

# Pests in the Abel Tasman National Park

All terrestrial mammals other than two species of bat, have been introduced to New Zealand for various reasons - hunting, fur or biological control. These mammals include stoats, possum, mice, rats, rabbits, deer, hedgehog, cats, dogs & goats.

Because there were no native mammals our native bird species evolved without a natural defence system to protect themselves.

The arrival of introduced predators made them very vulnerable. Our birds are flightless, nest on, or low to, the ground and in old tree stumps so are easy to attack. Predators take advantage of this vulnerability and it is estimated 68,000 birds are killed in New Zealand every day. Possums consume about 21,000 tonnes of vegetation in our forests nightly - that's the equivalent of about 3.5 elephants eaten every 24 hours.

## How do we know predators are there?

We see sign such as dead birds, poo, plant browse, pig rooting and a decline in bird numbers. We can check using tracking tunnels which attract pests who leave behind their foot prints, so we know they have been.



Mast seasons are also an indicator that there may be higher predator numbers. 'Masting' or very heavy fruiting of beech trees is triggered by a summer that is warmer than the previous one. During a mast year rats, mice and stoats breed prolifically. The increased number of rats and stoats prey on native birds such as mohua, kākā, kea, whio and kiwi, along with other species at risk such as bats and land snails.



# Controlling pests in the Abel Tasman National park

## Wasp bait stations

Bait is put out laced with 'Vespex' which targets wasps and is not attractive to bees. The wasps take the bait back to their nests to feed their larvae, destroying entire nests from one bait-station.

## Ground control

Over 90% of the Abel Tasman is trapped. The majority of traps are DOC 200 traps, but there are five different types of trap boxes in use, some using single traps, others double.

In some areas Goodnature, self-resetting A24 traps are used to target rats. The traps are powered by a CO2 canister that can kill up to 24 times before needing to be replaced.

## Aerial control

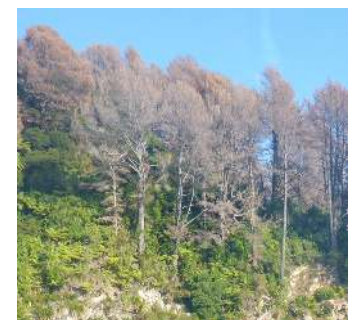
Given the large area and difficult terrain the most effective way to control rats and possums when their numbers are high is aurally applying cereal baits containing biodegradable 1080 pesticide. 1080, or sodium fluoroacetate, is a synthetic version of a naturally occurring toxin produced by a range of plants from South America, Africa and Australia to repel pests.

## Deer enclosure

This is a large area with tasty native plants inside. It draws the deer in & captures them live. A trigger wire sends a message to a DOC ranger who will deal with the deer immediately.

## Wilding pine control

Plants can be a pest too. A wilding pine control programme has seen hundreds of thousands of pine trees poisoned in the Abel Tasman National Park. Without intervention, the ridge lines of the Park would have turned into wilding pine forests. Seedling control is ongoing.



# Possum

## paihamu



### Habitat

Possums are widespread across most of New Zealand. Their main habitat is forest.

### Diet

Possums are omnivores. They prefer new, fresh leaves. They also eat buds, flowers, fruit/berries and nectar, which means they compete with native birds and reptiles for food sources. Possums regularly eat invertebrates such as weta and snails, and are known to eat the chicks and eggs of native birds. They may also feed on the carcasses of deer, rodents and other possums.

### Threats

In New Zealand, possums have no natural enemies and most native trees do not have possum defenses.

### Lifespan

About 4 years.

### Breeding

Possums only have one baby each year. They are marsupials so the tiny baby climbs into the mother pouch and attaches itself to her teat, or nipple. The joey grows inside the pouch and leaves when it is about 6 months old.

### Behaviour

Possums are nocturnal. They sleep in holes in trees, tree stumps, or other dark dens during the day. After the sun sets they come out to eat.

### Why are they here?

Brush-tailed possums are native to Australia and brought to NZ in 1837 to start a fur trade industry.

Department of Conservation, *te papa atawhai*, [www.wildaboutnz.co.nz](http://www.wildaboutnz.co.nz) Photo credit: fernphotos.com, Ruth Bollongino, Project Janszoon

# Stoat

## toriura



### Habitat

Stoats can live anywhere on land. They live on beaches, grasslands, farms, forests and high in the mountains - even above the tree line. Stoats will also swim long distances (more than 1km), or 'raft' on driftwood to reach an island habitat.

### Diet

Stoats are carnivores. They eat rats, mice, birds, rabbit, hares, hedgehogs & insects. They also eat lizards, geckos, frogs, crayfish, fish, eggs, and carrion.

### Threats

Hawks & kārearea, cats, dogs, & predator control.

### Lifespan

Most stoats live for 1 year but can live for 6-8 years.

### Breeding

Stoats have 1 litter of kits each year, in a nest such as a hole in a tree trunk or rabbit burrow. A litter can have as many as 12 kits but most have 6-8. Nearly all female baby stoats are pregnant when they leave the nest.

### Behaviour

They are agile and excellent climbers. They hunt during the day and at night. Their home range is 60-200 hectares so they are very fast. They kill for food but they also kill for fun. Stoats won't take poison bait and are trap-wary.

### Why are they here?

All three species were introduced to New Zealand as early as 1879 to control rabbits that were destroying sheep pasture.

# Goats

## nanenane



### Habitat

Goats can live anywhere on land. They prefer grassy areas.

### Diet

Goats will eat anything - even washing on the line! In the wild they are mainly herbivorous, eating any leaves or bark on plants that they can reach.

### Threats

Hunters are the only threat to wild goats at the moment.

### Lifespan

12-22 years.

### Breeding

Goats can mate when they are 5-6 months old. They typically have 1 or 2 kids and can give birth 2-3 times a year.

### Behaviour

Goats are agile and climb to high, steep places and walk on narrow ledges. Goats live in herds, which eat a lot, trample plants and compact the ground. This means they can prevent a forest from regenerating.

### Why are they here?

Goats came to NZ in the 1770s with early settlers, for many purposes. As food, milk, wool, cheese and to control weeds on farms.

# Mice



## Habitat

Mice can live anywhere on land.

## Diet

Mice are omnivores - they will eat anything they can get their paws on! They love to eat insects and plant materials such as seeds, fruits and berries. Mice have also been seen ganging up and attacking lizards, birds and chicks. The Abel Tasman National Park is a Beech forest and the beech trees seed, or 'mast' every 5 years or so. This heavy seed-fall provides an abundance of food, and a predator-plague cycle can begin.

## Threats

Hawks, kārearea, ruru, cats, dogs, stoats and rats.

## Lifespan

6-12 months.

## Breeding

Mice can mate and have babies when they are only 5 weeks old! They have litters of 4-16 and can have 7-8 litters in a year. Mice mate right after a litter is born. As soon as one litter is weaned - or no longer nursing, the next litter is born.

## Behaviour

Mice are nocturnal, or active at night. They often live in large groups because they reproduce so quickly. In a predator-plague cycle, the mice population increases rapidly which in turn provides abundant food for stoats.

## Why are they here?

Mice came to NZ as stowaways on ships.

Department of Conservation, *te papa atawhai*. Project Janszoon 2014. Photo credit: Chris Golding

# Wasps

## wāpi



### Habitat

Wasps will live wherever there is a good food source. They enjoy the Abel Tasman National Park because it is a beech forest which has an abundance of honeydew. Seasonally in some beech forests there are an estimated 12 nests, or 10,000 worker wasps, per hectare. This makes the total combined body-weight of wasps in these areas higher than the weight of all native birds, stoats and rodents, put together.

### Diet

Wasps will consume massive amounts of honeydew. In the autumn, wasps seek protein and will eat a huge number of native insects and have been seen killing newly hatched birds.

### Threats

No natural predators in NZ.

### Lifespan

Workers (sterile females) have an average lifespan of 12-22 days, drones (fertile males) have a slightly longer lifespan than workers, and queens (fertile females) have an average lifespan of 12 months.

### Breeding

Both species live in large colonies, about the size of a soccer ball, but they can become much bigger if they survive over winter.

### Behaviour

Wasps are a nuisance to forestry gangs, a worry to tourist operators and unwelcome guests at summer picnics and barbecues. No-one finds a wasp sting a fun experience. Wasps do not die when they sting, they can sting multiple times. The venom from a wasp sting contains several toxins that can cause a hypersensitive or allergic reaction in some people. Social wasps live as colonies in nests of honeycomb-like cells. They form complex social groups and all members of a colony help raise the young.

### Why are they here?

New Zealand has several kinds of native wasps which have evolved here and have never become a nuisance. But five social species of wasps have been accidentally introduced since the 1940s and are classed as pests (German, common and 3 paper wasps).

# Cats

## ngeru



### Habitat

Cats can live anywhere on the land. They are found on farmlands and in the forest. They live by the ocean, around wetlands or high in the mountains.

### Diet

Cats are mainly carnivores. They eat birds, lizards, large insects such as wētā, fish and frogs. Cats also eat mice, rats, hares and rabbits.

### Threats

None.

### Lifespan

Pets can live 15-20 years. Feral cats usually live 3-5 years.

### Breeding

Cats start breeding when they are 1 year old. They can give birth to 3 litters each year. Each litter produces 2-6 kittens.

### Behaviour

Cats are very active at night. They have excellent vision and hearing and a natural instinct to hunt. Cats generally hunt for food but a well fed pet cat may hunt just for fun.

### Why are they here?

The first cats were brought to NZ by ships in the 1770s. They were on the ships to help control rats.



# Hares



## Habitat

Hares can live anywhere on the land. They are found on grassland, pastures, sand dunes, swamps & open areas in forest or bush.

## Diet

Hares are herbivores. They eat tree bark, small branches, new tree growth, and young plant shoots. Hares also eat grasses, shrubs, mosses and seeds.

## Threats

Hawks, kārearea, stoats, ferrets, weasels, cats and dogs.

## Lifespan

3-4 years.

## Breeding

They can give birth to 2-8 litters each year. Each litter produces 2-3 leverets. Hares are born with fur and their eyes open.

## Behaviour

Hares do not dig burrows or scratch like rabbits. They come out in the afternoon and night to eat. They live by themselves or in pairs and have large territories of 50 hectares or more.

## Why are they here?

Hares were brought to NZ from England around 1850 for food. They were also used for people to hunt for sport.

# Deer

tia



## Habitat

Deer can live anywhere on land.

## Diet

Hares are herbivores. They eat small branches, leaves, new tree growth, and young plant shoots.

## Threats

None.

## Lifespan

12 years.

## Breeding

One calf can be born each year.

## Behaviour

Deer have favourite foods and they will eat their favourite first. This may mean they eat all of one species, preventing regeneration and causing erosion by eating plants that hold moisture when it rains.

## Why are they here?

Deer were brought to NZ around 1850 and set free for people to hunt for sport.

# Pigs

## poaka



### Habitat

Pigs can live anywhere on land.

### Diet

Pigs are omnivores. They eat anything they can reach. Grasses, seedlings, roots, berries and fruit. They also eat fungi, insects - such as our native powelliphanta snail, worms, eggs, small animals and carrion.

### Threats

None.

### Lifespan

12-16 years.

### Breeding

Pigs can have 2-3 litters of piglets each year. Each litter can have 6-10 piglets.

### Behaviour

Pigs root, or dig up the ground with their snouts. Pigs often live in groups and like to wallow, or roll around in the dirt. Rooting and wallowing can keep plants from growing in an area and cause erosion. Wallowing also compacts the soil with make it hard for seeds to germinate and grow.

### Why are they here?

Pigs were brought to NZ in the late 1700s and then by Europeans later. They were brought for food.

Department of Conservation, *te papa atawhai*. Project Janszoon 2018. Photo : caught in pig trap in Abel Tasman, credit Jake Goonan

# Rabbits

rāpeti



## Habitat

Rabbits can live anywhere on land. They do very well in dry areas.

## Diet

Rabbits are herbivores. They prefer plants such as tussock, grasses and shrubs.

## Threats

Hawks, kārearea, stoats, ferrets, weasels, cats and dogs.

## Lifespan

Up to 10 years.

## Breeding

Rabbits can reproduce when they are 5 months old and can have up to 50 kittens each year. Kittens are born blind and without fur.

## Behaviour

Rabbits are most active at sunrise and sunset. They live in groups and create complex underground burrows together - called a warren. Rabbits often cause erosion by eating all of the plants that hold the soil together. Their digging can also lead to erosion.

## Why are they here?

Rabbits were brought to NZ from England around 1850 for food. They were also used for people to hunt for sport.

# Rats

## kiore



Ship rat



Norway rat

### Habitat

Rats can live anywhere on land.

### Diet

Rats are omnivores. They will eat anything. Their food includes small animals, chicks, eggs, lizards, frogs and snails. They also eat large insects such as wētā, stick insects, cicadas, beetles, native slugs, grubs and caterpillars. Rats also eat plant materials such as seeds, fruit and berries.

### Threats

Cats and stoats.

### Lifespan

1 year.

### Breeding

Rats can reproduce when they are 5 weeks old. Most rats can have 7-8 litters each year. A litter usually has 4-16 baby rats.

### Behaviour

Ship rats are good climbers so are a threat to birds and their nests high up in trees. Norway rats are ground dwellers and are big enough to kill large adult seabirds. Kiore mostly eat things that are on or close to the ground. They are not good swimmers. Rats will often avoid food baits and poison, used in traps.

### Why are they here?

Kiore were brought to NZ 700 years ago with Maori for food and fur. The ship rat and Norway rat were brought by accident on ships with early explores and settlers, and were regarded as pests. A group of rats is referred to as a mischief.

# Dogs

## kurī



### Habitat

Dogs can live anywhere on land. In NZ most dogs live with people, not in the wild.

### Diet

Dogs are omnivores. They will eat anything.

### Threats

None.

### Lifespan

Pet dogs live for 10 - 15 years.

### Breeding

Most dogs can reproduce when they are 1 - 1½ years old. Most dog breeds can have 2 litters of puppies each year. A litter usually has 2 -8 puppies.

### Behaviour

Dogs have a natural instinct to hunt. They will chase or attack and kill small animals or birds. Dogs mainly affect kiwi, weka, rail and kororā and can also course bother humans too. They can also foul tracks and beaches if their owner does not pick up after them.

### Why are they here?

Dogs are usually only a nuisance when their owner allows them to be. Dogs walking off-lead, or let out at night are when problems arise.