

Rodent Dog Internal Biosecurity Report

2021-22

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1. Introduction

A three-year Environmental Studies Budget (ESB) grant was awarded in September 2020 to enhance the protection measures in place to prevent re-introducing rodents to islands around the Falklands that are free of rats and mice. The project also covered a number of surveys on previously eradicated or known rodent-free islands to confirm their status. In doing so the project hopes to raise awareness of the impact rodents have on habitats and species and show the benefits of good biosecurity.

Specifically, the project will:

- Check cargoes bound for rodent-free islands travelling on the Concordia Bay
- Check the ferry itself at regular intervals
- Check for rodents and advise on control at New Haven
- Confirm rodent free status of some privately and government owned islands
- Run trials to determine the efficacy of the dog versus 'human' monitoring for rodents at low densities
- Hold a range of outreach sessions to share the work of the project

This report summarises the second year of the project.

2. The Plan and Methodology

The plan was to conduct inter-island cargo checks throughout the year and carry out the island survey work in winter. This was done both to ensure the surveys could be fitted around other commitments but also to ensure surveys were scheduled when the lowest abundance of wildlife would be present. This both reduces distractions for the dog and protects the wildlife.

During island surveys the dog was on lead and within sight of the handler at all times.

It was considered impossible for the dog team to cover every inch of every island in the time allotted, so high risk areas were determined and targeted. The coastline nearest to the next rodent-infested area was considered the most important area to check as it is not only the first avenue for rodents to enter an island but also a habitat for feeding. Empty bird burrows and any old rodent burrows, where present, were also considered an important area of focus as it had been noted on Bleaker (during a previous visit by the rodent dogs) that rodents were using empty penguin burrows for nesting. Buildings, where present, were also targeted and, where time allowed, other random areas were also checked.

Another key area for rats is any place with access to fresh water as they are more reliant on fresh water than mice for survival. Rodents often build their burrows around springs so these areas were always checked.

3. Results

The results of the searches carried out throughout the year are presented below.

3.1 Inter-Island Cargo Checks

In total, 28 containers were searched on 7 voyages to outer islands.

In some cargoes residual odour (rodent urine) was identified by the dog, particularly on bags of animal feed and stores. This can be distinguished by the handler from live rodents through training and reading the dog's behaviour. Otherwise, no 'live' indications were given by the dog.

3.2 Concordia Bay and New Haven Searches

The Concordia Bay was searched three times throughout the year, most importantly the entire vessel was searched after a period in dry dock in Punta Arenas, prior to its first delivery run. During each dog search, different areas of the vessel were searched with the galley and passenger lounge always searched as they are considered higher risk being close to food, water and access to the deck. No live rodents were found during any searches.

New Haven searches confirmed there are rodents in that area and traps are in place to manage this.

While the Concordia Bay was in dry dock, the Protegat was used to do an island cargo run and this vessel was also checked by the dog team, prior to this interim run.

3.3 Kidney, Cochon, Top and Bottom

Kidney Island was search on 5th May, Cochon was attempted on 15th May but the swell made it too difficult to land. Top and Bottom Islands were searched on 17th May. As extremely calm weather conditions are required for the difficult landing on Cochon, the team were not able to search this island over winter.

As before, coastal areas alongside the mainland were prioritised during the search as these were considered to be higher risk areas, i.e. potential arrival sites for rodents to the islands (shorelines) and potential areas of harbourage (any buildings, bird burrows etc).

During the surveys, a leader walked the track ahead of the dog team to ensure a safe path for the team and avoid any wildlife. The dog's behaviour was interpreted by the handler throughout the trek, with any indications and behaviour changes noted. No indications that there was any rodent scent on the track were found.



Figure 1. Search track on Kidney Island

It should be noted that this year, for the first time since Top and Bottom islands were eradicated, a Cobb's wren was spotted (sighting confirmed by Sally Poncet) on Bottom Island. It is not known whether it was male or female, a breeding adult or young fledged from this year's cohort. A Cobb's wren was also heard on Top island but could not be seen. This is really exciting news as it has taken the birds quite a long time to re-colonise these tussac islands and this indicates that the birds are hopefully making their way back to these islands.



Figure 2. Photo of Cobb's wren (in red circle) taken on Bottom Island during dog search

3.4 Bleaker island

With kind permission of the Rendell family, Bleaker Island was search between 18th and 20th September 2022. This is in line with best practice, that is waiting a full three years post-eradication, before confirming success as this allows any missed rodents to re-establish and breed again. A GPS track was taken throughout, excepting during searches around the settlement and surrounding tussac, see Figures 3 and 4 below.

As there was not time to cover the entire island with the dog, 'spot checks' were conducted in areas where fresh water is normally present and at various areas around the island. The areas closest to the mainland (or nearest rodent infested area) were prioritised during the search as these were considered to be higher risk areas, i.e. potential arrival sites for rodents to the islands (shorelines) as well as potential areas of harbourage (any buildings, bird burrows etc). Previous areas of high density rodents were also searched to ensure the eradication had been successful and areas surrounding fresh water were searched. The search also prioritised the settlement near the jetty as the Concordia Bay is a potential pathway for rodents to return.

Over the course of the three days, the dog indicated on two old rodent burrows, which were thoroughly investigated by the team and no further signs of rodent presence were found (faeces, tracks, caches of food etc.). The dog was not intensely interested in the holes (as he would be for the presence of live rodents). It was therefore concluded that the years of presence of rodents has tainted the soil in some areas which means the dog is still able to pick up a faint scent, or perhaps rodent skeletons remain in some holes, and causes some interest for the dog. The dog team have found that old odour in areas that have been previously infested with rodents can still be picked up by the dogs up to 10 years after rodents have gone, depending on the environmental conditions and level of previous infestation.

All buildings in the settlement, as well as the jetty area, were searched with no indications or interest shown by the dog.

Where rodent monitoring stations were found these were checked and no rodent sign was found, nor did the dog indicate.



Figure 3. Search track on Bleaker Island, northern end



Figure 4. Search track on Bleaker Island, southern end, settlement and tussac areas searched shown by red polygons

Although the dog indicated in two areas on Bleaker Island, these were not thought to be live rodents but residual odour attributed to the previous infestation, giving confidence that rodents have not reinvaded Bleaker Island and the eradication has been successful.

3.5 Yacht/Launch Searches

A few local yachts were visited throughout the year by the dog either for training or to access islands. Additionally, almost all FIC and Sulivans launches have also been visited by the dog throughout the year as they were used to access vessels in Port William.

4 Trial

Over the past two years, a trial has been conducted to determine the best methods for determining rodent presence in a low density, outside scenario, i.e. in the early stages of an incursion. The trial was undertaken as there are a variety of methods that are now available on the islands, human monitoring (such as wax tags, chew sticks) and the dog team, and it was felt useful to determine which method, or combination of methods, would be most efficient and effective.

A full report on the trial is submitted with this report.

5 Outreach

An interview was given with Falkland Islands Radio to discuss the trial rodent monitoring and a public talk was given. Internationally an article was written in Audubon magazine, a short presentation was given at the Expo Prado, the dog team were the subject of a podcast for North Carolina Public Radio and the team took part remotely in three Detection Dog Conferences: Wildlifetrek Detection Dog Conference in the UK, the Penn Vet Working Dog Conference in the US and the Australian Conservation Dog Network conference in Australia. Facebook and Twitter were used regularly to share the dog team's work.

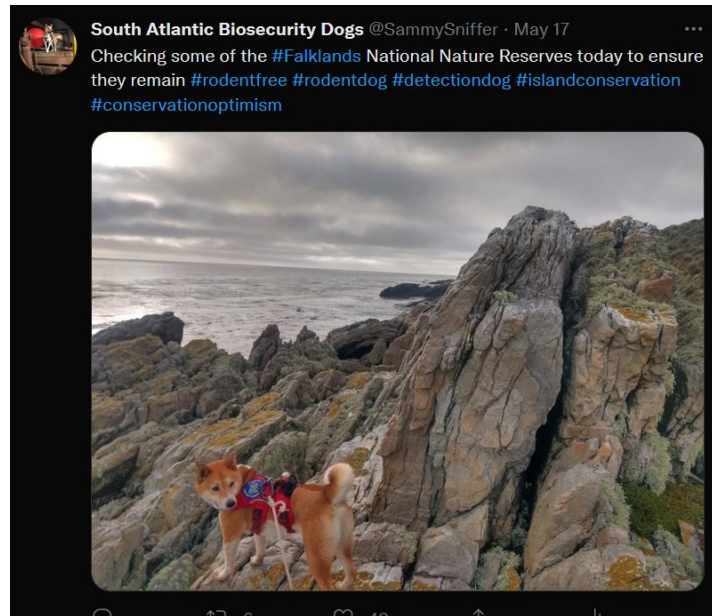


Figure 5. Twitter post about island searches

6. What went well, what can we improve

- Another quiet cruise ship year, due to Covid-19, meant that we were able to conduct all planned searches with no clashes;
- Stanley businesses and establishments have been very helpful in allowing us to train at their locations around town;
- Social media response has been positive;
- Safe, regular access to Cochon island is proving very difficult, requiring extremely calm weather.