

Water Fern

Species Description

Scientific name: *Azolla filiculoides*

AKA: Fairy Fern, Cyfrdwy (Welsh)

Native to: North and Central America

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

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. Can be seen most months of the year. Spreads mainly vegetatively though can produce minute spores.

Introduced for ornamental use in ponds and aquaria. First recorded in 1883 and has spread rapidly throughout England in the last 50 years. Infrequent in Scotland and Northern Ireland. Can be inadvertently carried on water plants from garden centres. Out-competes native species by forming a dense covering on the surface of the water, blocking out light, causing deoxygenation, 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 is listed under Schedule 9 to the Wildlife and Countryside Act 1981 with respect to England, Wales and Scotland. As such it is an offence to plant or otherwise cause this species to grow in the wild.

For details of legislation go to www.nonnativespecies.org/legislation.



Key ID Features

Usually green but often has a reddish tinge and can be completely red when exposed to stresses (such as cold temperatures, brackish waters or shading)



Forms dense mats but can also be present as a few fronds amongst emergent or other floating vegetation

Identification throughout the year

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.

Green form



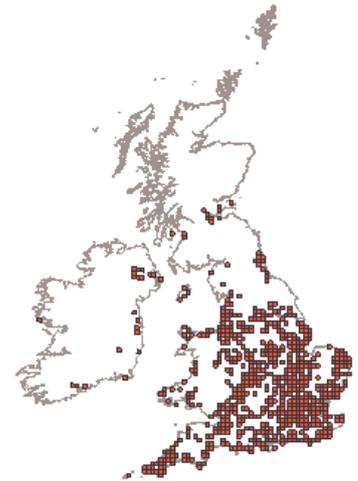
Red form



Distribution

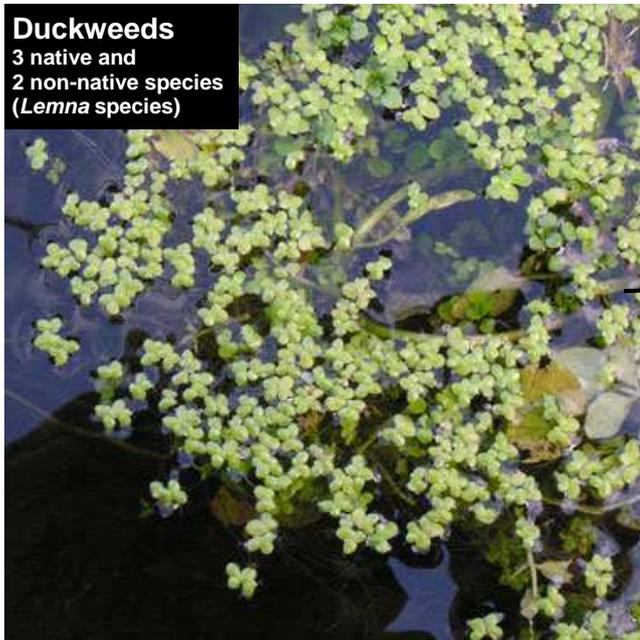
Sporadic distribution in southern and central England. Has spread north to Yorkshire and into Wales but relatively few locations in Scotland and Northern Ireland.

Source: NBN Gateway. Check website for current distribution



Similar Species

Duckweeds
3 native and
2 non-native species
(*Lemna* species)



Duckweed and water fern growing together



Common Duckweed

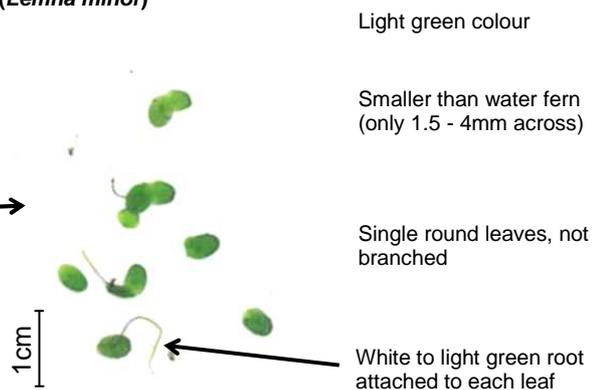
Native
(*Lemna minor*)

Light green colour

Smaller than water fern
(only 1.5 - 4mm across)

Single round leaves, not
branched

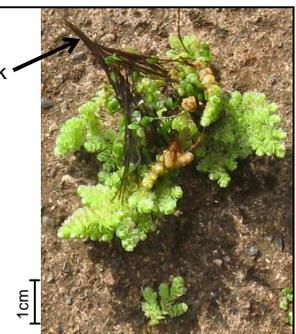
White to light green root
attached to each leaf



Water Fern For comparison

Multiple dark
brown roots

Leaves are much larger (up
to 2.5cm) and branching



References and further reading:

Blamey, M, Fitter, R and Fitter, A (2003) "*The Wild Flowers of Britain and Ireland. The Complete Guide to the British and Irish Flora*". A & C Black
Preston, C D and Croft, J M (1997) "*Aquatic plants in Britain and Ireland*". Harley Books
Preston, C D, Pearman, D A and Dines, T A (editors) (2002) "*New Atlas of the British and Irish Flora*". Oxford University Press
Stace, C (1999) "*Field Flora of the British Isles*". Cambridge University Press