



North Wales

Wildlife Trust

Ymddiriedolaeth Natur

Gogledd Cymru

# Invasive Non-Native Species Pocket ID Guide



Protecting **WILDLIFE** for the Future

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This book is also available in Welsh. Please visit our website or contact us to ask about a copy

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**Cronfa Amaethyddol Ewrop ar  
gyfer Datblygu Gwledig:**

Ewrop yn Buddsoddi mewn Ardaloedd Gwledig

**European Agricultural Fund for  
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Europe Investing in Rural Areas



**Llywodraeth Cymru  
Welsh Government**

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# Who we are



**We are the only local organisation dedicated to conserving all habitats and species across North Wales for the enjoyment of people and the benefit of wildlife.** We work with 45 other Wildlife Trusts, and are part of the largest UK voluntary organisation dedicated to conserving all of the UK's habitats and species, whether in the countryside, towns or at sea.

We are an independent, local charity, reliant on the support of our members and other donations. **Please help us if you can.**

**You can help protect wildlife by ...**

- **Becoming a member** for just a few pounds per month
- **Volunteering to help**, work on our reserves or as part of specific projects
- **Considering a Living Legacy**, a gift in your will, whether small or large, would leave your footprint in our landscape forever



# DINNS Partnership



**The Dee Invasive Non-Native Species (DINNS) Partnership is a catchment-wide initiative which coordinates the control and monitoring of Invasive Non-Native Species (INNS) within the Dee catchment.**



As lead partner, NWWT work with many partner organisations, and their volunteers, throughout the Dee catchment in North Wales and North-West England to tackle the problems posed by INNS. We are passionate about safeguarding our environment for future generations by promoting and delivering effective biosecurity.

We are always keen to involve more stakeholders in our work. If you are a volunteer who would like to assist us; a landowner who would like to tackle the INNS on your land; or interested in training or biosecurity, please contact us via the North Wales Wildlife Trust website.



# Biosecurity

A close-up photograph showing a person's hand holding a dark brown brush with black bristles. The brush is being used to clean the sole of a muddy, dark-colored boot. The background is a blurred, light-colored surface, possibly gravel or sand. The overall scene is set against a bright yellow background.

[www.northwaleswildlifetrust.org.uk](http://www.northwaleswildlifetrust.org.uk)

**Biosecurity is the most effective way of removing the threat INNS pose to our environment. Effective biosecurity can be as simple as ensuring our clothing, tools and equipment are kept clean and dry.**

In the UK, we have the national 'Check-Clean-Dry' campaign which sets out three simple steps to effectively carry out biosecurity:

**CHECK** your equipment and clothing for live organisms, particularly in areas that are damp and hard to inspect.

**CLEAN** and wash all equipment, footwear and clothes thoroughly. If you do come across any organisms, leave them where you found them.

**DRY** all equipment and clothing, some species can live for many days in moist conditions. Make sure you don't transfer water elsewhere.



# Recording INNS



**It is very important to record any INNS you may come across. The more records we have, the more effectively we can manage the threat.**

Below are some of the recording apps and websites for INNS recording. They are simple to use and make recording easy.

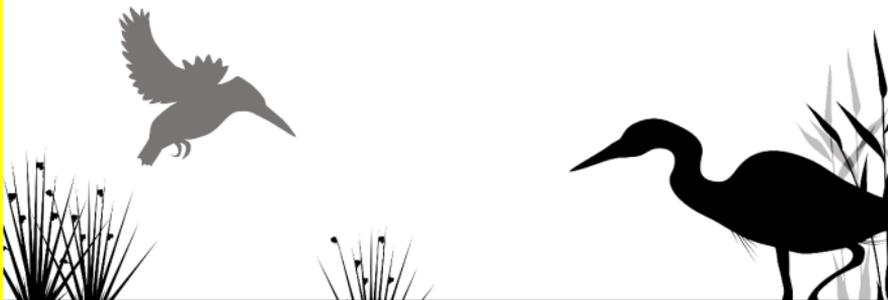
- Asian Hornet Watch
- Invasive Alien Species Europe
- irecord – The irecord website is the best place to submit records of INNS in the UK.

**[www.brc.ac.uk/irecord/enter-non-native-records](http://www.brc.ac.uk/irecord/enter-non-native-records)**

## **Alert species**

These are species requiring urgent action. Records will be sent straight to the GB Non-Native Species Secretariat via irecord or you can submit your records to:

**[alertnonnative@ceh.ac.uk](mailto:alertnonnative@ceh.ac.uk)**



## Recording in the Dee Catchment

If you have found one of the species in this book in the Dee catchment please send us a record via our online recording atlas.

When sending a record to us we need to know:

- **What** the species is; a photo helps!
- **Where** you found it
- **When** you first spotted it
- **Who** you are

Submit your record using our online atlas at:

**<http://dinns.cofnod.org.uk>**

Our atlas allows you to follow our progress, see what records we have and see if they are being managed.



A close-up photograph of several pink flowers with white centers, likely from the Mimulus genus. The flowers are in various stages of bloom, with some fully open and others as buds. The background is a soft, out-of-focus green, suggesting foliage. The overall image has a bright, natural feel.

# **Invasive Non-Native Species**

## **Identification guide**

# Himalayan balsam



## Species name

*Impatiens glandulifera*

## Habitat

Found mostly in damp areas such as riverbanks and woodland, although it can be found away from water

## Key features

- Leaves arranged in whorls
- Shallow roots
- Flowers range from pink to white
- Explosive seed pods
- Fleshy hollow stems
- Grows to approximately 2 metres tall
- Up to 7,000 seeds per plant



# Giant hogweed



**Hazardous**  
**Do not touch!**

## Species name

*Heracleum  
mantegazzianum*



## Habitat

Commonly found on riverbanks but can grow in many habitats



## Key features

- Stiff bristles and purple blotches on stem
- Large, serrated leaves
- Large white umbrella like flower-head
- Contact with sap can cause recurrent burns to skin, sunlight makes this worse
- Grows up to 5 metres tall
- Up to 20,000 seeds per flower head
- Takes up to 4 years to flower



A close-up photograph of Japanese knotweed (Fallopia japonica) in bloom. The image shows several large, vibrant green leaves with prominent veins. One leaf at the top left is heavily damaged, showing numerous small holes from insect feeding. The central focus is a large, dense panicle of small, white, star-shaped flowers. The background is a soft-focus green, suggesting a natural outdoor setting. The text 'Japanese knotweed' is overlaid in white, bold, sans-serif font with a black drop shadow.

**Japanese  
knotweed**

## Species Name

*Fallopia japonica*

## Habitat

Common in urban areas, riverbanks, railways and roadsides

## Key Features

- Bamboo-like stems with purple blotches
- Palm-sized, shield-shaped leaves
- Small, white flowers
- Young shoots spear-shaped, much like asparagus
- Forms dense stands up to 3 metres tall
- Does not set seed in the UK; spreads by root and plant fragments only



# American signal crayfish



## Species name

*Pacifastacus leniusculus*

## Habitat

Found in most freshwater habitats in the UK.

## Key features

- Underside of claws bright red
- White spot or 'signal' on hinge of claw
- Native crayfish is smaller, without white spot and red under-claw
- Burrows into banks, leading to erosion
- Very aggressive and effective predator
- Carries crayfish plague which is deadly to native crayfish



# Chinese mitten crab



## Species name

*Eriocheir sinensis*

## Habitat

Found in tidal streams, rivers and estuaries. Only freshwater crab in UK

## Key features

- Claws covered in downy fur
- White pincers (claw tips)
- Legs have bristly hairs
- Olive-brown body with four spines of either side of shell and four spines at the front
- Characteristic D-shaped burrows in river banks
- Adults migrate to estuaries in late summer to breed, and die once breeding is complete



# Killer shrimp



**ALERT SPECIES**

## Species name

*Dikerogammarus villosus*

## Habitat

Still or flowing fresh or brackish water; prefers hard, rocky substrates

## Key features

- Tail has distinctive cones. Back is usually striped
- Can grow up to 3 cm in length and is able to breed once 5-6 mm long
- Commonly found with Zebra mussel
- Readily attaches to clothing and equipment
- Only free swimming in UK. freshwater shrimp in the UK. Very effective predator, actively hunts prey



Report sightings of this species via:

• [alertnonnative@ceh.ac.uk](mailto:alertnonnative@ceh.ac.uk)

# Zebra mussel



## Species name

*Dreissena polymorpha*

## Habitat

Slow rivers, canals, docks, lakes, reservoirs and water pipes.

## Key features

- Small, striped mussel
- Can grow up to 3cm in length
- Distinctive D-shaped shell
- Attaches to solid surfaces, usually forming large colonies
- Known to block water pipes, foul hulls and damage underwater machinery
- Minute larval stage is easily transported on damp equipment



# **New Zealand pygmyweed**



## Species name

*Crassula helmsii*

## Habitat

Can be aquatic or terrestrial. Found in still or slow-moving freshwater habitats up to 3m deep

## Key features

- Fragile succulent with small white flowers
- Fleshy leaves grow in alternate pairs
- Stem fleshy and round but brittle
- Terrestrial form is dense and mossy in appearance. Stems tend to be pink/red
- Aquatic form is stringy with large spaces between leaf pairs and pale green stem
- Regenerates from tiny fragments





**Floating  
pennywort**

## Species name

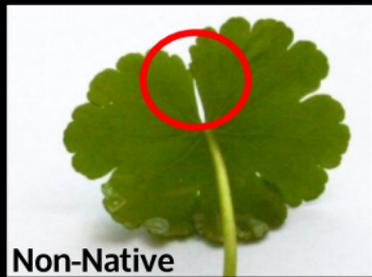
*Hydrocotyle ranunculoides*

## Habitat

Still or slowly moving freshwater e.g. rivers, lakes and canals

## Key features

- Shiny, kidney-shaped leaves with 'frilly' edge
- Fleshy, brittle stalks and fine roots
- Native pennywort has more circular leaf shape and leaf is complete
- Floating pennywort has split in leaf
- Forms dense mats on water surface, making navigation impossible
- Spreads easily from small fragments



# **Water primrose**



**ALERT SPECIES**

## Species name

*Ludwigia grandiflora*

## Habitat

Still or slowly moving freshwater e.g. rivers, lakes and canals

## Key features

- Bright yellow flowers with 5 petals
- Leaves are dark green with a light green midrib
- Emergent leaves are long and thin
- Submerged leaves are round
- It has a fleshy stem and can grow in water up to 3m deep



Report sightings of this species via:

- [www.brc.ac.uk/risc/water\\_primrose](http://www.brc.ac.uk/risc/water_primrose)
- [alertnonnative@ceh.ac.uk](mailto:alertnonnative@ceh.ac.uk)

# Parrot's feather



## Species name

*Myriophyllum aquaticum*

## Habitat

Still or slowly moving freshwater e.g. ponds, rivers, lakes and canals

## Key features

- Leaves bright blue-green
- Finely divided, feather-like leaves on emergent growth
- Leaves arranged in whorls of 4-6
- Brown roots present at nodes all along the brittle stem
- Submerged leaves are brittle; most leafy growth is above water
- Tiny white flowers can be seen at the base of the leaves from May to August



**Asian hornet**



**ALERT SPECIES**

## Species Name

*Vespa velutina*

## Habitat

Nests in trees and man-made structures.  
Frequently found in urban areas

## Key Features

- Large hornet with distinctive yellow legs
- Abdomen only has one yellow segment. Thorax entirely black. Head black when viewed from above
- Very large nests often found in trees and buildings
- Very aggressive do not approach or interfere with a nest. Hunts honey bees and other native insects



Report sightings of this species via:

- Asian Hornet Watch app
- [www.nonnativespecies.org/alerts/asianhornet](http://www.nonnativespecies.org/alerts/asianhornet)
- [alertnonnative@ceh.ac.uk](mailto:alertnonnative@ceh.ac.uk)

# Local Action Groups

**A Local Action Group (LAG) is a group or project focussed on reducing the risks and impacts of INNS in a specific area.**

LAGs can be big or small; covering counties, regions or just single rivers or their local patch. LAGs are very important when it comes to tackling INNS as they undertake a huge amount of work on the ground; often bridging the gap between organisations and communities.

In the UK, the GB Non-Native Species Secretariat supports LAGs in a number of ways. It organises an annual workshop and provides a toolkit of resources and information on its website.



# Find out more ....

For more information about invasive non-native species, biosecurity and Local Action Groups please visit:

[www.nonnativespecies.org](http://www.nonnativespecies.org)

## Photo credits

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