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Mark Carwardine's AT A GLANCE...

ALIEN SPECIES

WHAT IS AN ALIEN SPECIES?

An alien species is any non-native plant, animal or other organism introduced into a place that was never part of its natural range. Sometimes known as invasive, introduced or exotic species, alien species are a major threat to wildlife and wild places around the world.

WHY ARE THEY SUCH A THREAT?

They have evolved separately from the native wildlife in their new homes, which are consequently ill-equipped to cope with the onslaught of a new predator or aggressive competitor, and the upshot is often devastation for local ecosystems.

WHAT ARE THE WORST EXAMPLES?

There are thousands of shocking examples, from Nile perch in Lake Victoria to cane toads in Australia. The problem is so severe in New Zealand, where rats, stoats, possums and other introduced predators kill 25 million native birds every year (many of them flightless) that the government recently announced a project to try to make the nation alien predator-free by 2050.

HAVE WE ESCAPED ALIEN SPECIES IN THE UK?

Far from it. There are some 2,000 established alien species in the UK, including edible dormice, muntjac deer, ring-necked parakeets and yellow-tailed scorpions. Many are harmful. American mink,

for instance, are responsible for a collapse in our water vole population, while Japanese knotweed completely overwhelms other plants. A more recent concern is the harlequin ladybird, which has a voracious appetite not only for other ladybirds, but also the eggs of butterflies and moths.

HOW DO ALIEN SPECIES INVADE NEW PLACES?

Usually with the help of people, accidentally or intentionally. Stowaways on ships, disastrous attempts to control unwanted pests and escapes from captivity are all to blame. Alien species even hitch rides in the ballast tanks of ships – this is how Eastern European zebra mussels travelled to the Great Lakes of North America, where they are wreaking havoc among native fish populations and coastal communities.

ARE THE PROBLEMS ALL ECOLOGICAL?

No. Alien species can also have economic implications. Every year £1.7bn is spent trying to control them in Britain – and that doesn't include the direct economic losses caused by damage to infrastructure, goods and crops – while Australia faces an annual bill of £20m just to eliminate introduced fire ants.

WHAT IS BEING DONE TO TACKLE THE PROBLEM?

The ultimate aim is to remove or at least control



American mink were imported and farmed for their fur

harmful alien species, using anything from pesticides to trapping, and to prevent future invasions through education, research and legislation. The EU Regulation on Invasive Alien Species came into force on 1 January 2015, for example. But very often, alien species go unnoticed until it is too late.

SO IS IT HOPELESS?

Not necessarily. There are some impressive success stories. Rats have just been eradicated from South Georgia, in the South Atlantic, using poisoned bait scattered from helicopters. They had been eating birds' eggs and chicks, but five years and £7.5m later, the last rat has gone and birds are returning.

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MARK CARWARDINE is a frustrated and frank conservationist.

- Every month he demystifies some of the most important issues affecting the world's wildlife and assesses the organisations that protect it.

ARE THERE MORE NATURAL SOLUTIONS?

In some cases, yes. In Britain, five million grey squirrels do £10m worth of damage to native trees every year and have displaced most of our red squirrels. Their numbers recover within months of extensive culling. But native pine martens – which were largely eradicated by gamekeepers – could be the solution. Since greys were introduced from North America in 1876, they are not as adept as red squirrels at escaping these agile predators. It could be a rare chance for a native species to fight back.

- For more information on invaders see www.nonnativespecies.org