

Mokomoko Newsletter

Number 21, April 2023

It's been another good year at Mokomoko Dryland Sanctuary. Here's some recent news.



An adult male Otago skink, Oo196, out basking. April 2023

Grand and Otago skinks

In October 2022, the annual DOC survey recorded encouraging numbers of both grand and Otago skinks at the sanctuary. During three days of good weather, Ross Curtis, Carey Knox, Joanna Corrie and Anna Yeoman sighted 29 grand skinks and 28 Otago skinks. We're now seeing more juveniles than adults. This year's newborns are starting to be seen out enjoying the autumn sun. Three newborn grand skinks and six newborn Otago skinks have been seen so far this season, with more sure to be hidden in the tangle of shrubs and rocks. It's always a joy to see the babies, with their over-sized feet and their intricate, extra-bright patterning.

Translocation milestone

Last winter we reached an exciting milestone for grand and Otago skinks at the sanctuary. One of the steps towards a successful



Central Otago Ecological Trust
A Community-led Conservation Project



A juvenile Otago skink spotted for the first time during the DOC survey, Oct 2022.

translocation is when the number of animals sighted exceeds the number released. Since New Zealand's lizards breed slowly, the national criteria for lizard translocations suggest this should be reached within ten years of a translocation. During the 2021/22 summer season this was reached for both grand and Otago skinks at Mokomoko, about 3.5 years after the release. Over the 2021/22 summer, 37 grand skinks were seen, where 33 had been released, and 44 Otago skinks were seen, where 43 were released. A great reason to celebrate!



Carey Knox, Joanna Corrie and Ross Curtis enjoy a close look at a jewelled gecko, Oct 2023

Jewelled geckos

Our beautiful green geckos are as elusive as ever in the expanding thickets of *Coprosma*,

Muehlenbeckia and matagouri inside the sanctuary. Thanks to survey work by Carey Knox, over half the founding population, plus 28 young, have been sighted.



A young jewelled gecko, Sept 2022

Green skink translocation

After several delays, the planned translocation of Otago green skinks into the sanctuary is due to happen this December. It will be wonderful to have a population of these large, green-backed skinks, that used to occur throughout Otago, protected inside the sanctuary.

Mice

In autumn 2022, soon after our last newsletter, mice found their way into the sanctuary. This was the fourth incursion and came 18 months after the previous eradication. Again, we eradicated them using brodifacoum - special thanks to volunteers Phil Murray, Joe Sherriff and Tim Whittaker for a few cold mornings of



Anna, Phil, Garry and Tim ready to bring in the mouse bait, July 2022

work laying out the baits! We haven't found any obvious entry points, but we've strengthened two places where soil was threatening to erode from under the fence. And there's always the possibility that kāhu/harriers or kārearea/falcons are dropping mice in. Anna continues a monthly check for mice.



Grant inspects some impressive icicles on the south facing slopes of the gully, August 2022

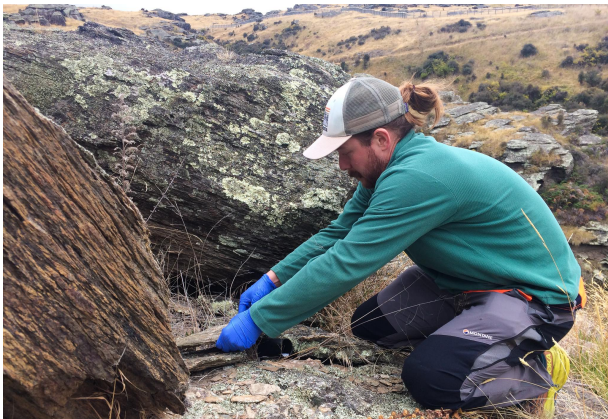
The mouse plan

We're keen to stop using brodifacoum in the sanctuary. It's an effective but problematic toxin - it accumulates in the ecosystem and will persist for decades. James Reardon from DOC is leading research to find alternative ways of controlling mice, as they're major predators of New Zealand's lizards. The plan is that when the next mouse incursion occurs, we'll trial a less-harmful toxin, Double Tap (diphacinone and cholecalciferol), in a parallel research trial with Zealandia Sanctuary (and possibly several other sanctuaries). It will involve laying 250 tracking tunnels to record mouse numbers for six weeks while the toxin is out. So a heads up that we'll be looking for some volunteer help with this project!

eDNA research

Another exciting study taking place at Mokomoko is by Tom Reeves from Southern Lakes Sanctuary. Tom is trialling whether it's possible to collect eDNA from Otago skinks by

using plastic pipes with a filter brush glued into the bottom to pick up tiny pieces of DNA from skinks that pass through. He and several colleagues have set up 12 sets of pipes throughout Mokomoko as a field trial for the technique. If it proves effective at picking up Otago skink presence here, the hope is that it could become a useful survey technique for measuring lizard populations in the wild.



Tom places one of the eDNA collection pipes where he hopes an Otago skink will visit it. April 2023

Weed control

A good effort was again made in early summer to knock back the invasive weed, everlasting pea, co-ordinated by trustee Garry Nixon. We seem to be making some progress. Thanks to volunteers Inge Diks, Joe Sherriff, Phil Murray, Rob Wardle and Alan Pickard for your help.

Thanks also to the volunteers who check the fence line every month.



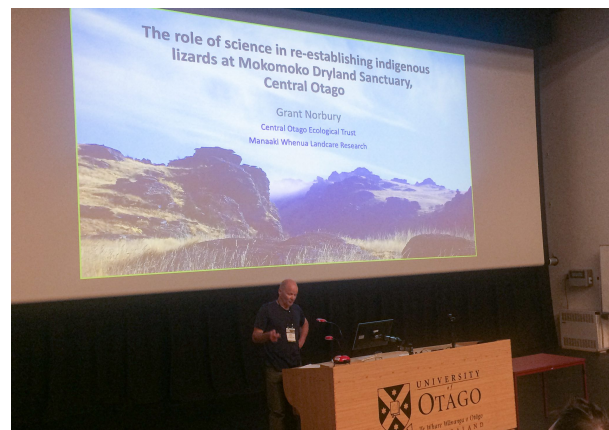
Garry, Phil, Grant, Rob and Inge prepare to spray everlasting pea, Nov 2022



Female grand skink Og037 knows the most sunny, sheltered spots on Rock 7 for making the most of the autumn sun. Apr 2023

Talks and education

At the NZ Ecological Society Conference in November, Grant spoke about the science behind COET's work reestablishing local lizards at Mokomoko Dryland Sanctuary. Trustees Jan Kelly and Anna Yeoman have spoken at several primary schools that have been learning about their local lizards. Jan is also writing up her research on the social behaviour of McCann's skinks as observed in her garden, while Anna is writing a book for the general public about New Zealand's lizards.



Grant speaks at the NZ Ecological Society Conference, Nov 2022

Funding

We are very thankful for financial support received recently from the Jones Long Family. Also for the Garmin InReach thanks Joe Sherriff and Jo Wilson. We're grateful for all the volunteers and supporters who make this

work possible, including recent funding from Central Lakes Trust, Otago Community Trust, and Otago Regional Council.

Trustees of the Central Otago Ecological Trust



Visiting herpetologists from the U.S., Anton Sorokin and Emma Steigerwald. February 2023



Jo Broadhead, Ben Crowson, Kath Jones, Will Nelson and Dave Long enjoy the grand skins. February 2023



A newborn Otago skink, the 33rd born at the sanctuary. March 2023



Grant shows a group from Southern Lakes Sanctuary around Mokomoko Dryland Sanctuary. Oct 2022



A female grand skink, Og045, stalks flies at Mokomoko, Jan 2023