

An introduction to Invasive Non-Native (Alien) Species









# Help!

# Our local wildlife is under threat from Alien invaders!





#### We need you to become Alien Detectives.....

Could you learn about alien species, what they are, where they come from and what they are doing here?

Great! Then you can help us tackle the aliens, spread the word and help protect our environment.





# What is an "Alien" or "Non-native" Species?



Alien, non-native and introduced can all mean the same thing...

- A non-native or alien species is a plant or animal that has been transported outside of its natural home range by humans - either accidentally or intentionally.
- A native species is one that has always grown or lived in a place (since the last Ice Age).
- Over 2,000 non-native (alien) species have been introduced into Britain from all over the world.







### **Examples of non-native, alien species**



Can you name any alien species present in Scotland?



These are just a few – there are lots more!





## **Invasive species**



What do you think an invasive species is?

The term invasive is reserved for the most aggressive species capable of damaging the environment when and where they establish.

Invasive species cause severe problems - they may cause harm or damage to;

- our wildlife and our environment
- our health or the way we live
- our economy (they cost us lots of money)









Invasive species can be either native or non-native, most of the ones that cause serious problems are non-native.





#### Invasive non-native species (INNS)



Invasive, non-native (alien) species are the most successful species in their new locations and those that cause the most severe problems.

They are often bigger, faster growing or more aggressive than our native species and may have no natural predators to control their numbers or limit their spread.

As a result, native species are often unable to compete with these alien invaders and so decline.







# How do the aliens get here?



All invasive non-native species were introduced into Britain by people either accidently or on purpose. How do you think this happens?

Travel and Trade







Hitchhikers that get a lift on a boat hull, in or on cargo, in deliveries or tourist luggage.

Ornamental Animals and Pets



Animals brought back to keep in estate parks and zoos or as pets - which later escape or are deliberately released.

Ornamental Plants 🔭 💥 🤴







Plants brought back by Victorian plant hunters for gardens - which later spread into the wild.

Commercial use; Food and Fur





Animals or plants brought here because they were useful.





### How are the aliens taking over?





Some plants produce huge numbers of seeds



These can float, fly and stick



Some plants have rhizomes (roots)



A tiny bit of rhizome can grown into a new plant!





How do you think

they get spread?

#### How are the aliens taking over?





Seeds

Drop into water and float downstream, or blow in the wind.

Plant fragments

Rhizome fragments



Attach to fishing gear, boats, waders and wellies.

Get caught in animal fur or on their paws.



Attach to shoe treads and bike tyres or to cars and trains.





#### What impacts are the aliens having?



Can you think of any problems that invasive non-native <u>plants</u> can cause for our <u>wildlife</u> and to the <u>environment</u>?



Invasive plants outcompete native flowers. They grow fast and take over, shading out native plants.



Invasive plants have big, showy, flowers which attract pollinators away from native flowers.



Invasive plants have weak root systems which leads to bank erosion and a risk of flooding.



Invasive plants change the habitat of the riverbank which affects the insects and animals that live there.





## What impacts are the aliens having?



Can you think of any problems that invasive non-native <u>animals</u> can cause for our <u>wildlife</u> and to the <u>environment</u>?



Predation.

American mink
prey on water voles
and ground nesting
birds, devastating
their populations.



Competition.
Ring-necked
parakeets compete
with native birds for
nest sites and for
food.



Carry disease.
Grey squirrels carry a virus which though it doesn't affect them is deadly to our native red squirrels.



Hybridisation.
Sika deer interbreed with native Red deer, causing a hybrid deer.





## What impacts are the aliens having?



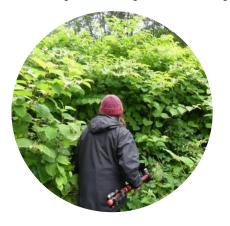
Invasive non-native species can also cause problems to our well-being and our way of life. Can you think of any ways they impact on us?



The sap of Giant hogweed causes severe skin burns and blisters.



Japanese knotweed can grow through cracks and damage property - costing a lot of money to remove.



Invasive plants can grow very large and can block footpaths for walking and access to rivers for fishing.



Invasive water plants block rivers and canals and prevent boats sailing on them.



Rabbits and deer cause damage to trees and agricultural crops.





#### Can we stop the aliens?



Yes! And as an alien detective you can help. What do you think we can do to rid Scotland of these alien invaders?



We can remove invasive plants.
Some can be pulled up, dug out or cut down.



Some invasive plants need to be sprayed with pesticide.



We can monitor for and trap invasive animals e.g. American mink and Grey squirrel.



We can practise good Biosecurity by cleaning our boots and gear when we've been out.



We can spread the word and tell other people about the problem and how they can help too.





#### What next?



#### Find out more!

Over on our website you'll find lots of activities, worksheets and games to help you discover more about some of the things mentioned in this introduction.

# www.invasivespecies.scot/alien-detectives



Discover more about aliens and the alien invasion.



Worksheets and activities to do in the classroom.



Games to play both indoors and outside.



Practical activities about aliens and exploring the river.



