

A close-up photograph of pink flowers, likely Great Watercress, with water droplets on their petals and stems. The background is a dark, textured green.

Wiltshire
Wildlife Trust



Invasive species along the waterways



A healthy waterway



A waterway with invasive species

Introduction

Rivers and streams are one of our most important resources, **sustaining human life and supporting diverse habitats and species**. These are under threat by invasive non-native species that arrived in Great Britain due to accidental human transportation, or through natural dispersal from non-native populations in Europe.

In this booklet you will find the main invasive species to look out for and where you will need

to go to report them, along with some advice on how to deal with Himalayan Balsam and staying safe along the waterways.

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What to look out for

Discover some of the invasive, non-native species that are often present in Wiltshire's waterways.



Japanese Knotweed - *Fallopia japonica*

Leaves: Lush green with smooth edges

Flowers: Sep-Oct | Small, white, and borne in clusters on vertical branches

Growth Pattern: Bamboo-like with regular nodes on the stem. Grows in dense stands up to 2m tall

Habitat: Likes wet areas but can grow in most habitats

Other Features: The red-pink zig-zag stems are a characteristic feature of Japanese Knotweed. The mature canes are flecked with purple.

Eradication is required by law, treatment by stem injection or spraying from a specialist contractor.



American Mink – *Neovison vison*

The mink is a small, lithe mammal, with brown-black fur, a narrow snout, a small white chin, and a white throat. Mink can be distinguished from otters by their smaller size, darker fur, and a smaller face.

It's an active predator, feeding on anything that's big enough to catch, including ground-nesting birds and native water voles which are now under threat of extinction.

American mink scats are small, black, and contain fur, feathers and bones. In contrast, otter spraints are usually dark greenish, slimy and full of fish bones, scales and crayfish parts.



Species of special concern

The plants and animals depicted below are Species of Special Concern and cannot be brought into Great Britain, kept, bred, transported, placed on the market, used or exchanged, allowed to reproduce, grown or cultivated, or released into the environment.

There are some limited exceptions to these restrictions, which can be found on the NNSS website:

■ nonnativespecies.org/legislation/species-of-special-concern

Himalayan Balsam - *Impatiens glandulifera*

Leaves: Pointed oval with toothed edges

Flowers: Jul-Oct | Large slipper shaped flowers, broad petals at the opening

Growth Pattern: Grows in dense clusters up to 2.5 metres tall

Habitat: Found in many habitats, mostly along ditches & riverbanks

Other Features: The flowers are followed by exploding seed pods which can project the seeds up to 4 metres. The stems are fleshy & hollow, which become red/purple in the summer.



Orange Balsam - *Impatiens capensis*

Very similar to Himalayan Balsam but has orange flowers. Not as impactful as Himalayan Balsam, as doesn't create huge stands in the UK.

Giant Hogweed - *Heracleum mantegazzianum*

Leaves: Very large, deeply lobed and toothed

Flowers: Jun-Jul | Large flat umbels which can be up to 60cm across.

Growth Pattern: Grows very tall (up to 3.5 metres), generally with a single tall, flowering, spiny purple-flecked stem

Habitat: Found in a variety of habitats, however, is common along riverbanks where the river has distributed its seeds

Other Features: The nodes where the leaves join the stem is ringed with coarse bristles. Very similar to common hogweed but much larger. Warning: can cause severe skin burns.

Treatment to be carried out only by a professional contractor using spraying or stem injection.



Red alert species

The plants and animals depicted below are 'Alert Species' in Great Britain. Invasive non-native species are one of the top threats to global biodiversity, cost the GB economy almost £2 billion a year, and can even harm our health. You can help prevent this by reporting sightings of these species through iRecord.

Broadleaf/Twoleaf Milfoil *Myriophyllum heterophyllum*

Leaves: Submerged evergreen aquatic perennial, with whorled feather like segments

Flowers: May – October with tiny red flowers

Growth Pattern: Produces dense mats of submergent material throughout the water column. Up to 9.5m in depth.

Habitat: Lakes, ponds, slow flowing rivers, ditches, canals and bogs. Can survive as a semi-terrestrial plant on muddy margins.

Other Features: The mats prevent water flow, reduce sunlight, reduce oxygen availability and impeded swimming, boating and fishing.



Water Primrose *Ludwigia grandiflora*

Leaves: Long oval willow type leaves

Flowers: Large bright yellow, like a primrose

Growth Pattern: Easy spread from detached sections/fragments

Habitat: Ponds, Farm reservoirs, slow moving rivers and ditches

Other Features: Spreads rapidly to become locally dominant. Reduces oxygen and interferes with navigation and recreational activities. Outcompetes native plants for light, nutrients, and important pollinators.



Yellow legged (Asian) hornet *Vespa velutina*

The Yellow legged (Asian) hornets have darker abdomens than European hornets, with yellow-tipped legs. They are active mainly between April and November (peak August/September) and are inactive over the winter.

They are a predator to the majority of our pollinators, including honeybees, with one of their nests consuming 11kg of insects in one year.

They have no natural predator in the UK, so their numbers can easily increase if not controlled, presenting a huge risk to Wiltshire's insect population. They also present a health risk to those who have allergies to hornet or wasp stings.

Do not under any circumstances disturb or provoke an active hornets' nest. Please note the yellow legged (Asian) hornet can only be recorded on iRecord.



IDENTIFICATION:

- Smaller than native hornets
- Orange head (from front)
- Abdomen almost entirely dark, with fine yellow stripes and a yellow or orange 4th segment near the base
- Black or brown thorax
- Legs with yellow tips

Where to report any invasives seen

If you have a sighting of a certain species, we encourage you to use either iRecord or INNS Mapper which have both smartphone apps and websites. If possible, try and send a photo of the species to help identify them. You will need to create an account on either service to log your sightings.

Please note the yellow legged (Asian) hornet can only be recorded on iRecord.



How to deal with Himalayan and Orange Balsam

There are a few ways both Himalayan and Orange Balsam can be managed and eradicated from a site.

Control without chemicals (preferred)

Strimming

Using a trimmer, flail or scythe before the flowering stage in June and cutting below the first node, to prevent regeneration. This should be done annually to deplete the seed bank. The plants can be composted or left, if there are no flowerheads.

Pulling

Another method is to pull the plant from the roots or below the first node. The roots are shallow rooted and come up with ease. Leaving them on the bankside is fine, as the dehydrate quickly. They can be composted if there are no flowerheads going to seed.

Grazing

Grazing by Cattle or sheep is effective from April onwards but will need to be continuous throughout the season. This can have a negative impact due to excessive poaching. Native vegetative species can also be over grazed, which may lead to erosion.

Control with chemicals

Glyphosate

This herbicide been shown to be effective at controlling Balsam but not recommended near water. A licensed contractor with PA6-AW is needed for this treatment. Long lance application will help reach less accessible areas. Plants should be sprayed in Spring before flowering but late enough that seedlings have grown enough to be affected by the spray.

It is important to note that glyphosate will also kill other species, such as grass exposing riverbanks to erosion.

Further details on control methods

No matter how good on-site control is, there is a likelihood of re-colonization especially if this is in a riverine situation. Repeat treatment is necessary to prevent further spread.

The seedbank can be present for over five years, so it is necessary to check if new seedlings are growing throughout this period.

If the Balsam is in notable stands and affecting large areas, it would be advantageous to either join or form a Local Action Group (LAG). LAG's can be formed quickly with neighbours or concerned volunteers in the community.

More information can be gained from here:

■ nonnativespecies.org/local-action-groups-lags



Staying safe by the waterways

Your safety and welfare are top priorities. Only take on tasks that you are comfortable and confident with.

Water safety

Unless you have received training to perform a specific survey, there should be no reason for you to enter the water. Take care on soft banks, particularly after heavy rain. River water can contain harmful bacteria that can carry potentially serious diseases such as Weil's disease (also known as leptospirosis). You should be aware of the symptoms, and let your doctor know if you become ill.

Weather and the environment

Check the weather and ensure you take appropriate clothing and plenty of food and water. Consider whether any recent heavy rain might have made the river or riverbank conditions more dangerous.

Be tick aware

Ticks are common in the UK and can carry serious diseases such as Lyme disease. They can live in areas of dense vegetation such as long grass, woodland, and heathland. Check yourself regularly and ensure you are familiar with the symptoms.

You can find out more at:

■ nhs.uk/conditions/lyme-disease/

Lone working

If you are out on your own, let someone know where you're going and when you'll be back. Make sure you carry a mobile phone.

Check Clean Dry

Help stop the spread of invasive plants and animals in our native waters. Keep clothing, footwear and equipment used in water free from invasive non-native species after use.



Clothing

Ensure you are wearing footwear with good grip and clothing that can stand up to the British weather. If pulling Himalayan Balsam wear gloves and sanitise your hands once you finish, before you eat or drink anything.



Further information & ways to get involved

For more information on other invasive non-native species please visit the NNSS website:

■ nonnativespecies.org

The NNSS offer free online training modules for identifying non-native species:

■ elearning.nonnativespecies.org

Record other wildlife using iSpot, a website aimed at helping anyone identify anything in nature:

■ ispotnature.org

Find your local INNS action group:

■ nonnativespecies.org/local-action-groups-lags

**Want to do more with Wiltshire Wildlife Trust?
Sign up as a volunteer:**

■ volunteering.wiltshirewildlife.org (or scan the QR code)

