

# Water fern

## *Azolla filiculoides*

### Invasive species identification guide

#### Where is it found?

Still and slow flowing water bodies (e.g. ponds, drainage channels, ditches, canals)

#### Similar to...

Duckweed - this has much smaller single round leaves and the roots attached to each single leaf are light green to white. Some species of duckweed are invasive and may be found alongside water fern.

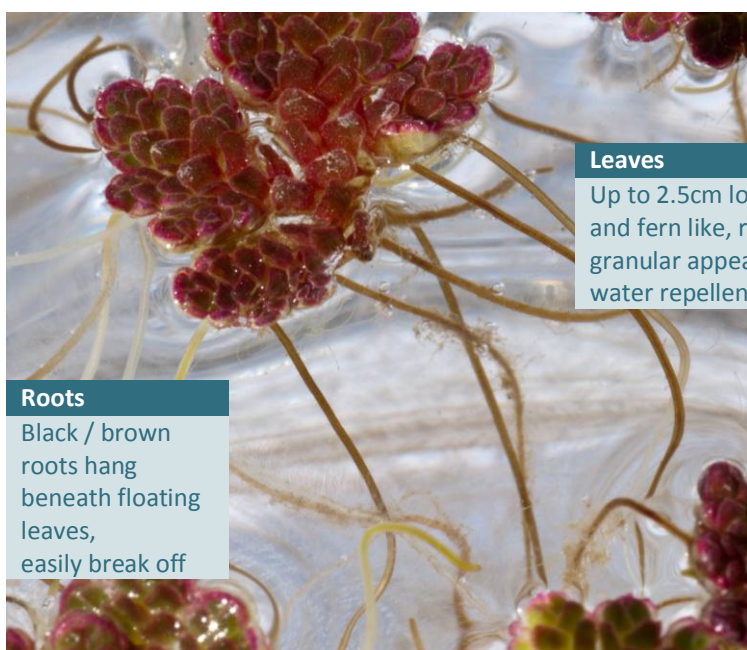
#### Key features

- Small free-floating water plant that forms dense green or red mats
- Plants can be present year round, but often die back in winter



#### Colour

Can vary considerably through the year. Green in spring/ summer often turning red during cold weather in autumn/winter



#### Leaves

Up to 2.5cm long and fern like, rough granular appearance, water repellent surface



#### Roots

Black / brown roots hang beneath floating leaves, easily break off



#### Photos

© GBNNSS



# Invasive species ID guide: Water fern



## Management

**Chemical control:** Spraying with herbicides containing glyphosate is widespread, although expert advice may be necessary to ensure safe and successful application

**Biological control:** A small North American weevil, *Stenopelmus rufinasus*, has been very effective in South Africa against this species and it is now available for use in the UK. The weevil is only known to feed on this plant species, so it should not pose a threat to any of our native plant species. Contact professionals for further advice on using this method.

**Mechanical control:** Plant removal can be effective if repeated frequently. However the plant easily propagates from small residual particles that break off during removal. Once a dense mat has formed the plant releases spores into the water due to stress if removal is attempted. These spores can overwinter so even if the main plant/mat is physically removed further removal and monitoring is necessary.

If using chemicals near a watercourse or conservation area you will need permission from the relevant authority (Environment Agency or Natural England).



## Report sightings

All sightings of water fern should be reported to the Lincolnshire Environmental Records Centre (LERC).  
[www.glnp.org.uk/getting-involved/your-sightings/](http://www.glnp.org.uk/getting-involved/your-sightings/)

Reporting and management of non-native invasive species contributes to the Lincolnshire Biodiversity Action Plan (LBAP).  
[www.glnp.org.uk/partnership/nature-strategy/](http://www.glnp.org.uk/partnership/nature-strategy/)

For further information on control of non-native invasive species please visit the GLNP website and go to the 'Getting involved' pages.  
[www.glnp.org.uk/getting-involved/](http://www.glnp.org.uk/getting-involved/)

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