

## Top ten most wanted foreign species

The Environment Agency is today releasing a top-ten most wanted list of foreign species that have overstayed their environmental visa.

The American signal crayfish and the American mink may originally be from across the pond, but they are now taking over British waterways, out-muscling native competition and spreading disease. For the native white-clawed crayfish and water vole, these invasive species are over sized, over sexed and over here.

But these are just two of the recent arrivals that have taken advantage of Britain's complimentary living conditions, with the Environment Agency compiling the top ten invasive species marked for containment and removal.

1. Japanese Knotweed	Plant
2. American Signal Crayfish	Crustacean
3. American Mink	Mammal
4. Giant Hogweed	Plant
5. Floating Pennywort	Plant
6. Himalayan Balsam	Plant
7. Australian Swamp Stonecrop	Plant
8. Chinese Mitten Crab	Crustacean
9. Parrots Feather	Plant
10. Topmouth Gudgeon	Fish

### 1. **WANTED:** Japanese Knotweed (aka: *Fallopia japonica*)

**Crime:** Causing structural damage to buildings and roads, after forming dense vegetative layers that stop native flora germinating. Increases risk of flooding through dead stems being washed into rivers and stream channels, restricting access to riverbanks and reducing land values.

**Background profile:** Rapidly growing perennial plant from Asia, brought to Britain in the mid-19th century as an ornamental garden and fodder plant but then spread into the wild.

**Physical description:** Grows up to 2-3m tall with green bamboo-like, speckled stems and forms dense cane-like clumps. Its leaves are green and shield or heart-shaped, with a flat base and are up to 120mm long. It flowers in August – October with creamy flower clusters borne on the tips of most stems.

**Known whereabouts:** Widespread in the wild in Britain across a range of habitats – particularly roadside verges, riverbanks and derelict land.

**If sighted:** A new Japanese Knotweed Code is being released to tackle England and Wales' most damaging foreign species. Includes advice on spraying herbicides containing *Glyphosate* during early summer flowering stage and again in late summer/autumn to stop regrowth. The use of an approved herbicide in or near water requires the prior written approval of the Environment Agency.

2. **WANTED:** American Signal Crayfish (aka: *Pacifastacus leniusculus*)

**Crime:** Introducing crayfish plague (the fungi *Aphanomyces astaci*) into Britain which can wipe out entire populations of native white-clawed crayfish. Out-competes native crayfish, expands numbers and range rapidly, with colonisation rates of over 1km of watercourse per year. Impacts British invertebrate macrophyte (plants) communities. Burrows into riverbanks creating a honeycomb of tunnels, which can then collapse and damage the banks.

**Background profile:** Imported into the UK from North America in the 1970's as an attempt to create a commercial crayfish farming industry. They are bigger, stronger and breed faster than the native white-clawed crayfish.

**Physical description:** Identified by bright red colouring under the claws and white patches on claw joints. They are on average 16cm long but can grow up to 30cm long.

**Known whereabouts:** In freshwater lakes and rivers across England and Wales.

**If sighted:** Commonly caught in waterways of southern England using rod and reel. If caught signal crayfish must be removed from waterway and killed. Very tasty in a bisque.

**Measures being taken:** Transferring crayfish between waterways is illegal. A 'Crayfish Code' (available in a Pdf) has been formulated by the Environment Agency to stop the spread of signal crayfish and the crayfish plague.

3. **WANTED:** American Mink (aka: *Mustela vison*)

**Crime:** Devastating predator of native wildlife in Britain, the mink is linked to huge declines in water vole and moorhen populations. Occasionally, mink will indulge in "surplus killing", taking a large number of prey at one time. They have been known to cause damage to property, such as boats and caravans, when scavenging for food and may also cause problems at fish farms, hatcheries and in game/ornamental bird enclosures. Mink have no natural predators in Britain.

**Background profile:** Native to North America, mink were originally brought to Britain in 1929 for use in fur farms. However since the 1950s they have been breeding extensively in the wild following accidental and deliberate. They are a member of the weasel family, which includes badgers, polecats, martens and otters.

**Physical description:** Brown or black in colour and between 30-60cm long with a slender body and short legs.

**Known whereabouts:** Mink are found in aquatic habitats throughout Britain but can spend time away from water, even including urban areas.

**Measures being taken:** Mink numbers have started to decline as our native otter population recovers from the effects of pollution, hunting and loss of river habitats. Otters are reported to attack and even kill mink and it seems that the reason mink spread so quickly initially throughout Britain was because they had no competition.

4. **WANTED:** Giant Hogweed (aka: *Heracleum mantegazzianum*)

**Crime:** Sap contains a toxic chemical that sensitises the skin and leads to severe blistering when exposed to sunlight. Also forms dense colonies that suppress the growth of native plants and grasses, leaving riverbanks bare of vegetation in winter and increasing erosion risks.

**Background profile:** Originally from the mountainous Caucasus region of Asia that lies between the Black and Caspian Seas, Giant Hogweed was introduced to Britain in 1893 as an ornamental plant.

**Physical description:** Looks like a large coarse form of cow parsley, reaching up to 4m high and produces up to 50,000 seeds.

**Known whereabouts:** Widespread across England and Wales, it escaped from gardens and is now prevalent along riverbanks, towpaths and wasteland areas.

**If sighted:** Spray with herbicide during the growing season (March to August), when there is green, leafy material present. In order to be effective, spraying must be carried out before the plant flowers and sets seed. The use of an approved herbicide in or near water requires the prior written approval of the Environment Agency.

5. **WANTED:** Floating Pennywort (aka: *Hydrocotyle ranunculoides*)

**Crime:** Growing in shallow, slow-flowing eutrophic water bodies, floating pennywort forms dense interwoven mats of vegetation that extend up to 40cm above the water surface and up to 50cm below. These mats quickly cover the water surface and can grow 20cm per day, starving the waterbody of light, nutrients and oxygen which kills many of the species living in it and also increases the risk of flooding by blocking the waterway.

**Background profile:** Originally from North America and was brought to Britain in the 1980s as a plant for tropical aquaria and garden ponds. However by 1991 it had become present in the wild.

**Physical description:** Has circular or kidney-shaped, deeply lobed leaves, up to 180mm across. The stem is horizontal with a fleshy appearance and has leaf stalks and roots every 0.2-0.3m. It has no flowers and can double its weight in as little as 3 days.

**Known whereabouts:** Relatively restricted to about 35 sites in the south of England and south Wales. It is very likely to spread around UK watercourses and become a major nuisance in the future.

**If sighted:** Use a herbicide containing *Glyphosphate* or *2,4-D amine*, and cut and remove 2-3 weeks later. Very difficult to control due to its rapid growth rates. The use of an approved herbicide in or near water requires the prior written approval of the Environment Agency.

6. **WANTED:** Himalayan balsam (aka: *Impatiens glandulifera*)

**Crime:** Grows in dense stands that shade out native grasses and other flora. In the autumn, the plants die back, leaving riverbanks bare of vegetation and vulnerable to erosion. Produces more nectar than any native European species of plant, which makes it a more attractive option to pollinating insects such as bumblebees, luring them away from native flowers which suffer from less pollination.

**Background profile:** Originating in the Western Himalayas and introduced to Britain in 1839, Himalayan balsam escaped from gardens and rapidly colonised riverbanks and areas of damp ground.

**Physical description:** It is an annual plant that grows up to 3 m tall with pale to purplish-pink slipper shaped flowers in June - October.

**Known whereabouts:** Himalayan balsam grows on riverbanks and shoals in the river channel.

**If sighted:** Spray with a herbicide containing *Glyphosate* or *2,4-D amine* in early spring for best effect. Control measures should aim to prevent flowering and if this is achieved before seeds are set, eradication is possible in two to three years. The use of an approved herbicide in or near water requires the prior written approval of the Environment Agency.

7. **WANTED:** Australian swamp stonecrop (aka: *Crassula helmsii*)

**Crime:** Destroys pond-life, pushing out native vegetation, by rapidly forming a mat over the water surface, which continues to grow upwards like a huge sponge. It will even spread into the turf and destroy the pond itself. Anything living beneath this mat is killed through lack of light, oxygen and eventually water itself. As well as being considered unsightly and detrimental to landscape quality it can also severely inhibit navigation, fishing and many other forms of water-related sport and recreation on affected watercourses. Also destroys shingle habitat, which is used by some nesting birds.

**Background profile:** Introduced to Britain from Tasmania in 1911 and sold as an 'oxygenating plant' in garden centres. Since 1956 has been aggressively spreading in the wild.

**Physical Description:** There are 3 different typical growth types – a terrestrial form, an emergent form and a submerged form. These forms however remain interchangeable depending on the environmental conditions. It is greenish yellow, with fleshy leaves and has small white flowers from June – September. Grows vigorously all year round and colonises any still or slow-moving water body ranging from damp ground to water 3m deep.

**Known whereabouts:** Found growing on damp soil, in shallow water or submerged in ponds, lakes and wetlands and has spread throughout England and Wales.

**If sighted:** The plant is best treated at the early stages of infestation. Delay will cause problem several orders of magnitude worse in each successive year until *Crassula* actually destroys the pond itself. On submerged material use herbicide containing *Dichlobenil* in March. On emergent material use *Glyphosate* at 6litres/ha at least twice a year between March and October. The use of an approved herbicide in or near water requires the prior written approval of the Environment Agency.

8. **WANTED:** Chinese Mitten Crab (aka: *Eriocheir sinensis*)

**Crime:** Known to burrow into riverbanks, presenting a hazard to river and other freshwater engineering projects. Out-competes many native species. The crab is capable of emerging from water and crossing dry land to enter new river systems. Could eventually threaten freshwater habitats currently occupied by populations of our native crayfish (*Austropotamobius pallipes*). Is the secondary host of a parasitic lung fluke (*Paragonimus ringer*) that can infect mammals including humans, if eaten raw or poorly cooked.

**Background profile:** Originated in southeast Asia and thought to have been introduced to Britain in 1935 through ballast water on ships. The crab is a delicacy in Asia and is eaten raw.

**Physical Description:** A large crab with a shell width of approximately 80 mm and legs that are one and a half times its width. It has "mittens" on its claws that are actually lots of soft bristles or setae.

**Known whereabouts:** Found in estuaries, lakes, riparian zones, water courses and wetlands. Mitten crabs spend the first five years of their lives upstream in fresh water and then migrate seawards and gather in large numbers to breed in estuaries. Largest populations in Britain are found in the Humber, Thames and Medway estuaries. The population in the Thames probably runs into millions and they occur throughout the estuary and lower freshwater reaches of the river.

**If sighted:** Environment Agency fisheries staff conduct regular trapping of Chinese Mitten Crab in affected waterways in an attempt to stop the spread of this crustacean.

**9. WANTED: Parrots feather (aka: *Myriophyllum aquaticum*)**

**Crime:** Forms dense mats of vegetation in waterways starving other species of sunlight, nutrients and oxygen, eventually killing them. Also severely inhibits navigation, fishing and many other forms of water-related sport and recreation on affected watercourses. Now adapting the British winters by becoming more frost resistant. Dense appeared on surface of water can lead children to think solid ground is underneath, increasing risk of drowning.

**Background profile:** Originated from lowland central South America and was first found in Britain in 1960 and has now spread to about 150 sites. Widely grown in garden ponds and though not usually deliberately introduced into the wild, seeds can be concealed in soil of other nursery-sourced plants.

**Physical Description:** Bright green in colour, has fleshy and brittle stem with feathery emergent shoots, but no flowers. Only female plants are present in Britain, so spreads by vegetative means only.

**Known whereabouts:** Grows in ponds, reservoirs, gravel pits, streams canals and ditches.

**If sighted:** Use a herbicide containing *Dichlobenil* in spring to shallow water and areas of damp ground. Material should be cut and removed as often as necessary and at least every 6 – 9 weeks from March to October to weaken the plant. The use of an approved herbicide in or near water requires the prior written approval of the Environment Agency.

**10. WANTED: Topmouth Gudgeon (aka: *Pseudorasbora parva*)**

**Crime:** Out-compete native species such as roach and rudd because it matures at one year old, whereas a rudd does not mature sexually until two or three. It can also breed up to four times a year. May carry a damaging parasite, which is believed to interfere with the breeding cycle of salmon and trout.

**Background profile:** Small Asiatic member of the carp family, appeared in mainland Europe in the 1960's. Has been introduced accidentally into a number of British lakes.

**Physical Description:** Measuring up to 9cms in length, the males are usually darker in appearance than females. Often confused with juvenile native species, although their appearance is quite distinct.

**Known whereabouts:** Found in waterways across England and Wales.

**Measures being taken:** Environment Agency fisheries staff conduct regular electro-fishing of affected waterways in an attempt to stop the spread and eradicate this fish.

**All above plants are covered by pest-control legislation:** The Wildlife and Countryside Act 1981 provides the primary controls on the release of non-native species into the wild in Great Britain. **It is an offence under section 14(2) of the Act to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9, Part II.**

**For guides on how to approach these invasive species, go to <http://www.environment-agency.gov.uk> and search for 'invasive species'.**

**For images of any of these species – and professional pictures of recent Topmouth Gudgeon eradication taking place – please contact the national press office.**

**Ends**

**Media enquiries: 020 7863 8710 or outside normal office hours, please contact the National Duty Press Officer on pager 07798 882 092.**