

# Meeting notes from joint non-native invasive species meeting between Highland, Moray and Aberdeenshire

Held on 26th April 2017 at Elgin Youth Cafe

*The meeting was funded by Aberdeenshire Council, Forestry Commission Scotland, Scottish Natural Heritage, The Highland Council. We are grateful for their support.*

## 1) Invasive non-native species ~ a national perspective

Stan Whitaker, SNH

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Stan noted that the number and spread of invasive species has had a continuous rapid increase since the 1800s, bringing with them an increasing biodiversity and financial costs. In some cases invasive species can affect internationally important species - for example, mink predating ground-nesting seabirds.

A prevention list of species, allied to rapid response mechanisms, has been established in order to try and minimise new invasive species establishing. Recently this has worked effectively in responding to reports of floating pennywort, raccons, Asian hornet, zebra mussels and quagga mussels.

Species specific contingency plans have also been established for eg raccoon, muntjac deer, stoat and rat.

Some 'Species Control Agreements' have been set up - including for giant hogweed near Dunblane, *Rhododendron ponticum* at Glengarry

There are large scale eradication programmes for Hebridean mink, Shiant Isles black rats, and hopes to get large-scale funding for a new Scottish invasive species initiative.

Eradication of established invasive species is unlikely, but management at a landscape scale or island level can be effective and list of target species - including rhododendron, mink and giant hogweed - has been agreed, with landscapes such as Atlantic oakwoods and the Shiant Isles identified.

In discussion, the suggestion was made that tax relief could be a useful tool in encouraging invasive species control, and is an approach used in other countries.

## 2) Eradicating invasive plants from riparian land - work on the River Dee

Calum Hislop, River Dee Trust

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New work in eradicating invasive plants on the River Dee has been funded through the Aberdeen peripheral road route agreements. The work is volunteer-based and is tackling Japanese knotweed, Himalayan balsam, giant hogweed and skunk cabbage.

The work covers 60 km of river, over which a detailed survey has been undertaken.

Giant hogweed can be effectively treated with glyphosphate. However seeds can remain viable for 10 years (at least) and hundreds will grow where a plant has been removed - so repeat visits over a number of years are essential. Bags of seed heads are removed and burnt.

North American skunk cabbage is also treated with glyphosphate.

Himalayan balsam can be effectively controlled by mechanical cutting - and the use of a remote control flail mower has proven effective - cutting up to 20,000 sq metres a day. Roots can be left as a stabiliser, as cutting below the first nodule kills the plant.

Volunteers are key to the programme, and are given training, with a small number trained up in the use of pesticides.

In order to improve the riverside habitat, and help to decrease invasive species return, treated areas are planted with trees to lead to the creation of riparian woodland.

The main focus of the control programme in 2017 will be tackling the large areas infested with Himalayan balsam, working with large volunteer work parties hand-pulling plants and staff using mechanical cutters.

### **3) River Restoration on the River Peffery**

Simon McKelvey, Cromarty Fisheries Trust

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Surveys of the River Peffery (which flows past Strathpeffer and Dingwall) showed that the upstream and river mouth habitats were not good for fish. Problems included non-native invasive species, canalisation and a small weir. There has also been a loss of riparian habitat, pollution from agricultural run off, and a decline in amenity value.

Work to improve the river habitat was carried out after discussion with SEPA. Scottish Water removed the weir.

In common with work on the River Dee, areas that have been cleared of invasive species have been planted with riparian woodland. Improved riparian edges provide shading, additional food and tree roots for trout to rest amongst.

In-stream structures have been used to encourage meanders within the constraints of canalisation. Methods include felling sycamores across the river and fastening them in place at the bank with steel rope. These cost a few hundred pounds per structure - the cost reduced by the use of volunteer labour.

The River Peffery is one of the areas being focussed on by the Highland Council flood team, which may bring further innovative management possibilities.

**Discussion** included:

- a question about glyphosphate alternatives. A list of these can be found on the SNH website.
- an offer from CNPA to team up with others wanting volunteer input. The volunteer co-ordinator is Mike Woolvin.

### **4) Hogweed control at Munloch and Auldearn**

Jonathan Willet

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Jonathan noted that giant hogweed, first introduced in 1828, had spread rapidly since 1962. Giant hogweed is widespread throughout most of Britain - but the north and west coasts of the Highlands remain largely free of it.

Jonathan outlined a previous Highland Council approach - which had been to ask land agent, Bowlts, to invite all landowners along the burn sides to contribute to the removal of giant hogweed. Landowners on both burn catchments had been happy to contribute, and a commercial sprayer had carried out the work, spraying in early spring.

Jonathan noted that the loss of the Highland Council biodiversity officers had meant that the contract had not been re-issued in 2016, and that in spite of clearance on the Littlemill Burn, Munlochry from 2010 – 2016 seedlings were visible along the burn side.

The Highland Council approach had proven to be effective and cheap to run, but a long term approach is required to achieve a sustained reduction in giant hogweed.

## **5) Blackface sheep and giant hogweed control on the River Deveron**

René van der Wal, University of Aberdeen

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A five hectare study area on the River Deveron was selected in 2009, having been identified as 'the most severely infested hogweed site in the entire Deveron catchment'. Giant hogweed was very dense in some areas of the site, and smothering young broadleaved trees. By 2011 it was found that chemical control was not effective because of the size of the site. Mechanical control was attempted in 2012, but the hogweed was too dense for this approach. In 2013 sheep grazing was introduced to the site - with up to 5 sheep per hectare.

Sheep have proven to be very effective in clearing giant hogweed, but nettle and thistle have moved into the newly bare areas.

Initially sheep density was too high and trees had been debarked. Density is now reduced. Sheep have been grazed on the site from March to November each year. They seem to favour giant hogweed seedlings and can graze large ones without ill-effect; no plants have gone to seed since 2013. By September 2016 (4th year of sheep grazing) there were very few seedlings at the site.

Subsequent cessation of spring grazing in 2017 revealed there remained an active seedbank as thousands of giant hogweed seedlings were recorded. Sheep were therefore put back onto the site in May to eat these seedlings.

Testing of the viability of seeds left buried in bags for two years suggests that only 8% of seeds remain viable. However, each giant hogweed plant may produce 50,000 seeds, meaning that around 400 seeds per plant remain viable in the soil.

## **6) Hogweed control by the Nairn, Findhorn and Lossie Fisheries Trust**

Bob Laughton, Nairn, Findhorn and Lossie Fisheries Trust

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Invasive species control along these rivers has been taking place for many years, but in 2012 the rivers were surveyed and work coordinated to maximise benefit.

Using a drone has proven to be useful in mapping invasive species along the river side. The use of GPS means that flight coordinates can be used to map the same route in future years.

Giant hogweed: digging up plants can be effective in small/ low density stands. In dense stands, three or four years of spraying may reduce the density to a level where digging can be used. Long-handled saws can be used to remove the flowers, keeping the user at a safe distance from the plant. Heads can be burnt to reduce the likelihood of seeds developing, and if seeds have developed, to reduce seed viability. If roots are dug out these can either be burnt, or left upside down to dry out.

Bob highlighted the value of carrying out some work in areas that have a high public profile, as it demonstrates the potential to reduce plant density and encourages land owners to participate. As a result of this approach the fisheries trust has begun to see an increase in estate involvement.

The fisheries trust uses a mix of paid contractors and volunteers. This enables paid workers to tackle the most difficult stands, leaving volunteers to work in more rewarding areas and areas with a lower density of invasive plants.

## **7) Managing Beech within the Lower Findhorn Gorge SSSI/SAC**

Ben Clinch, Moray Estates

Ben highlighted the work by Moray Estates to tackle the removal of beech trees on the lower River Findhorn gorge. This is an SSSI for its bryophyte species and it has been known since the mid-1980s that the beech trees needed to be removed.

The steep sides of the gorge present a challenge and so SNH agreed to provide the estate with £60K spread over three years to trial different removal methods.

Two staff members have been trained in rope access methods, and a supervisor (trained to a higher level) has been contracted in. High tensile ropes have been suspended over the gorge to allow trees to be winched out of the gorge and over the public footpath above.

Some trees have been injected with herbicide-laden 'eco-plugs'. The plugs have been used at half the recommended dose, and so far seem effective. There is concern about the amount of plastic used in injecting 100s of plugs into a tree, and also of the potential for standing dead timber to become a future hazard to workers.

'Buckthorn bags' to cover cut stumps and prevent re-growth, will be trialled in the future.

The results of these methods will be assessed in order to try and understand which is most effective in different circumstances.

Seedlings from oak acorns collected on the estate are planted where the beech has been removed.