

Water fern *Azolla filiculoides*



Habitat: Aquatic, freshwater
Family name: Salviniaceae
Common name: Water Fern



Water Fern

Description: Very small free-floating water plant that forms dense mats. Unmistakeable when in its red form and relatively easy to distinguish from duckweeds in its green form.



Water Fern protuberances create leaf water resistance

Plants can be present year round, but often die back in winter. Colour can vary considerably through the year. Green in spring/summer often turns red during cold weather in autumn/winter.

Water fern's out-competes native species by forming a dense covering on the surface of the water, blocking out light, causing de-oxygenation, preventing air-breathing insects from reaching the surface and reducing water temperatures. Dense and continuous stands can be a health hazard as the water surface appears solid.



Water Fern Spores



Water Fern Stand

Water Ferns (*Azolla filiculoides*) are often confused with *Lemna minuta*, *Azolla cristata* and *Azolla pinnata*.



Water Fern and Lesser Duckweed

Lemna minuta or Lesser Duckweed, is smaller than Water Fern, with singular leaves measuring between 1.5mm to 4mm wide and a single pale green or white root attached to each leaf.

To distinguish *Azolla filiculoides* from *Azolla cristata*, examine the trichomes (small protuberances that create water resistance) on the upper surfaces of the leaves.

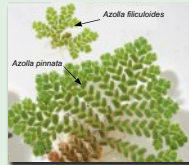
In *Azolla filiculoides* leaves are unicellular (single celled), Whereas *Azolla cristata* leaves are septate (two-celled).



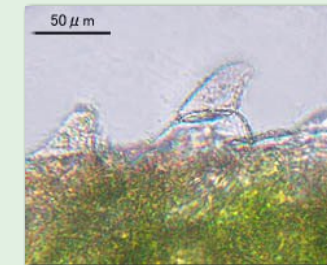
Water Fern
Azolla filiculoides



Water Velvet
Azolla cristata



Mosquitofern
Azolla pinnata

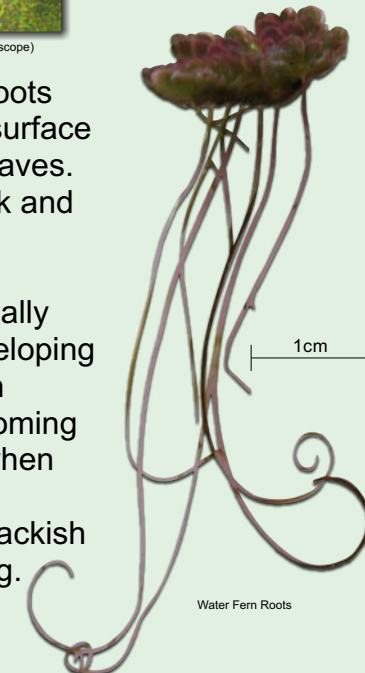


Water Fern Leaf Surface (under the microscope)

Water fern spreads mainly vegetatively, though it can produce minute spores.

Brown hair-like roots hang below the surface of free floating leaves. roots easily break and form new plants.

Leaves are normally green, often developing a reddish tinge in autumn and becoming completely red when exposed to cold temperatures, brackish waters or shading.



Water Fern Roots