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CONSERVATION
TE PAPA ATAWHAI

RAT INVASION - NOISES ISLANDS

Following a report of rats on the Noises Islands a field trip was organised to determine what species of rat was present and on which island.

The Norway rat *Rattus norvegicus* was thought to have arrived on the Noises during the mid-1950's and quickly built up to high numbers. In 1976 the island group was selected as a study area to test eradication methods and by mid-1980's was considered rat free. Owned by the Neureuter Family the group consists of Otata, Horopapa, The Stacks, Ororapa, Scott, Sunday, Ike, and to the south east, David Rocks and the lighthouse island Maria. The main group lies 3 km north of Rakino Island on the outer edge of the inner Hauraki Gulf. Otata has a cottage used by the owners for holidays and it was there rodent sign was found in late February 1991. One rat was subsequently caught but disposed of before identification could be made. This report provides details of field work carried out between 11 and 13 March 1991 and makes recommendations for future rodent control on the islands.

In order to determine what species of rodent was present and on which island standard 'ese-set' breakback rat traps were set on Otata, Horopapa, Scott and Sunday. Six Norway rats were caught on Horopapa, and one trap was set off on Scott and Sunday with small amounts of rat fur caught under the back breaker. No traps were set off on Otata. Six cage traps were set about the buildings on Otata in an attempt to catch live rats. It is possible to make a genetic fingerprint from blood taken from live rats. If rats were caught on Otata, those fingerprints would allow a comparison to be made with other inner Hauraki Gulf islands (particularly Rakino) and possibly determine where this latest invasion of rats originated. No rats were caught in the cage traps.

Only a few rat droppings were found on Otata in the outside toilet. No rat sign was found on Ike, or Maria, and David Rocks were not checked. Fresh rat droppings were found all over Oropapa. The pattern of colonisation would seem to be that rats swam from Rakino out to Oropapa (1.5 km) then on out to Horopapa (1.2 km) where they were able to "breed up". They

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then spread across to Scott, Sunday, and have only just reached Otata. The Neureuter Family spent 5 weeks on Otata during the Christmas holidays and were not bothered by rats, nor did they see sign about the buildings, or BBQ area.

Horopapa was last visited in August 1988 when 60 snap traps were set for 2 nights. No rats were caught and no sign found despite searches in the usual places for droppings or evidence of rats feeding on shellfish, insects or snails. Horopapa has a colony of the large flax snail *Placostylus hongii* and predation by Norway rats is obvious and severe. Wax block baits were put out in Novacoil stations on Horopapa, Scott, Sunday and Otata so even if the odd rat missed detection its chances of being poisoned were likely. Since then the project has been allowed to lapse and the islands are now almost back to the state they were in pre-1976.

In an attempt to eradicate those rats found on the Noises a day trip was made on 21 March. Standard wax block rat baits (Rentokil and Storm) were broadcast by hand on Horopapa, Scott Sunday, Oropapa and all small stacks lying close to main islands. Bait was put out in excess of that needed to eradicate and an effort made to place some baits in sheltered places to reduce the weathering effect of rain. Insufficient bait was available to thoroughly cover Otata and that island will need one more application. In addition, bait stations will need to be set out and perhaps gnaw sticks. A gnaw stick is a piece of sap wood 300 x 25 x 18 mm which is soaked in cooking oil for several days then set in the ground so that at least ⅔ is above ground level. Norway rats gnaw these and the sticks act as a passive indicator of their presence. Sticks put out in August 1988 were found to have fresh incisor marks on this visit so sticks act as useful indicators for at least 2 years. Gnaw sticks are not known to work for ship rat or Polynesian rat.

A return visit is planned when Otata will be re-poisoned, gnaw sticks will be set out, and bait stations established. The fact that the Noises have been re-colonised shows that post eradication monitoring must not be allowed to "lapse". How far Norway rats are able to swim is not known and may well be greater than the distance they are known to have swum.

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