



Will Whittington and John Tayton preparing bait for boulder field.

test any wandering intruders which would then be targeted by an incursion response. Biosecurity best-practice approaches will be developed as part of this project in accordance with U.K. legislation and environmental considerations.

The work on the Shiant Isles is also intended to develop expertise in the UK for both island restorations and implementation of biosecurity protocols. The RSPB aim to develop these over coming years to secure a better future for all of the UK's seabird islands.

Interim Project Manager, Tom Churchyard said "this project is really our proving ground. Our work here is testing our logistical ability,

pushing the boundaries on what RSPB have previously been comfortable doing. Alongside other work in the UK, such as the excellent Isles of Scilly Seabird Recovery Project, we hope this work will give us the skills to protect and restore seabird islands around our diverse coastline."

In two years, the SIRP team hopes for a successful eradication and a "rat-free" declaration to ensure the safety for thousands of seabirds for generations to come.

For more information about the Shiant Isles Recovery Project visit www.rspb.org.uk/shiantslife ■

Corporate video now available with new translations

The well-received corporate video that details the manufacturing, research & development, and operations behind Bell's rodent control products, is now debuting in five new languages.

With subtitles translated into French, Spanish, German, Italian and Greek – customers around the world can learn more about the day-to-day operations at Bell's headquarters.

Contact your Bell Representative for more information about viewing the videos.



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THE BELL REPORT

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Photo Credit: Jack Ibbotson, WMIL

Eradicating rodents, be it in any environment, is a challenging job. Now imagine a scenario in which you need to eliminate more than 3,600 black rats (Roof Rats, *Rattus rattus*), over the course of a blistery winter on remote and uninhabited islands off the coast of Scotland.

The only way to get there is sailing through rough waters. With no harbour on the isles, you need to lug heavy equipment (18kg pails of bait, bait stations, food and more!) over an undulating landscape of slippery rocks and seaweed. Finally, baiting takes place along rugged terrains and jagged cliffs, which means harnessing into a makeshift ropes course and scaling across the rock face with bait in tow.

This synopsis was the actual job description for the team members of the Shiant Isles Recovery Project. Their mission is to remove invasive black rats from the isles in order to protect the cherished seabirds that breed there every year.

The Shiant Isles Recovery Project (SIRP) is a partnership between RSPB Scotland, Scot-

tish Natural Heritage and the Nicolson Family; it is funded by EU LIFE+ Nature LIFE13 NAT/UK/000209. The eradication of black rats is being led by Wildlife Management International Ltd with the support of Engebrets and Sea Harris Ltd.

The Enchanted Isles

The Shiant name derives from a Gaelic term meaning "holy" or "enchanted". A befitting name for the moss-soaked isles, an emerald jewel rising from the sea on the Scottish horizon. As a designated Special Protection Area (SPA), the Shiant is one of the most important seabird breeding sites in Europe.

During the peak summer breeding season, thousands of seabird species inhabit the island including more than 65,000 pairs of puffins and tens of thousands of guillemots, razorbills and shags, amongst other species. This prolific nesting means an abundance of food for black

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Right: Tom Churchyard (RSPB) accessing bait stations on the cliffs





Team briefing prior to baiting.

rats, whose summer population is estimated to be as high as 30,000.

Rodents are one of the most serious threats to the seabird species. They prey on the eggs and hatchlings of birds while threatening fauna and native flora. Between 2000 and 2013 it was reported that 10 of the 16 monitored Scottish seabird colonies suffered from significant declines, due in part to predation by invasive species.

The black rat is thought to have invaded the Shiant Isles from a shipwreck dating back to the 18th century. Many believe the isles are the only remaining home to black rats throughout the UK, driven out by their more aggressive and larger counterparts, the brown rat (Norway rat, *Rattus Norvegicus*). Recent National Biodiversity Network data shows, however, black rat populations around the U.K, particularly in ports and port towns.

Conserving the sanctity of such important breeding grounds was the catalyst behind the SIRP's determination to take on the project. Removing the rodents ensures the safety to the breeding seabirds, returning the isles to their "enchanted" epithet.

"By eradicating the invasive rat population on the Shiant Isles, the project aims to increase the resilience of seabirds and help to reverse population declines," said Elizabeth "Biz" Bell, senior ecologist with family-owned Wildlife Management International (WMIL) of New Zealand, who set up the project's rat removal program. "In the absence of rats, struggling seabirds will have safe breeding sites on the

Shiant Isles which will allow the recovery and restoration of the island's existing colonies."

A Triple Threat

The SIRP team needed rodent control products that not only performed well, but also prove time and again to be reliable. Rodenticide that was palatable, effective and resistant to mould and mildew in the ubiquitously soggy region of Northwest Scotland was of utmost importance. Bait stations and traps designed to withstand the harshest of elements and keep non-targets out, was of course a top priority as well. So, the team turned to Bell's Contrac® Blox, Protecta® Bait Station and Trapper® T-Rex® Rat Snap Traps – a triple-threat in rodent elimination.

With product in hand, the next challenge was laying out a plan of attack. How do you bait a boulder field laid at a 90-degree angle, a cliff or a shoreline, all while ensuring no risk to non-target species?

First tactic, the team planned the baiting and eradication phase to take place during the winter of 2015-2016, when populations (both rats and seabirds) were at their lowest levels.

Next step was determining bait placement. The team began by placing canes across the islands to establish a bait station grid. Tube bait stations were placed at each marker, with Protecta stations employed in the toughest terrain. The climbing team also established routes along the island for bait placement along the shoreline cliffs.

Eight blocks of Contrac Blox were placed in

each station, and 150 T-Rex Snap Traps were used in the pre-assessment phase for resistance sampling and collecting specimens. It took 1,100 bait stations (including 250 Protecta stations) and 4 tonnes (4,000kg) of bait for the project alone.

"After the initial baiting, results were encouraging with large amount of bait take along the coastlines and boulder fields," said Bell.

The team took several steps to ensure bait take was up-to-standards. They set trail cameras up to record rats eating bait. Flavourful, non-toxic wax blocks placed between bait stations served as a monitoring device to pinpoint any bait-shy or trap-shy rodents.

The team also recorded chew marks on the wax-blocks to determine which smells and flavours enticed rodents the most, to later employ during monitoring stages.

The Road Ahead

With the eradication stage now complete, the second stage of the project begins, encouraging seabird species to breed on the isles.

"From spring 2016 Manx shearwaters and Storm petrels will be encouraged to nest on the Shiant Isles, and their expected recovery will be monitored," said Bell. One method of encouragement – the team will use loudspeaker systems to broadcast birdcalls to assure migrating seabirds that the isles are now a safe refuge.

Biosecurity measures will also be developed to reduce any risk of re-infestation. Permanent stations will be placed around the islands to de-

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HIGHLIGHTS FROM 2016 PEST-PROTECT GERMANY

In early March, Bell's European team gathered in Stuttgart, Germany to participate in the first Pest-Protect exhibition. With more than 100 exhibitors and a steady stream of attendees, the show was Europe's largest pest control exhibition to date.

The busy exhibition hall, with a continuous flood of visitors to the booth, was the perfect venue to discuss new products and label updates. The EMEA team also unveiled new German product catalogues and corporate video with German subtitles. The video played on a loop to give showgoers an opportunity to experience Bell's manufacturing expertise, all the way in Germany.■



Left to right: Bell's Arnaud Del Valle, Brady Hudson, Tino Panetta and Martin Kuffel
Photo Credit: Pest Magazine
www.pestmagazine.co.uk

Personnel News Bell Promotes Westover



Mark Westover

Former Vice President of Sales and Business Development, Mark Westover, has been promoted to Chief Operating Officer for Bell. In his new role, he will be providing strategic guidance and leadership, overseeing Research & Development, Operations and Customer Service.■



Photo Credit: Nick Tomalin

FINAL CHECKS ON THE ISLES OF SCILLY

Final checks are underway on the Isles of Scilly before it can officially be deemed "rat-free".



Manx Shearwater Chick

Not too far from the Shiant Isles, other members of the Seabird Recovery Project are currently working as detectives in the search for any remaining signs of Norway Rats (Brown Rats) off the Cornish coast in the Isles of Scilly archipelago in England.

The project began in 2013, when a study revealed that rodents were threatening rare bird species including the Manx shearwater and Storm petrel. Wildlife Management International Ltd. with a team of more than 30 volunteers turned to Bell's Contrac® and Protecta® bait stations with the hopes of ridding the islands of rats for good.

The rat-removal phase was completed in the winter of 2013/2014. Staff members, along with six or eight volunteers, distributed 3,000 kg of Contrac® Blox, donated by Bell Laboratories, across the island in more than 1,000 bait stations. During the first few weeks of baiting, they checked stations daily, recorded bait take and refilled stations. Bell's Trapper T-Rex® Snap Traps were also used during the early stages in order to take the population down quickly.

As bait-take subsided, the project moved onto the monitoring stage - the most important aspect to the rat removal program. The detection tools of choice were chocolate, coconut and peanut butter non-toxic wax blocks. While designed to attract rodents, the hope of the team is that their efforts to eliminate the population prove successful, and the only nibbles come from the occasional cow, powerless to the lures of chocolate.

Some initial findings by the team point to a job well done. Six adult Storm petrels were recorded nesting and 28 Manx shearwater chicks have also been recorded in the areas

previously overrun by rats.

"Up until last year the only place they nested successfully was on a few outer rocks and islands in the Isles of Scilly. So following the removal of rats; the benefits of island restoration for these tiny sparrow sized seabirds is clear," said Jaclyn Pearson, Isles of Scilly Seabird Recovery Project Manager.

When can the Isles of Scilly be declared "rat free"? Under international convention, it means a two-year period since the last sign of rats. With the team hoping for such an outcome, the focus will turn to preventing re-infestation.

"Biosecurity protocols have been established in order to reduce the risk, and this information has been relayed to all residents," said Pearson. "We want to ensure they are aware of the rat-free status and ways they can assist in keeping it that way."

With the removal of brown rats from the Isles of Scilly, the project team hopes these same techniques and solutions can be used to rid invasive rodents from other inhabited islands around the world.■

With the Isles of Scilly Project, even the schoolchildren were involved in monitoring; checking non-toxic wax blocks for any signs of rodent chew marks. With such a community focus, the hope is re-infestation will be minimized.

