

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)



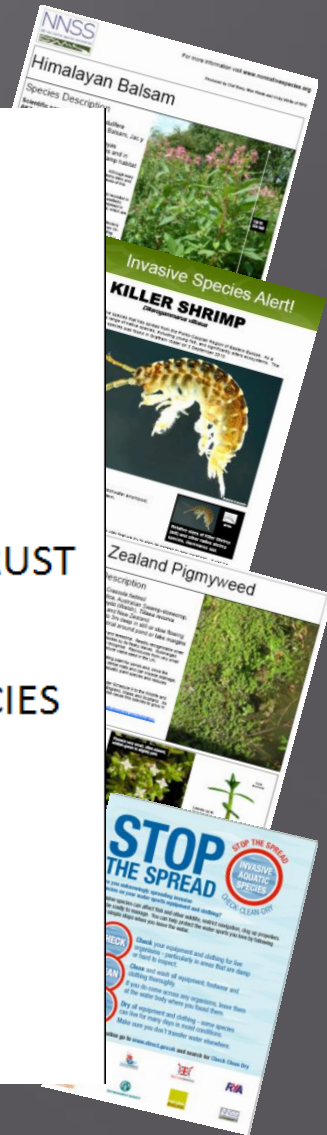
Awareness Raising Packs

- ▣ 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*

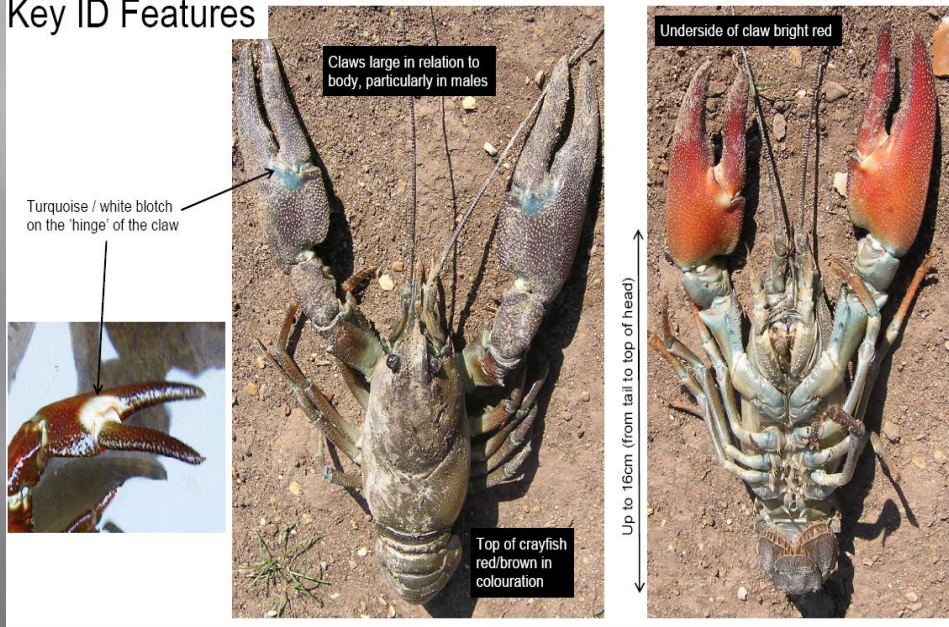
American skunk cabbage *Lyschiston americanus*

American Mink *Mustela vison*



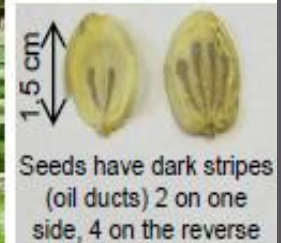
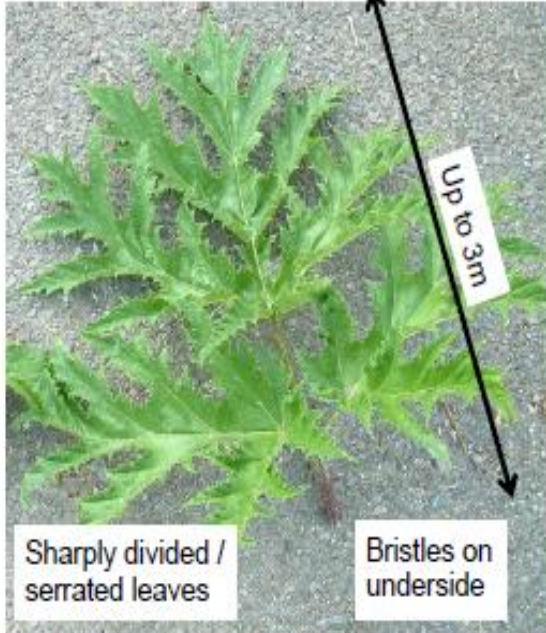
High risks of introduction

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: *Arctiosthia 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.org/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 1942, 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.

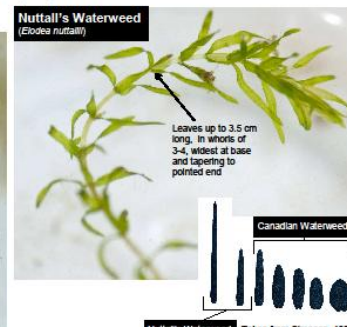
Elodea species are listed under Schedule 9 to the Wildlife and Countryside Act 1981 with respect to England and Wales. As such, it is an offence to plant or otherwise allow these species to grow in the wild.

For details of legislation go to www.nonnativespecies.org/legislation.



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.



Nuttall's Waterweed Taken from Simpson, 1986

- ▣ 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



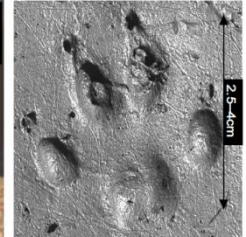
Mink Project



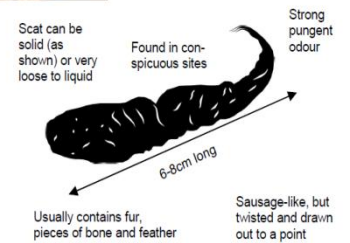
Key ID Features



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



Dingwall BioBlitz



RAFTS
Rivers and Air Transport Trust

Publicise the benefits

