

What are invasive non-native species?

Plants and animals from all over the world have been introduced to British waters by people, often accidentally. These are known as **non-native species**. Most are harmless, but a small proportion become **invasive** and harm the environment, economy, or our health and the way we live.

Why are they a problem?

For the environment:

Invasive non-native species harm the environment in a number of ways, including:

- Competing with native wildlife for food and habitat
- Killing fish by spreading diseases and reducing the oxygen levels of the water.
- Damaging entire ecosystems.

For water users:

They can interfere with the activities you enjoy:

- Blocking waterways making it hard to fish or paddle.
- Killing fish.
- Damaging boats and clogging propellers.

For everyone:

Invasive non-native species cost

the British economy over £1.7 billion a year. Some harm our health, for example as irritants or the skin or respiratory system.

Stop the Spread

Over fifty invasive non-native species have already been found in our freshwaters and the numbers are rising rapidly.

Once established they can be difficult and expensive to control so it's important to prevent their spread in the first place.

This leaflet contains tips on how you can help, and examples of freshwater and riparian species that have been found in GB.

Himalayan balsam *Impatiens glandulifera*



- Leaves up to 15cm long, opposite along the stem or in whorls of 3-5.
- Grows up to 2 metres tall, often found on riverbanks.
- Trumpet shaped pink flowers (rarely white), 2.5-4 cm long, from July—Sept.
- Grows in dense stands and outcompetes native plant species, particularly on riverbanks. Dies back in winter leaving banks bare and exposed to erosion.

Giant hogweed *Heracleum mantegazzianum*



- Tall plant, up to 5m. Stems usually have sharp bristles, with blotchy purple patches (sometimes completely purple).
- Leaves up to 3m wide, and sharply divided / serrated.
- Umbrella shaped white (or rarely pinkish) flowerheads, up to 80 cm wide.
- Outcompetes native plants and can harm human health.

WARNING: Do not touch this plant. The sap is toxic and causes blistering of the skin upon exposure to light.

Australian Swamp-stonecrop *Crassula helmsii*



- Leaves are small, round and fleshy and arranged along the stem in opposite pairs.
- Small, white flowers with small petals.
- Can grow under the water surface, out from the water surface, or on land by the water.
- Forms dense impenetrable mats, can grow 200 times faster than native pond plants.

Floating Pennywort *Hydrocotyle ranunculoides*



- Leaves are shiny and kidney shaped with a crinkled edge, usually broader than long. Stems are fleshy.
- Grows up to 20 cm a day under the right conditions and quickly covers the water surface.
- Visit www.nonnativespecies.org/floatingpennywort to view the GB Floating Pennywort strategy, along with materials and guidance for anyone wishing to help tackle this species.

Water Primrose *Ludwigia grandiflora*



- Creeping perennial water plant with long oval leaves like a willow.
- Large, bright yellow flower like that of a primrose.
- Water primrose can produce huge numbers of seed per year.
- Currently known from just a few sites in Britain.

This is an alert species: if found please report your sighting to iRecord.

Water Fern *Azolla filiculoides*



- Very small free floating water plant.
- Leaves have a fern-like rough granular appearance and range from green to red in colour.
- Black brown roots hang below the plant and can be easily broken.
- This plant forms dense mats on the surface of still waters which can cause the waters surface to appear solid.

Parrots Feather *Myriophyllum aquaticum*



- Blue-green feather like leaves arranged around the stem in groups of 4-6.
- May grow under the water, or out of the water surface.
- Plants growing out of the water are more robust than those growing under water.
- Can block ditches and dominate ponds.
- Dies back in winter although submerged form is present all year.

For more information on anything in this leaflet visit nonnativespecies.org/checkcleandry

Twitter [@CheckCleanDryGB](https://twitter.com/CheckCleanDryGB)

This leaflet was funded by the Aquatic Biosecurity Partnership and is based on a previous version by Cheshire Wildlife Trust.



How can I help?

Record your sightings

Sightings of these and any other non-native species can be recorded online through [iRecord](https://www.iRecord.org). Remember to note your location and try and take a photograph.

Volunteer

Why not join a Local Action Group working on invasive species management? If you're an angler, paddler, swimmer, or water enthusiast you can also get involved through your sport.

Visit nonnativespecies.org/floatingpennywort for details.

Check Clean Dry after leaving the water

Invasive species can be small and hard to spot so are easily spread on damp clothing, equipment, and footwear. Remember to:

CHECK

Check your equipment and clothing as soon as you leave the water for plant and animal material and remove anything you find. Leave it at the site where you found it.

CLEAN

Clean everything thoroughly as soon as you can, pay particular attention to areas that are damp or hard to access. Use hot water if you can.

DRY

Dry everything thoroughly for as long as possible as some invasive species can survive in damp conditions for over two weeks.

Find full ID sheets for the species in this leaflet and more on how you can help at nonnativespecies.org/checkcleandry.

Chinese mitten crab *Eriocheir sinensis*



- Only freshwater crab found in the UK.
- Migrates downstream to estuaries in Autumn to spawn.
- Green, brown or grey in colour, front white tipped pincers covered in dense matt of fine hairs.
- Legs are long and hairy, body square and up to 86 mm across.
- Undermines riverbanks through burrowing leading to increased risk of erosion.

Killer shrimp *Dikerogammarus villosus*



- Up to 30 mm long, body is curled and semi-transparent with two pairs of antennae and large, powerful mandibles (jaws).
- Predator of native shrimp and other native fauna. Likely to disrupt ecosystems through direct predation and indirect effects across food chains.
- Parasites carried by killer shrimps could reduce fish stocks.

Signal crayfish *Pacifastacus leniusculus*



- Much larger than our native white-clawed crayfish although juveniles of both species are very similar.
- Claws are bright red underneath with a small turquoise / white spot on the surface.
- Spreads up and down stream and may cross land to colonise adjacent water bodies where it will dominate and replace our native crayfish.
- Carries crayfish plague which is deadly to our native crayfish.

Topmouth gudgeon *Pseudorasbora parva*



- Small fish up to 110 mm in length, usually 20—75 mm. with an upturned mouth.
- Grey back, pale sides and belly, rounded fins.
- Harms native and farmed fish by competing for food, transmitting diseases, and preying on young fish and eggs.

This is an alert species: if found please report your sighting to iRecord.

Quagga mussel *Dreissena rostriformis bugensis*



- Invasive mollusc up to 40 mm in length.
- Distinctive 'D' shape, rolls to side when placed on its front.
- Brown-yellowish to completely black in colour, with stripes of different shape and size.
- Significantly changes whole ecosystems by filtering out large quantities of nutrients, blocks pipes, and smothers boat hulls and other structures.
- Very similar to the invasive zebra mussel which is more widespread.

Invasive plants and animals block waterways and harm wildlife

Help protect the environment and activities you enjoy

STOP THE SPREAD