

PROJECT NEWS

Issue 20, March 2014



Of turbines and tracking tunnels

Tony Martin - Project Director

When you are a thousand miles from the nearest shop, and well beyond the range of even the most determined FedEx delivery driver (unless he has a long-range plane and a parachute), it pays to be prepared. The consequences of having machinery, let alone a helicopter or two, breaking down because parts have worn out and spares are not available, can be show-stopping. Preparation is everything.

And with an operation as complex as ours, involving so many different elements, there's an awful lot of preparation to be done. It's neither glamorous nor exciting, but it's as important to our success as dropping the bait itself. Mid-way as we are between the fieldwork of Phase 2 in 2013 and that of Phase 3 in 2015, preparation is what dominates our lives at the moment and, since this is our third experience of it, I hope and trust that we're getting quite good at it by now!

Since the helicopters are by far the most complex bits of machinery we use on South Georgia, and are of course vital both for our safety and mission success, it's not surprising that they feature very large in our planning and preparations. All three aircraft worked their socks off during the 2013 field campaign, and carried hundreds of heavy loads in often turbulent conditions, so wear and tear levels were high. For this reason, the engineers, led by Phase 2 stalwart Paul Wilkinson, have been giving the aircraft a top-to-bottom overhaul and are slowly rebuilding them from the set of components, large and small, which returned from South Georgia in shipping containers last year. The story of this process is on page 5 of this Newsletter.

Another major element of our preparation work is a monitoring expedition aboard the yacht *Pelagic Australis*, led by Deputy

Project Director Rob Webster. Rob described this operation in the December 2013 Newsletter (No.19). The voyage is underway as I write, and Rob has sent us an update via his satellite phone link on the vessel – see page 3 of this Newsletter. It is just one year since we baited the Phase 2 area, and that's too soon to be sure that the rats have all gone, even if Rob and his team find no evidence of any survivors. But the idea of the expedition is to investigate whether any of the 12 Baiting Zones we treated in 2013 show obvious signs of surviving rodents, allowing us to order additional bait for next season and re-treat any areas that need it. As you'll see from Rob's report, with about half of the areas checked so far, the news is definitely encouraging, though the team have had to fight their way through a lot of bad weather, even by South Georgia's extraordinary standards...



Just as encouraging as the lack of any sign of surviving rodents so far are the daily reports of pips, pintails and skuas. Although no

Of turbines & tracking tunnels (cont'd)

proof of pipit breeding was found on the South Georgia mainland in the summer just past, the sheer numbers of birds being seen by the survey team does suggest that chicks were raised without any human being aware of it. And that wouldn't be at all surprising, given what a tiny fraction of the coastline and suitable nesting habitat is visited each year. Singing males were observed in summer in at least three widely-spread sites, all of which had previously been treated for rats by our baiting team. Moreover, respected ornithologist and South Georgia addict Frank Todd reported that he saw what looked to be pipit breeding behaviour during a visit to the Bay of Isles earlier this year, so the omens are good. The bottle of fine champagne awaiting proof positive of pipits breeding on the main island remains on ice, however, and my bet is that it will be claimed next season, probably by several people!

Pintails and skuas are both vulnerable to dying as a result of eating bait pellets, so we have been anxiously awaiting reports of their abundance in the Phase 2 baiting zones one year after the bait was spread there. The news was again excellent, with both species seen frequently and in good numbers. This confirms the results of surveys carried out by British Antarctic Survey staff on Bird Island, just off the western tip of South Georgia. Here, less than a minute's flying time away from land we baited in May 2013, and home to a substantial proportion of South Georgia's pintails and skuas, numbers were as normal. So the news from all directions is extraordinarily good, and that is very encouraging indeed.

Support for the Project comes in many forms and from all corners of the world. Unsung heroes include the owners and crews of ships which transport equipment and sometimes personnel to or from South Georgia at no cost to us. On page 4, SGHT's CEO Alison

Neil highlights the incalculable assistance provided year after year by the fishing boat *San Aspiring* and its owners Sanford Limited, a New Zealand-based sustainable fishing company. Much of our equipment comes from New Zealand, and needs to go back there for servicing after each season. From the outset, Sanford Limited and their Vessel Manager Dean Jurasovich have been unstinting in their support, carrying gear large and small directly between New Zealand and South Georgia. Our grateful thanks to them, and to the operators of other vessels that have assisted, and continue to assist, our work in vital ways.

As ever, a successful conclusion to the next fieldwork Phase of the Project (in this case, the 3rd and final Phase) is dependent on two things – the work itself and the availability of sufficient funds to allow it to happen. We are now within striking distance of clearing invasive rodents from every nook and cranny of South Georgia, and everything is being put in place to finish the job next season. Our fund-raising team is working flat out to secure support from grant-awarding Trusts and Foundations, companies and other major donors to help us over the finishing line. But this final season of work, involving the removal of the very last rat from the island, now needs more help from you, too. Later in this Newsletter I explain why this globally important project is worthy of your support. Worthy not only for the sake of South Georgia's native wildlife, but because what we are achieving as a group of determined, dare I say visionary, people is already inspiring other non-governmental groups around the world to take action in their own part of the world. The impact of your donation will reach far beyond the shores of South Georgia. As a conservation bang for your hard-earned buck, this project is surely hard to beat!

Tony Martin



The dainty Wilson's storm petrel – a bird which has been almost banished from mainland South Georgia by rats. But this greenfinch-sized seabird will be among the pioneers regaining possession of the island by the million once all the rats have been vanquished with your help.

I am writing from the saloon of the yacht *Pelagic Australis*, after a long day on the north coast of South Georgia. We are currently transiting from Salisbury Plain, site of the second largest King Penguin colony on the Island, to Rosita Harbour, where we will anchor for the night. Our small team has now been working on and around South Georgia and the rat eradication's Phase 2 area for the last few weeks, as part of a major effort of monitoring to check the effectiveness of last year's baiting fieldwork. The weather has been mixed, to say the least, and has included copious wind and rain, with additional hail, graupel, snow, and sun. However, by using a yacht as capable as *Pelagic Australis*, landings have been possible in conditions that helicopters could have no hope of working in last year! Many thanks must go to the crew of the yacht who have assisted us tirelessly and cheerfully up to this point.

The work is split roughly in two halves of a fortnight each, plus travelling time between the Falklands and South Georgia. The period from the 10th to the 23rd of March can be described as the deployment phase – we visited as many coastal sites as possible in the baiting zones from Cumberland Bay to the Nunez Peninsula, spending several hours ashore with our team of seven at each site. We have been systematically planting chewsticks, chewboards, wax tags, tracking tunnels, and automatic camera traps throughout. The first three of these are very basic but proven methods of detecting rodent presence – in essence they are things which are designed to tempt rats and mice to chew on them, thus leaving evidence of their teeth marks in plastic, wood, or wax. The tracking tunnels are designed to transfer ink onto the feet of any rodents passing through, then transferring their footprints to an adjacent white section of card, thus recording them. We have a small number of the automatic cameras to add a high-tech element to the strategy. After visiting 17 sites and deploying over a thousand devices, we spent a few days in King Edward Cove, the yacht tied up to the wharf at Grytviken.

Having had a couple of days of relaxation and re-organising of equipment onboard the yacht, we have again headed out to cover the same sites again – this part of the trip is crucially important to the whole South Georgia rodent eradication effort – it will give us an early indication, albeit imperfect, of the success or otherwise of the strategy in the Phase 2 areas baited last year. This information will be fed back in to the planning process for the next and (hopefully) final tranche of fieldwork, planned for a year's time.



South Georgia Webcam2

(Live picture from South Georgia - new image uploaded every 3 minutes.)

Next [refresh](#) in 130 seconds



The survey team leaves King Edward Cove aboard Pelagic Australis on Sunday, March 23rd to start its second sweep of the Phase 2 baiting areas. This photo was fortuitously captured by one of the King Edward Point Webcams (www.sqjland.gs). Note the damp conditions!

As I write, the team has revisited four sites – Fortuna Bay, Prince Olav Whaling Station, Blue Whale Cove, and Salisbury Plain. We have checked all of our devices and have not found any evidence of rat presence. This is terrific news, and very heartening. A healthy number of birds adversely affected by rat presence has also been seen – an excellent example being frequent sightings of pipits. But we are proceeding with caution and must not be complacent. After all, this project is significantly larger than its predecessors, and to be successful in every baited area at the first attempt would not be far short of miraculous. If the weather is kind, then the team should complete its work and be able to report on findings by the middle of April. So fingers crossed there will be some very positive news to deliver in the next newsletter.

STOP PRESS (Tony writes)

I have just heard from Rob and his team, following a really great day's work on March 29th. On this day they got back into both of the baiting zones that were previously mouse-ridden, and Rob excitedly told me that all of the detection devices they put out – LOTS of them – were free of rodent sign. Since writing the text for this article, the team has also visited Rosita Bay and Wilson Harbour, and those areas were also apparently free of rodents (they both had rats previously, and Rosita was riddled with them last year when we camped there). Rob also told me that yesterday was a complete wash-out, with appalling weather. No-one got any sleep the previous night because the wind was so fierce that the anchor dragged, and they were forced to leave the anchorage during the storm. Not for the faint-hearted is South Georgia in late March, long after all sensible visitors have left for home!

The *San Aspiring* sails again

Alison Neil, Chief Executive SGHT



The San Aspiring sails past the stunning Drygalski Glacier

The fishing vessel *San Aspiring* is one of the unsung heroes of the Habitat Restoration project. Since Phase 1, thanks to its owners Sanford Limited, a New-Zealand based sustainable fishing company, it has transported vital project equipment to and from New Zealand to South Georgia free of charge.

Many of the leading experts in island eradications are Kiwis (including our Chief Pilot Peter Garden), so it's unsurprising that some of the key technical pieces of equipment, like the mapping software and hardware, are also sourced from New Zealand. Shipping the equipment commercially would be very expensive, so we are lucky that the *San Aspiring* helps out whenever it can.

In the first week of March the *San Aspiring* delivered a mended bait hopper from the Phase 2 fieldwork to King Edward Point, ready for the hoped-for return of Team Rat to the field in early 2015. The *San Aspiring* is currently doing research work in the South Sandwich Islands area, and its crew will not return to New Zealand for several months.

A big thank you to Dean, the vessel manager, all the crew of the *San Aspiring*, and to those at Sanford for their part in supporting the South Georgia Habitat Restoration Project.



San Aspiring in Drygalski Fjord, 150 metres deep

Refurbishing the helicopters

Tony Martin

Regular readers of Project News will remember that last year's fieldwork on South Georgia was completed at the last possible moment – in fact winter had arrived! One consequence of this was that all hope of hitching a lift back to the Falklands on a ship with a helideck had long since disappeared, so we had to dismantle all three helicopters and squeeze them into shipping containers for the long ride home.

As announced in the last issue, the aircraft are now enjoying life in a warm and spacious hangar at Oxford Airport, courtesy of A2BAero, our new maintenance providers. But not everything has changed. We are delighted that Phase 2 engineer Paul Wilkinson has remained with the Project and is now rebuilding and refurbishing the helicopters with help from others as he needs.

The aircraft worked exceedingly hard last season, between them flying 600 hours and lifting and carrying over 600 tonnes of supplies and equipment, often over many miles of glacier-draped mountains and in turbulent conditions. It is not surprising, therefore, that these vintage but oh-so-reliable aircraft need a thorough inspection and overhaul before being sent south again at the end of the year. Every nut, bolt, washer, retaining clip, split pin, bulb, connection rod, rotor blade and much else must be thoroughly checked and tested before each machine can be once more certified as airworthy. The cost of all this is absolutely eye-watering - for example £20,000 just to have one of the six turbines inspected and refurbished. But safety has no price, and when you consider what work these aircraft achieve during each hour aloft, they represent the most amazing value for money. There is simply no other way in which we can reach and snuff out every last rat on South Georgia, whether it lives on a mountain top or somewhere along the 1000+ kilometres of coastline, and return ownership of its territory once more to the island's native wildlife.

The tail booms had to be removed to allow the helicopters to fit inside a 20-foot shipping container, and when I last saw the aircraft they were still forlornly tail-less (see page 1 photo). In the photos sent a couple of days ago by Paul (below) you will see that chassis and tail sections have been re-united. To ensure that the right pieces of the jigsaw are fitted to the right aircraft, each has its own 'bay' in the hangar, with everything neatly laid out around it. And this is no scruffy garage. The floor is spotlessly clean, and a drop of oil spilt on it sends someone rushing for a cloth. You, could, quite literally, eat your dinner off this floor!



Paul (above) and colleague Ollie refurbishing two of the SGHT helicopters. These older-style aircraft are liked by engineers because, as with older cars, they are less complex and often easier to fix if something does go wrong!

Not only are the helicopters too long to fit into a shipping container (we re-use the ones that originally came from the States with the bait), but they are also too tall. This calls for drastic measures, and requires the removal of the gearbox, the rotor assembly, the mast (the vertical metal tube which holds the aircraft in the air!) and the undercarriage. The engineers constructed some cunning 'artificial legs' to replace the cross-members and skids, and these allow the chassis to be lowered just enough for the airframe to be slid, ever-so-carefully, into a container with just a few centimetres to spare.

Running the SGHT contract for A2BAero is Andy Bloxham, the company's Director. Andy was very keen to attract the SGHT fleet to his newly renovated premises at Oxford, and has proven to be a very capable and competent partner for the Trust. Andy has been assisting and advising me on a number of fleet management issues, and I very much welcome his expert and practical approach to some complex matters. Like our can-do pilots, Andy is not a person to be defeated by anything, and with him and his staff on our side, I know that everything will be ready and raring to go by the time the three helicopters need to leave Oxford to begin their long and tortuous passage to South Georgia later this year.



It's now or never

I first saw the jaw-dropping beauty of South Georgia nearly twenty years ago. Like all of us fortunate enough to visit this magical place, I will evermore retain many memories of that first visit – the forbidding cliffs, the gleaming glaciers, the raucous penguin colonies that stretched into the hazy distance. But for me the lasting impression was ironically one of sadness. I spent time on rat-free islands which come alive at night with the cacophony of myriad petrels, prions and storm-petrels, ghosting in and out of my head torch beam like moths, and during the day are graced by pipit song. And I also lived on the South Georgia mainland, which was eerily silent at night and bereft of pipits during the day. I learned that the silence was due to the presence of rats – millions of rats – which had been unwittingly introduced by sealers and whalers centuries earlier, and had chomped their way through most of the wildlife. The naturalist in me cried at the tragic loss of stunning birds, while the zoologist in me raged at the devastation of a globally important seabird ecosystem and Man's apparent inability to do anything about this tragic mess. Enquiries on getting back to the UK left me in no doubt that eradicating the rats on South Georgia was simply impossible. The island was too big, too remote and too mountainous for anything of the sort to have any hope of success.

If anyone had suggested at the time that, less than two decades later, I would be leading a project that was within a single fieldwork season of removing the last rat from South Georgia, I would have thought they were delusional at best. Nevertheless, and sometimes I have to pinch myself to believe it, that is where we stand. Through the efforts and vision of thousands of people, many of them reading these words, South Georgia stands on the brink of a new beginning – a future full of life and song and activity, as its native inhabitants reclaim their ancestral home. The impossible dream is now but a season away.

Everything is on track for a final season of fieldwork in early 2015 and, with the experience of two previous seasons under our belt,

we are confident of achieving success. The only question – but it is a big one of course – is whether we can raise the necessary cash in time. The fund-raising team is working hard and productively, but indications are that we will not quite reach our target by the time a decision to proceed must be made. To be stopped so tantalisingly close to the finishing line would be unthinkable, so we are pulling out every stop to find the necessary extra funds to get us underway next year. Will you please help us to achieve this goal?

I know that most people reading these words have already donated to the cause, and I hope you'll agree that we have put your money to really good use – the island's native wildlife is already responding to its new-found freedom in the areas we've treated. I am now asking that you help us over the finishing line with another gift, large or small. With your help, the eerily quiet empty spaces on South Georgia will once more be filled with millions of birds returning to their nests. Pipit song will again fill the air during the long summer days. The island will be restored to its former glory, and all this in the space of just a few years, thanks to the combined efforts of you and others with a similar passion to make a real difference.

This is a legacy which is already inspiring others to follow suit. If the supporters of a small UK charity and an equally small American Foundation have the vision and audacity to take on a challenge of this size, and can achieve success on a scale greater than any Government in the world, then surely they can do something similar. What we are achieving on South

Georgia acts as a beacon of hope for the wildlife of many other rodent-infested islands around the world and the people who care about it. That's something of which we can be immensely proud.

With my thanks and best wishes,

Tony



Not far to go now...



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Thank you!

