

THE Bell Report



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FROM THE FIELD

New Zealand wildlife conservationists apply ingenuity & **DITRAC**® to rid island of rats

Rappelling down the rugged 600-foot basalt cliffs of Canna Island, some 26 miles off the west coast of Scotland, Elizabeth Bell carefully wedges a bait station made of 30-inch long PVC piping into the cliff edge.



Scaling the 600-foot cliffs of Canna Island to lay bait is all in a day's work as the WMIL team rids the island of rats.

Anchoring the station with holding wires, she fills it with Bell Laboratories' DITRAC Blox, tugs the station to make sure it's secure and then drops further down to repeat the procedure.

Elsewhere on this tiny island which measures 4.5 miles long and one mile wide, her teammates from

Wildlife Management International, Ltd. (WMIL), a New Zealand company that specializes in island/species management, position similar bait stations every 325 feet on the island's exposed plateau and every 165 feet along the slopes, coastal areas and elsewhere.

Their work, commissioned by the National Trust for Scotland (NTS) which owns the island, is challenging but the payoff is big – restoring the rapidly dwindling seabird nesting colonies on the island by eliminating their main predator, Norway rats.

2005 - Worst Seabird Breeding Season Yet

Canna Island in the Inner Hebrides is one of Scotland's 48 Special Protection Areas for seabirds. Some 5.6 million seabirds, roughly a third of all seabirds in Europe, are found in Scotland with nearly one fifth of them breeding on NTS properties.

Once a sanctuary for breeding puffins, kittiwakes, razorbills and other seabirds, Canna has experienced drastic declines in both breeding seabird populations and the number of chicks reared in the past decade.

In 2005, the worst breeding season ever, the cormorant population on Canna, for example, once one of Europe's largest, had dropped to an alarmingly low 327 occupied nests.

Upsets in nature are usually the result of a complex set of interrelated factors. On the narrow cliff ledges of Canna, exposed nests are vulnerable to attack from gulls and ravens. But, the biggest threat came from Norway rats, first introduced to the island by ferry traffic a century or two ago.



Elizabeth "Biz" Bell places bait stations along the slopes.

Continued on page 3



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Bell's new **Rodent Rid**[®] controls outdoor pests

Bell Laboratories rang in the New Year with the introduction of its newest pesticide to control outdoor pests: RODENT RID.

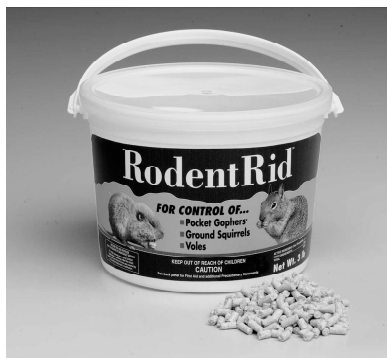
Developed to control voles, pocket gophers and ground squirrels, RODENT RID has a broad label for use on lawns, golf courses, parks, ornamental and non-bearing fruit tree plantations, nurseries and other non-crop areas.

Fast-Acting Bait - Within 24 Hours

A restricted-use pesticide, RODENT RID contains 2% zinc phosphide formulated with human food-grade ingredients for a highly palatable bait that competes well with food in the animals' natural environment.

Depending upon the location, the bait can be either broadcast or hand applied. Once consumed, the bait acts quickly, killing pests in as little as 24 hours.

RODENT RID is similar to Bell's ZP Rodent Bait AG which has a broad use label for large operations outdoors and is only available in 50 lb. bags.



RODENT RID in convenient 3-lb. pails controls voles, pocket gophers and ground squirrels.

RODENT RID, on the other hand, was developed for smaller applications on a select number of outdoor pests.

For convenience, RODENT RID comes in a sturdy 3-lb. pail that is easy-to-carry and reseals tightly to

keep bait fresh and free from odor contamination in storage or service vehicles.

For more information on RODENT RID or to download its Material Safety Data Sheet (MSDS) or specimen label, visit Bell's website at www.belllabs.com ■

Other Product News..

In January, Bell also launched FINAL Blox with brodifacoum in New Zealand, now the strongest single-feeding anticoagulant on the New Zealand market and the only bait approved there for use along perimeter fencing outdoors. ■

TRAPPER T-Rex[®] aids in collecting info on island rats

Bell's TRAPPER T-Rex Rat Traps proved a useful tool in the Canna Seabird Recovery Project.

Set out in the early weeks of the project, the rat traps helped the WMIL team confirm the rat species involved and provided relevant information on breeding status, feeding preferences from stomach contents, and parasite loading.

The team placed traps around the farm buildings and settlement occupied by the island's 13 inhabitants, as well as along the coastal road. Chicken runs were also targeted though the chickens had been removed from the island earlier. A building site for construction workers and food storage areas had traps, too.

"The T-Rex traps had been recommended by colleagues in New Zealand for their ease of use, construction and

fewer captures of non-targets," noted WMIL team leader, Elizabeth Bell. "After using the Bell Labs' similar mouse traps, I was very interested in trialing them as I knew they were easier to handle for less-experienced trappers."

She reported that rats had no problem approaching or entering the traps. Nearly 70 rats were captured.

"There was no trap shyness observed and we used them up until early November when the bait arrived," Bell added.

Additional traps will be used for long-term monitoring. ■



Canna Island - from page 1

With milder winters in recent years, the island's rat population had exploded. In spring and summer, when the adult burrow nesting seabirds returned to breed, rats preyed on their chicks and eggs.



Canna Seabird Recovery Project

As conservator of Scotland's largest seabird colonies, the National Trust for Scotland responded in 2005 with the three-year Canna Seabird Recovery Project, hiring WMIL to eradicate the rats on Canna.

WMIL, founded in 1992 by Brian Bell who worked for 30 years on island restoration and preservation of endangered species for the New Zealand Wildlife Service, assessed Canna for factors such as non-target species, secondary impact possibilities, terrain, presence of residents, farms, waste management quarantine, rat species, and toxin before devising a rat eradication strategy.

Their plan, based on methods they developed in New Zealand for eradicating Norway rats from islands the size and terrain of Canna, called for this baiting strategy:

- The WMIL team would set up a grid of 4,000-plus PVC tube bait stations across the island.

- Canna and nearby Sanday Island would be baited during the winter from September, 2005 through March, 2006 when there are

no alternative food sources for rats, such as breeding birds and vegetative growth. Rats are more likely to accept bait then.

With rats removed the first winter, the team would focus on long-term monitoring the next two winters, and bait, as needed.

"This approach was successful on Ramsey Island in Wales and Lundy Island in the UK recently," noted Elizabeth Bell, WMIL senior biologist who is supervising the work.

For bait, Bell Laboratories' UK Regional Manager, Will Golland, suggested DITRAC Blox with the active ingredient, diphacinone. Based on bait use on Lundy Island and the estimated 10,000 rats on Canna, 40 pallets of bait were shipped to the island.

Setting up Rat Eradication Program

In late August, the WMIL team arrived on Canna and began setting up the grid of bait stations on the islands. Sanday, which had been connected to Canna by a foot bridge before a storm washed it away, was accessible at low tide.

"Only some of the smaller and steeper offshore rock stacks did not have rats present," noted Bell. "We'll treat all offshore rock stacks and islets with poison as is common practice in any eradication. The cliffs will be accessed by abseiling or ledges."

The 1,000 bait tubes used on Lundy two winters before were awaiting the team when they arrived. The remainder – 3,000 stations made by inmates at Edinburgh Prison and 400 by NTS volunteers – arrived later in fall.

To lay the grid, the team employed several techniques. On easily accessible areas, they used lengths of rope to mark out the grid, placing canes to indicate bait stations placement. Cliffs were treated somewhat differently. They also used GPS and GIS mapping.



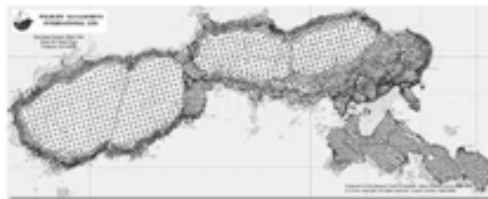
Typically two wires were inserted through the tube about 2 inches from each entrance to prevent larger animals, such as rabbits, from entering.

Wires fixed over the tube secured it.

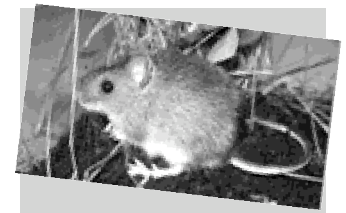
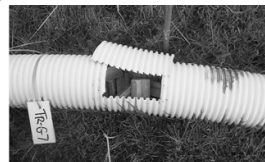
Stations were either tagged or numbered with pens or white paint.

By late October, the grid was complete with 4,213 bait stations blanketing the island. The team then baited, placing 10 DITRAC Blox in each station and 30 in those with difficult access. They checked and baited stations regularly.

In December, the team left for a brief holiday vacation. In our next issue, we'll report what they found when they returned to Canna. ■



Grid of Canna showing location of 4,213 bait stations.



Rare Canna wood mice rescued for breeding

Before the rat eradication baiting could begin on Canna, rare wood mice, genetically unique to the island, were captured and shipped to Scotland for breeding.

Thriving for centuries on the isolation of the island, the Canna wood mouse is the only native rodent on Canna and has developed its own genetic line, growing nearly 25 percent larger than its mainland counterpart. To protect this unique and valuable strain, researchers rescued 158 mice and sent them to the Edinburgh Zoo and the Highland Wildlife Park where they are successfully breeding in captivity.

Once rats have been eradicated on Canna, the rescued wood mice and their offspring will be re-introduced to the island. To have lost this strain of mouse would have cost the island much in its biodiversity.

Besides seabirds, rats had been preying on wood mice and other small mammals on the island. ■

Rodent ecologist Elmouttie joins Bell as Technical & Training Manager in Australia

Australian rodent ecologist David Elmouttie has joined Bell Laboratories in the newly created position of Technical & Training Manager for the southern hemisphere.



David Elmouttie

Based in Brisbane, Australia, Elmouttie works with the pest control and agricultural industries in New Zealand, Australia and the Pacific Islands.

He serves as a technical resource for Bell distributors and pest management professionals, providing hands-on technical assistance on rodent infestations, as well as developing training presentations and informational

materials on native rodents and pest species for PMPs. As part of his responsibilities, he is also involved in product registration, including conducting in-field product studies in various markets.

Specialty in Vertebrate Pests – Rodents

Elmouttie is finishing his Ph.D. in ecology from the School of Natural Resource Sciences at Queensland University of Technology in Brisbane, specializing in vertebrate pest management and organism-resource interactions.

His Ph.D. research, supervised by Dr. John Wilson, investigated the interaction between small mammals and seed resources in tropical rain forest fragments.

Elmouttie's research experience with small mammals, particularly rodents also includes helping develop a rodent control strategy for East Timor's rice and maize crops which provided a cost-effective management plan and a training program for East Timorese locals. He also studied the foraging behavior of roof rats within Australia's macadamia nut orchards for an Honours Thesis in 2000. Recently his research involved *Oribius* weevils in New Guinea.

Besides research, Elmouttie worked for the University as an undergraduate tutor and demonstrator. He also wrote and presented specialized lectures on vertebrate pest management and other related topics.

"I'm looking forward to working with such an innovative and specialized company," Elmouttie said. "Like Bell, I've specialized in rodent management and feel that I have found the perfect work environment to utilize the experiences and knowledge that I have gained over the past years. I am excited for the future with Bell, especially as the company is growing so rapidly in the Australia/New Zealand region." ■

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