

- Rasavaha – Nourishing
- Mutravaha – Supportive
- Shukravaha – Reproductive tonic

Madhura Rasa nourishes Dhatus and promotes Bala. Kashaya Rasa imparts Grahi action. Sheeta Virya alleviates Pitta disorders such as Daha and Trishna, while

Madhura Vipaka supports long-term nourishment and reproductive health.^[5]

Modern Perspective

- Antioxidant activity due to flavonoids and phenolics.
- Anti-inflammatory activity through reduction of oxidative stress.
- Nutritive effect due to abundant carbohydrates and minerals.

PHARMACOLOGICAL ACTIVITIES

Antioxidant Activity

Shringataka exhibits significant free radical scavenging activity due to its phenolic compounds. The ethanolic extract of fruits of *Trapa bispinosa* Roxb (Family: Trapaceae) was screened for its antidiarrheal, analgesic and antioxidant activities.^[6]

Anti-inflammatory Activity

The antioxidants, enzymes and phytochemical constituents of the plant are responsible for reducing inflammation. From results it clear that plants are enriched with flavonoids.

Flavonoids are actually responsible for antiinflammatory activity.^[7]

Antimicrobial Activity

Extracts of Shringataka have shown inhibitory effects against various microorganisms.^[8] These findings may lend support to the traditional use of this plant in diarrhea and dysentery. the extracts of *Trapa bispinosa* showed interesting antimicrobial activity against Gram-positive and Gram-negative test organisms and significant cytotoxic activity.^[9]

Anti-diabetic Activity

hytochemical studies showed the presence of alkaloids, triterpenes, steroids, polyphenol and carbohydrates in METN. Among them polyphenolics are the most reported phytoconstituents showing a wide range of pharmacological effects including antidiabetic activity. The presence of polyphenols or putative constituents may be responsible for promising antidiabetic activity of METN.^[10]

Nutritional Supplementation

Its high carbohydrate content makes it useful during convalescence and weakness.^[11,12]

Phytochemical screening of seed extract of *Trapa bispinosa* fruits reveals the presence of carbohydrates, saponins, phytosterols, fixed oils, and fat, while the pericarp extract of the fruits of *Trapa bispinosa* revealed the presence of tannins, flavonoids and glycosides alkaloids, saponins, steroids, and phenolic compound.^[13]

Neuroprotective Activity

Studies find that hydralcoholic extract of fruits of TB show significant neuroprotection via reducing the

oxidative stress induced by D-galactose in a way of reducing the level of oxidative biomarker and increasing the level of antioxidant in cerebral cortex like Malondialdehyde, fluorescent material Lipofuscin and Glutathione, Catalase respectively.^[14]

Uses in Unani Medicine

It is used in cases of sexual debility, spermatorrhea, general debility, fatigue, tuberculosis, intermittent fevers, dysentery, dry cough bilious affections, bleeding disorders, anal fissure, lumbago, dental caries and sore throat.^[15]

Uses during Pregnancy, Sexual Transmitted Disease and Fertility

If there is itching on her lower abdomen, thigh or, breast, take water chestnut (*Trapa bispinosa*) lotus.^[11]

Water chestnut fruits with milk are used in nervous and general debility, seminal weakness and leucorrhoea, as confection made of it is given in 2 to 4 doctor doses. In menorrhagia hakims prescribe it as a compound powder thus; Take of *Trapa bispinosa*, kamarkas (kino) and white sugar. Divide them into 7 parts and take 1 part every day.^[11]

DISCUSSION

Shringataka is a unique medicinal fruit possessing both nutritional and therapeutic value. Ayurvedic texts consistently describe it as Balya, Brimhana, Vrishya and Pittashamaka. Its Trishnaghna and Dahahara actions make it useful in heat-related disorders. Modern research supports these traditional claims through antioxidant, anti-inflammatory and metabolic activities. The rich starch and mineral content further justify its use as a nourishing and restorative food.

TAKE-HOME MESSAGE

Shringataka (*Trapa bispinosa* Roxb.) is a unique Ayurvedic drug that combines nutritional richness with significant therapeutic potential. Classical Ayurvedic texts describe it as **Balya, Brimhana, Grahi and Vrishya**, highlighting its role in promoting strength, nourishment and reproductive health.^[1] Its Madhura-Kashaya Rasa, Sheeta Virya and Madhura Vipaka make it particularly effective in Pitta-dominant disorders such as Daha, Trishna and Raktapitta.

The drug acts primarily on **Rasa, Rakta and Shukra Dhatu**, contributing to tissue nourishment, vitality and enhancement of Ojas. Modern scientific studies have validated several traditional claims by demonstrating antioxidant, anti-inflammatory, antimicrobial and anti-diabetic activities.^[7] The presence of carbohydrates, starch, flavonoids, tannins and essential minerals further supports its nutraceutical and therapeutic importance.

Thus, Shringataka represents an excellent example of the Ayurvedic principle "**Ahara eva Mahabhaishajya**" (food itself is medicine). Integration of classical

Ayurvedic knowledge with modern scientific research may further expand its applications in preventive, promotive and curative healthcare.

CONCLUSION

Shringataka (*Trapa bispinosa* Roxb.) is an important Ayurvedic medicinal plant with significant nutritional and therapeutic potential. Classical texts describe it as Balya, Brimhana, Grahi and Vrishya, while modern studies support its antioxidant, anti-inflammatory, antimicrobial and anti-diabetic activities. Integration of classical knowledge with scientific evidence highlights its value as both a therapeutic agent and a functional food.

REFERENCES

1. Sharma PV. *Bhavaprakasha Nighantu*. Phala Varga. Chaukhambha Bharati Academy, Varanasi.
2. Sharma PV. *Priya Nighantu*. Chaukhambha Orientalia, Varanasi.
3. Sharma PV. *Kaiyadeva Nighantu*. Chaukhambha Orientalia, Varanasi.
4. Narahari Pandit. *Raja Nighantu*. Chaukhambha Orientalia, Varanasi.
5. Sharma PV. *Dravyaguna Vigyana*, Vol. II. Chaukhambha Bharati Academy, Varanasi.
6. Karmakar UK, Rahman KS, Biswas NN, Islam MA, Ahmed MI, Shill MC, Paul P, Kamruzzaman M. Antidiarrheal, analgesic and antioxidant activities of *Trapa bispinosa* Roxb. fruits. *Research Journal of Pharmacy and Technology*, 2011; 4(2): 111-5.
7. Ambikar D, Rajurwar P, Naikwadi MA, Dhanagar P. Comprehensive Review of Pharmacological Activities of *Trapa bispinosa* Roxb. *International Research Journal of Pharmacy and Medical Sciences*. ISSN (Online), 2581-3277.
8. Rahman MM, Mosaddik MA, Wahed MI, Haque ME. Antimicrobial activity and cytotoxicity of *Trapa bispinosa*. *Fitoterapia*, 2000 Dec 1; 71(6): 704-6.
9. Razvy M. A., Mohammad O. F., and Mohammad Hoque A., Environment friendly antibacterial activity of water chestnut fruits, *Journal of Biodiversity and Environmental Sciences*, 2011; 1(1): 26-34.
10. Kang WY, Li YY, Gu XZ, Xu QT, Huang X. Antioxidant activities, α -glucosidase inhibitory effect in vitro and antihyperglycemic of *Trapa acornis* shell in alloxan-induced diabetic rats. *J Med Plants Res*, 2011 Dec 23; 5(31): 6805-12. DOI: 10.5897/JMPR11.1163
11. Kirtikar KR, Basu BD. *Indian Medicinal Plants*. International Book Distributors, Dehradun.
12. Nadkarni K. M., *Indian Materia Medica*, 2007, 1, 2nd edition, Popular Prakashan, Mumbai, India.
13. Adkar P, Dongare A, Ambavade S, Bhaskar VH. *Trapa bispinosa* Roxb.: a review on nutritional and pharmacological aspects. *Advances in Pharmacological and Pharmaceutical Sciences*, 2014; 2014(1): 959830.
14. Ambikar DB, Harle UN, Khandare RA, Bore VV, Vyawahare NS. Neuroprotective effect of hydroalcoholic extract of dried fruits of *Trapa bispinosa* Roxb on lipofuscinogenesis and fluorescence product in brain of D-galactose induced ageing accelerated mice. *Indian Journal of Experimental Biology*, 2010 Apr 1; 48(4): 378.
15. Ghani A., Haq S. S., Masoodi F. A., Broadway A. A., and Gani A., Physico-chemical, Morphological and pasting properties of starches extracted from water chestnuts (*Trapa natans*) from three lakes of Kashmir, India, *Brazilian Archives of Biology and Technology*, 2010; 53(3): 731-740, 2-s2.0-77955527589.