Rogues of invasive species

Gallery

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Non-native invasive species are plants and animals that have been introduced from outside their natural surroundings and are alien to their new environment. They can take over the habitat of native species very quickly, resulting in the decline or total exclusion of these indigenous species or communities. They can cause social, economic and environmental damage and, in certain circumstances, will adversely affect human health. They can impact negatively on the recreational and amenity use of water bodies, with a knock-on effect to tourism, by restricting angling, boating, swimming and other water-based leisure pursuits. And they can also impact upon commerce and industry by obstructing engines, turbines and water intake pipes.

If non-native invasive species are allowed to spread unchecked within the country, the economic and ecological cost could be too great to contemplate.

Prevention is generally far more cost effective and environmentally desirable than measures taken following the introduction and establishment of invasive species. It should, therefore, be given priority as the first line of defence.

It is critical that appropriate national legislation is introduced to underpin whatever preventative measures are taken. In addition to legislation, codes of conduct or good practice should be developed with relevant industries and stakeholder groups, and the Central Fisheries Board will shortly introduce biosecurity guidelines directed at specific stakeholder groups.

In September 2009, the Central Fisheries Board received funding through the EU's Life+ Programme to commence the CAISIE project. CAISIE - Control of Aquatic Invasive Species and restoration of natural communities in Ireland – and the project received €1.5m. The project is jointly funded by the National Parks and Wildlife Service, and is due to be completed in 2013. It will target priority invasive species in Lough Corrib and in the Grand Canal and Barrow Navigation. This will be achieved through the development and demonstration of effective control methods, stakeholder engagement and awareness-raising, as well as enactment of appropriate robust legislation, policy development and information dissemination.

Most of the high-impact invasive species present in Ireland today were introduced in the last two decades, and one aquatic species was first recorded less than one month ago.

Should you encounter any of these invasive species, please contact www.cfb.ie (01 884 2600) or www.caisie.ie with details relating to the exact location of the organism.

Nuttall's Pondweed – ***Elodea nuttallii***
This perennial submerged plant is native to North America, and was first recorded in Ireland in the 1980s. It grows in still and slow-flowing water, and thrives in eutrophic habitats. It is a freshwater plant but is tolerant of moderately saline water. In recent years it has become widespread in Ireland, and where it establishes, it can form exceptionally dense monocultures. These occupy the water column from bed to surface and create an impenetrable canopy on the water surface. No native flora can compete with this plant, and as a consequence, natural biodiversity suffers following its introduction. Because of the density of its vegetation, amenity usage of infested waterways is seriously curtailed.

Himalayan balsam – ***Impatiens glandulifera***
This annual plant grows to 3m high and is spread exclusively by seed. The seed pods explode when mature, scattering the small seeds up to 7m from the parent plant. The plants grow in dense stands along the banks of rivers and effectively suppress any native grasses and herbaceous plants. The balsam dies back in Autumn, exposing the bare banksides to erosive winter flows.

Bloody red shrimp - ***Hemimysis anomala***
Hemimysis is a free-swimming, shrimp-like organism that was first spotted in Ireland in 2008. It has spread very quickly into a number of lakes on the River Shannon. It is typically small, ranging from 8-16mm in length. Body colour varies from translucent / ivory-yellow to deep red. The latter colour results from pigment-containing cells in the organism's body. *Hemimysis* individuals can aggregate into locally dense swarms during daylight hours, normally in the shade of piers or harbour walls. These swarms impart a distinct red colour to the water where they occur. Hemimysis is a voracious predator and will significantly reduce aquatic insect species, which represent important fish food items, if they continue to spread at the current rate.

Chub - ***Leuciscus cephalus***
Chub is a highly prized angling species in Britain and Europe, and was probably intentionally introduced to Ireland by anglers. The presence of chub in Ireland (the River Inny) was first confirmed in 2005. Chub feed on aquatic plants and insects when young, but as they mature, they feed more selectively on larger prey items, including young trout and salmon parr. As Chub will actively compete with native fishes for space, food and spawning habitats, their presence could alter the fish community structure in those rivers where they prevail.

Asian clam
- *Corbicula fluminea*
The Asian Clam is Ireland's newest and most dangerous invasive species. It was first recorded in the River Barrow at St Mullins in 2010. Nobody knows for certain how it was introduced here, although it possibly arrived with boats brought in from abroad or as bait. The shells are typically yellow-gold to brown and are characterised by evenly spaced concentric ridges. Normally the clam grows to 25mm although specimens up to 50mm have been recorded. Each clam can filter up to one litre of water per hour. It thrives in clean and well oxygenated rivers with sand or gravel beds. This invasive species has the capacity to totally change the ecology of a river as it will actively compete with our native aquatic insects for food and space. By depleting the insect populations and altering the nature of the river beds, this species could have devastating effects on our native and naturalised fish stocks.

Giant hogweed – ***Heracleum mantegazzianum***
This statuesque plant can grow to a height of 4m and was introduced to Ireland as an ornamental plant in the late 1880s. Its preferred habitat is wasteland and the banks of rivers. The plant produces a sap that is hazardous to humans, particularly in the presence of direct sunlight. The large leaves create sufficient shade to suppress native herbaceous understorey plants along banksides.

Curly leaved waterweed – ***Lagarosiphon major***
Lagarosiphon major is one of our most notorious invasive species. It is sold by garden centres and DIY stores as an oxygenating plant for ponds and fish tanks. It was located in Lough Corrib in 2005, where it grows with such vigour that it has already excluded the native flora from the bays in which it is established. The dense vegetation present in many bays in the lake already restricts angling, boating and other water-based leisure pursuits. It could represent a major flood hazard in the Corrib catchment in the future.

New Zealand pigmyweed – ***Crassula helmsii***
This plant was first recorded in Ireland in 1994. It has spread very rapidly in watercourses in Britain and has the potential to do likewise here. It forms dense submerged and emergent stands in ponds, small lakes and canals. In watercourses it can displace native plants, alter the water chemistry, obstruct water flow and reduce the recreational value of impacted watercourses.