

DROSERACEAE

Aldrovanda vesiculosa L.

Common / Local names: Malacca jhanggi (Bengali); waterwheels, common Aldrovandra (English).



Aldrovanda vesiculosa L.

Descriptions: A rootless free floating aquatic herb. Stems 6-40 cm long, articulated. Leaves in whorls of 7-9, connate at base, blade articulated, reniform to orbicular when flattened, reduced in the flowering whorl, upper surface with hairs and glands; petioles 3 – 9 mm long, swollen, lacunose, apex bearing subulate dentate segments, segments (1-3-)4-6, 6-8 mm long. Flowers white, solitary, axillary; pedicels slightly curved, 1-1.5 cm long, reflexed in fruit. Sepals 5, coherent at base, ovate to elliptic to elliptic-oblong, 3-4 x 1.5 mm. Petals 5, narrow, obovate, 4-5 x 2.5 mm, connivent in a cap. Stamens 5; hypogynous filaments subulate, 3-4 mm long;

anthers broad didymous, dehiscing laterally. Carpels 5, connate in 1-celled ovary with 5 parietal placentas, ovules numerous; styles 5, filiform, free with branched terminal stigmas. Capsules globose, 5-valved, membranous. Seeds mostly 6-8, almost ovoid with black shining testa, 1.5 x 1 mm.

Fl. & Fr.: July. The flower only opens for a few hours, after which the structure is brought back beneath the water level for seed production.

Habitat: *A. vesiculosa* prefers clean, shallow, warm standing water with bright light, low nutrient levels and a slightly acidic pH (around 6). It can be found floating amongst *Juncus*, reeds, and even rice.

Chromosome: $2n = 48$ (Y. Hoshi, Proc. 4th International carnivorous plant conference, Tokyo, Japan p. 37. 2002).

Distribution: India - West Bengal, Manipur. It is supposed to be extinct in India.

Notes: This plant was first cited as *Lenticula palustris* Indica in 1696 by Plukenet. In 1747 Monti described and named it *Aldrovandia* in honor of the Italian naturalist Ulisse Aldrovandi (1522-1605). Finally in 1753 Linnaeus took over Monti's description and in his *Species Plantarum* used the name *Aldrovanda vesiculosa* L.

The trap mechanism of the species is categorized as steel-trap (active) (named for its analogy among human device, active trap, display special movements to capture prey). Morphologically the trap is a bilobed wedge-shaped leaf blade joined at midrib called hinge, which bent inwardly after receiving stimulus to catch the prey. Numerous long finely pointed hairs along the midrib are sensitive to a touch to closure of leaf. The closure of trap depends upon the stimuli, varies from 1-10 touches. Unless, additional stimulus is added, it takes 20-30 minutes to open. The digestive glands become functional after imprisoning the prey (Kundu, Basu & Chakraverty, J. Econ. Taxon. Bot. 20: 719-724. 1996).