

# INNS AWARENESS RAISING

# Cromarty Firth Biosecurity Plan

## Cromarty Firth District Bio-Security Plan

2010 - 2015

Cromarty  
Firth  
Fisheries



Prepared by

The Cromarty Firth Fishery Trust

2010

- ▣ Produced as one of 20 Biosecurity Plans through RAFTS network
- ▣ Links to Cromarty Firth Fishery Management Plan and WFD delivery

# Objectives of Biosecurity Plan

- ▣ 1) Prevent the introduction and spread of INNS
- ▣ 2) Establish a framework for detection and surveillance of INNS
- ▣ 3) Develop control and eradication programmes for INNS

# Control and eradication



# Prevention, detection and surveillance

- ▣ Most important part of biosecurity planning
- ▣ Awareness raising amongst the general public and key users of the water environment is essential

# Signage (Gyrodactylus)

## Cromarty Firth Fishery Board

GYRODACTYLUS  
SALARIS

**KEEP  
FISH  
DISEASE  
OUT**



Anglers and canoeists. If you and any of your tackle or equipment have been used abroad in the last 7 days, you must disinfect that equipment before entering this river. If you require advice on this, please:

Call the Cromarty Firth Fishery Board on  
01997 433404

Call ASFB or RAFTS on 0131 226 4955

or visit

<http://www.fishscotland.co.uk/pages/gyrodactylus-salaris.pdf>

To find out what to do to protect our river from disease and how to disinfect your equipment.



# Signage (Check Clean Dry)



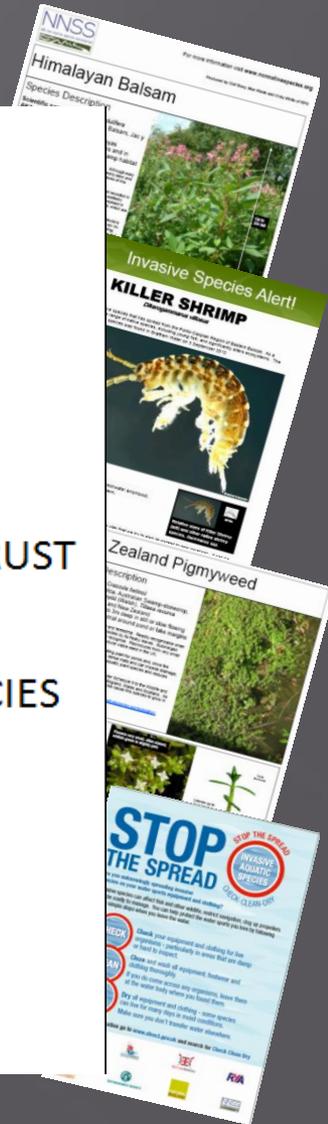
# Awareness Raising Packs

- ▣ Anglers Pack
- ▣ Garden Centre Pack



CROMARTY FIRTH FISHERY TRUST

INVASIVE NON NATIVE SPECIES  
INFORMATION PACK



# Anglers Pack

Angling owners

Ghillies

Angling club

Website

# High priority species already present

Himalayan balsam      *Impatiens glandulifera*

Japanese knotweed      *Fallopia japonica*

Giant hogweed      *Heracleum mantegazzianum*

Rhododendron      *Rhododendron ponticum*

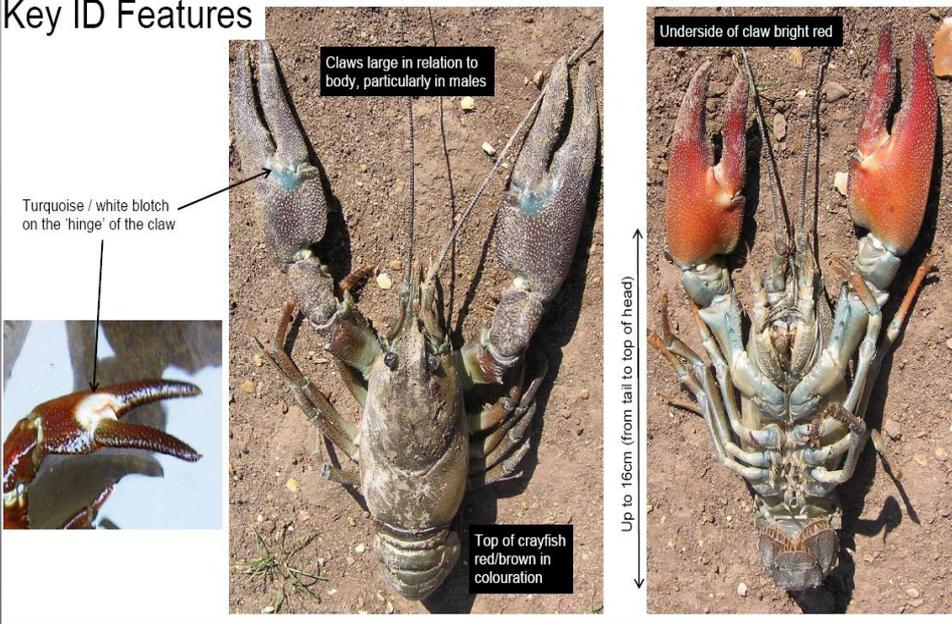
American skunk cabbage      *Lyschiston americanus*

American Mink      *Mustela vison*



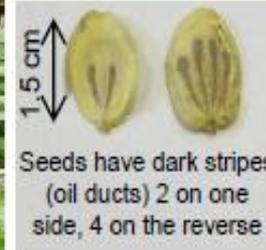
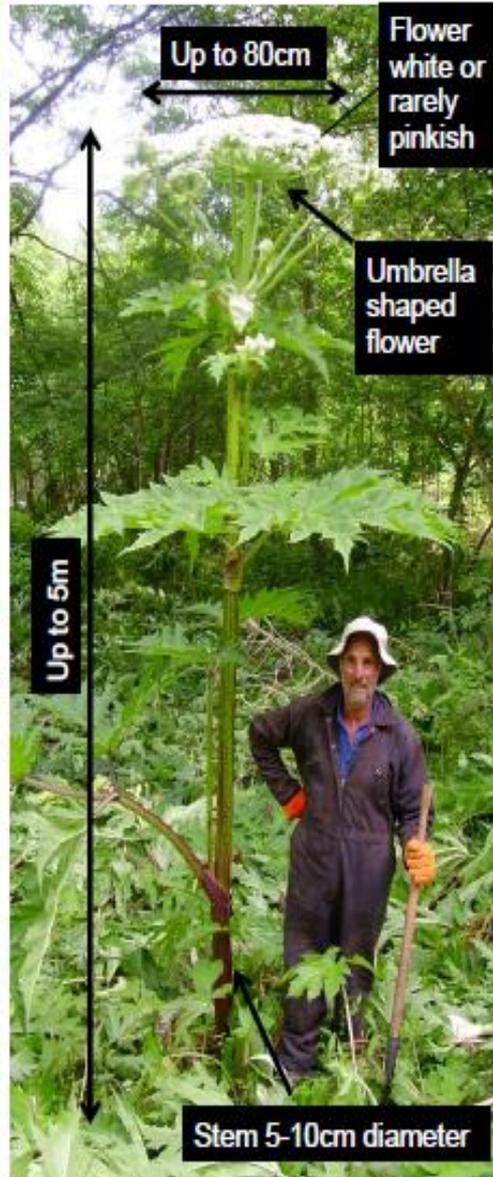
# High risks of introduction

## Key ID Features



# Giant Hogweed *Heracleum*

## Key ID Features

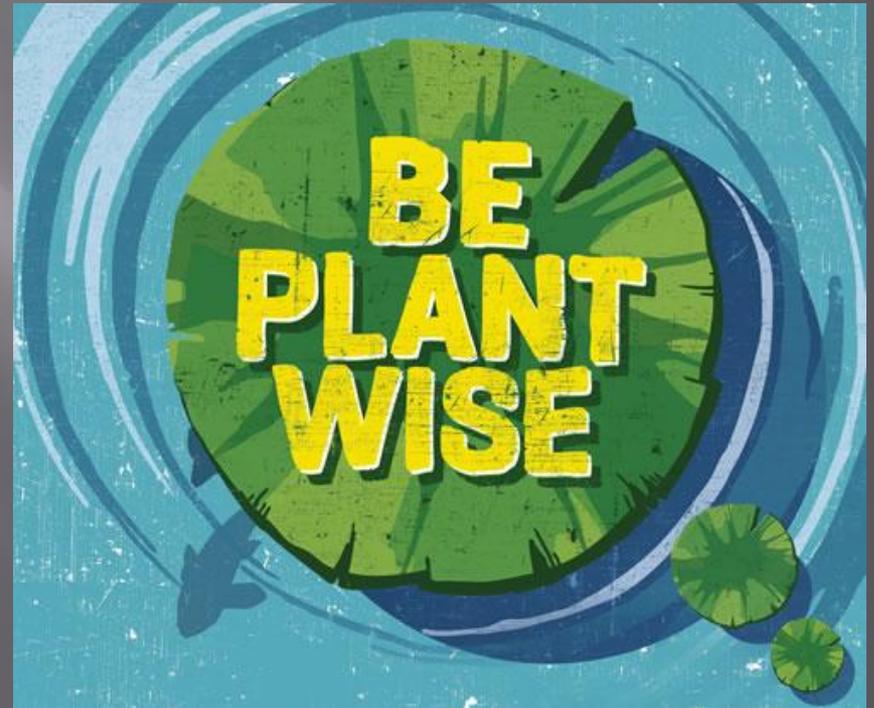


# What anglers can do

- ▣ Display posters leaflets and awareness packs
- ▣ Report sightings of mink
- ▣ Report sightings of INN plant species
- ▣ Adhere to biosecurity guidelines provided

# Garden Centres

- ▣ Know what you grow
- ▣ Stop the spread
- ▣ Compost with care



# Detailed species information



www.nonnativespecies.org

Produced by Max Wade, Vicky Ames and Kelly McKee of RPS

## New Zealand Flatworm

### Species Description

**Scientific name:** *Arthurdendyus triangulatus*  
**AKA:** *Artioposthia triangulata*  
**Native to:** New Zealand  
**Habitat:** Gardens, nurseries, garden centres, parks, pasture and on wasteland

This flatworm is very distinctive with a dark, purplish-brown upper surface with a narrow, pale buff spotted edge and pale buff underside. Many tiny eyes. Pointed at both ends, and ribbon-flat. A mature flatworm at rest is about 1 cm wide and 6 cm long but when extended can be 20 cm long and proportionally narrower. When resting, it is coiled and covered in mucus.

It probably arrived in the UK during the 1960s, with specimen plants sent from New Zealand to a botanic garden. It was only found occasionally for many years, but by the early 1990s there were repeated findings in Scotland, Northern Ireland and northern England.

Native to New Zealand, the flatworm is found in shady, wooded areas. Open, sunny pasture land is too hot and dry with temperatures over 20°C quickly lethal to it.

New Zealand flatworms prey on earthworms, posing a potential threat to native earthworm populations. Further spread could have an impact on wildlife species dependent on earthworms (e.g. Badgers, Moles) and could have a localised deleterious effect on soil structure.

For details of legislation go to [www.nonnativespecies.com/legislation](http://www.nonnativespecies.com/legislation).



### Key ID Features



www.nonnativespecies.org

Produced by Alison Jukes, Max Wade, Vicky Ames and Kelly McKee of RPS

## Canadian and Nuttall's Waterweeds

### Species Description

**Scientific name:** *Elodea* species  
**AKA:** Chwyn dŵr (Welsh)  
**Native to:** North America  
**Habitat:** Still or slow-flowing, shallow or deep water

There are two non-native species of Waterweed *Elodea* species in the UK. Canadian waterweed *Elodea canadensis* and Nuttall's waterweed *Elodea nuttallii*. Both are aquatic, submerged (apart from tiny white flowers borne on very long thread-like stalks just above the water surface) growing up to 3 m in length, perennial and only reproduce vegetatively in the UK as all plants are female.

Canadian waterweed, first recorded in Ireland in 1836 and in Britain in 1842, has subsequently spread rapidly and is now found commonly. It has disappeared from some areas, often being replaced by Nuttall's waterweed. Nuttall's waterweed is found in more nutrient-rich water than Canadian waterweed. First recorded as naturalised in Britain in 1956, it has since spread rapidly but is less common than Canadian waterweed in northern England, Scotland and Ireland.

It is difficult to distinguish between these two species. Dense growth of these waterweeds in slow flowing rivers, drainage channels and canals can impede flow and exacerbate flooding. Replace native aquatic plant species and reduce biodiversity in lakes and ponds and interfere with recreational activities such as angling and boating.

*Elodea* species are listed under Schedule 9 to the Wildlife and Countryside Act 1981 with respect to England and Wales. As such, it is an offence to plant or otherwise allow these species to grow in the wild.

For details of legislation go to [www.nonnativespecies.com/sensitio](http://www.nonnativespecies.com/sensitio).



### Key ID Features

Flowers are small and inconspicuous and petals white or white tinged with red and borne on end of very long fine stalk.



- ▣ Pond Alert Campaign
- ▣ Guide to INN plants and the law
- ▣ High priority potential introductions
- ▣ INN plants to avoid
- ▣ Further information and links

# Developing volunteer networks



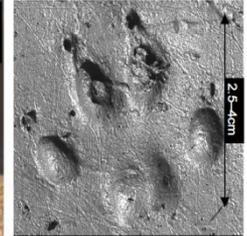
# Mink Project



## Key ID Features



Usually has white patches on chin and throat (small amounts of white fur may be present on the upper lip)



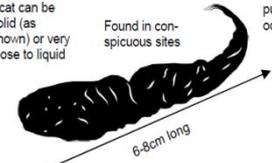
Tracks may form paths leading to water, occasional signs of tail dragging in mud



Scat can be solid (as shown) or very loose to liquid

Found in conspicuous sites

Strong pungent odour



Usually contains fur, pieces of bone and feather

Sausage-like, but twisted and drawn out to a point



# Dingwall BioBlitz



# New public web based reporting



**RAFTS** RAFTS Invasive Species Site Record  
INVASIVE SPECIES & BIODIVERSITY PROGRAMME

Welcome to the reporting page of the Rivers and Fisheries Trusts of Scotland Biodiversity and Invasive Species Programme. All present the reporting page is only designed to collect data within the boundaries of the areas of operation of the Argyll, Deeside, Gairn Rivers and Clacknish RFTs, Forth Fisheries Trust, Forth and Tweed Rivers Trust and Tweed Fisheries Trust. The boundaries of these areas are shown in yellow on the map below.

### Report Your Invasive Species Sighting In THREE Easy Steps

1. Register
2. Plot
3. Describe

Register with us: Report a Sighting now | Plot your sighting on our map: Report a Sighting now | Describe your sighting: Report a Sighting now

Where do you want to go?  
Destination Search:

Map Layers Key:

- Candidate Sites
- Acacia (Quercus) Treatment
- Blueberry Treatment
- Chestnut Sites being monitored



Call us on Invasive Species site pages to help, if needed.

#### Recent Sightings

- 22 *Salix* spp.
- 4 *Azorella* ssp. *azorella* (Chesula) (Native)
- 2 *Azorella* ssp. *azorella* (Tweed Native)
- 4 *Azorella* ssp. *azorella* (Tweed Native)
- 13 *Black Birch* (*Betula pubescens*)

#### Map Tips

- Click-and-drag to zoom in
- Drag to pan
- Hold down the shift key and click to zoom to a particular region
- If you have a wheel mouse, hold to the location and the map will zoom in. Then click the wheel to zoom in or out keeping the same (or) location at the same point on the map.

#### Common Invasive Non Native Species



Plant: Ragwort

This is an important and exciting project aiming to collect and if possible eradicate harmful invasive plant species from the few catchments in Ireland, Northern Ireland and Scotland. These plant species threaten native biodiversity, damage both recreation and economic interests and can even pose a risk to human health. It is hoped that the CIRB project will become a baseline for future control or eradication throughout the UK and Ireland.

The development of CIRB was funded by Scottish Natural Heritage, the Rivers Fisheries Trust, Clacknish RFT, Forth Fisheries Trust and the European Union's European Regional Development Fund through the Scotland's Growth and Prosperity Fund and the Scottish Government's Biodiversity and Nature Programme.



**Disclaimer:**  
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RAFTS may not give the accuracy of data and our users reported in a listing posted by the Rivers Trusts. All candidate sites shown in public listed have been visited by members of the public and are generated with their best reporting. All locations are subject to change.  
If you would like any further details please contact the Invasive Species team on 01753 474444



# Publicise the benefits

