We're on our way!

The SGHT Restoration Project is now formally underway!
Following public consultation on our plans, the Government of South Georgia and the South Sandwich Islands (GSGSSI) gave consent for the Project to start fieldwork next season - February/March 2011 - and the Board of the SG Heritage Trust immediately instructed the Project Director to commence the operation.

This huge Project will be undertaken in two phases over a period of five seasons. The task is to eradicate invasive rodents - the rats and mice which have devastated the terrestrial ecology and seabird populations of South Georgia over two centuries - from the whole of South Georgia. This will be achieved by spreading rodent bait pellets by helicopter over the entire land area where they occur, at an average rate of around one pellet per 10 square metres. Two helicopters will be deployed throughout the operation, both for safety and because the scale of the task is greater than could be achieved with a single aircraft. Flying will be carried out between mid-February and mid-April each year. This is after the breeding season of most birds and before the first heavy snowfalls of winter.

![Helicopters like this will soon be dropping rat bait on South Georgia, allowing the island's native wildlife to make a comeback](image)

The total land area to be freed of rodents in Phase 1 amounts to more than 150 square km. This is a small proportion of the land area of South Georgia, but substantially larger than Campbell Island - the largest island ever cleared of rodents until now. Even in this first year, the task is as daunting as it is exciting!

The bait application in early 2011 will be followed by a programme of monitoring to assess the impact of the bait on both the target species (to check that every rodent has been removed) and the non-target species (to check that any losses are sustainable and recoverable by the population). Plans for Phase 2 will incorporate any improvements in methodology or strategy suggested by the results of the Phase 1 monitoring. Phase 2 - the removal of rats and mice from the remainder of South Georgia - is planned to commence in February 2013, and will probably take three seasons to complete.

Unlike the fieldwork for Phase 1, which will be within easy reach of the King Edward Point/Grytviken settlement, Phase 2 will necessitate the setting up of remote field camps supported by a yacht. In each such location, fuel and rodent bait will be depoted, and helicopter flying time will be minimised by having these resources available close to where the bait is being spread.

Any Questions?

Do you want to know more about the Habitat Restoration Project? We have prepared a full document that covers any further questions you may have. Answers can be found at: [http://www.sght.org/projects.htm](http://www.sght.org/projects.htm)

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Meet the Team...

The field team for Phase 1 comprises ten people each of whom was chosen for their expertise and experience in a broad range of fields, all of them essential for success in this operation. Five nationalities are represented, and one of the team was even born at South Georgia! The team represents a collaboration of two groups of experts, each dependent on the other for success. Expertise in aviation and the art of aerial application of rodent bait is represented by the two pilots, aircraft engineer, assistant project director and helicopter tracking specialist, all of whom are from New Zealand - the country with by far the most distinguished track record in this area of work. This New Zealand know-how is complemented by five South Georgia specialists, whose job is to ensure that the operation adapts safely and effectively to the unique weather and landscape of South Georgia.

Peter Garden. The project has been extremely fortunate to secure the services of Peter Garden as chief pilot. Peter is a New Zealander and has as much experience of aerial bait spreading as anyone in the world. He has flown in rat eradication operations all over the globe, including Campbell and Rat island (in Alaska) - the nearest in character to South Georgia.

Tony Martin. Appointed project director in 2009, Tony is seconded to SGHT from the University of Dundee, where he is Professor of Animal Conservation. A South Georgia addict for many years, he has long dreamed of restoring the island to its pre-rodent invasion condition and status. He brings to the project 30 years of experience of polar logistics and a love of driving heavy machinery! Tony also has a long lasting passion for South Georgia’s birds.

Gary Patterson. Another New Zealander, Gary joins the team with an excellent reputation in the interpretation of helicopter flightlines - a crucial skill which will enable us to ensure that no areas of land go untreated. Gary will come to South Georgia soon after leaving Macquarie Island, where he will have carried out the same role on this sub-Antarctic Island - the largest of its kind treated at that time.

Sally Poncet. Sally is based in the Falkland Islands, and knows South Georgia like the back of her hand. A biologist and yachtswoman of international repute, Sally led the successful operation to remove rats from Grass Island off South Georgia - the only attempted eradication in the archipelago to date.

Ken Passfield. A resident of the Falklands, Ken has many years of experience of working at South Georgia in many roles, including as government officer and fishery observer. An accomplished mariner, cook and jack-of-all-trades, Ken will be an unflappable lynchpin of the team.

Dion Poncet. Born on a yacht at South Georgia, and returning there almost every year since, Dion has the island in his blood. He is a qualified yacht skipper, is trained in rat eradication techniques and has helped clear rats from several islands in the Falklands. Dion will likely skipper the yacht required in Phase 2 of the Project.

Nick Torr. A New Zealander and veteran of many eradication operations, Nick will be assistant project director. Nick is in great demand worldwide and is currently involved in the campaign to eradicate invasive mammals from another UK overseas territory - Henderson Island.

Deirdre Galbraith. A qualified Medical Practitioner, Deirdre has vast experience as an expedition doctor. She has worked in both polar regions, and brings to the Project expertise in rescuing casualties in mountainous and snow-bound environments. In March 2009 Deirdre was ship’s doctor on the SGHT voyage to South Georgia, and she knows the island well.

The team will be completed by another pilot and a helicopter engineer, yet to be selected. Both will be known to our Chief Pilot, Peter Garden, and chosen for their expertise and experience with the type of helicopter we expect to be using on South Georgia - the Bell 206 LongRanger.

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The International dimension

South Georgia is many times bigger than any island so far cleared of invasive rodents worldwide. For the Project to be successful, we must draw on the expertise and experience of people who have done this type of work many times before, and there is no better place to look than New Zealand. Facing the loss of most of their wild birds to invasive mammals, the Government and people of New Zealand lead the way in eradicating rats, mice, stoats and cats from islands where the native wildlife had been devastated, and achieved remarkable successes.

A conference on this topic was held in Auckland, New Zealand in February 2010, and was attended by three of the South Georgia Habitat Restoration (SGHR) team - Tony Martin, Sally Poncet and Peter Garden. During the conference, a special meeting of leading experts in this field (the Island Eradication Advisory Group) was held to review plans for the South Georgia Project. The Group made some constructive suggestions for improvements, and these have now been incorporated into a revised Operational Plan for Phase 1 of the Project.

Following the conference, Project Director Tony Martin travelled to Animal Control Products, the company making bait for the Macquarie Island operation and a potential supplier for South Georgia, then went to stay with Peter Garden for discussions on helicopter-related issues, and finally travelled to Tasmania to spend time with the team that will be working to clear Macquarie Island of invasive mammals later in 2010. Project Manager Keith Springer and his team were very generous with their time and hospitality, and Tony now has a comprehensive understanding of what is needed to lead and organise an eradication operation of this scale.

The most striking aspects of this Antipodean visit for Tony were the ‘can-do’ attitude of the people who carry out this work, and their enthusiastic and selfless desire to help and encourage those tackling new habitat restoration projects around the world. For many, clearing islands of invasive pests is a vocation rather than a job, and they rejoice at the remarkable speed of recovery of the islands they tackle, often watching centuries of damage being rolled back in a few years. As the largest project of its kind ever tackled, South Georgia is already causing a stir globally, and our progress will be watched with great interest far and wide. We are privileged to have on the team several highly experienced New Zealanders, and greatly appreciate the support of many others whose advice will enhance our chances of success.

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**An Icy threat....**

Sally Poncet been visiting and conducting surveys on South Georgia for over 30 Years. Here she writes with first hand experience of the effects of glacial retreat and it’s immediate threat to the wildlife of South Georgia as the potential risk of invasion by rats increases due to glacial retreat and climate change.

It has been many years since rat eradication at South Georgia was first considered. Andy Cox and Ian McFadden from the New Zealand Government’s Department of Conservation (DOC) spent a month at South Georgia in 2000 at the invitation of the South Georgia Government doing bait trials and carrying out a hand broadcasting operation on 30 ha Grass Island in Stromness Bay.

As project coordinator, it was my first introduction to the New Zealand way of tackling eradications and there was no better way to learn than spending time with Andy and Ian.

Working from Golden Fleece we visited many different parts of the island to assess eradication sites, and came to realise that South Georgia’s remaining rat-free mainland areas and their wildlife were at risk of invasion by rats due to glacial retreat and climate change.

Images such as these from Gold Harbour show just how fast the ice is disappearing. Ten years on, it is really exciting to see that the dream of a rat-free South Georgia may be attainable.

Nearly 25 years ago (1986), the snout of the Bertrab Glacier at Gold Harbour was on the beach. You could pass in front of it just, at low tide if there wasn’t too much swell.

Since then, the glacier has undergone a massive retreat and is now halfway up the vertical rock face, the beach has disappeared and a large lagoon is in its place. Similar changes are happening all around South Georgia.
THE LEGACY OF BIG SOUTH CAPE ISLAND, SOUTHERN NEW ZEALAND

An insight into the extreme sensitivity of island animals and plants to rats and the benefits of eradication.

Written by Don Merton

Forty six years ago an event occurred on an island near Stewart Island, southern New Zealand, that was to change forever the way we perceive, manage and protect our precious off-shore islands and their living heritage. A disaster occurred that would have far-reaching implications not only for New Zealand, but for island nations around the world!

In 1961, as a junior officer with the New Zealand Wildlife Service, I was privileged to spend a month on the largest of the southern “muttonbird islands” – Taukihepa/Big South Cape Island (939ha) - off Southwest Cape, Stewart Island, New Zealand. These islands are a major breeding ground of the NZ muttonbird or sooty shearwater (Puffinus griseus). Big South Cape at that time was the final refuge for a number of native animals formerly abundant and widespread on mainland NZ and Stewart Island, but which following European colonisation had become extinct on all but Big South Cape and two tiny adjacent islands – Solomon and Pukaweka. Although inhabited by ~300 muttonbirders (Maori with traditional harvesting rights) for around three months each year and somewhat modified, no mammal had been introduced and the island had retained its full quota of indigenous wildlife. Big South Cape was a remarkable bird island – and a very special place.

“Rats are responsible for countless extinctions and massive contractions in range of island endemics. Not only are bird populations severely affected, but also reptiles, invertebrates and plants.”

As a consequence of this trip, and many other field assignments in remote areas, I tried to fathom just how and why our native wildlife – especially the endemics – were in such a predicament on the NZ mainland: Although habitat destruction and fragmentation was well advanced, we still had hundreds of thousands of hectares of seemingly intact native forest and other habitats, yet massive extinctions (~40% of native land and freshwater birds were extinct) and retractions in range and numbers had occurred, and, in contrast to islands like Big South Cape, our mainland forests were largely silent.

Some leading biologists (educated in Europe or North America - where land mammals are of course an integral part of natural systems) were adamant that the ecological collapse and extinctions we’d experienced were not a consequence of predation – predators they explained were a natural part of the scheme of things....As in Europe and

North America, endangerment and extinction in New Zealand were primarily due to habitat destruction, fragmentation and degradation. My colleagues and I were not convinced. Then, soon after, an event occurred that not only clinched the argument, but changed forever the way we were to perceive, protect and manage our islands and their native plants and animals....

In March 1964 muttonbirders returning to Big South Cape reported that a rat plague was causing immense damage to property and wildlife - Ship rats (Rattus rattus) had reached their island and their numbers had erupted. This was the final and only refuge for such rarities as the South Island saddleback, NZ bush wren, Stewart Island bush snipe and greater short-tailed bat. My Wildlife Service colleagues and I were very concerned and anticipated an ecological disaster.

However, some of the most knowledgeable and respected biologists at that time genuinely believed the rats did not pose any urgent or significant threat to resident wildlife, and vigorously opposed any suggestion to intervene. They maintained that we should simply monitor the situation: “If we intervene we may change the ecology in a way that we cannot predict. We should intervene only after research has shown there is in fact a problem and trials have demonstrated that the intervention is safe and effective”!

Thanks to the tenacity of some senior Wildlife Service staff and Forest and Bird Protection Society personnel, we eventually succeeded in getting permission to mount a rescue mission, but by the time we reached Big South Cape (five months after the first reports) many land-bird populations had already been effectively destroyed. We were successful in saving the saddleback through transferring some of the remnants to two small neighbouring pest-free islands, but sadly, were too late to save the bush wren, snipe and bat – all of which were quickly exterminated along with an unknown number of invertebrate taxa.

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The tragedy of Big South Cape was a valuable and timely lesson for me, and other aspiring conservation workers and served to convince even the most sceptical that, unaided, rats are capable of inducing ecological collapse and extinction within naïve island faunas. We now know that globally, rats are responsible for countless extinctions and massive contractions in range of island endemics. It is possible to maintain the rodent-free status of biologically-important islands; to eradicate rats, and other aliens from even very large islands so as to restore ecological values and processes; and to reinstate predator-sensitive species. The New Zealand Department of Conservation eradicated rats from Big South Cape Island during the winter of 2006 - and fortuitously, the descendants of that last natural saddleback population are soon to be returned to their ancestral home!

I was hugely privileged to visit South Georgia last December as leader of a NZ ‘Wild Earth Travel’ group on ‘Clipper Adventurer’ and to briefly see first-hand the impact that rats are having upon your incredible wildlife. I was interested to learn for instance that your pipit has been exterminated by rats throughout most of its mainland range and is now in effect ‘a biological refugee in its own land!’ - confined to a few rat-free off-shore islands. The plight of the South Georgian pipit has an uncanny resemblance to that of our Campbell Island pipit (Anthus novaseelandiae aucklandicus) population: With the arrival of rats on main Campbell Island (11,300ha) in the early 1800’s the pipit, along with an endemic snipe, flightless duck and breeding populations of smaller seabirds, was quickly exterminated from the main island and confined to off-shore stacks and islets.

The pipit has been exterminated by rats throughout most of its mainland range and is now in effect “a biological refugee in its own land!”

Rats were eradicated by the NZ Department of Conservation in 2001, and during a visit in 2005 I was absolutely blown away to not only see the pipit, but by the numbers of pipits present. They had recolonised the main island and occupied virtually all suitable habitat. Furthermore, they appeared to be absolutely fearless of people.

When we stopped for a breather they would not only approach closely, but would as a matter of course enter our ‘personal space’ ie: perch on our boots or packs. Although not the most colourful of birds they certainly make up for it in other ways – they just ooze personality!

Together with other native animals and plants making a come-back on Campbell Island since removal of alien mammals, pipits are adored by the many tourists that now visit Campbell each summer.
I’ve no doubt that a similar spectacular response and enduring benefits will follow removal of rats from South Georgia.

Sponsor a Hectare!

SGHT has raised just enough to go ahead with Phase 1 of the Project. We now urgently require funding for Phase 2, allowing the remainder of South Georgia to be clear of killer rodent pests by the year 2015. We have a lot more to do to raise funds for Phase 2; a further £5m ($7.5m U.S.) is needed to complete the work.

To Make a Donation...

You can directly help return millions of seabirds to South Georgia, and restore the island’s native ecology, by joining the increasing number of donors who will make this all happen. Details are available on the South Georgia Heritage Trust website www.sght.org/projects.htm

Alternatively, donations will be gratefully accepted at the Museum in any currency, cheque or cash, and a receipt provided. The South Georgia Heritage Trust is a UK charity, so donations can be enhanced by the recovery of tax from UK tax-payers. US citizens can make tax deductible donations by downloading the form from the SGHT website at www.sght.org/usdonations.htm.

You can help us. Perhaps you’d like to get together with a group of friends and sponsor a Hectare or a square mile? What better gift could you give South Georgia?
SGHT will provide you with a donation certificate – perhaps you could even send it as a gift.

This is a huge project - by far the largest and most ambitious of its kind ever attempted. Its success will be built on the participation of experts from all over the world, and the financial support of hundreds of South Georgia enthusiasts - many of whom, unlike you, have not even been fortunate enough to visit the island.

If you would like to contribute a lasting legacy to South Georgia, please do sponsor the Project. Restoring a hectare (2 1/2 acres) of the island for evermore costs £90 ($140);
a square mile costs £23,000 or $36,000 – and we have a total of 80,000 hectares or 300 Square Miles to cover.

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