



**South Lanarkshire Biodiversity Partnership
Invasive Species Working Group
Position Statement
August 2011**

1. Introduction

The threat posed to biodiversity by invasive non-native species (INNS) is being increasingly recognised. In Scotland, legislation which governs INNS has recently been updated and a Code of Practice issued. The South Lanarkshire Biodiversity Strategy also recognises INNS as an important threat to native biodiversity and a sub-group of the South Lanarkshire Biodiversity Partnership has been established to examine the issue in more detail.

The Biodiversity Strategy prioritises 9 species for action:

Signal crayfish	<i>Pacifastacus leniusculus</i>	freshwater/ wetland
American mink	<i>Mustela vison</i>	freshwater/ wetland
Giant hogweed	<i>Heracleum mantegazzianum</i>	freshwater/ wetland
Himalayan balsam	<i>Impatiens glandulifera</i>	freshwater/ wetland
Japanese knotweed	<i>Fallopia japonica</i>	freshwater/ wetland & lowland
New Zealand flatworm	<i>Arthurdendyus triangulatus</i>	lowland
Grey squirrel	<i>Sciurus carolinensis</i>	woodland
Rhododendron	<i>Rhododendron ponticum</i>	woodland

Although Bracken (*Pteridium aquilinum*) is native to the UK and cannot be classified as INNS, it has been included on the list of priority invasive species due to its invasive characteristics in the landscape.

This report will set out current progress being made towards Biodiversity Strategy targets and will identify areas for future action, to be progressed by the Invasive Species Group (ISG).

In addition to the species specific targets outline below, an early priority for the ISG will be to establish a database of invasive species records for South Lanarkshire. It is hoped that this database will become the central point of focus for invasive species records and all partners of the South Lanarkshire Biodiversity Partnership will be encouraged to submit records. This will facilitate a coordinated approach to the management and control of invasive in the region. This database will be expanded to capture records from surrounding local authority areas so that invasive species work can take place at the regional scale.

2. Policy context

A Scottish working group meets regularly to ensure effective policy co-ordination and practical implementation in Scotland. Invasive species are covered a number of pieces of legislation and policy. A summary of the more significant legislation/ policies is presented below.

Legislation

Wildlife and Countryside Act 1981: This Act is the principal domestic legislation concerning non-native species. It is an offence under Section 14 and 14A of this Act to:

- Release or allow to escape into the wild any animal which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state or a hybrid of such an animal
- Release or allow to escape from captivity any animal included in the list in Part I of Schedule 9 to the 1981 Act, or a hybrid of such an animal
- Plant or otherwise cause to grow in the wild any plant which is included in the list in Part II of that Schedule, or a hybrid of such a plant
- To sell, offer or expose for sale, possess for the purpose of sale etc, any species specified in an order made by the Scottish Ministers

Penalties were increased by the Nature Conservation (Scotland) Act 2004 to include imprisonment for up to twelve months and/or a fine not exceeding £40,000. On conviction on indictment, the penalties are an "unlimited" fine and/or a two year prison sentence.

The Wildlife and Natural Environment (Scotland) Act 2011 amends and updates the 1981 Act and makes new offences banning the release of an animal, or the growing of a plant, outwith its native range, described as a

“general no-release approach”. A new system of Species Control Orders (SCOs), enables responsible bodies to set out measures required to be taken to control or eradicate INNS.

European Legislation: Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive), Article 22 & Directive on the Conservation of Wild Birds (EC Birds Directive) Article 11. These Directives require member states to ensure that deliberate introduction of non-native species into the wild is regulated (and if necessary prohibited) so as not to prejudice natural habitats or wild native flora and fauna.

Wildlife Trade Regulations: As well as implementing the Convention on International Trade in Endangered Species (CITES) within the EU, these Regulations also contain provisions (Article 4(6)(d)) to regulate the import and sale of species that present an ecological threat to native species.

International Conventions

The Convention on Biological Diversity (CBD): This states that under Article 8(h), each Contracting Party shall "prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species".

The Bern Convention: The Convention on the Conservation of European Wildlife and Natural Habitats Article 11(2)(b) states that each Contracting Party shall undertake to "strictly control the introduction of non-native species".

Policy

The Invasive Non-native Species Framework Strategy for Great Britain was launched in May 2008. Its overarching aim is to minimise the risk posed and reduce the negative impacts caused by invasive non-native species in Great Britain. It is intended to provide a strategic framework within which the actions of government departments, their related bodies and key stakeholders can be better coordinated.

The Scottish Natural Heritage (SNH) Species Action Framework (January, 2007) sets out a framework for the management of species in Scotland and provides a list of species for which clear, targeted action over the next five years could make the most difference to biodiversity.

The Scottish Government has published a draft of the Code of Practice on Non-Native and Invasive Non-Native Species. This Code provides practical guidance in respect of the release, keeping, sale and notification offences contained in the Wildlife and Natural Environment (Scotland) Act. It also contains information on species control agreements and species control orders, and sets out a framework of responsibilities agreed by the key government agencies dealing with invasive non-native species.

3. The priority species

3.1 Signal crayfish

Background

The North American signal crayfish (*Pacifastacus leniusculus*) is a lobster-like invertebrate which is found in freshwater habitats. The species was first found in Scotland in 1995 and is now present in the Upper Clyde. Known negative impacts caused by signal crayfish include alterations to aquatic invertebrate communities and impacts upon fish populations as a result of egg predation. Signal crayfish also burrow into river banks, undermining their structure. Potential impacts of this behaviour upon riparian species (e.g. water vole), are currently unknown. In running waters, extensive burrows may destabilize the riparian zone, leading to increased rates of bank erosion, the shallowing of streams and the compaction of salmonid and lamprey spawning grounds. In extreme cases, extensive damage to riparian tree roots have been observed.

Potential data sources

- CRF Crayfish database
- Angling associations
- SEPA
- SNH

Completed Projects

- Clyde/ Annan crayfish barrier. Annan District Salmon Fisheries Board, Clyde River Foundation, Scottish Natural Heritage and South Lanarkshire Council. Completed June 2011.

Current/ Ongoing Projects

- Angling association surveillance and control programmes.
- CRF Biosecurity Plan.
- CRF Operational Research Programme (includes monitoring the effectiveness of the Clyde/Annan barrier).

Future action- definite

- CRF will produce an updated distribution map in December annually.

Future action- recommended

Periodic review of control/containment methods to determine whether they can be applied to the Clyde system.

SLBP Position

The ISG will continue to monitor ongoing work and contribute records as appropriate. We will request a copy of the distribution maps produced annually by CRF, for inclusion in the Biodiversity Strategy annual report. Partners of the SLBP will assist in eradication/ control programmes when feasible.

3.2 American mink

Background

American mink (*Mustela vison*) were first introduced into Scotland in the 1930s, as part of the fur industry. Deliberate releases and accidental escapes have led to the species spreading throughout the country, particularly in riparian environments. Mink pose a significant threat to many native species, particularly ground nesting birds and water voles (*Arvicola terrestris/ Arvicola amphibius*). Mink may also account for a large proportion of salmonid mortality in some river systems.

Potential data sources

- RAFTS
- SEPA

Completed Projects

- None.

Current/ Ongoing Projects

- None.

Future action- definite

- Monitor RAFTS mink programme in the north and east of Scotland, and engage when appropriate.

Future action- recommended

- Collate existing records of mink distribution.
- Conduct survey to confirm distribution within South Lanarkshire.
- Consider possible control programme if appropriate.
- Mink survey programme in the upper Clyde catchment.

SLBP Position

The SLBP has no current plans to actively survey for or control mink. RAFTS are currently running a trial eradication programme in North East Scotland. If this project is successful, there may be scope for a wider roll out across Scotland. SLBP will keep a watching brief on this programme and may consider a mink distribution survey programme if funding and resources become available. In the interim, any *ad hoc* sightings reported to the SLBP will be recorded in the invasive species database.

There may be scope for a mink survey programme in the upper Clyde catchment, in conjunction with SUP and landowners.

3.3 Giant Hogweed

Background

Giant hogweed (*Heracleum mantegazzianum*), is a native of the Caucasus mountains and was introduced to Britain in 1893 as an ornamental plant. It escaped from gardens and now colonises many areas of wasteland and riverbanks. Each plant can grow up to 5m in height and produces up to 50 000 seeds that are easily dispersed by water, so the plant spreads rapidly along watercourses. It forms dense colonies that suppress the growth of native plants and grasses. It also poses a threat to human health, causing burns and prolonged photosensitivity where sap comes into contact with skin.

Potential data sources

- SLC
- Road network managers
- Rail network
- CRF
- SEPA
- BTCV

Completed Projects

- SLC invasive plants leaflet survey.

Current/ Ongoing Projects

- CRF Invasive species surveying and mapping. The Rotten Calder Water and the River Clyde between Motherwell Bridge and Crossford Bridge will be completed in 2011. The other sub-catchments will be completed individually as funding allows.

Future action- definite

- Data collection and mapping – through training of local groups, online recording programmes and work with BTCV volunteers.

Future action- recommended

- Secure funding to extend survey away from riparian areas.
- Liaise with road and rail network to gauge distribution and control efforts along transport network.
- Liaise with SLC roads and transportation and planning to gauge distribution and control effort.

SLBP Position

The SLBP view invasive species in riparian areas as a priority. Work is currently underway to secure funding to complete a distribution survey along riparian corridors and examine opportunities for a systematic eradication programme. Any control will need to be carried out in a strategic manner, to ensure that cleared areas are not re-colonised from untreated upstream populations.

3.4 Himalayan Balsam

Background

Himalayan balsam (Indian balsam) (*Impatiens glandulifera*) was introduced into Britain in 1839. It is often described as the tallest annual plant in Britain, growing up to 3m tall. It forms dense stands and produces large quantities of seed, which can explode from pods and be scattered up to 7m away from the parent plant. Seeds

can also be transported in water, causing Himalayan balsam to form dense stands along the length of rivers. These stands suppress the growth of native grasses and other flora. In autumn the plants die back, leaving the banks bare of vegetation, and therefore liable to erosion.

Giant hogweed, Himalayan balsam and Japanese knotweed are often dealt with together, given their similar habitat requirements. Where species specific work is required, this will be identified under the relevant heading. Otherwise, the actions listed for giant hogweed are relevant to the three species.

3.5 Japanese Knotweed

Background

This perennial plant was first introduced to Britain in 1852 from Japan. In the UK only female plants are present, meaning that Japanese knotweed (*Fallopia japonica*) does not set seed but instead spreads rapidly through vegetative means, sending rhizomes underground at least 7m away from the parent plant. This results in dense clumps of the plant forming, causing damage to soil and even structures, as well as shading out native vegetation. The plant has a high regeneration capacity, with very small pieces of rhizome being capable of growing into a new plant.

Potential data sources

- SLC
- CRF
- SWT
- SNH
- Plantlife

Giant hogweed, Himalayan balsam and Japanese knotweed are often dealt with together, given their similar habitat requirements. Where species specific work is required, this will be identified under the relevant heading. Otherwise, the actions listed for Giant hogweed are relevant to the three species.

Future action- recommended

- Contact NHS Scotland re knotweed in hospital grounds.

3.6 New Zealand flatworm

Background

The New Zealand flatworm (*Arthurdendyus triangulatus*) is a predatory terrestrial worm, first found in Scotland in the 1950s. It predated native earthworms and can reduce their numbers to “below detectable levels”. (<https://secure.fera.defra.gov.uk/nonnativespecies/factsheet/factsheet.cfm?speciesId=367>). There is also a correlation between the presence of flatworms and sharp declines in mole populations.

Potential data sources

- NBN Gateway
- Buglife

Completed Projects

- None known.

Current/ Ongoing Projects

- None.

Future action- definite

- SLC householder survey.
- SLBP awareness leaflet for garden centres.

Future action- recommended

- None.

SLBP Position

The New Zealand Flatworm is recognised as a priority in the Biodiversity Strategy, however its distribution and extent is currently unknown in South Lanarkshire. A survey of households with gardens and garden centres should help us to gain an understanding of the potential scale of the issue in the area. Further decisions can then be taken as to how best to proceed.

3.7 Grey squirrel

Background

The Grey squirrel (*Sciurus carolinensis*) was introduced into the UK in 1826 and repeatedly after this date. It has spread across most of the UK, including the central belt of Scotland. The grey squirrel is the major cause of the decline of the native Red squirrel (*Sciurus vulgaris*) and the species has also been implicated in the decline of songbirds.

Potential data sources

- SNH
- FCS
- RSSS
- Windfarms/ Environmental statements for developments

Completed Projects

- A survey of woodlands identified as Priority Woodlands for Red squirrels to establish Red squirrel presence/ absence. SLC Ranger Service 2009.

Current/ Ongoing Projects

- Red squirrels in South Scotland- monitoring, control and education.

Future action- definite

- None.

Future action- recommended

- None.

SLBP Position

As the grey squirrel is already well established in South Lanarkshire, it is unlikely that eradication is feasible. The Partnership will maintain a record of both red and grey squirrels as sightings are reported. Records will also be forwarded to the NBN gateway and Red Squirrels in South Scotland. The SLBP will support projects such as Red Squirrels in South Scotland which encourage woodland managers to manage their land in a red squirrel “friendly” manner. Grey control will be supported in areas where it is appropriate. Red squirrels do still occur in the south of the county but are under increasing pressure as a result of woodland clearance for development (Particularly windfarms). In these cases, the SLBP will provide advice and look to secure mitigation measures (off-site if necessary) to ensure that Red squirrels continue to inhabit South Lanarkshire. The SLBP will continue to remain up to date on Red squirrel conservation projects elsewhere in Scotland and the North of England and will be willing to provide support as required to these projects.

3.8 *Rhododendron ponticum* & hybrids

Background

Rhododendron ponticum is an evergreen shrub, native to the Iberian Peninsula. Spain and Portugal are likely to be the main sources of the UK population, with records first occurring in the 1890s. It has become widespread after being planted in the grounds of estate houses in the Victorian period. It is able to grow and spread rapidly, by both seed and through suckers, and is tolerant of shade which allows it to colonise woodland habitats, in addition to open ground and bogs/ mires. Once established, *Rhododendron* casts dense shade which other flora cannot tolerate. It is also toxic which, combined with the formation of a deep litter layer, ensures that other plants cannot compete with it.

Potential data sources

- FCS
- NTS
- SNH

Completed Projects

- None known. Probable control work at a local scale (e.g. SSSIs, estates).

Current/ Ongoing Projects

- Some small scale eradication on SLC land
- Control work at the Milton Lockheart Estate, Clyde Valley

Future action- definite

- None.

Future action- recommended

- Map current distribution of *Rhododendron ponticum*.

SLBP Position

We recognise the importance of *Rhododendron ponticum* in historical estate management, however there is a need to map the distribution of plants not under formal management. Eradication or control in areas where *Rhododendron ponticum* is not suitable, should be undertaken and advice/support given to those managers who retain populations of the plant for heritage/tourism reasons.

SLBP partnership organisations who own land where *Rhododendron ponticum* is present should consider mapping and control as a priority. *Grant providing organisations should promote funding options for control.*

3.9 Bracken

Background

Although bracken (*Pteridium aquilinum*) is native to woodland in Scotland, it has been included in this document as a priority for action given its invasive nature in some habitats. Following the withdrawal of traditional management from large areas of open countryside, bracken has become highly invasive, and now covers 4% of the UK.

If confined to small areas in a mosaic of plant communities, bracken provides cover to a few ground-nesting birds and reptiles. However, bracken can form dense stands, excluding other plants (and their associated fauna) by shading them out. It produces carcinogenic spores, and toxins which are a potential threat to livestock. The rapid spread of bracken over moors and hillsides where people go walking is also linked to an increase in the incidence of human cases of Lyme disease and bracken can therefore pose a significant public health risk.

Potential data sources

- SGRPID
- SUP
- Moorland Forum
- Plantlife
- FCS map bracken on areas to be planted, prior to control pre-planting. There are no records in South Lanarkshire.

Completed Projects

- None known. Probable bracken control on farms/ estates/ developments (e.g. windfarms).

Current/ Ongoing Projects

- SRDP funding packages for bracken control/ eradication and/or production of bracken management plans.

Future action- definite

- None.

Future action- recommended

- None.

SLBP Position

Bracken is largely an issue for landowners and it is difficult for the SLBP to take any action directly. We will continue to support measures under the SRDP and will provide guidance as required. Landowning partners of the SLBP will be encouraged to control bracken, where it is becoming a problem.

3.10 General actions

- The SLBP and its partners will assist in eradication/ control programmes where feasible.
- All SLBP partners will provide records to the South Lanarkshire invasive species database.
- Where necessary, the ISG will seek funding to commission surveys or other work to contribute towards the monitoring and control of invasive species in South Lanarkshire.
- Encourage developers to submit records from commissioned ecological surveys to the NBN/ South Lanarkshire INNS database.

4. Communication

Clear communication about the threats posed by INNS is essential in order to generate awareness and prompt action. The Invasive Species sub- group of the SLBP will work closely with the People and Communication group to generate communication materials as required. Tools such as press releases, links to online guidance and websites, postcards, leaflets and social media are likely to be utilised in future publicity campaigns. Where appropriate, the SLBP will actively promote guidance and strategy documents which are issued by the Scottish Government and/ or national agencies (for example, the forthcoming Invasive Species Code of Practice).

5. Future Action

The following actions are currently outwith the scope of the invasive species group but are considered to be of importance for future development:

- Web reporting & interactive mapping.
- Expansion of surveys away from riparian corridors.
- Systematic, large scale control programmes.
- Build links with neighbouring areas to ensure a coordinated landscape scale approach to monitoring and control.
- Develop training programmes for a variety of target audiences (e.g. public, volunteers, developers, planners).