

These are the plants about which Plantlife is concerned.

We would recommend avoiding these plants. You may also wish to refer to the pdf *Invasive plants and the law* which outlines the standings of invasive plants in law.



American skunk-cabbage *Lysichiton americanus* & Asian skunk-cabbage *Lysichiton camtschatcensis*

These plants are very commonly grown as bog garden plants and are widely available from garden centres and nurseries. They are commonly mistaken for each other and have the same invasive behaviour in the wild. Most plants in the wild probably arise through the dumping of garden material, as colonies quickly outgrow their space in most gardens. It is likely that some wild populations have become established from seed dispersed from nearby gardens. Given the popularity of these plants in gardens and their continued introduction into the wild, it is likely that these two plants will increase. They can out-compete native plants and cause extensive damage locally.

© Crown Copyright 2009. GBNNSS. (Pictured: American skunk-cabbage)

Canadian waterweed *Elodea canadensis* (not pictured)

Cotoneaster species *Cotoneaster*



These popular garden and landscaping shrubs are also popular with birds who enjoy the berries and spread the seed. This can spread cotoneasters in the wild, where they can be difficult to eradicate.

Cotoneasters provide an important reminder that even with the best intentions of gardeners, the wind, birds and other animals can help plants to 'escape over the garden wall'. Plantlife is particularly concerned about four types of

cotoneaster: hollyberry cotoneaster *C. bullatus*, wall cotoneaster *C. horizontalis*, small-leaved cotoneasters *C. microphyllus* agg., and Himalayan cotoneaster *C. simonsii*.

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Curly Waterweed *Lagarosiphon major*
(AKA *Elodea densa*)



This waterweed, and others similar to it like Canadian waterweed *Elodea canadensis* and Nuttall's waterweed *Elodea nuttallii*, are widely sold across Britain - often labelled simply as 'oxygenating plants' or 'pondweeds'. Their prolific growth means they can form dense masses and reduce other plant life. Although they are sold for their 'oxygenating' quality, they can cause big fluctuations in oxygen availability and this can be harmful to invertebrates and fish.

Duck potato *Sagittaria latifolia* (not pictured)



Evergreen oak (holm oak) *Quercus ilex*

An evergreen tree used in parks, churchyards and large gardens, evergreen oak is now regenerating freely in parts of south and east England. It has become established in a range of key botanical sites particularly on dry limestone and chalk sites in coastal Britain. It has also achieved more localised establishment within heathland areas.

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False-acacia *Robinia pseudoacacia*

False-acacia is extensively planted in Britain and spreads mainly by suckering. Although it is currently uncommon in the wild it is showing alarming signs of spreading in disturbed, ruderal habitats (for example on railway lines). Its rapid spread, suckering nature, spiny, impenetrable habit when established, and its ability to regrow when cut down mean that it is a major cause for concern. In France and Italy the tree is freely establishing in woodlands, much as sycamore has done here. We have the ability to control it in the wild in Britain at the moment, but it is likely to become a major established pest in the coming decades.

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Fanwort (Carolina water-shield) *Cabomba caroliniana* (not pictured)

Few-flowered leek *Allium paradoxum* (not pictured)

Floating pennywort *Hydrocotyle ranunculoides*



This plant forms dense mats that float across the water surface. It causes a range of problems including changing oxygen availability in the water, threatening fish and invertebrates, choking drainage systems and crowding out native water plants. It has been sold incorrectly labelled as 'marsh pennywort', the common name for *Hydrocotyle vulgaris*, a native British species that is not invasive. It may also be sold as 'water pennywort'.



Giant hogweed *Heracleum mantegazzianum*

Giant hogweed grows up to 6 m tall. Its height distinguishes it from the native hogweed, which is much smaller (up to 2 m). Giant hogweed dominates vegetation in marginal habitats and along river banks and crowds out native plants. Sap from the plant can burn the skin when exposed to sunshine so precautions must be taken when dealing with it.

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Giant knotweed *Fallopia sachalinensis* (not pictured)

Giant rhubarb *Gunnera tinctoria* (not pictured)

Green seafingers *Codium fragile* (all subspecies except *atlanticum*) (not pictured)

Himalayan knotweed *Persicaria wallichii*



This plant has been grown in cultivation but is less popular today than in the past. It is still present in some gardens and is still available commercially from some nurseries. As with similar plants (like Japanese knotweed), this large plant, reaching up to 2m tall, becomes established on stream sides, hedge banks, woodland edges, roadsides, railway banks and waste ground. There it grows into extremely dense stands that out-compete all native vegetation.

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Hottentot-fig *Carpobrotus edulis* (not pictured)

Indian (Himalayan) balsam *Impatiens glandulifera*



Indian balsam is commonly found along riverbanks and streams. It spreads quickly as it can project its seeds up to four metres. Many seeds drop into the water and contaminate land and riverbanks downstream, but the explosive nature of its seed release means it can spread upstream too. It produces a lot of nectar over a prolonged season and is attractive to pollinating insects. Because it attracts bees, there is concern that its presence may result in decreased pollination for other native plants.

Japanese knotweed *Fallopia japonica*



Japanese knotweed is one of the most pernicious weeds in Britain. It can colonise most habitats, including river banks, woodlands, grasslands and coastal habitats. It grows through walls, tarmac and concrete and causes huge problems wherever it grows. It reproduces from tiny fragments and any soil contaminated with Japanese knotweed fragments must be disposed of at registered sites to prevent its spread. In 2003, the Government estimated that it would cost £1.56 billion to control this plant across the country. Japanese knotweed is considered more

of a problem in human-dominated environments such as urban areas and railway lines than in natural habitats.

Also, invasive is the hybrid knotweed *Fallopia japonica x Fallopia sachalinensis* (not pictured)

Japanese rose *Rosa rugosa* (not pictured)

Large-flowered waterweed *Egeria densa*



© Kristian Peters¹

This submerged aquatic plant is very popular in the freshwater aquarium trade. Plants are often discarded into the wild once they out-grow their tanks. It seems introductions as a result of dumping in the wild are continuing, and there is great fear that if our climate warms even slightly, the plant will 'take off', outcompete native plants and clog up waterways and drainage systems. Large-flowered waterweed flowers only in warm water conditions - it was seen in flower for the first time in Surrey in 2006, having been recorded in the wild since 1950. Conservationists in Cornwall are already having to deal with infestations of the plant in the wild.

Marine green algae (seaweeds) *Caulerpa taxifolia* (left) & *Caulerpa racemosa* (right)



Both of these plants are very popular in the marine aquarium trade in Britain. In many countries the cause of introductions has been the discarding of surplus plant matter. They are two of the most rapidly increasing invasive marine algae known. According to the Invasive Species Specialist Group *Caulerpa taxifolia* is

one of the top 100 invasive species on earth and it has successfully invaded four temperate regions worldwide, in spite of it being native to tropical regions.



Currently there are no reports of either species in the wild in Britain. They are a problem in the Mediterranean, however, and with predicted climatic changes we believe we should be wary of them. Alternative non-invasive marine aquarium algae are already widely available in the marine aquarium trade and we think these alternatives should be promoted.

Both *Caulerpa* images: © Richard Ling / www.rling.com¹

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Montbretia *Crococsmia x crocosmiiflora* (not pictured)

New Zealand pigmyweed (Australian swamp-stonecrop) *Crassula helmsii*



This plant may also be mis-labelled as *Tillaea recurva*, *Tillaea helmsii* or *Crassula recurva* when sold. Just a tiny fragment of the plant can regrow and multiply into a dense mat of vegetation. It is now spreading to sites right across the UK. *Crassula helmsii* is frost resistant and once introduced to a site takes just three to five years to dominate it. It is almost impossible to remove.

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Nuttall's waterweed *Elodea nuttallii* (not pictured)



Parrot's-feather *Myriophyllum aquaticum*

This popular but vigorous pond plant is still for sale in many outlets in the UK. It can choke ponds and waterways and is now surviving the average UK winter. This will allow it to spread even more widely in the wild. This plant may be sold as Brazilian water-milfoil, *Myriophyllum brasiliense* or *Myriophyllum proserpinacoides*.



Pickerelweed *Pontederia cordata*

This plant is extremely popular in water gardens where it is grown as a submerged or marginal plant in pools and ponds or as a bog plant. It is very widely available to buy. These large, vigorous plants grow up to 1m tall and often out-grow their space in garden pools and ponds; they are then sometimes discarded into the wild. It is likely that some populations also arise by deliberate planting in the wild - for example by anglers wanting to 'improve' fishing ponds (no doubt without realising the problems the plants may cause).

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Pirri-pirri-bur *Acaena novae-zelandiae*

Originating from Australia and New Zealand, this plant is spreading in Britain and has become established at many important wildlife sites. Introduction is mainly through the dumping of garden material in the wild. From there its hooked burs mean it is easily spread by sheep and other animals. It becomes especially invasive when it establishes on cool, damp cliffs and upland habitats - often the very types of site where threatened native plants occur.

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Prickly heath *Gaultheria mucronata* (not pictured)

Purple dewplant *Disphyma crassifolium* (not pictured)

Red algae *Grateloupia luxurians* (not pictured)

Rhododendron *Rhododendron ponticum*



There are many different types of rhododendron. Most people are particularly concerned about *Rhododendron ponticum* and the hybrid *Rhododendron ponticum x Rhododendron maximum* which cause problems in the wild across the UK in acid woodland and heathland. Rhododendron shades out native plants and is causing particular problems in the internationally important oak and hazel woodlands of the west coast of Scotland, where rare lichen and moss communities are under threat. On Lundy Island in the Bristol Channel, rhododendron was threatening the endemic Lundy cabbage *Coincya wrightii*

(and its associated endemic invertebrates) until an eradication programme was initiated.

Shallon *Gaultheria shallon*



Planted as cover and food for game on shooting estates, Shallon has become a serious pest after colonising heathland and acidic woodland habitats. It can form dense evergreen stands which smother other vegetation and, like many invasive plants, will regenerate rapidly even after an area has been cleared of it.

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South American waterweed *Elodea callitrichoides* (not pictured)

Spanish bluebell *Hyacinthoides hispanica*



Left to right: Spanish, hybrid and native bluebells

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www.christinahartdavies.co.uk

In Plantlife's 2003 *Bluebells for Britain* survey, the Spanish bluebell and the Hybrid bluebell, sometimes known as the garden bluebell, were found in one out of six woodland sites surveyed.

The Spanish bluebell appears to hybridise with our native bluebell *Hyacinthoides non-scripta*, and this could be causing the loss of the genetic distinctiveness of our native bluebell. The Natural History Museum and at the Royal Botanic Gardens Edinburgh have investigated the nature of the problem by looking at the genetics of different bluebells from across the UK and western Europe. Their research should provide more information about the nature and degree of threat posed by the Spanish bluebell to the native bluebell.

Three-cornered garlic *Allium triquetrum* (not pictured)

Tree of heaven *Ailanthus altissima*



This deciduous tree, originally from China, is very widely planted - in gardens, streets, parks and public spaces. As well as getting into the wild by seed dispersal from growing trees, it is also spread by the dumping of excess material. Like rhododendron, this plant prevents other vegetation from growing in the surrounding area by releasing toxic compounds. Attempts to control it by cutting result in more vigorous growth. It is not yet known to be causing problems at sites of botanical interest here, but in some countries where it has already caused

many problems, it is called the 'Tree of hell'.

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Turkey oak *Quercus cerris*

Turkey oak is a deciduous tree that has been planted in woodlands, estates, large gardens, in parks and along roads. It has now naturalised and is spreading into calcareous grassland and heathland. It has been recorded from a large number of important nature conservation sites. Although many of these reports are of small numbers of the tree at the moment, Turkey oak will undoubtedly continue to colonise open grassland and heathland areas, becoming a major nuisance in years to come.

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Variegated yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum* (not pictured)

Water fern *Azolla filiculoides* (not pictured)

Water lettuce *Pistia stratiotes* (not pictured)

Water primroses *Ludwigia grandiflora*, *Ludwigia peploides*, *Ludwigia uruguayensis*



Invasive non-native water primroses are currently known from just a handful of sites in Britain. Control work is being carried out at each site with the hope of eradicating this plant in the wild. Early identification and removal is essential if the significant and expensive damage inflicted by this plant on wetlands in France is to be avoided here.

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If you think you have seen non-native water primrose, email the Environment Agency on ludwigia@cornwt.demon.co.uk providing a postcode/grid reference of the location and, if you are able to, attaching an image of the plant. Take care as invasive water primroses are still sold in Britain - sometimes under the name *Jussiaea*.

Yellow azalea *Rhododendron luteum* (not pictured)
