

newsletter

HERTS LOCAL WILDLIFE SITES



The Hertfordshire Local Wildlife Sites Partnership

2016

Welcome...

...to the 2016 Local Wildlife Sites newsletter. This time we are focussing on invasive species, their management issues, case studies, ideas and opportunities.

What are Wildlife Sites?

Local Wildlife Sites (LWS) are sites of substantive nature conservation value and although they do not have any statutory status, many are equal in quality to statutory Sites of Special Scientific Interest (SSSIs). There are more than 40,000 Local Wildlife Sites in England overseen by 65 Local Sites systems, covering contrasting landscapes in coastal, rural and urban situations. Hertfordshire currently has 1,575 habitat LWS. Together with SSSIs, LWS support locally and nationally threatened species and habitats. They play a critical role in forming the building blocks of ecological networks and Living Landscapes.

We want to hear from you!

Comments or suggestions for future articles are welcome. If you would prefer to receive your newsletter via email please contact Carol Lodge: carol.lodge@hmwt.org



photo: Forestry Commission

What is an Invasive species?

An invasive species is any organism (flora, fauna or pathogen) that has been recently introduced into the wild, whether intentionally or accidentally. Some of these species then flourish as their natural limiting factors such as predators or diseases are not present. As a result they compete with native species and change the natural habitat diversity.

There are many ways in which an invasive species can change the natural habitat diversity, they can;

- Hybridize with native species (weakening native species' gene pools making them more susceptible to extinction through environmental changes).
- Outcompete native species for resources.
- Be a risk to biosecurity.

Not only do invasive species have a negative impact on the surrounding environment but some species, such as Japanese knotweed, can cause thousands of pounds worth

of structural damage to modern infrastructure. Not all introduced species become invasive but the few that do have caused significant damage. Under the Wildlife and Countryside Act 1981 it is illegal to release any non-native species into the wild.

There are some species such as rabbits that are considered to be naturalised. Naturalisation occurs when a species has been imported but now behaves like a native. For example rabbits are a vital food source for foxes and the birds of prey, as well as preventing the succession of grasslands through the grazing of shrubs.

Most of the invasive species found at Wildlife Sites in Hertfordshire are there due to garden waste dumping on sites, as well as being planted historically for cover and feed for game birds.

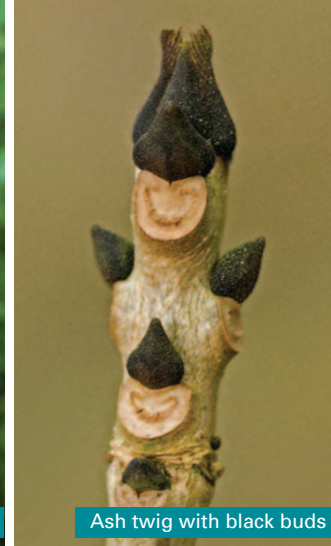
It is important that invasive species are monitored and controlled to ensure we do not lose our natural habitats and diversity.



Oak processionary moth caterpillar



Ash dieback – healthy and infected leaves



Ash twig with black buds

Tree Health in Hertfordshire – a cause for concern

Chalara (ash dieback) arrived in the UK in 2012. Its spread is causing a significant problem in the East and North of the country. It is one of many pests and diseases threatening our trees, the landscape they enrich and the wildlife that depends on them. Here we discuss their impact and measures to reduce it.

There is no cure for ash dieback. Once infected most young ash trees die quickly. Older trees may show more tolerance but eventually die, either from the disease or from other pathogens, such as honey fungus, attacking them in their weakened state. It will be some years before resistant trees are bred and available commercially.

Ash is present in many Wildlife Sites. The disease's impact may dramatically affect each Site's landscape, biodiversity and create financial implications for landowners dealing with infected trees.

The caterpillar of the **oak processionary moth** strips an oak's leaves, weakening it. The caterpillars' tiny hairs carry irritants that can cause skin rashes and eye problems. Identified in London in 2005 it is likely to arrive in Hertfordshire in the next couple of years.

Oak trees are also affected by **Acute oak decline**. It can kill the tree and affect the quality of the timber. The condition is not fully understood but is aided by stress factors such as drought, waterlogging and overcrowding.

Several problems affect horse chestnut trees. Leaves prematurely

turning brown, are affected by **leaf miner moth larvae** and/or the fungal disease **Guignardia leaf blotch**. **Chestnut bleeding canker** can prove fatal.

These examples are just a few of the pests and diseases to threaten our trees.

What can landowners, do?

We may not stop existing pests and diseases, but can reduce their impact. We can also help to prevent new pathogens arriving and spreading. Here are some measures:

- **Be vigilant** – Know your trees and look for signs and symptoms. The Forestry Commission's (FC) website has information and simple guides. www.forestry.gov.uk/pestsanddiseases.

- **Report it** – If you see an infected tree, use the FC's Tree Alert web page www.treealert.forestry.gov.uk. This helps monitor the spread and 'nip new problems in the bud'. Last year, an eagle-eyed volunteer spotted a new pest in St Albans,

enabling swift eradication.

- **Take advice** – OPM caterpillars need to be dealt with by professionals due to their health risk.

- **Manage trees sensitively** to prolong their life. This gives us a chance to identify resistant trees, protect dependant wildlife and to plan. Do not prune or fell affected trees unless essential. Reduce other stresses e.g. ploughing, compaction, heavy thinning or overcrowding.

- **Take simple biosecurity measures.**

- **Plan** – Aim for diversity in species, age and structure of woods and hedgerows.

- **Only plant native species** of local 'provenance' ideally from locally/regionally sourced seed stock.

Other guidance

Tree health and habitat management pages on the Countryside Management Service website www.hertslink.org/cms.



Ash trees – (left) with moderate dieback and (right) healthy and mature

Rogue's Gallery of Invasive Species



photo: Brenda Harold

Himalayan balsam

Latin Name: *Impatiens glandulifera*
Native Country: Western Himalayas.
Established date: Introduced in Britain in 1839, escaped from gardens.
Habitat: River banks and damp ground.
Problems: Grows in very dense stands and when it dies back in autumn large areas of bank are left bare of vegetation therefore increasing the risk of erosion. Seed pods explode and can spread seeds up to 7m and seeds stay viable for 2 years.
Control: Control should aim to prevent flowering and is therefore best carried out before June. Can be controlled by cutting, strimming or pulling on a regular basis. Herbicides could also be used.

Canadian pondweed

Latin Name: *Elodea canadensis*
Native Country: North and South America.



photo: Crown Copyright

Established Date: Around 1836. Today it's sold as an oxygenating plant for ponds.
Habitat: Slow flowing freshwater systems like lakes, ponds and some rivers.
Problems: Outcompetes native flora also effects invertebrate population.
Control: Mechanical means, either by cutting or dredging to remove by the roots, with all cut weed being removed from the water to prevent de-oxygenation.

Cherry laurel

Latin Name: *Prunus laurocerasus*
Native Country: South Eastern Europe, Caucasus, Western Asia, Iran and Turkey.
Established Date: Planted in Britain in the 17th Century and recorded in the wild by 1886. Widely planted for game cover and screening.
Habitat: Woodland, fields and thickets.
Problems: Invasive in the shrub layer of woodland, it is shade tolerant but itself casts a dense shade that excludes other species from both the shrub and field layers and ultimately prevents the regeneration of canopy trees. Leaves contain cyanide.
Control: Cut during winter, pull up seedlings, treat young plants with foliar sprat mixed with adjuvant. Burn the cuttings.



photo: Julia Wise

Floating pennywort

Latin Name: *Hydrocotyle ranunculoides*
Native Country: North and South America.
Establish date: First brought to Britain in 1980s and first noted in the wild in 1991 in Essex.
Habitat: Shallow margins in slow flowing water bodies.
Problems: Forms dense mats of vegetation, which effects both the ecology and amenity use of the water course. The stems grow up to 20cm per day.
Control: Difficult to control due to its ability to re-grow from a single node.

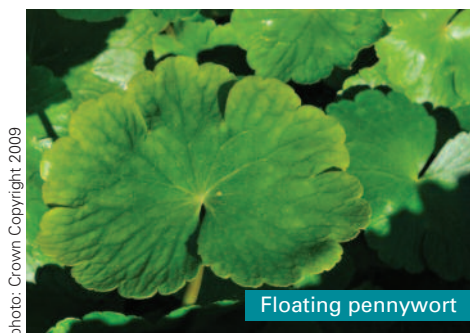


photo: Crown Copyright 2009

Cutting and removal is the best form of management.

Spanish & hybrid bluebells

Latin name: *Hyacinthoides hispanica* (Spanish), *H. hispanica*; *H. x massartiana* (Hybrid)
Native Country: Southwestern Europe.
Established Date: Introduced to Britain in 1683 and known in the wild by 1909. Hybrid first recorded in 1963.



photo: Brenda Harold

Habitat: Woodland.
Problems: The biggest concern is not the spread of Spanish bluebells but the spread of hybrids. Hybrids can become dominant within bluebell woods, and will dilute the distinctive traits of our native bluebell over time.
Control: Dig up bluebells while they are in leaf. Bluebells are strongly resistant to weed killers.

Rhododendron

Latin Name: *Rhododendron ponticum*
Native Country: Iberian Peninsula.
Established date: First recorded in Britain in 1894, it was introduced for ornamental horticulture.
Habitat: Most common in woodland.
Problems: Similar to cherry laurel; invasive in the shrub layer of woodland, it is shade tolerant but itself casts a dense shade that excludes other species from both the shrub and field layers and ultimately prevents the regeneration of canopy trees. Some studies also suggest that



photo: Crown Copyright

Elsewhere we look at ash dieback, azolla and the oak processionary moth, but here are a few more invasive species that can be found in Hertfordshire (but unfortunately there are many more that are not mentioned).

honey made from Rhododendron pollen is toxic.
Control: Rhododendrons usually don't produce seeds until they are 10-12 years old, therefore removing young plants can prevent a serious infestation in the future. Rhododendron regrows vigorously when cut. As a result some method of stump killing or removal is always necessary. Not to be mistaken for spurge laurel an Ancient Woodland Indicator.

Japanese knotweed

Latin Name: *Fallopia japonica*
Native Country: Japan.
Established date: Brought to Britain in the mid nineteenth century as an ornamental garden plant.
Habitat: Urban areas, river banks and waste ground, usually in the sunshine – is not shade tolerant.
Problems: Can grow to be 2-3m tall, underground rhizome systems can extend to at least 7m, and to a depth of 3m. Outcompetes native flora, as well as causing a massive amount of structural damage to buildings and car parks.
Control: Chemical control using glyphosate. Can be pulled but they will have fragments of knotweed crown still attached at their base. This is highly regenerative and will regrow, even after the stem has dried – avoid pulling stems. Refer to code of practice of their disposal.



photo: Brenda Harold

Goats rue

Latin Name: *Galega officinalis*
Native Country: Native to Europe, Asia-temperate.
Established date: 1640.
Habitat: *Galega officinalis* grows along stream banks and in moist areas. It prefers full sun but will tolerate light shade.



photo: Brenda Harold

Problem: Outcompetes native plants, and some studies suggest it is toxic to cattle, sheep and goats.
Control: The best way to manage is mowing and spraying plants regularly. Mowing alone is not effective.

Australian swamp stonecrop/ New Zealand pygmy weed

Latin Name: *Crassula helmsii*
Native Country: Tasmania.
Established date: Introduced to Britain in 1911, first sold as an oxygenating plant in 1927. First reported in the wild in Essex in 1956.
Habitat: Water courses.
Problems: It has vigorous, year-round growth and can grow well on damp ground or in water up to 3m deep. Where this plant invades it quickly outcompetes native vegetation, and maintains dominance by very rapid growth and uptake of almost all available nutrients.



photo: Philip Precy

Control: This plant is best treated at the early stages of infestation, delay will make it much harder to control. Emergent growth can be controlled by using a high volume solution of glyphosate (5ml/l) applied at a walking

rate of 6 seconds per metre. Cutting is not recommended but dredging out marginal can be effective as the plant is shallow-rooted. The area around any infestation should be fenced to prevent movement of fragments by livestock. Dredged materials should be piled in heaps and covered with thick black polythene sheeting or at least 20cm of soil.

Parrots feather

Latin Name: *Myriophyllum aquaticum*
Native Country: Lowland central South America.



photo: Crown Copyright

Established date: Bought to Britain in 1960 and now spread extensively in Southern England.
Habitat: Ponds, reservoirs, streams, canals and ditches.
Problem: Outcompetes native plants.
Control: Chemical control and hand pulling is very effective.

Giant hogweed

Latin Name: *Heracleum mantegazzianum*
Established Date: Was introduced as a garden plant in 1893.
Habitat: Wasteland and river banks.
Problems: Forms in dense patches so when it dies back in winter bare banks are exposed increasing erosion. Giant hogweed contains a poisonous sap and the slightest contact with skin can cause painful blistering and severe skin irritation.
Control: Chemical control using glyphosate at 6 litres per ha is the most effective method. Cutting down the stems with a sharp sythe or sickle before flowering will help to control



photo: Crown Copyright

just below ground prevents regrowth and will provide good control.

Snowberry

Latin Name: *Symphoricarpos albus*
Native Country: Western North America.
Established date: First introduced in 1817, unknown when it became established in the wild.
Habitat: Found in woods, hedges,



photo: Crown Copyright

scrub, waste ground and on railway embankments
Problem: It has a vigorous suckering habit causing it to spread from its original planting; then produces dense thickets which outcompete other less vigorous plants.
Control: Cutting down to coppice level in spring. Cut again in autumn.

Creeping water primrose

Latin Name: *Ludwigia peploides*
Native Country: South America, sold in the UK as a pond and aquarium plant.
Established Date: First recorded in 2005 only been recorded in 13 sites.



photo: Crown Copyright

Biosecurity and how it can play its part

Humans have introduced many non-native plants and animals to the UK. Most have little negative environmental impact. Some are regarded as invasive as they spread and cause damage to the environment, the economy or our health. About 10-15% of non-native species may be problematic. Aquatics tend to be more invasive than terrestrial ones. Much effort is made to control and eradicate species such as Japanese knotweed and giant hogweed. The economic cost is up to £1.7billion per annum; there is an equally significant ecological cost to our important wildlife areas.

Unfortunately many invasive non-native species are already widespread. Contamination and spread from existing populations threatens Wildlife Sites. A tiny 5mm fragment of Australian swamp stonecrop (*Crassula helmsii*) can colonise new areas and out-compete native vegetation, choking waterbodies. A walking boot easily traps and transfers that fragment to the next site visited.

Therefore biosecurity is an important issue. Biosecurity reduces the risk

of introducing or spreading invasive species in the wild. All site users, contractors, staff, volunteers and casual visitors have an important role to play.

What measures can help minimise the risk of spreading invasive non-native species?

Firstly, include biosecurity measures when planning your visit. Are invasive species present on-site? If you are visiting a number of sites and one is known to have invasive species then plan your visit so that is the last of the day. Can you avoid site visits at peak times for seed dispersal?

Good hygiene practices are important. Just because no invasives have been reported doesn't mean they are not present. The simplest measure is to arrive on site with clean footwear and equipment and make sure you leave with footwear and equipment visibly clean. Cleaning equipment on site minimises spread.

The 'Check, Clean, Dry' campaign
 The 'Check, Clean, Dry' campaign aims to prevent the spread of aquatic

invasive non-native species. Its principles can also be applied to terrestrial invasive non-native species.

The 3 simple steps of the campaign are:
Check equipment and clothing for live organisms, seeds and vegetation. Don't forget damp or hard to inspect areas.

Clean and wash equipment, footwear and clothing thoroughly. Leave any organisms on site where you found them. If on-site cleaning is not possible, bag up items and clean at home. Water cleans if items are dried for 48hrs; otherwise submerge in hot water (45deg+) for 15minutes.

Dry all equipment and clothing. Species such as the zebra mussel can live for 15 days on damp waders. Dry for as long as possible (minimum of 48hrs for equipment).

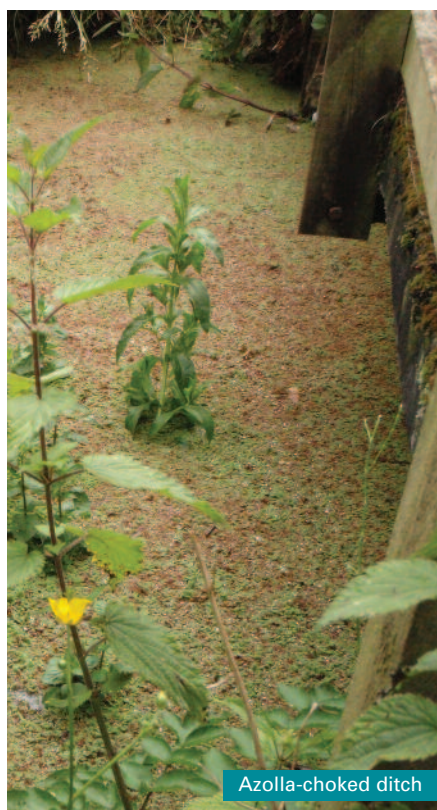
Prevention is less costly and difficult than control. Responsibility and action at all levels by landowners and visitors will go a long way towards the control of these species.

■ Cath Patrick LVRPA



Battling Alien Invaders at Oughtonhead Common

David Cannon from the Friends of Oughtonhead Common releasing some of the weevils into the ditch



Azolla-choked ditch

Oughtonhead Common (a Local Nature Reserve near Hitchin) is an important wetland habitat. As well as the River Oughton, a chalk stream, the Common comprises a mosaic of ditches, ponds, reed and sedge beds.

The river has hosted a number of invasive species including mink, signal crayfish, Himalayan balsam and *Azolla filiculoides*. *Azolla*, also known as water fern, fairy fern or fairy moss has been a problem in both the Common's river and its ditches for a number of years.

Azolla, introduced into this country from the tropics of America in the

1800s, is thought to have developed a cold-tolerant strain. No native insects feed on *Azolla*. It can rapidly colonise watercourses, potentially doubling its surface area every 4-5 days. This rapid growth means it can outcompete native plants, reduce oxygen levels and reduce water quality.

The Friends of Oughtonhead Common, a local volunteer group, have mechanically harvested the weeds with buckets, but this only works in the short term. Herbicides can eliminate *Azolla* but have a detrimental effect on native plant species and are therefore unsuitable for a site noted for wetland plant diversity.

In America *Azolla's* predator is a tiny weevil, *Stenopelmus rufinasus*. These weevils will exclusively eat *Azolla* (with no adverse effect on native species) and die off once *Azolla* is gone.

Four years ago, weevils were introduced to an *Azolla* choked ditch at Oughtonhead. After 3 months it was gone and has not yet returned. This year, weevils were also released into stretches along the river. Success has been slower, but this may be due to the *Azolla* being spread over a larger area and the weevils not being able to move between patches. We will review the situation.

Using the weevil to biologically control *Azolla* can be successful although full eradication in an uncontained environment is probably unrealistic and control may be a more realistic goal.

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NORTH HERTFORDSHIRE DISTRICT COUNCIL



The Wildlife Sites Partnership in Hertfordshire includes Herts and Middlesex Wildlife Trust, Hertfordshire Environmental Records Centre, Hertfordshire Ecology, Natural England, the Countryside Management Service, Lee Valley Regional Park Authority, Chilterns AONB, the Forestry Commission and the Environment Agency, and is coordinated by Herts and Middlesex Wildlife Trust.



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