

The ‘bully’ in your garden

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‘Which plants do best in our gardens?’ [Matthew Jebb](#) asks before answering himself: “Usually foreign plants, because generally our predators and pathogens leave them alone.”

This apparently innocent fact has been one of the drivers of a worldwide environmental crisis. Plants that gardeners originally chose for their exotic beauty repeatedly escape into the wild. And some become highly invasive, forming impenetrable monocultures where native plants and animals cannot flourish.

There are other big drivers of this crisis, such as agriculture and forestry. But as director of the National Botanic Gardens, in Dublin, Jebb wants fellow gardeners, public and private, to “act responsibly, and not create yet another series of problem plants.”

He recalls that it was William Robinson’s Victorian wild-garden movement that popularised alien plants such as giant hogweed, pontic rhododendron and Japanese knotweed, not only for their remarkable structural and aesthetic qualities but also for their “vigour”. Robinson and his followers little realised how vigorous these plants would prove to be. All three plants, and many more, now cause biological havoc in Ireland.

In parts of the country Japanese knotweed is rapidly smothering rural river valleys, eliminating spring flowers from our roadsides and even bursting up through tarmac to dominate vast urban waste lots. It thrives on disturbance and usually jumps back in after clearance, denser than before, unless sophisticated long-term measures are taken.

Alien invasive plants have become an international problem. Some natural-history writers, notably Fred Pearce, author of *The New Wild: Why Invasive Species will be Nature’s Salvation*, now argue that we should simply abandon all attempts to eliminate them. Jebb disagrees strongly but takes a pragmatic, case-by-case approach, teasing out the often contradictory aspects of the way we deal with nature.

Indeed, although the phrase “alien invasive plant” is a metaphor that describes a real problem accurately enough, it has some unfortunate connotations. Critics have associated it with anti-immigrant racism, and some of the phrases derived from it, such as “rhodo-bashing”, are certainly questionable.

So is the labelling of such plants as “thugs” and “bullies” in some conservation literature. This is both inaccurate and unhelpful. It suggests that the plant itself is somehow behaving badly. The problem is not the plant but human behaviour, which puts plants (and animals) in inappropriate places. For millenniums, and ever increasingly today, we heedlessly move species around the world.

It’s unfortunate, too, that all aliens are often wrongly considered invasive threats, which parallels the portrayal of all human immigrants as thieves or terrorists. “Montbretia, for example, does no mischief at all on our roadsides,” says Jebb, though some may disagree with this view.

Likewise, a plant accurately associated with one problem may then be falsely or prematurely associated with others. Legitimate scientific speculation often morphs into widely accepted but unproven legends.

It’s often thought, for example, that pontic rhododendron is allelopathic – that is, that its roots and leaf litter alter soil biochemistry to prevent native plants returning to sites where it has been cleared. It can indeed take a long time to recover native vegetation in such places. But the biochemical forces involved, if any, remain unknown to science.

Similarly, there is a widespread belief that the rhododendron, with its “big, blowsy flower”, as Jebb puts it, attracts bees in such numbers for so long that the insects neglect to pollinate nearby native plants, such as foxgloves. This would give rhododendron yet another “unfair” advantage, not only shading out rivals in its immediate vicinity but also preventing ones farther away from breeding efficiently.

But Jane Stout of the Trinity Centre for Biodiversity Research, at Trinity College Dublin, is unconvinced that this happens. Bees do visit foxgloves less when near rhododendron, she says. And there is some evidence that bees that still frequent such foxgloves deposit less pollen than usual. Yet the plants’ seed production remains constant in studies to date.

Ecosystem relationships are more complex than most of us can imagine. It’s also true that an alien plant that is undesirable in one setting may bring biodiversity benefits in another, or that its removal from a specific site may cause more problems than it solves.

Jebb observes that woody mallow, regarded as invasive on our mainland, provides valuable predator protection for rare nesting terns on Ireland’s Eye. He adds that the single biggest colony of the very scarce Killarney fern shelters under a canopy of laurel, rightly regarded as a major threat to native biodiversity in most scenarios.

But these cases are the exceptions, and not the rule, he stresses. He believes the threat is often so great that some risks may

be taken in eliminating a problem species. He led a team using Roundup, whose active ingredient is glyphosate, to destroy a colony of ice plant that was threatening to engulf the cliff flora on Howth Head, on the northern edge of Dublin Bay.

“We had no idea of the outcome,” he says. “We could have been left with bare rock that other invasives might then have colonised.” Instead, he is happy to report, the collateral damage was minimal, and native samphire species very quickly re-established themselves on the site.

He has not achieved the same results with the South American *Gunnera tinctoria*, giant rhubarb, a garden favourite whose behaviour in Ireland is puzzling and challenging. It is aggressively colonising both Clare Island and Achill but does not appear to be spreading much in mainland Mayo, and not at all in the east of the country. A second species, *Gunnera manicata*, is not currently behaving invasively here, but Jebb says the two species may be hybridising in Cornwall, where a gunnera invasion has become a severe problem at the Eden Project.

On Clare Island it is now growing in such profusion on some of the cliffs that Jebb doubts it can be eradicated. It is a sobering thought that the rich biodiversity first recorded in Robert Lloyd Praeger’s pioneering biological survey (and currently being replicated by the Royal Irish Academy) could now be chronically compromised by a plant from the other side of the world.

Whatever the outcome, we should be probably be thinking a lot harder about what we plant in our gardens in future.

Knocking out knotweed: Offaly leads the way

Combating Japanese knotweed is often seen as futile, or too expensive, but Matthew Jebb, the head of the National Botanic Gardens, points to a remarkable success story. Amanda Pedlow, heritage officer at Offaly County Council, says there is no regrowth of knotweed on public land in the county after an eight-year campaign.

Private landowners are also responding very well to offers to assist removal, as awareness of the problem rises through media campaigns and roadside signage. Irish Water and the [National Roads Authority](#) have also been very co-operative.

“We had the advantage of moving early,” Pedlow says. “I saw western counties where it had become a huge problem, but we had very few patches more than 10m long. We started spraying with Roundup in 2008, and the knotweed grew weaker year on year.”

The real breakthrough came in 2013, when they switched to another weedkiller, Synero, with the active ingredient aminopyralid, which Pedlow found much more effective. This is just as well, as the EU is likely to ban Roundup very soon because of secondary effects.

There may be minor collateral damage from Synero, but Pedlow believes the benefits of knotweed removal far outweigh any downsides.