

Water Wheel Plant - *Aldrovanda vesiculosa*

Soil: peaty water with dead leaf litter

Container: shallow water filled tub or aquarium

Watering: aquatic, submerged growing CP

Light: full to part sun to dappled shade

Temperature: warm summer, cool winter, tolerates frost

Humidity: 100%, submerged aquatic

Location: garden bog pool, windowsill, aquarium, greenhouse

Dormancy: yes, forms turions for temperate varieties. Red tropical form does not require dormancy

Habitat

- The Waterwheel Plant, *Aldrovanda vesiculosa*, is native to the bog pools of Africa, Asia, Australia, and Europe. It grows submerged in acidic, peaty water that is low in nutrients, but rich in dead leaf litter. The typical climate is warm temperate. The mean summer water temperature is 27°C and the mean winter water temperature is 4°C with water temperature ranges between 2-32°C. Air temperatures can range from -7-40°C. Companion Carnivorous Plants include *Utricularia inflata* and other *Utricularia* species. The wetland is typically open and sunny.

Culture

- *Aldrovanda* is a moderate to challenging aquatic Carnivorous Plant to grow. It does best in a large tub or tank, but even better in an outdoor bog pool. Add a 2-8cm layer of peat moss and leaf litter to the water. This releases tannins into the water that is critical to good *Aldrovanda* growth and reduces algal growth. Let the pool age for a week or more before introducing the *Aldrovanda*.
- It is important to include emergent plants in pots such as Cattail, Pickerel Weed, Water Lilies or Arrowhead Plant. *Salvinia* and *Azolla* are a good floating companion plants and are easy to grow. The leaf litter generated by these companion plants is essential to promote the growth of daphnia, protozoa and other aquatic “food.”
- In addition these companion plants keep algae growth to a minimum during the warm growing summer months. *Aldrovanda* prefers the sunny, yet lightly dappled sunlight among these plants.
- A companion Carnivorous Plant such as *Utricularia inflata* will consume extra nutrients from the water and it is good practice to remove half of the *Utricularia* periodically to remove the excess nutrients from the pool. The water can be a sphagnum peat slurry, with the *Aldrovanda* growing on the top.
- If grown outdoors the pool should be deep enough so that the pool bottom is below the frost line, about 45-60cm in many areas. *Aldrovanda* prefers warm, partially sunny conditions among water lilies and reeds. It is tolerant of slightly basic waters of pH 7-7.9, but definitely prefers more acid pHs between 5.0-6.8. *Aldrovanda* needs free CO₂ in the water, which is provided slowly and continuously by a nice peat/sand/leaf-litter

bottom. Its growth can benefit from a yeast-based CO₂ generator, slowly bubbling the gas through the water. Dissolved O₂ can be quite low. Good water chemistry and rich prey abundance are the two most critical factors for healthy culture.

- Tadpoles, small fish and herbivorous snails can be pests, but the greatest threat is often filamentous algae. [Living Infusoria Culture](#) can help control algae growth.

Propagation

- *Aldrovanda* can be propagated from cuttings that are at least 3 nodes long. Seeds can be slow and need steady conditions.

Dormancy

- Winter dormancy is required, except those from tropical habitats. As day length and temperature diminish the plant will slow its growth and develop winter buds or turions at the plant tips. These will drop off, sink and over-winter in the bottom of the pool.
- The top of the pool may be ice covered, but the bottom should be deep enough so that the water does not freeze solid.
- In early spring as the water warms, the turions will begin growth and the plants will float to the surface, often before other plants begin spring growth. For indoor culture, the turions may be kept in a peat slurry in the refrigerator.

Feeding

- *Aldrovanda*'s traps are under water and quite small. Their common "foods" are daphnia, mosquito wigglers, and protozoa. Catching abundant prey is a significant growth factor. They do a marvelous job of attracting and catching prey all on their own when provided with an adequate supply

Other Considerations

- *Aldrovanda* does not compete well with algae. Acidic peaty water and companion emergent plants will help reduce this problem by maintaining a strong infusoria culture. Flowering requires prolonged, warmer temperatures around 90°F.
- *Aldrovanda* can be grown on top of a peaty slurry as long as the plant stays wet. On occasion the water level may go low in a pool or tub, but the *Aldrovanda* can survive extended periods if kept wet. Consider growing *Aldrovanda* outdoors. They can tolerate frost or a light freeze. They grow exceedingly well in a bog pool in the yard. They can devour mosquito wigglers.