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WATER HYACINTHS quite commonly form huge clumps that can cover entire lakes or waterways.

The Water Hyacinth

a floating beauty

TRINIDADIANS love liming near water and if you happen to be heading down to a “lake” or water park anytime soon, chances are you might see a lovely purple flowered plant in the water. You would be forgiven for thinking that it must be a branch from some flowering plant that fell into the water, but on closer inspection it becomes clear that this plant is actually growing on the water.

These floating gems are water hyacinths (*Eichhornia crassipes*).

They are easily identified when in flower with their lilac petals. If you look closer, the lips of their petals are further detailed with yellow. Multiple flowers are borne on short columns and the plants can bloom throughout the year.

Identifying the water hyacinth plants themselves can be tricky unless you are familiar with the species, as they can vary in appearance. The plants have glossy oval-shaped leaves which are constant enough but the stems

of hyacinths can either be long and thin or rather fat and round - radically changing their appearance. These stems are filled with air pockets and it is this which allows hyacinths to float on the water's surface. Plants growing in thick clumps tend to have longer stems while solitary plants in the open water tend to have shorter, fatter stems. This is likely to be related to stability as plants growing in dense clumps support each other and are less likely to topple over.

Indeed, water hyacinths quite commonly form huge clumps that can cover entire lakes or waterways. Part of the reason for these large clumps is that water hyacinths have an incredible ability to multiply. They are one of the fastest growing plants in the world, with some studies indicating that they are capable of a 12 percent increase in biomass every day in suitable conditions. Populations can double in size anywhere from six to 15 days!

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Kids Newsday

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ENVIRONMENT



THE WATER hyacinth form floating mats on waters and often become life rafts for wildlife that were dislodged from the rivers. Turtles and a host of invertebrates are frequent passengers on the plant "raft."

Hyacinths can impede water flow, boats

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Plants can grow by seeds (which remain viable for many years) but such rapid growth is achieved principally by runners, similar to the underground rhizomes of ginger on land.

These runners allow a new plant to be established at the end of a short "branch" which benefits from access to food from the parent and stability.

In this manner, large sections of a water hyacinth raft can be attached to one another by these "branches" and all being genetic duplicates of each other. This is a very useful ability for a plant to have. Open water can be a limited resource and water plants tend to have fast growth rates, which evolved as a response to competition in their native habitat — the rivers and waterways of South America.

So when these pretty flowering plants were dished out as tokens to participants in the New Orleans Cotton Exposition in the US state of Louisiana in 1884, it was only a matter of time before someone accidentally or deliberately released them into the wild. Since then the population has exploded and has been a headache for water management authorities, not just in the US, but across the world - save for the colder latitudes.

Outside of their native habitat, this species poses several problems. By covering the water surface, water hyacinths can impede the movement of boats and other water craft which have economic and safety implications. Dense growth will also prevent fishing, hydroelectric power generation and water harvesting for agriculture. By blocking sunlight, the food chain of a water body can be affected as other light dependent aquatic species are driven out. The long roots of the hyacinths slow down the flow of water, changing the dynamics of a waterway by increasing the rate of sediment deposition. Nearly impossible to eradicate, biological control has proven to be the most effective means for large scale infestations.

There have been attempts to find alternative uses for these plants. The dense root mats readily absorb heavy metals and other pollutants so that the plants are used in water and sewerage treatment facilities. The sheer amount of available biomass has also encouraged interest in the use of water hyacinths for producing biofuels.

The plants can be eaten and are treated as a vegetable in some countries. However, the bioaccumulation of toxic compounds in wild plants necessitates cultivation in cleaner conditions. The plants themselves are food for some animals, including manatees and terrapins, and can be used as fodder for livestock (subject to the same bioaccumulation issues, of course).

An article on water hyacinths would be incomplete without mention of their role in the dispersal of wildlife. The Orinoco River and other drainages on the north-eastern coast of Venezuela is home to vast growths of water hyacinth plants and, during periods of heavy rainfall, these rafts become dislodged and will float out to sea. The plants themselves cannot last for long in sea water and most will die. However, these floating mats often become life rafts for wildlife that were dislodged from the rivers. Snakes, turtles and a host of invertebrates are frequent passengers and it is not uncommon to hear reports of anaconda being washed ashore the beaches of south Trinidad. There was even a tapir (a large South American mammal) which was said to have made landfall at one time.

So the next time you see these pretty lilac blooms and lush green leaves floating serenely on the surface of the water, consider the enormous impact this little plant has had the world over.

This feature was written by Kris Sookdeo. For more information on our natural environment, you can contact the Trinidad and Tobago Field Naturalists' Club at admin@tfnco.org or visit our website at www.tfnco.org.

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