



OLD AND NEW: The new R200 million research base and meteorological station on remote Marion Island, where house mice thought to have been introduced by sealers in the 18th century are already making themselves at home. PICTURES: JOHN YELD

Rodents play cat and mouse with experts

The patter of tiny paws is heard at research base

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WHEN the cats are away the mice will play.. which is why 500 mouse traps and samples of various makes of rodent bait stations will be loaded aboard the supply ship SA Agulhas before it sets sail for Marion Island from Cape Town again on Tuesday.

The traps will be used in an attempt to get rid of all the mice making themselves at home in the island's new R200 million base, officially opened just a fortnight ago by Deputy Minister of Public Works Hendrietta Bogopane-Zulu, before the ship returns a month later:

And the various rodent bait stations will be placed within an experimental area of about 500m around the base, to see whether they are effective and which design works best.

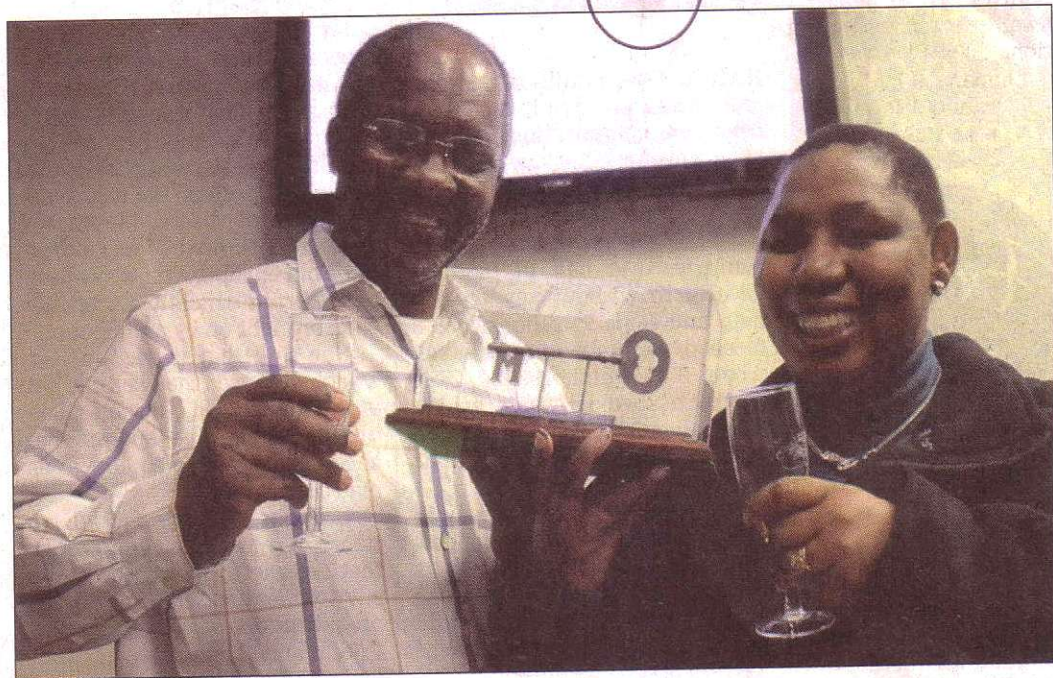
Marion and Prince Edward islands, which form the Prince Edward Island group, are areas of special conservation significance. But a small number of alien species have already reached both islands, and some of these species are aggressive invaders – like the house mice on Marion (there are fortunately none on Prince Edward) which were probably introduced by sealers at some point during the early 1800s.

Soon after South Africa annexed the islands in 1947/48, five cats were introduced to control the mice. But the cats both bred rapidly and very quickly turned to much easier prey: burrowing petrels which had no defence mechanisms against them. By the time the cats were eradicated after a 14-year struggle, they had killed literally millions of seabirds and caused several local extinctions of petrel species.

The cats' eventual demise,



ALL SMILES: The Public Works construction team that built the new base at Marion Island have their picture taken in front of the structure. In the centre is deputy minister Hendrietta Bogopane-Zulu, but keeping a low profile on this particular occasion are the house mice that are already a serious nuisance in the base.



UNLOCKING OPPORTUNITIES: The Deputy Minister of Public Works, Hendrietta Bogopane-Zulu, hands the ceremonial key to the new Marion Island base to the deputy director-general of environmental affairs, Dr Monde Mayekiso, during the official opening a fortnight ago.

of course, meant that the mice could continue breeding.

Marion mice are not yet as large and aggressive as the so-called "super mice" on Britain's Gough Island that, at 40g, are twice the size of the normal house mouse that weighs just 20g. "They wear capes and red underpants," quips Stellenbosch University invasive species expert Professor Steven Chown.

But the Marion rodents have already found their way up to elevations of 800m, and apart from devastating the indigenous invertebrate populations, have also started the horrible practice that has become a major problem on Gough: eating alive the Wandering Albatross chicks while they sit on their nests.

And, although the harsh winter on Marion knocks down the mouse population every year so that it's not increasing significantly at this stage, there are irrefutable signs that climate change is causing considerable warming here, and there are fears that this phenomenon will promote the spread of the mice.

Because of Marion's size – nearly 300km² – a mass mouse-

poisoning operation and/or introducing a specific rodent viral infection, similar to that done to help reduce the cat population, would cost a vast amount and pose serious ecological risks, says Professor Marthán Bester of Pretoria University, who co-ordinated the cat eradication project.

"It wouldn't be impossible, but we would have to test very carefully because the skuas and sheathbills take the mice," he explains, although he adds: "But it's already a big bother now, and something needs to be done."

Before any large-scale mouse eradication project is initiated on Marion, scientists first want to see the results of a similar event planned for Gough.

In the meantime, the mice have been making themselves at home in the new base on Marion.

Bogopane-Zulu was not happy to learn of this invasion of her department's show-piece, particularly because the mice appear to be damaging, or are very likely to damage, the dry walls used in the construc-

tion. This particular building technique, which employs new "alternative construction technologies", will also be used by the department elsewhere, so knowing how to deal with potential rodent problems is important. Bogopane-Zulu explained in an interview during the return voyage.

Shortly before leaving the island after the opening ceremony, she called a "mouse meeting" of scientists, the current over-wintering team and engineers and construction officials from her department, to come up with solutions.

"We've just handed over this new base, where we utilised our new alternative construction technologies, and the mice are having a field day and a real party, breeding between the panels and eating them," she said.

"So despite the amount of money we've spent on the base we may never complete it, because we'll have to continuously replace them (the dry wall panels), and it might end up costing us three times as much. And there's nothing as irritating when you're trying

to sleep than to have this constant scratching – you know trouble has arrived.

"So the mice are not going to destroy this beautiful base, and I asked all the stakeholders, firstly, how can we kill the mice already there, and secondly, what can we deploy to keep them off the base."

Chown had reminded the meeting that mouse traps baited with peanut butter were the most effective way, and had undertaken to work with his postgraduate student to deploy and monitor the 500 traps that would be purchased from the construction budget, Bogopane-Zulu said.

"We also discussed how mice outside the base can be kept out, and the team there didn't appear to know about the (baited) eradication boxes that are used quite successfully in our harbours and other places."

Her officials would procure samples of these bait stations while the team on the island would do further online research, and the various products would then be tested on the island.

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