e. (Odia),

due consent and cooperation was taken for the documentation of the information shared by them. In order to have a clear basic knowledge regarding the gods and goddesses of Hindu mythology, most of the religious scriptures including epics and puranas were screened and relevant data were recorded (Lambert, 1993; Miller and Burger, 1995; Simoons, 1998; Leach, 2003; Dafni et al., 2006). Moreover, important holy places like temples and archaeological sites of Odisha were visited and sculptures of gods and goddesses were observed and studied. Some rare temples like Saptamatruka temple at Jajpur as well as 64 yogini temples at Hirapur in Khurda district of Odisha were also covered for similar purpose.



**Fig.1:** (A) Location of Odisha state in the eastern region of India  
(B) Study area showing different districts

### Results and Discussion

In coastal districts of Odisha, two varieties of *Nelumbo nucifera* are found; one has white flowers and is commonly called 'Sweta padma'; the other has pink or reddish-pink flowers and is called 'Rakta padma' (Fig. 2). Lotus flower with these two colours is also reported elsewhere (Chopra, 1956). The lotus plant grows up to a height of about 1.5 meters and its roots remain fixed within the muddy bottom of the water bodies and the leaves as large as 60 cm in diameter float over the surface of water or are held above it. The flowers can be up to 20 cm in diameter and are found on stems rising above the leaves. The present study indicated that the flower of *Nelumbo nucifera* flower lasts 3-4 days, undergoing changes of flower shape. On the first day of flowering, the petals are partly open, forming a narrow tunnel above the receptacle. At the dusk of day-1 flowers close completely, appearing like unopened buds. The next day, the petals open again and in the evening, the petals close again but much more loosely. On the third morning, the flowers open again, the stamens begin to wither and the stigmas become dry. Abscission of petals

and stamens occurs on the following days leaving the receptacles to ripen as fruit. The results are principally comparable with data from the studies of Vogel and Hadacek (2004) and Seymour and Blaylock (2000).

The lotus is the symbol of truth, auspiciousness and beauty (satyam, shivam, sundaram). It is the oldest and the most universal floral symbol in Indian art. In Rig Veda the Lotus goddess is already called by her two names, 'Shri and Lakshmi, and associated in every possible way with the lotus symbol' (Zimmer 1990). The lotus represents the principal symbol of growth and denotes life floating on the surface of creative water (Agarwal 1965). In Indian religion, this has been widely portrayed because this is the only flower which has been able to sustain with its dignity beyond centuries. In Hindu mythology, Lord Vishnu is lying on the snake Anata in the Khirasagara, and Lord Brahma has been born from the lotus that was growing out of the navel of Lord Vishnu. This famous sculpture is found in Jagannath temple Puri, Maa Mangala temple, Kakatapur, Hanuman temple of Mahavinayak, Jajpur, Maa Sarala temple, Tirtole and Chandbali and many other temples of coastal Odisha (Fig.3). According to Zimmer "This is the door or gate, the opening or mouth of the womb of the universe" (Zimmer, 1990). Thus in Hinduism the lotus became the visible representation of the womb of creation. Goddess Lakshmi is described as "lotus-born" (Padmasabhava), "standing on a lotus" (padmesthita), "lotus coloured" (Padmavarna), "lotus-thighed" (padma-uru), "lotus-eyed" (padmaks), "abounding in lotuses" (padmini, pushkarnini), "decked with lotus garlands" (padmamalini) (Zimmer, 1990). The lotus inspired various Indian artists so many times to paint this symbol as auspicious and holy one. It is seen generally in Indian art, where the divine images often appear typically positioned on a lotus, such as lord Vishnu, Lord Brahma, goddess Saraswati etc. In majority of temples wall paintings of Goddess Lakshmi sitting on Lotus and Saraswati sitting on white Lotus (Sweta padma) is observed in most of the temples of coastal Odisha. In some temple walls painting of elephant with offering Lotus to goddess Lakshmi is also seen. During the field work, numerous instances of faith and belief related to Nelumbo in each and every culture are observed (Fig.4-8). It is also observed in various coins of Indian currency. In most of the Hindu homes, painting of

Lotus on the ground using rice paste during Mana or Sera basa osha (i.e. worship to Laxmi) is a religious ritual. In Hindu faith, Goddess Laxmi (Goddess of wealth, fortune and prosperity) became pleased and blessed Sriya Chandaluni (a scheduled caste woman) because she had worshipped Laxmi obeying all religious rituals by drawing the figure of lotus with rice paste over the floor of her clean cow dung smeared thatched house in early morning of Thursday. In Buddhism, the Indian lotus also has a central significance (Beuchert, 2004). Buddha strode over seven lotus flowers when he was born and with the Bodhisattvas (future Buddhas) and various saints he was often depicted as sitting on lotus flowers or on the flat top of the gynaeceum (Fig. 2) (Majupuria and Joshi, 1988).

The legendary story behind Durga Puja conducted by Ramachandra to kill the demon Rabana by offering 108 lotuses speaks us about the importance of lotus. Out of the 108 lotus required for worshipping goddess Durga, Devi stole one lotus to test the devotion of Ramachandra. Ramachandra substituted one of his eyes to make the number of lotus 108 and from that day padmalochana or Kamala Lochana (Lotus eye) was another name added to his other names. As per Hindu Mythology the Bishwa Rupa exhibited by Golakha Bihari Bishnu depicts the presence of Sankha, Chakra, Gada and Padma (N. nucifera) in his four hands. The musical song sang by snake player (Sapuakela) for playing snake is popularly called as Padmatola. The name of many villages of Odisha (such as Padmapur), the name of ancient Queen of Odisha (Padmabati), one of the vesa of lord Jagannath (Padma Vesa) and the award for excellency offered by Govt. of India (Padmabibhusana and Padmashree) is also prefixed with the term Padma from which the importance of lotus can be well felt. Increase in world population, urbanization and overexploitation has depleted many natural resources and threatened the existence of many wetlands and water bodies globally (Taft et al., 2005). Around 50 % of the earth's wetlands are estimated to already have disappeared worldwide over the last hundred years (NWA0, 2010). Many of them are now transformed into other land forms, such as paddy fields, human settlements and sites for developmental projects. Hence, this is the right time to conserve this beautiful creation of nature.



**Fig.2:** White nad pink flower of *Nelumbo nucifera* Gaerten.





Fig.3: Sculpture of Nelumbo nucifera Gaerten.at Maa Sarala temple Chandbali.



Fig.4: Sculpture of Nelumbo nucifera associated with god and goddess of Hindu mythology.





Fig 5: Sculpture of Nelumbo nucifera in wooden doors, figure of Hanuman on lotus and image of lotus in choura found in courtyard of Hindu family.



Fig. 6: A wooden frame showing painting of lotus, Sculpture of Buddha on Nelumbo nucifera at Rathagiri, painting of Lotus on the ground using rice paste, encryption of lotus on the wall of Hanuman temple of Mahavinayak, Jaipur.





**Fig.7:** Sculpture of *Nelumbo nucifera* associated with god and goddess of Hindu mythology and in Indian currency.



**Fig.8:** Sculpture of *Nelumbo nucifera* in different temples of Odish.

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