

Eichhornia crassipes

[Synonyms : *Eichhornia speciosa*, *Heteranthera formosa*, *Piaropus crassipes*, *Piaropus mesomelas*, *Pontederia azurea*, *Pontederia crassipes*, *Pontederia elongata*]

WATER HYACINTH is an invasive, free-floating, semi-evergreen or evergreen aquatic perennial. Native to tropical America (possibly Brazil) it has pale violet blue flowers with a conspicuous gold and blue ‘eye’ on upper petals.

It is also known as *Akasa thamarai* (Tamil), Blue devil, Common water-hyacinth, *Dickstielige Wasserhyazinthe* (German), *Eichornia hrubostopkatá* (Slovak), *Ejŝhornio ŝvelpetiola* (Esperanto), Floating water hyacinth, *Glaïeul d’eau* (French), Green plague, *Hotei aoi* (Japanese), *Jacinthe d’eau* (French), *Kachuri pana* (Bengali), *Kalavasha* (Malayalam), *Keladi bunting* (Malay), *Kemeling telur* (Malay), Lilac devil, Million-dollar weed, *Pisachithamara* (Telugu), *Tokoželka nadmutá* (Czech), *Tropische Wasserpest* (German), *Vattenhyacint* (Swedish), *Vesihyasintti* (Finnish), *Vodní hyacint* (Czech), *Wasserhyazinthe* (German), *Waterhiasint* (Afrikaans), and Water orchid.

The flowers bloom for up to 2-3 days before wilting.

Cultivation as an ornamental plant is banned in some countries eg. Australia, India, the United States and countries in the south-eastern Asian peninsular.

Crassipes is derived from Latin *crassi-* (thick) and *-pes* (foot) components meaning ‘thick stemmed or footed’.

In its native habitat in Brazilian rivers, apart from the sea cows (manatees), it seems that most wildlife ignore the water hyacinth as a food. However the attention from the sea cows is sufficient to keep the plant in control there.

Away from its natural home control of its growth can be a massive problem. From two parents the plant can produce 1200 offspring within four months. With great rapidity it can choke rivers and waterways to the point where they become unnavigable. This is well illustrated in Florida where it is believed to have been introduced as an ornamental plant at the beginning of the 20th Century. Here on the St. John’s River it has a functional name as it is known as the ‘Million-dollar weed’ because of the millions of dollars that have been spent since it was introduced in keeping the waterways clear. Another dramatic example occurred in the Nile where it runs through Sudan. The water hyacinth is believed to have been introduced to this stretch of the river in 1957 and in only one year it had spread through 620 miles of waterway – apparently the speed of its progress was approximately ½ a mile a day upstream and double that downstream. Not only did the clogged river add an extra day to the journey for steamers that plied this part of it but perhaps of far greater importance the incidence of malaria and bilharzia also increased there. In Asia massive impenetrable ‘islands’ of water hyacinth have been known to obliterate rice fields. Australia (where it was introduced in about 1894) has experienced similar problems and here, as no doubt elsewhere, the water hyacinth has even been responsible for the collapse of bridges.

Its long-lived seeds and rapid reproduction counter many economic attempts to control the plant with chemicals. It would seem that natural predators are now receiving greater attention and at the turn of the 20th and 21st Centuries hopes seem to be focussed on a South American moth and certain weevils. In the Spring of 2003 journalists were

reporting significant claims made by scientists at the International Institute of Tropical Agriculture in Benin (West Africa) for the application of the latter. Apparently these weevils could munch their way through as much as 90% of the floating water hyacinth masses in many countries to which they have been introduced and over two decades are likely to have saved economies massive sums (one does wonder what the weevil does however when it runs out of food). In Benin alone the figure for such savings over a 20 year period is quoted as being in the region of 3½ million pounds sterling.

But the water hyacinth is not all bad news. Apparently it has the ability to cleanse water of many pollutants and poisons, including heavy metals – but without controls in conducive climates this could be at a considerable price. In 2005 researchers at De Montfort University in Leicester (England) were carrying out laboratory experiments which indicated that the powdered root could work as effectively as the plant itself in cleansing water, specifically of arsenic, and could reduce existing high toxic levels to concentrations below World Health Organisation maximum safe limits. Tests on the drinkability of the resultant water were still necessary but if these were successful this breakthrough could affect the lives of millions of people in the World, not least all those many many villagers in Bangladesh who obtain their water from tube wells and polluted waterways.

Water hyacinth is understood to have little or no nutritive value. Despite this records note that the young leaves, leafstalks and flowers, thoroughly cooked, have been eaten by some American Indian tribes and in Java in the past (although authorities do point out that an unpleasant itching sensation must have been experienced afterwards).

But in eastern Asia eg. China, Malaysia, Singapore and Hong Kong, it is specifically cultivated in tanks as pig fodder, is encouraged in fish-ponds as a larder and haven in which the fish can hide, and in the West Indies it is fed to donkeys. Indonesian pigs have been fed on the dry matter harvested when the plant has been grown on sewage, and apparently this has also been mooted as a source of methane. The plant has been proposed as a cattle food by some researchers as well.

Records show that the most luxuriant examples of the leaves and leafstalks when rotted down yield a particularly high level of potash and are often used locally as manure. Apparently in China the plants have been harvested in the Autumn and burnt in the fields there. The stem fibre has been offered as an inferior alternative to jute (*Corchorus capsularis*) for making twine. And locally in south-eastern Asia the plant has also been used in the past to make thick cardboard and has been put forward as a possible source of cellulose. Today at the beginning of the 21st Century it has been noted that an enterprising company is making attractive ‘cane-furniture’ from the dried stems and exporting this to Europe, including Britain.

In north-western Malaysia the flowers have been used in veterinary medicine to treat skin disorders in horses.