NEWS FROM THE ALPS
E-BLAST
THE ALPS PROGRAM. WORKING TOGETHER BEYOND BORDERS.

The Long-Footed Potoroo that launched a hundred cameras – literally – as part of a fact-finding monitoring-mission that's just kicked off on Mount Buffalo.

ONE PIC = 100 CAMERAS

Imagine discovering a threatened species somewhere unexpected. First up you'd want to know how many individuals there might be in this new population. You'd then want to work out what feral animals might be lurking in the undergrowth (literally) ready to eat up your new discovery. For answers to these questions you'd need a ute full of camera equipment and some well-briefed teams to get the camera-traps out in the field and functioning. And that, in a nutshell, is what this story is all about, and it's been told by Conor Wilson, Parks Victoria's Nature Conservation Works Coordinator for the Eastern part of Victoria.

A native of Northern Ireland, with a background in marine biology and freshwater mussel conservation, Conor came to Australia to catch up with an old mate, fell in love and the rest is history. Together he and his wife live with their two daughters at a place that looks out over the southern fall of the Alpine National Park. Conor's initial role with Parks Victoria (a twelve-week contract) quickly morphed onto the payroll proper. "I came for the fun – getting up into the Alps with my swag – and I've stayed for the spreadsheets."

His skill set is perfectly suited for the mission that's just been launched: he knows the landscape and he understands the value of robust data gleaned directly from the field. He also appreciates that great things are achieved when organisations that share an interest work together. In fact, the surprise discovery of the Long-Footed Potoroo on Mount Buffalo – the catalyst for this story – came not from Parks Victoria but DEECA (The Department of Energy, Environment and Climate Action). "A DEECA monitoring camera captured an image of a potoroo in May 2022: a species which is classified as endangered in Victoria and as threatened nationally." The surprise came from the fact that the camera was on Mount Buffalo where no-one had previously looked. Base-line data was needed fast, not only to get an idea of the distribution of the potoroo population across the park, but to also provide a better understanding of the presence of non-native predators – the foxes and cats. The mission that followed was designed to achieve all this by using cameras – lots of them.

Julien Atherstone, Parks Victoria Area Chief Ranger, on his way to install two remote cameras near Mount Sugar Loaf.

Planning where to place over 100 infra-red camera traps – designing and planning the implementation of the array – was done by Conor's agency colleagues Marty Lockett, Naomi Davis, Rae Poules, Elaine Thomas, and Anthony Thomas. The array was then reviewed by the Arthur Rylah Institute for Environmental Research, "…the aim being to have the cameras

placed in the most effective locations.” As well as this, 50 of the cameras were set into the array in a sub-design as part of a feral cat movement study being carried out by the University of Melbourne. “We then put the call out for willing hands to set up the camera-traps in the field. The majority of people hailed from Parks Victoria, and these were joined by external contractors as well as representatives from the Taungurung nation.”

The briefing in Bright preparing the teams for the challenging settings they’d encounter in the days ahead, with lots of the local staff getting involved and sharing their knowledge and enthusiasm for the project.

Late in October on day one of the mission, everyone gathered for a three hour briefing in Bright which borrowed its architecture from SMEACSQ fire briefings. Teams of two would be working in challenging settings so the briefing worked to bring everyone up to speed on the Situation (the landscape), the Mission (setting up camera traps), and the Execution (detailed instructions). The usual Admin, Communications, Safety and Questions followed. By the time day two dawned, everyone was up to speed and off and running. Over the next four days the teams would keep operations controller Kev Cosgriff (Parks Victoria) up with where they were. By the time they all met for dinner on Friday night at the Porepunkah Hotel, 85 camera-traps had been commissioned, (a further 12 followed soon after), and a fair few of the people involved had enjoyed themselves enough to ask if they could help out with the future camera servicing.

“The cameras are now recording and storing images. We’re aiming for 90 days of data – November through to the end of January – after which we’ll be going in to gather information. Depending on funding we’ll then reset the cameras for another equivalent 90 days in 2024.” Itching to see how it’s all going, Conor admits he and colleagues Elaine Thomas and Anthony Thomas will go out to take a sneak peek at some of the closest cameras in a few weeks’ time. And by the time the full data set is brought in, processed and a report generated in 2025 – a process that involves tagging images possibly using artificial intelligence – who knows what will be revealed. “My guess is we’ll see lots of foxes. We may receive a surprise where it comes to cats: you don’t spot them easily so there could be a lot out there.” Management tweaks will then follow re pest control so that as much as possible can be done to reduce feral animal threats to what is at this point still the mysterious new population of Long-Footed Potoroos living up on Mount Buffalo.

This project received grant funding from the Australian Government.

Project staff (Anthony Thomas) demonstrate how to set up a camera and lure using a very forgiving setting – a level patch of lawn. Out in the field things were more challenging.

HOW TO SET A CAMERA TRAP

Getting good data begins with consistency and attention to detail. At the briefing the teams were given detailed instructions on how to set each device so they'd share the same date and time, battery power levels, and settings (standard image resolution taken as five rapid fire images per trigger at high sensitivity). As for the physical camera-trap set-up, nothing was left to individual interpretation, again to boost consistency and assist potential automated image processing. Here's what they were asked to do…

Location: select the nearest suitable location within a 50 m radius of the coordinates provided with a suitable tree for camera attachment and clear of vegetation to enable lure set up and to minimise pruning. (Cameras that had to be set up outside this area were GPS logged for future retrieval.)

Setup: mount cameras with a southerly facing aspect to minimise glare in images. To maximise night-time infrared lighting, select locations with a solid background of trees or thick scrub a meter or more behind the lure. Mount the camera on a stake or secure to a stout tree, 30cm above the ground and 2m back from the lure, using a wedge to angle the camera slightly. In an optimal set-up, the lure should be in the centre of the image with some foreground in view.

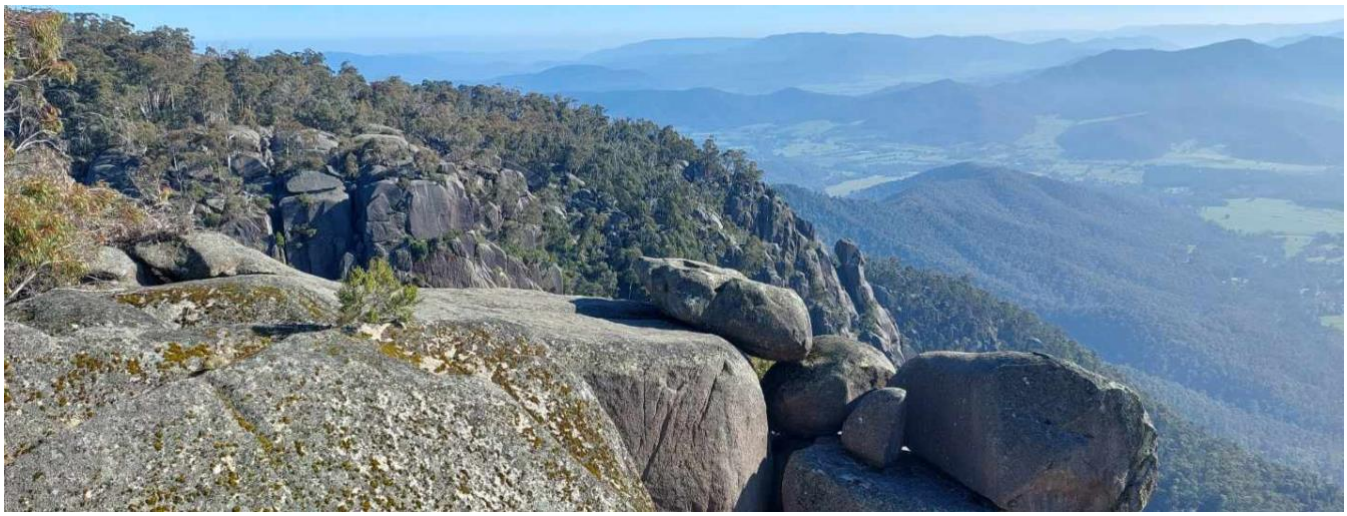
Lures: the PVC pipe lure holders (donated by Gavin Melgaard from DEECA) are attached to a tomato stake with a cable tie, then set at a height of approximately 10cm above the ground. Clear to 1 metre around the lure holder, then load it with the lure. (It is a *delicious* mix of peanut butter, rolled oats, a dash of truffle oil, and treacle or golden syrup which the instructions ask the teams not to eat too much of).

Final Checks: take some test images to check the set-up using the card reader, making adjustments as required. Then before arming the camera for real, delete any test images.

For detailed information about the cameras, lure holder construction or the recipe for the lure itself, contact Conor Wilson .

Batteries (for the cameras) had to be charged in the lead up: 12 batteries per camera for more than 100 cameras.

To give a sense of what it was like being in the field for the camera installation, these two shots speak volumes: Conor Wilson pushing through regrowth looking towards Lake Buffalo.



An area of challenging terrain in the north-east of Mount Buffalo National Park and below, Maria Cardosa, (Parks Victoria) who volunteered for the camera installation, contributing her expertise in installing remote cameras via a PhD in endangered mammals.

LONG FOOTED POTOROOS

Alpine Peatlands are found on the plateau of Mount Buffalo. Valued for their ecological diversity, they also function to slow the infiltration of water, supporting moist forest types further downslope, indirectly contributing to the Long-Footed Potoroos favoured habitat.

To picture a potoroo imagine a mouse-like kangaroo that's been inflated to the size of a rabbit. In the case of the Long-Footed Potoroo – *Potorous longipes* – their tails are longer and their hind feet measure more than their heads. They also have something called a hallucal pad: a leathery patch on the sole of their feet just behind their inner toes.

Sad-to-say but the main reason *Potorous longipes* is currently so special is because it has a very limited distribution and is extremely rare. Up until recently there were two known core populations in Victoria as well as another smaller one in New South Wales. Which explains why it's been so exciting to capture an image of one on camera on Mount Buffalo where no one thought they were living.

What we do know about *P. longipes* is that they prefer moist forest types with dense understories where they make crude nests to shelter in during the day. The landscape needs to be moist given the potoroos' main food source – foraged for at night – is the underground fruiting bodies of fungi with other fruit and small invertebrates thrown in. If the landscape is rich, the animals' range is around 10 kilometres: if it's less so, the range can extend out to 40 kilometres. Breeding happens year-round, producing single young.

Knowing all this, it's easy to see how fire can mess with a potoroo's ideal habitat, removing the understorey cover: there goes your food and shelter. Fire can also reduce and further isolate populations which puts pressure on successful and genetically variable breeding. It's also harder to stay out of the way of feral predators like foxes and cats. Information gathered via the Mount Buffalo monitoring cameras will help increase what is known about the Long-Footed Potoroo and be used to support it not only in this newly discovered location, but anywhere it is found.

TELL US YOUR STORY: We are always looking for stories to include in this newsletter. What's happening in your part of the Alps? If you've built a new bridge, cleared a track, managed pests, done vegetation restoration works or worked on threatened species recovery, why not send Dave Crea a photo and a quick line and he'll take care of the rest. Maybe you just went for a particularly fabulous walk and would like to share your experience. We're

always happy to hear from agency staff members, volunteers and members of the general community.

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