

FACT FILE: AQUATIC WEEDS

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Actively thriving colonies of Water Hyacinth may double their numbers every 11 to 18 days. Kariba Weed grows at an alarming rate – in two years it spread from 20 hectares to 40 000 hectares in the Kariba Dam. Even the smallest piece left behind will re-grow. And Water Hyacinth (*Eichhornia crassipes* – category 1) – is such a worldwide problem that a Global Working Group comprising over 30 scientists from 11 countries meets every two years to discuss control options for this single species.

No wonder that a number of aquatic plants have been declared invasive alien plants under the March 2001 amendments to South Africa's Conservation of Agricultural Resources Act (Act No 43 of 1983). Invasive aquatic plants threaten ecosystems when they multiply: an excess of these plants alters the pH of water, kills fish by blocking out sunlight, produces an oversupply of minerals, which in turn increases algal growth.

Pretty water lettuces (*Pistia stratiotes*) floating in suburban birdbaths are already responsible for clogging-up entire stretches of the Lower Sabi River (Kruger Park), Amanzimtoti River (KwaZulu-Natal) and dams around Mafikeng. A Water-Lettuce-eating weevil has been introduced to tackle the lettuce but it takes enormous research, expense and time to clear water bodies and both biological controls and physical methods of removal have to be used. Once plants are in an ecosystem they are an ongoing problem due to their incredible adaptations they employ for survival. For example the seeds of water hyacinth (*Eichhornia crassipes*) from South America can survive for 15 years before germination.

The ability of aquatic weeds to reproduce is astounding. Kariba weed (*Salvinia molesta*), from tropical America (probably introduced for fishponds and aquaria) can double its mat-forming biomass in 4 to 10 days. It encroaches on waterways in Gauteng, Cape and KwaZulu-Natal. Wind, floods, birds, animals and sporting equipment all transport and spread these alien plants to open stretches of water where new colonies are established. Should your fishing tackle be covered with an aquatic weed, just wipe it off carefully onto a piece of newspaper or plastic, roll it up and then pop it into the nearest refuse bin. Resist the temptation to wash it off in a pond of clear water.

Don't buy these aquatic aliens

The following are declared invasive alien plants, and it is against the law to have them in your aquatic gardens.

- Parrot's feather (*Myriophyllum aquaticum*) – category 1 (**remove and destroy**).
- Pickerel weed (*Pontederia cordata*) – category 3 (**may no longer be planted**).
- Water lettuce (*Pistia stratiotes*) – category 1 (**remove and destroy**).
- Water Hyacinth (*Eichhornia crassipes*) – category 1 (**remove and destroy**).
- Kariba weed (*Salvinia molesta*) – category 1 (**remove and destroy**).
- Red water fern (*Azolla filiculoides*) – category 1 (**remove and destroy**).
- Indian Shot (*Canna indica*) – category 1 (**remove and destroy**).

How do aquatic weeds wreck waterways?

- Indigenous plant and animal life are reduced.
- Invaders interfere with water flow in rivers and canals and block irrigation systems.
- Their presence reduces water quality and availability.
- Water levels are lowered by their high evapotranspiration rates.
- Suitable breeding grounds are created for mosquitoes and bilharzia-carrying snails.

AQUATIC WEEDS

- Recreational sports such as fishing, swimming, water-skiing and boating are hampered or prevented by the sheer mass which occupies useful volumes of water.
- Drownings occur as apparently solid mats of invader weeds cover water into which unsuspecting children and animals fall.

Clearing waterways

Aquatic weeds present a problem world-wide and South African scientists are at the forefront of international research. Control has to be ongoing.

Mechanical Control: Small ponds and infestations require labour, seining nets and rakes. In urban areas weeds can be taken to refuse dumps (check with local authority). On farms they should be dried, burnt or buried.

Biological Control: Certain aquatic weeds have natural enemies, insects and or diseases, that only effect a specific weed and can therefore be used as a control method.

Chemical Control: This is best carried out by specialists because you could kill non-target species or pollute the water. One disadvantage of chemical control is the pollution of water by rotting plant residue. Identify the invader correctly by consulting the National Botanical Institute (NBI) or Department of Water Affairs and Forestry.