



Antarctic Research Trust

Biosecurity Plan for Hummock Island

The need for biosecurity

Hummock Island is one of the few larger offshore islands in the Falklands that is free of the introduced pests that are common around Stanley, on mainland farms and many offshore islands: it has no rats, no mice, no feral cats, no earwigs. Keeping Hummock Island free of rodents and earwigs is an important part of preparation for every single person who comes to visit. Because there is no requirement for any service provider (e.g. Workboat Services, Falkland Islands Government Air Service (FIGAS) and retailers) to ensure that their storage areas/warehouses/outside sheds are free of pests, the onus is totally on visitors and the ART to maintain good biosecurity practices.

Biosecurity is all about setting up as many lines of defence as practical at the following three crucial moments:

Pre arrival – stopping pests from getting to the island

On arrival – checking in order to detect potential pests as soon as possible after they arrive

After arrival – surveillance and monitoring to detect pests that weren't detected on arrival, and a response plan for killing newly arrived pests

Here is how you can make sure you avoid introducing pests to Hummock Island:

1. Stopping pests reaching Hummock – pre-arrival

It is the responsibility of Trustees to ensure that all visitors are informed in advance of the island's pest-free status, and of the importance of minimising the risk of accidentally introducing new organisms to the island. This information will be disseminated as follows:

- on the Antarctic Research Trust website
- in responses to all visitor enquiries and bookings, including those from cruise ships and yachts
- in printed tourism leaflets about the island

In the unlikely event of visitors not contacting Trustees in advance, this information will be disseminated

- on signage at the house on the island
- verbally when welcoming people to the island

To minimise the risk of introducing pests to the island, visitors are to ensure that, prior to embarking on their transport vessel, they have thoroughly inspected and cleaned all items of clothing, footwear, rucksacks, bags, boxes, food and equipment so they contain no soil, seeds and insects. Whether you are a local resident flying out from Stanley or an overseas visitor staying in a hotel/B&B/lodge/guest house, bear in mind that earwigs are very common and can easily pass unnoticed. Be particularly vigilant in January - April as this is the time of year when earwig and mouse populations are at their highest in the Islands.

Please study carefully the following points, and tick the boxes when you've completed each action.

| Action | Completed? |
|--|------------|
| Have you cleaned your boots and shoes inside and outside to remove mud, dust, seeds and soil prior to leaving for Hummock? | |
| Have you shaken out each individual item of clothing and your rucksacks? Have you checked inside pockets, cuffs, seams and hoods for soil, seeds and insects? | |
| Have you cleaned all Velcro fasteners using a needle or tweezers to remove 'fluff', seeds and debris? | |
| If you have recently visited penguin or albatross colonies elsewhere before coming to Hummock, have you washed all footwear, camera tripods and walking poles using an anti-viral disinfectant? | |
| Have you emptied out and shaken all your equipment containers including cardboard boxes and plastic bags, and checked that they are clean and free of insects, soil and seeds before re-packing? | |
| Have you inspected books, papers and cardboard items for earwigs? | |
| Are you using transporting anything in boxes and plastic bags? If so, have you made sure that the boxes and bags are taped on all sides and corners and stored in a pest-free area in Stanley or Camp prior to your departure for Hummock? | |
| Are you taking any fresh vegetables to Hummock? If so, have you washed them thoroughly, removed all soil and checked for earwigs before packing them into sealed boxes? | |

THINK! THINK! THINK!

EVERYTHING MUST HAVE BEEN CHECKED BEFORE IT TOUCHES THE BEACH!

ABOVE ALL, THE MOST EFFECTIVE MITIGATION MEASURE IS TO TAKE YOUR TIME! YOU WILL PROBABLY BE RUSHED ON DEPARTURE FROM STANLEY AND DURING TRANSFERS WITH FIGAS AND BY BOAT, BUT WHEN YOU ARRIVE AT THE ISLAND, TAKE YOUR TIME LANDING BAGS, STORES AND GEAR. IF IT IS GETTING LATE AND NEARLY DARK, ASK YOURSELF, CAN ITEMS REMAIN ON THE VESSEL UNTIL MORNING? STAYING IN CONTROL OF LANDING BAGS, STORES AND GEAR ON HUMMOCK IS THE BEST CHANCE WE HAVE OF DOING IT PROPERLY!

2. Detecting new arrivals on Hummock – immediately after arrival

To find out if a pest has accidentally escaped detection and stowed away in luggage, clothing or stores it is essential that you inspect all items on arrival. Everyone must check their gear immediately upon arriving at the house on Hummock. This applies to researchers, guests and service providers alike.

- Take your personal luggage directly from the landing beach and into the living room area in the house - do not leave them outside for any longer than necessary.
- First, shut the outside door!
- Next, check coats and boots.
- Then, unpack the contents of your luggage. Check each item one by one as it is unpacked. Open all goods and search for any signs of pests. Earwigs should be squashed. Rodents should be caught (keep the doors closed!) and killed immediately.
- Continue to keep an eye open for earwigs on the first two to three evenings after your arrival, in particular on the floor beneath boots and boxes and the walls adjacent.
- All stores and equipment are to be taken to the store shed and/or generator shed and inspected in the same manner – door shut and be prepared to kill!

- When rinsing vegetables in the house on Hummock, use a washing up bowl, so as to avoid accidentally pulling the plug and flushing an earwig down the sink as it might survive in the waste pipe. Kill any earwigs immediately. Do not flush them down the sink!

3. Detecting new arrivals on Hummock – surveillance

Invertebrates

There are sticky traps in every room in the house and in the generator shed and storeroom. These traps are also effective at trapping mice. The traps are checked weekly.

If a rat or mouse is seen:

- Notify the ART
- Interview the person who actually made the sighting as soon as possible. Take account of their experience, but do not judge the sighting on experience alone. The most important factors are how well they saw it – i.e. how close, how long, what visibility
- Ask open questions, e.g. tell me what you saw, how long did you see it, what did it look like? Do not ask leading questions, e.g. was it about 10 cm long?
- Record or write everything down, including when the sighting took place and when the interview took place. One sighting may be dismissed, but if you get several in the same area you may form a different conclusion.
- Ensure the exact location of the sighting is recorded, if necessary take the person back to the location.

Other Evidence

- Take digital photographs *in situ* of any evidence or suspicious items – use high resolution for at least some pictures.
- Mark the spot. Collect all evidence for analysis (e.g. all rat droppings, chews etc).
- Take time to look for other evidence such as tracks, hair, scratches etc.

- Label the evidence carefully.
- If sending evidence to an expert for identification, think about the security of the transport – don't lose it!

4. Getting rid of rodents as soon as they've arrived

As soon as a rodent is seen or rodent sign found, a fast effective response has to be in place in order to catch/kill/detect animals before they move away from the area.

Steps in response

1. If you see a rodent inside a building, try to corner and kill it before it can escape. Placing a box on the ground against a wall often works – rodents will run into it and can then be killed. If the rodent falls into the sea, do not assume it has drowned as they can swim very well and it is likely to scramble ashore elsewhere. Unless you have the body, do not assume it is dead.
2. If the rodent is seen at the house and escapes (or is suspected to have escaped), spread cereal-based pellets (2 buckets stored in the generator shed) within a radius of 200 m around the house in favourable rodent habitat i.e. tussac grass, rock overhangs and buildings, spreading the bait evenly over the area.
3. Set up rat and mouse traps (out of reach of tussacbirds and thrushes) and check daily.
4. Continue checking for 2 weeks.
5. If there are persistent rodent signs, a full eradication will be needed.

Shipping goods from Stanley on MV *Concordia Bay*

Wherever possible, cargo will be transported to Hummock on small local vessels departing from Roy Cove. Cargo may occasionally be shipped on the coastal vessel MV *Concordia Bay* - large vehicles on deck and goods in containers. The following measures are necessary to ensure an adequate level of biosecurity when shipping on MV *Concordia Bay*:

It is essential to inspect and confirm that the container used for Hummock cargo

- is packed by a designated person acting on behalf of the ART.
- is in good condition with effective door seals that would prohibit passage of rodents and invertebrates.
- is clean before being packed. e.g. swept out and insecticide spray used in the corners and along the door threshold.
- is not left unattended with its doors open at any time.
- is equipped with rodent bait stations and sticky insect traps positioned inside next to the door so they can be easily accessed and checked on opening.
- is fumigated with a pyrethrum-based insecticide prior to being sealed.
- does not contain goods for any other destination, and will not be opened until arrival at Hummock.
- contains only goods (including vehicles and building materials) that have been inspected before being loaded in the container.

The importation of the following items is known to be of high risk of pest species:

- off-island building aggregate
- pallets made of untreated wood
- boxes packed with woodchips and other similar materials
- corrugated cardboard
- vehicles

Should circumstances require delivery of a vehicle to the island for example fire-fighting appliances, arrangements should be made for inspection and cleaning prior to shipping. Vehicles are potentially a very high biosecurity risk as soil, seeds, mice and earwigs can be very hard to detect.

POTENTIAL THREATS TO HUMMOCK ISLAND

| Invasive species | Arrival pathway | Risk factor | Mitigation | Measures to take if detected | Longer term consequences |
|-------------------------|--|--------------------|--|--|---|
| Earwigs | Every single item landed on the island could have earwigs! | Extremely high | Check all cargo/personal gear prior to departure and again on arrival. Maintain continued vigilance during stay. | Kill any earwigs seen. | If they become established no eradication or control is possible. Devastating consequences for native insect communities |
| Mice | Cargo and stores, vehicles | Very high | Check all boxes prior to departure. Take your time over landing cargo and inspect everything on unloading. Unpack inside on arrival WITH HOUSE/SHED DOORS CLOSED. Do not land vehicles unless in exceptional circumstances eg firefighting | If mouse is contained within building, take your time, keep all doors and windows closed, hunt and destroy. If mouse seen outdoors, bait wider area using mouse bait stored in shed. | If mice became established on the island, eradication is currently impossible. Devastating consequences for native insect and bird communities. |
| Mice | Shipwreck | Very low | None | Bait the coast opposite where the ship has grounded, however this is a long shot so only worth doing if there is someone on the island. | If mice became established on the island, eradication is currently impossible. Devastating consequences for native insect and bird communities. |

| | | | | | |
|------------|---|----------|--|--|---|
| Rats | Cargo and stores, vehicles | Low | Rats are much more obvious to detect than mice. Check everything prior to departure. Take your time over landing cargo and inspect all boxes on unloading. Unpack inside on arrival WITH HOUSE/SHED DOORS CLOSED. Do not land vehicles unless in exceptional circumstances, e.g. firefighting. | If rat is contained within building, take your time, keep all doors and windows closed, hunt and destroy. If rat seen outdoors, bait wider area using mouse bait stored in shed. | If rats became established, eradication would be possible however this is expensive and involves putting poisons into the environment. |
| Rats | Shipwreck | Very low | None | Bait the coast opposite where the ship has grounded, however this is a long shot so only worth doing if there is someone on the island. | If rats became established, eradication would be possible however this is expensive and involves putting poisons into the environment. |
| Weed seeds | Boots, scientific equipment, camera tripods, walking poles, building construction materials, vehicles | Medium | Clean everything prior to departure. Inspect on arrival. Only ship in aggregate directly from Pony's Pass quarry. Do not land vehicles unless in exceptional circumstances eg firefighting. | Not possible. | Any new plants are likely to be detected given the small size of the island. Weed control is easy and straight forward but does involve costs so again, prevention is better than cure. |
| Pathogens | Boots, scientific equipment, camera tripods, walking poles | Medium | Clean everything prior to departure. Inspect on arrival. | None | No control possible, could have devastating consequences. |

NOTES: