



Introduced rodents

Animal pests

The four rodent species found in New Zealand today are introduced pests. Rodents often live in close association with humans, where they damage crops and buildings, taint water supplies and pose a human health risk. At the same time, rodents can also survive well away from human settlements and have had devastating effects on our native flora and fauna.

Three of the four rodent species found in New Zealand were introduced from Europe: the Norway (or brown or water) rat, the ship (or common or black) rat and the house mouse. The kiore, or Pacific rat, was introduced by early Māori from Polynesia and is different from the other rodent species in that it has cultural and spiritual significance to some Māori. Kiore are described in more depth on a separate fact sheet.

Where do they live?

Norway rats, which arrived here in the late 1700s with early European explorers, mostly live in drains and sewers. They are good swimmers and can cross waterways up to 600 meters wide. Away from humans, populations of Norway rats are now mainly associated with wetland habitat such as rivers, streams, lakes, lagoons, swamps and estuaries.

Zealand today. Ship rats are particularly suited to forested areas, thanks to their excellent climbing ability. They are seldom seen because they are shy and nocturnal.

The European house mouse is widely distributed throughout the country in forests, sand dunes, pasture and tussock grasslands as high as 1300 metres above sea level.

Ship rat eating fantail chicks
D. Mudge

The ship rat, which arrived towards the end of the nineteenth century in the ships of early sealers and whalers, is the most widespread rat species in New





Norway rat R. Morris



House mouse R. Morris

Rodent facts

- Rodents generally have very high birth rates, which enables populations to grow rapidly. Norway rats are able to breed every two to three months and can produce litters of up to 8–12 offspring each time. You can see how numbers can increase so quickly! Mice litters tend to be smaller but more frequent, and therefore mice can increase even more rapidly than rats.
- Their propensity to multiply combined with their ability to adapt to a wide range of habitats has enabled rodents to become the most widely distributed mammals in the world apart from humans.
- The Norway rat is the larger of the two European rats. It has a thicker and shorter tail than the ship rat and a coarse, shaggy coat. The ship rat has smooth fur and a long, scaly tail.

Did you know?

Occasional plagues of mice, and less frequently ship rats, are reported every few years in various parts of the country, particularly in the South Island. Contributing to these plagues is an event known as masting. This occurs when our native beech forests have a bumper flowering year, producing huge amounts of beech seed.

Mice love to eat beech seed, so in years where seed is plentiful, their populations are able to grow very quickly, sometimes to plague proportions. This boom also means good times for predators such as stoats that eat mice.

This boom in predators is bad news for native birds and invertebrates. Native species are in trouble whenever predator numbers are high. Native species are also at risk when numbers of mice drop and stoats go looking for native animals as alternative food sources.

Why are rodents a problem?

Rodents are a public nuisance in urban and rural areas, and they also have a huge impact on our native fauna and flora.

Both ship and Norway rats have a direct impact on our wildlife by eating birds, eggs, lizards and invertebrates. The ship rat is generally a greater threat to forest birds because of its climbing ability. However, the Norway rat may feed on ground-nesting birds and their young, especially those that nest close to waterways. Mice are predators of native invertebrates, and on occasion small reptiles and birds. All rodents eat a wide range of plant material, thereby competing with native species for food and also preventing forest regeneration.

One of the best known examples of how devastating the spread of rats can be is the story of Big South Cape Island. In the early 1960s, a boat accidentally brought ship rats to the island, which was the

largest of the three island homes of the South Island saddleback/tieke. The rats quickly spread to its other island homes and this precious bird was all but wiped out. It was an ecological nightmare for a whole range of endemic species and in the end the Stewart Island snipe, Stead's bush wren and greater short-tailed bat were declared extinct. It was only through the intervention of the New Zealand Wildlife Service (now incorporated into the Department of Conservation) that some South Island saddlebacks were transferred to predator free islands. The current population of over 700 birds is descended from the survivors of the 36 saddlebacks rescued in 1964.

What is DOC doing?

Today New Zealand is a world leader in eradicating rats and mice from islands (in 2006 some 40 offshore islands were rat free). The largest-ever rat eradication programme was completed by Department of Conservation staff on 11,400-hectare Campbell Island in 2003. On the mainland too, the Department conducts intensive predator control programmes, especially in naturally significant areas known as 'mainland islands'. In these places, plant and animal species are often on the brink of extinction and predator-control work is considered essential. As Sir David Bellamy put it, "New Zealand is the only country which has turned pest eradication into an export industry."

How can you help?

Unfortunately, all islands that are free of rodents could be re-invaded, either accidentally from ship wrecks or naturally by rodents swimming from other islands. It is therefore critical that when you visit an offshore island that is free of rats or mice, you check your boat and belongings to ensure there are no rodent stowaways.

For further information

For further information you can access the Department of Conservation website at www.doc.govt.nz or contact your nearest Department of Conservation office. District Councils also have pest control officers who will be able to advise you on rodent control methods if you have a rodent problem at home.



Comparison of rat pelts C. Mahoney