

Drifters



Floating aquatic plants have structural adaptations that prevent them from sinking. By staying afloat they are able to absorb maximum sunlight and can easily exchange gases with the atmosphere. In addition, floating plants may heavily shade the water below, reducing the number of submersed species that compete with them for nutrients.



Salvinia minima, water fern

Salvinia is a genus of free-floating **water ferns**. Their fronds (leaves) stay afloat because they have wettable hairs on the underside and water-resistant hairs on the top side. *Salvinia minima* is rootless—highly modified, submersed fronds look like and function as clumps of roots.



Water-resistant hairs of water fern frond



Swollen petioles of water hyacinth

Water hyacinth, *Eichhornia crassipes*, floats because its inflated leaf petioles have air-filled tissue called aerenchyma. They are so buoyant that waves from nearby boats cannot sink them. Native to the Amazon basin, water hyacinth is a rapidly growing species that becomes invasive when introduced into waterways in warm climates.



Large platters of Victoria water lily

Victoria water lily, *Victoria amazonica*, is the world's largest water lily, with leaves often six feet across. Native to Brazil, the species is a favorite of botanical gardens because of its impressive size. Its flat leaves, called pads or platters, turn up at the edge to prevent surface water from getting on top of the leaf, yet are notched in two places to drain rainwater. The flat pads are lightweight and structurally sound, acting like living rafts on the water's surface.