Aliens on Skye

Alien plants on Skye were not recorded with great enthusiasm by my predecessor as Botanical Society of the British Isles Vice-county Recorder. However, there are plenty here and more arriving. Last year (2012) saw the first record of Giant Hogweed (Heracleum mantegazzianum), a single plant in Portree which was comprehensively destroyed. This year has seen the first record of American Skunk-cabbage (Lysichiton americanus) and its appearance has led to discussion locally about the status of alien plants and what, if anything, should be done about them.

Invasive aliens such as Rhododendron (Rhododendron x superponticum) and Japanese Knotweed (Fallopia japonica) are familiar and there is little doubt that these can be harmful to native vegetation and at least in the latter case to human constructions. Farther down the Axis of Evil there are things like Himalayan Balsam (Impatiens glandulifera) which is present on Skye but mostly does little harm and American Skunk-cabbage which Plantlife describes as being of “Moderate Risk”.

The Vice-county Census Catalogue of the Vascular Plants of Great Britain
published in 2003 listed 898 taxa for Vice-county 104 (Skye, Raasay & the Small Isles) of which only 81% were described as native, the remainder being classified as neophytes, casuals or archaeophytes. Since then many more aliens than natives have been added to the list so that the percentage of natives is now less than 80%. Skye has four of the plants listed on Schedule 9 of the Wildlife and Countryside Act in Scotland which prohibits their planting in the wild or otherwise causing to them grow there:

- Giant Hogweed (*Heracleum mantegazzianum*)
- Japanese Knotweed (*Fallopia japonica*)
- New Zealand Pigmyweed (*Crassula helmsii*)
- Shallon (*Gaultheria shallon*)

Many locally would suggest that Rhododendron (*Rhododendron x superponticum*), Sitka Spruce (*Picea sitchensis*), and Lodgepole Pine (*Pinus contorta*) are more problematical than any of the above except perhaps Japanese Knotweed.

Of course, many native plants can be invasive too such as Bracken, Soft-rush, Nettle, Docks and Ground-elder. These commonly become a problem following damage to habitat or changes in management. Furthermore, most non-native garden plants are not invasive.

It is well worth considering why invasive aliens have become a cause célèbre. According to Plantlife “The problem with plants that are both non-native and invasive is that, as well as being naturally tenacious, they have the advantage of surprise: our own native flora has not evolved alongside them and so is even more ill-adapted to compete.” This sounds perfectly sensible but in practical terms if a plant is invasive, whether native or not, then clearly the rest of the native flora is not competing successfully. Aliens often have few insect predators here, but Bracken would not be spreading so fast in northern and western Britain if it had effective predators – the absence of such explains proposals to introduce moths from the Southern Hemisphere to control it – another can of larvae.

What are we worried about?

That they come from abroad? They are certainly oversexed (in some cases, though some of the worst offenders spread entirely vegetatively) and over here, though not overpaid. Is this just jingoism or, to coin a word, xenophytophobia?

That they are introduced by humans? Because we are in some way not part of the biosphere?

That we don’t like change? Animals, including humans, are programmed by evolution to fear change and in the distant past, change in the status quo often signalled life-threatening danger. I hold to a belief that the universe, the planet and particularly life are all about change. Yet resistance to change is a frequent human response, perhaps because it reduces certainty and predictability.

Is it perhaps, the rate of change – the rate of arrival and/or spread that concerns us? Many things in our world are changing fast and maybe we react against that?

Plants have expert distribution capabilities: luscious berries containing seeds that are not digested, burs to stick to fur, exquisite parachutes or tiny spores for wind dispersal. Despite that, without human assistance most plants are geographically restricted to a greater or lesser extent, often by climate.

Many invasive aliens are attractive to our eyes – that is often why they were brought here in the first place. They can also be poisonous – think of blisters from Giant Hogweed – but there again the coasts and burns of Skye are full of the native Hemlock Water-dropwort (*Oenanthe crocata*) which is so toxic that a botanical illustrator died a few years ago having fallen asleep in a room with this plant in a vase.

The increased mixing of previously separated species provides a bigger local gene pool from which survival characters can be selected in a changing world, giving a greater chance of surviving stress and more opportunities for hybridisation which, on occasion, will lead to new species.

New Zealand Willowherb (*Epilobium brunnescens*) is an interesting plant that is not on Plantlife’s list of non-native aliens. The Non-native Species Secretariat website of the Department for Environment, Food and Rural Affairs says: “The actual impact of New Zealand Willow-herb is difficult to assess”. This species was first recorded in the wild in 1904 in Edinburgh and on Skye in 1940. It is now ubiquitous from sea level to mountain top. Though usually well integrated into native vegetation, it can form large mats in botanically rich areas such as the Trotternish Ridge. It would be impossible to eradicate using current technology. This may change in the future if genuinely specific herbicides, perhaps genetically targeted, become available. In that eventuality, would we wish to destroy it?

I also wonder how we would have reacted to Pipewort...
(Eriocaulon aquaticum), a fundamentally North American plant now given Nationally Rare status, if its first British record had not been Skye 1764 but Skye 2004.

So what should we do with our American Skunk-cabbage? Each new case needs a considered response and, as the New Zealand Willowherb case shows, if you don’t act early on you may not get another chance. In this case I have come down on the side of removal – but only just. We shall see what happens.

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