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TEAM RAT SCORES ANOTHER VICTORY



Keeping SGHT's three veteran helicopters airworthy was vital to the success of the project.

PHOTOS BY
ROLAND GOCKEL

Winds, known as the Furious Fifties, are common on South Georgia Island, which is located at 54 degrees south. Funneling out of the Strait of Magellan, these winds, along with deep depressions spiraling up off the Antarctic Continent, wreak havoc with weather patterns on this sub-Antarctic island, yet not enough to stop Team Rat.

For nearly four months, the 25 international members of Team Rat, consisting of four helicopter pilots, two engineers, three chefs, two doctors and highly skilled field staff, endured snow, winds and temperatures of minus 14° C (6°F) to eradicate millions of rats and mice

from this important seabird sanctuary.

Right down to the final hours of baiting, they experienced touch-and-go conditions brought on by the worst weather in a decade. With four remaining pods of bait left to spread and nightfall fast approaching, the team finally got a break when a thin cloud causing dangerous icing conditions moved on, allowing them to successfully complete Phase 2 of the South Georgia Habitat Restoration Project, baiting a total of 580 sq km (226 sq. mi.) of the island.

A Mammoth Task by All Accounts

“This has been a mammoth task both in

terms of the area required to be completed and the weather conditions encountered,” noted Peter Garden, one of three helicopters pilots who, together, logged more than 600 flying hours and over 1,000 flights to spread nearly 200 tonnes of Bell Laboratories’ pelleted bait across this rugged, glacial landscape.

Led by Tony Martin, Project Director of the South Georgia Heritage Trust and Professor from the University of Dundee, Scotland, the project has now baited 70 percent of the island’s rat-infested areas, five times larger than any island rodent eradication project to date.

In the 2011 Phase 1 trial, project staff spread

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“...THROUGH GREAT TEAM-
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– TONY MARTIN

58 tonnes of bait over 128 sq km (49 sq. mi.), an area now believed to be rat-free for the first time in nearly two centuries, when rats first arrived on the island aboard ships of early whalers and sealers.

By eradicating invasive rats and mice, the £7.5 million project of the South Georgia Heritage Trust aims to restore this UK Overseas Territory to its original status as one of the world's greatest seabird sanctuaries.

South Georgia is home to many birds feeding in the South Atlantic. Today, 29 species of birds breed on the island. However, with no trees on the island, birds rest and nest on the ground where their eggs and chicks are easy prey for rats. The native South Georgia pipit was driven to near extinction by rats, while populations of petrels, terns, shags and other nesting seabirds were greatly reduced by rat predation.

For now, rat colonies are kept separate by the island's glaciers, but as they retreat, rats could co-mingle making eradication impossible.

Teamwork Overcomes Weather Challenges

Nearly 21 months in preparation, Phase 2 of the project pitted Team Rat against every challenge the island could throw its way.

In early February, facing blizzards, gale-force

winds, and low clouds and fog, which often made flying impossible, the team worked round-the-clock to transport 800 loads of fuel, bait, equipment and food from the British Antarctic Survey's logistics ship, the RRS Ernest Shackleton, to the separate forward operating bases.

Often the flight crew flew in frigid temperatures at 1,500 feet without a door so they could watch the bait drop. Even spreader bucket controls froze up. But, with support from field staff whose expertise ranged from GPS and data management to meteorology and polar logistics, the job was completed with the last bait spread on May 18 as winter set in.

“We battled against the odds with the weather, our biggest enemy, but through great team-work and planning we managed to meet our target,” Martin told reporters at a news conference in July on his return from South Georgia.

With baiting completed, the team decommissioned their camps/loading sites, flew a final pass over the sites with a strong magnet to pick up any metallic objects, and then dismantled the helicopters for shipping back to the UK for maintenance before the final push in 2015 when, funds permitting, the rest of the island's rat infested areas will be baited. ■



Top: Individuals handbaited four abandoned whaling stations where thousands of rats live in rusty, dilapidated remnants of former whaling days.

Middle: Some members of Team Rat slept in tents, despite snow and freezing temperatures.

Bottom: Night photo of a rat picking up Bell's pelleted brodifacoum bait.



Photos courtesy of Island Conservation

Young Giant Tortoises REPATRIATED TO PINZÓN ISLAND

Early on the morning of July 10, 2013, eleven rangers from the Galápagos National Park Service left the tortoise rearing center on the island of Santa Cruz and travelled three hours by park boat to the craggy shores of Pinzón Island.

From there, they hiked two and a half hours, carrying their precious cargo in day packs, to the highlands of this 1,830 ha island. Near the island's central crater, good tortoise habitat with ample vegetation, they released 118 juvenile giant tortoises, the first repatriated to Pinzón since 20 tonnes of Bell Laboratories' pelleted conservation bait were aerially applied in November 2012 to rid the island of destructive black rats.

"As many as 70 to 80 percent of repatriated tortoises are expected to survive once released at this age," noted Karl Campbell, senior program director for Island Conservation, one of the partners, along with Bell, in the Galápagos Restoration Project.

Pinzón's repatriated tortoises are collected as eggs in the final stages of incubation or as hatchlings still in the nest and taken to the tortoise breeding center where they grow to "rat-proof" size – usually three to four years of age, weighing a few pounds and about the size of a side plate.

"At that age, they are past the life-stage that represents the period with the highest mortality in wild animals," Campbell pointed out.

Plight of the Giant Tortoises

Except for the endemic rice rat, giant tor-

toises have suffered the most from invasive species, such as rats.

Non-native black rats, introduced to the Galápagos Islands some 150 years ago, have preyed on tortoise eggs and young hatchlings to the point where natural recruitment into the tortoise population was zero.



In 1959, when the Galápagos National Park Service and the Charles Darwin Foundation were established, only 11 of the original tortoise populations remained and most were near extinction. Only the fact that tortoises are long-lived saved them from extinction.

In 1965, prompted by the dire conditions of the remaining 200 old tortoises on Pinzón Island, park officials relocated 20 tortoise eggs to a newly created tortoise rearing center in Puerto Ayora. The hatchlings were reared until they were strong enough to fend for themselves against rats. By 1970, the first 20 tortoises, by then sufficiently "rat-proofed," were repatriated to Pinzón.

Since then, with the ongoing success of the park's tortoise breeding and rearing program, 783 juvenile tortoises have been repatriated to

Pinzón. A second facility, the Arnald Tupiza Tortoise Center on Isabel Island, has repatriated 1,000 giant tortoises including 150 six-year-old tortoises released in April, 2013.

"Pinzón can support many more tortoises than are present," Campbell noted, adding that the population will take time to recover from the impact of rodents.

"One of the primary reasons for the rodent eradication on Pinzón was to allow a self-sustaining population of tortoises to once again thrive on the island," he added.



Along with captive breeding and repatriation of endemic species to prevent their extinction, conservationists are restoring the ecosystem on the Galápagos Islands by eliminating invasive species, such as rats, mice, feral pigs and goats, which are a major threat to the biodiversity of the Galapagos.

In addition to the bait drop on Pinzón in 2012 to eradicate rats, 490 lb. (223kg) of Bell's conservation bait was applied to the

Photos clockwise: Pinzón lava lizard; Pinzón Island, Galápagos; Juvenile Pinzón Giant Tortoise; Park rangers releasing young repatriated Pinzón Giant Tortoises to their homeland; GIS specialists review data during rat eradication

Frosch - second hired, now retired

In 1974, Danny Frosch, a 20-year old Vietnam veteran recently discharged from the U.S. Navy, took a job as a packer for a start-up company whose owner, Malcolm Stack, manufactured a rodent control product called Rodent Cake.

For the next 39 years, Frosch, the second employee hired at Bell Laboratories, contributed his hard work and talents to make the company the world leader in manufacturing rodent control products.

At the end of July, the third-shift supervisor, who over the years ran nearly every machine in the plant and witnessed “amazing changes at Bell,” retired.

“It was a lot different then,” recounts Frosch of the days when he was one of two employees. “The number of people working here, the automation, and the number of products we make compared to the two when I first started working with the company. It’s unbelievable.”

Linda Hughes, Stack’s daughter and current owner of Bell, said Frosch was the go-to guy when machinery needed fixing or quick product turnaround was needed.

“Danny was wiry, nimble and had great hand-eye coordination,” Hughes recalled. “I remember how good he was making place pacs in the early days. It was not



mechanized and he had to control the flow of pellets into the pac and seal it with a knee pedal. He could turn out product four times faster than anyone else. His knowledge and commitment to Bell are unmatched.”

Frosch feels similarly about his co-workers at Bell. When asked what he’d like to tell Bell customers, Frosch was quick in his response, “The quality of the people at Bell. From top to bottom they are always looking to improve and to meet the demands of our customers,” he said. “There is no other company like it.”

“Everyone at Bell wishes Danny the best in his retirement,” Hughes added. ■

Use pesticides safely. Always read the label. Follow the Alliance Code of Practice for glue boards in the U.K.

Pinzón *Tortoises* from page 3

smaller Plaza Sur. A similar operation was conducted in 2011 on smaller islands, including the island of Rábida which the Galápagos National Park, after thorough searches, has now declared free of rats.

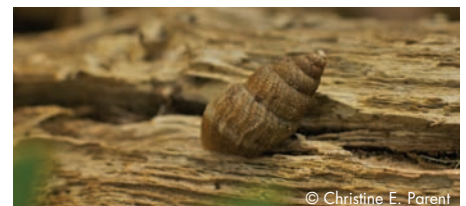
Biologist Re-discovers Rábida Land Snail

Early signs of recovery after the eradication of invasive rats are promising. Rather than reporting on species extinctions, the majority of which occur on islands, scientists are finding the first promising signs of ecological recovery.

Christine E. Parent, a biologist at the University of California-Berkeley, for example, while scaling the dusty slopes of Rábida Island a year after the aerial baiting, re-discovered the Rábida land snail, once thought to be extinct.

“With the removal of introduced rats on Rábida and other islands, endemic land snail populations are expected to grow and recover from past predation pressure,” Parent noted.

The next island slated for baiting in 2014 will be Floreana, the first island inhabited by people and the largest in the Galápagos Archipelago to undergo rat eradication. ■



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