

Take action now!

One Planet • One Health • One Team



- Learn more about invasive alien species that might already be in your neighbourhood
- Tell others about the importance of knowing more about invasive alien species
- Be careful not to spread invasive alien species by following biosecurity recommendations
- Find out about local projects on invasive alien species and ways in which you can report any observations that you make



We are Dr Kelly Martinou and Prof. Helen Roy, ecologists who study IAS. We would like to dedicate this leaflet to all our friends and colleagues who work on invasive alien species research and management. To find out how to become a citizen scientist visit alien-csi.eu or contact us: thethreemosquiteers@gmail.com



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The Three Mosquiteers learn about invasive alien species

Hi, I am Mo, and today we will find out about invasive alien species.

Hi, I'm Ski.

Meow

Hi, I am Do. You can help us by becoming a citizen scientist.

Chubby



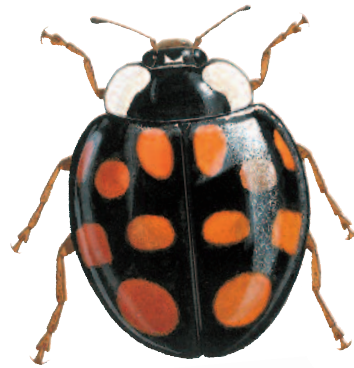
What are invasive alien species?

Species, such as plant and animals, that have been moved from one part of the world to another part of the world by humans, sometimes by accident and sometimes on purpose, are called **ALIEN SPECIES**.

Some of these alien species cause problems for other species or the environment or us and these are called **INVASIVE ALIEN SPECIES**. Here are some examples:



The **Harlequin ladybird** has been intentionally introduced from Asia to Europe and many other countries as a biocontrol agent in order to control agricultural pests.



Acacias trees have been introduced in wetland in order to dry mosquito breeding habitats.



Red swamp crayfish has been introduced as a source of food and as an ornamental animal but carries pathogens that kills native crayfish



The **Asian tiger mosquito** was introduced by mistake from South East Asia through international trade of used tyres for cars and lucky bamboo plants.



A queen **Asian hornet** arrived in France within some pottery that was imported for sale. This queen produced many more Asian hornets that have spread through France and into some neighbouring countries.

Not all alien species cause problems and some help us out such as some ladybirds that are quite fussy and only feed on a specific type of pest insect



Bermuda buttercup can become dominant, reducing native vegetation and crop germination.



Gambusia spp. fish were introduced to control mosquitoes but they compete for prey with native fish eg. *Aphanius* spp. and *Valencia hispanica*

Invasive alien species are one of the major causes of change to our natural world



Many invasive alien species have travelled around the world on ships



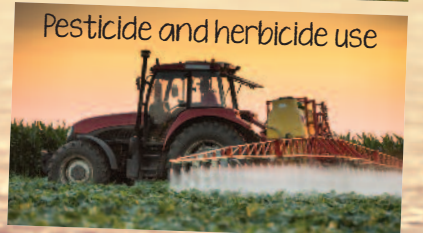
Habitat loss



Climatic change



Agricultural intensification



Pesticide and herbicide use



Varroa destructor mite on a honeybee pupa

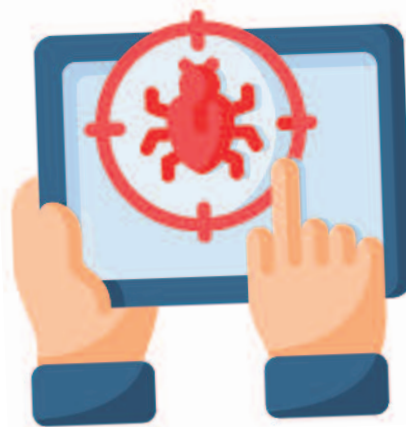


Invasive alien species

Together with all these threats invasive alien species can harm biodiversity and ecosystems

What can you do?

You can help too by joining a citizen science programme for invasive alien species (IAS) and help to monitor and stop their spread by reporting any IAS that you may encounter.



Citizen scientists make contributions to environmental and biodiversity research and monitoring, addressing real-life problems together with scientists.

Human travel and commerce have led to frequent introductions of exotic invasive species a threat to native ants and biodiversity

Biosecurity is really important

BIOSECURITY STATION
PLEASE DIP YOUR
FEET & NETS

Biosecurity are the actions carried out to minimise the risk of invasive alien species by preventing arrival and spread.

Stopping some invasive alien species arriving in a new region, or preventing their spread if they do arrive, is the most effective way to take action.

Such actions include making sure that there are no invasive alien species hitchhiking on your shoes or clothes or in your bags – for example seeds of alien species can stick to the mud in your shoes.

Find out how to become a citizen scientist by visiting alien-csi.eu

