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SEPTEMBER 2024

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Announcing the arrival of tuatara!

I am delighted to officially announce that the Sanctuary has now received a permit from the Department of Conservation to translocate tuatara to the Sanctuary, our application to translocate tuatara was submitted in December 2023. Translocation plans are being developed.

This translocation will involve sourcing animals from 5-6 sites located in the South Island and in the North Island. Sanctuary staff are presently working on preparing translocation plans and the logistics of translocating tuatara.

This translocation is especially important as it will be the first release of tuatara into the wild in Whakatu/Nelson region in over 100 years. This is a significant cultural milestone for Nelson city, for the region, and for iwi Māori, particularly for Ngāti Koata who act as the national gatekeepers for this iconic species. We would like to thank Ngāti Koata for supporting for our application and planning to bring tuatara back to Whakatu/Nelson. Ngāti Koata will be advising on, and being actively involved and assisting with the translocation of these iconic creatures.

We are likely to receive a mixture of juvenile young tuatara through to mature adults. They will live in our mouse-free enclosure at the Sanctuary. These ancient reptiles, often called living fossils, will add a fascinating dimension to our conservation efforts. Our dedicated team has been preparing diligently to ensure that their new habitat is ideally suited to their needs, replicating the conditions of their natural environment as closely as possible.

Visitors will have the unique opportunity to observe these remarkable creatures up close and learn about their unique evolutionary history and ecological significance.

The arrival of the tuatara is a milestone for the Sanctuary and a testament to our ongoing commitment to preserving New Zealand's unique wildlife.

We look forward to welcoming these incredible animals and sharing their story with all who come to visit.

Ru Collin, Chief Executive



Tuatara
Source: wired.com

TUATARA FUNDING RECEIVED SO FAR

We would like to acknowledge the funding we have already received that has enabled us to get to our current state of readiness to receive tuatara. Our thanks to the following funders:

- The Frimley Foundation and the Booster Wine Group who both provided \$10,000 to enable the mouse-exclosure fence build
- The City of Nelson Civic Trust who have given \$2,000 for signage at the Coalmine/tuatara area
- Private individuals, who wish to remain anonymous for the their \$5,000 towards the mouse-exclosure fence

The Sanctuary has already spent approximately \$100k on the mouse-proof fence build, mouse eradication and monitoring within the exclosure, tuatara habitat preparations, a walking track and signage.

VOLUNTEER AND STAFF PROJECT CONTRIBUTIONS

We would also like to acknowledge and thank the many volunteers, in particular, the fence team who have put in many hundreds of hours of work into building the mouse-exclosure fence and walking tracks.

Our thanks also to others in the weeding, planting, monitoring and track cutting teams.

Sanctuary staff have also put in many many hours of effort to prepare us for this very significant translocation. The tuatara translocation currently being planned is likely to be the first of several in the coming months.

HELP FUND THE TUATARA TRANSLOCATIONS

Translocations are often an expensive business, if you'd like to help cover the costs of this exciting new translocation, please consider making a donation through the website, [click here](#):

Or make a donation via online banking, please use "Tuatara" as the reference, and email info@brooksanctuary.org.nz with your name, date of your donation and the amount so that we can match the donation to you and issue a tax deductible donation receipt.

Brook Waimārama Sanctuary Trust
NBS 03-1354-0561993-00

SPONSOR A TUATARA HABITAT FENCEPOST

In support of the tuatara project, we intend to launch a new range for sponsored fence post plaques which will be fixed to the mouse-exclosure fence around the tuatara habitat.

We are still finalising the details, more information on these new sponsored fenceposts will be released in the near future.

FUNDING SPECIFIC PROJECTS

A project such as the Sanctuary always needs funds!

If you would like to donate to the Sanctuary for something very specific, such as tuatara translocations, (future) reintroductions of other species (such as kiwi or kākā), or you have something else in mind, please get in touch with Ru Collin, Chief Executive or Nick Tilly, Office Manager.

Equally important, if not more so, we always need general funds that are NOT tagged to specific purposes. So if you'd like to make a donation that helps keep the lights on, pays for the replacement of aging assets (such as computers), pays for new technologies, or our wages, insurance or for photocopier paper, please get in touch! Every dollar helps us achieve our mission.

Ru Collin, ru.collin@brooksanctuary.org.nz
Nick Tilly, nick.tilly@brooksanctuary.org.nz

Donations can be made at any time to:
Brook Waimārama Sanctuary Trust
NBS 03-1354-0561993-00

or through the website, [click here](#):
<https://www.brooksanctuary.org.nz/make-a-donation>

MOUSE FREE EXCLOSURE UPDATE

With the help of staff and dedicated volunteers, the mouse-free enclosure has made significant progress. Recently, the team laid cardboard on the exotic grass, throwing rocks and logs on top to create a safe space for various species to thrive. The cardboard will act as a weed mat and biodegrade in six months.

The rocks will serve as a habitat for all reptiles, including large-bodied skinks, tuatara, and geckos. Over time, the team hopes to create a larger rocky area to interplant scrambling vines like *Muehlebeckia*. These vines will provide refuge from avian predators and larger tuatara that eat lizards and simultaneously produce fruit that the lizards will eat.

Every improvement has been carefully thought through for both human and animal pleasure.

We've planted two native grasses: gossamer grass (*Anemante lessoniana*) and long-haired plume grass (*Pentapogon crinitus*). The grassy area will also serve as another habitat for the reptiles, giving them different areas to explore. These native grass areas will be expanded if the plants do well. These will be excellent open habitats for tuatara breeding and grass skinks.

From handrails to fully completed paths, we're excited for you to see this private track for the first time at our Open Day on 20 October; we will be leading guided tours through the new area, so you'll be able to see for yourself the results of all the hard work preparing this area for the eventual tuatara translocations.



POWELLIPHANTA SNAIL POPULATION GROWING



On the 28th of August on a misty afternoon, two *Powelliphanta hochstetteri consobrina* made their way up to their new home at The Brook Waimārama Sanctuary. These snails were found by forestry workers at Mount Duppa, and promptly handed to Powelliphanta expert, Kath Walker. Being from a different collection site, these snails will introduce unique genetics that could improve the diversity of the Brook population. The snails were released at the same location as the original cohort, near the top of the Sanctuary. This species is generally found at high altitudes, within dense leaf litter and inside nooks and crannies. "While we were there, we had a poke around for the original animals. We could not locate any snails. This does not necessarily mean that they weren't there, in fact, the absence of empty shells is a good sign," stated Henry Hart, a ranger at the Sanctuary.

"Powelliphanta snails are not your common garden snail. Powelliphanta are giants of the snail world. They are also beautiful. Their oversize shells come in an array of colours and patterns, ranging from hues of red and brown to yellow and black. They are as representative of New Zealand's unique evolutionary history as the kakapo, moa or kiwi. Unfortunately, they are also one of the most threatened of New Zealand's invertebrates. A total of 61 species or subspecies are ranked as being of national conservation concern," says the Department of Conservation.

The reintroduction of these snails was a momentous occasion, marking another step in the ongoing efforts to preserve these remarkable creatures. The Sanctuary has become a beacon of conservation excellence, a testament to what could be achieved when communities come together to protect their natural heritage. With each successful release, the team edges closer to their goal of stabilizing and eventually increasing the Powelliphanta population.

But the journey is far from over. Continuous efforts are needed to combat the threats these snails face, from habitat destruction to predation by introduced species. Education and community involvement play crucial roles, inspiring a new generation to cherish and protect the unique biodiversity of New Zealand.

As the day came to a close, it was a reminder for the team of the delicate balance of nature and the ongoing commitment required to maintain it.



Photo Credit: Chelsea Haley



Photo Credit: Henry Hart



ECOSYSTEM RESTORATION

ECOLOGICAL PLAN 2024

The process of developing an ecological plan began in late 2022, with scope and funding confirmed to support stakeholder engagement from early 2023.

The original intention was to implement the document by January 2024. However, the document went through a process of multiple reviews which took longer than expected to reach a final version.

What we sought from the ecological plan can be explained with excerpts from the original scoping document used in the tender process in April 2023:

Our vision

To be an eco-sanctuary nationally recognised for its exemplary conservation practices, where wildlife, education, and research flourish.

Our mission for the next 15 years

To restore an introduced mammal free mature native forest ecosystem, enabling people to engage with the natural world in a way that promotes environmental responsibility and our community's health and wellbeing, and contributes to the recovery of our local and national ecosystems.

What we would like to get out of the plan

The plan will clearly define the BWST's ecosystem restoration goals, set priorities, and guide us over a specific period (to 2035) with tasks to achieve the goal (milestones).

The plan complements the aims and goals of the current BWST 15-year strategic framework to 2035. Consultation with stakeholders, especially Sanctuary supporters, BWST staff and trustees, local iwi, as well as DOC, NCC (Nelson Nature) and Kotahitanga mō te Taiao would be required.

Strategy and other priorities - what do we want to achieve?

1. Show a clear path to restoring the forest ecosystem of the Sanctuary
2. Prioritise ecosystem restoration goals and actions
3. A suitable research and development framework.

What have we now got?

Taken from our ecologist's September 2024 monthly report:

We have received the final version of the (ecological) plan. The plan will be 'working document' that provides us with guidance and direction for the next steps over the next 15 years towards restoring the Sanctuary to a fully functioning and resilient natural ecosystem.

The plan is 112 pages long of which 40 pages are made up of references and appendices. The plan is structured into two main parts. Simplified:

- chapters 1 to 6 are providing a historical overview of the sanctuary and its current state



Photo Credit: Don Fraser

- chapters 7 – 10 examine, review and identify existing and new monitoring and surveillance opportunities as well as providing guidance on potential candidate (both fauna and flora) species for translocation as well as some prioritisation.

A lot of focus in the plan is on additional monitoring and surveillance ranging from monitoring that will help guide operational management of the BWS to blue sky research. The challenge now is to identify the work that is essential and/or of greatest value for achieving the ecosystem restoration vision.

Next steps

We will work with the ecosystem advisory committee and ecosystem working group to identify key suggestions, confirm priorities and timelines for implementation through detailed operational plans. We expect to prepare a rollout plan that will be provided to Sanctuary staff, volunteers and supporters.

SANCTUARY TOWN OFFICE IS RELOCATING

As many of you are aware, the Sanctuary town office in Morrison Square is required to vacate our existing premises; the building owners have given us until 30 November 2024 to move out. We are just one of 22 tenants given notice to vacate Morrison Square. We'll be one of the last tenants to move out.

We are moving to a building located at Millers Acre. We think the Sanctuary office will be ideally located in this space with high foot traffic and visibility to visitors to Nelson, and we have the opportunity to take floorspace (previously occupied by the Simply New Zealand store) through to 1 February 2025, and possibly longer on a short-term basis. The location is planned to be part of the new eBus hub.

We are continuing discussions on securing a longer term town office site as we believe there is great value to the Sanctuary and the campground having a presence/profile in the central city area.

The timeline includes moving the current office after the 2024 AGM and the Sanctuary Open Day events with the intention of completing the shift by mid-November.



Figure 2 The new Sanctuary town office with shared toilets with DOC.



Figure 1. The future look of the Millers Acre site in the Nelson CBD featuring a bus hub

HAPPEN FILMS

Tasman-based filmmakers Happen Films were filming at the Sanctuary from 18–20 September, shooting for a short documentary that will showcase rongoā Māori practitioner and advocate Donna Kerridge. Donna was visiting from her home base of Oakura, Northland and gifted a half-day workshop as part of the film shoot, providing Happen Films with additional footage for their doco. There were 20 attendees, with registrations offered free to 10 mana whenua and thereafter on a pay what you can basis. The workshop fees raised \$500 which is being donated to the Sanctuary.

Donna was delighted to be sharing her knowledge at the Sanctuary and commented on what an ideal location it was, with an abundance of plants to call on for her teaching. Happen Films were equally pleased with the setting for the film, and expressed gratitude to the Sanctuary staff for their willingness to help coordinate the comings and goings of the crew and the workshop group. Even the weather performed beautifully – the rain fell only over the workshop lunchtime, when everyone relocated to the Visitor Centre for warmth and shelter. The short film will be released on 28 December on the Happen Films YouTube channel.

SANCTUARY LIVE FEED CAMERAS NOW LIVE!

If you have visited the Sanctuary in the last 12 months, you may have noticed in the Visitor Centre the large TV screen playing four live-feed camera view from within the Sanctuary. You can now view the same thing on our website from wherever you are, [click here](#).



NEW SIGNAGE AT THE VISITOR CENTRE

Four additional signs have been added to the back of the journey boards at the Visitor Centre. They were installed on 26 August.

Each sign is designed to convey an essential aspect of our conservation efforts, from protecting the delicate ecosystems to understanding the species that call the Sanctuary home.

Education is a powerful tool in fostering stewardship, and these new additions are a step towards ensuring that every visitor leaves with a renewed sense of responsibility and wonder for the environment.

We hope that, inspired by these messages, visitors will carry forward the lessons learned here, applying them in their everyday lives and spreading awareness within their communities. After all, preserving our natural world is a collective effort that begins with informed and passionate individuals.

Stop by to have a look for yourself!



CUIK PROFILE

If you've visited the Sanctuary Visitor Centre any time in the past couple of years, chances are you will have noticed our large electronic display unit from CUIK next to the 3D map of the Sanctuary.

CUIK (Communication Using Interactive Kiosk), pronounced "kwick", is an innovative, community-minded, interactive wayfinding system that helps smart cities connect with residents, visitors and the community and tell the story of the region.

This interactive kiosk experience is an avant-garde public engagement platform that was developed by a team in Nelson. CUIK aims to help councils, non-profit organisations, local businesses and tourism operators communicate with the public, encourage a pedestrian-oriented environment, and showcase what the region has to offer. CUIK also features local artists and local legends.

If you've visited the Nelson Airport recently, you've probably seen the CUIK kiosk in the arrivals area close to the luggage carousel.

CUIK tell us that 1,648+ people have interacted with our featured advertisement to find out more about the Sanctuary and how to get to the Sanctuary.



The Sanctuary advertisement runs full screen and is displayed every two minutes for 12 seconds(!)

We acknowledge CUIK as a valuable in-kind sponsor and partner with the Sanctuary, we look forward to the next 12 months and the visitor exposure gained through the high profile CUIK unit at the airport. We plan to profile the Brook Valley Holiday Reserve, now managed by the Sanctuary on the digital kiosk at the airport.



THINGS TO DO AT THE SANCTUARY

Guided tours of the Sanctuary are offered on Sunday mornings departing from 10.30 am. See the website link to book at <https://www.brooksanctuary.org.nz/lots-to-see-and-do/brook-sanctuary-guided-tours>



GLOWWORM TOURS: SEASON (ALMOST) OVER

For the fourth year in a row, the Sanctuary has offered winter glowworm tours. The season kicked off in July (slightly later than previous years, due primarily to the additional workload taking over the campground operations). A total of 25 tours were scheduled across July (5), August (14), and September (6); 4 additional tour dates have been added to the schedule for the last week of September.

This year, for the first time, we recruited two paid guides, Eve Newton and Lea Reeves, and expanded our pool of volunteers who have assisted in guiding the tours. As with previous years, we've received terrific feedback on these tours. If you haven't already done one, bear them in mind for winter 2025 between June and September!

So far, 270+ people have taken a tour this season, raising approx.—\$8,000 (net) for the Sanctuary.

This year, the weather has been very kind to us. We've only had to cancel one tour due to adverse weather conditions. We offered places on the additional tours to the people booked for the cancelled tour.

VISITING HOURS

Opening days/times: September | October
Open: Thu-Sun 10am - 4pm

School holidays (30 Sep-13 Oct),
Open: Tue-Sun 10am - 4pm



GORDON'S NEW ENCLOSURE

Gordon, our Auckland Green Gecko and dedicated Sanctuary mascot, has had an enclosure upgrade with lots more space! Swing by the Visitor Centre to try and find Gordon enjoying his new home. This enclosure has been lent to us by a Sanctuary volunteer.



RECENTLY SNAPPED IN THE SANCTUARY

If you have some great photos taken in the Sanctuary that you'd like to share, please tag us on Instagram and Facebook @brooksanctuary or email them to events@brooksanctuary.org.nz



Fungi
Ramariopsis pulchella
Photo credit: Rebecca Bowater



Slime Mold
Badhamia utricularis
Photo credit: Rebecca Bowater



Tomtit | Miromiro
Petroica macrocephala
Photo credit: Sean McGrath



Bellbird | Korimako
Anthornis melanura
Photo credit: Sean McGrath



Orange Pore Fungus
Favolaschia calocer
Photo credit: Aden Meser



Glowworms | Titiwai
Arachnocampa luminosa
Photo credit: Andy MacDonald



Kākāriki Karaka | Orange-Fronted Parakeet
Cyanoramphus malherbi
Photo credit: Sean McGrath



Native Cranberry Moth
Poecilasthena pulchraria
Photo credit: Deb Corbett



Coral Fungi
Genus Ramaria
Photo credit: Deb Corbett

UPCOMING EVENTS



OPEN DAY: NELSON'S BIG GREEN DAY OUT

The Brook Waimārama Sanctuary is excited to present its Spring Open Day on Sunday, 20 October from 10am to 4pm, with free admission!

Join us for Nelson's Big Green Day Out as we celebrate our native flora and fauna in an idyllic setting. Enjoy delicious street food from 13 vendors, stimulate your creativity through our collaborative art workshops, stroll along peaceful bush tracks or sit back and enjoy some live music. With activities planned for the whole family, this will be a great day out that you won't want to miss.

Bring some cash as our wifi for EFTPOS is a bit patchy, EFTPOS may not be available at all vendors!

SCULPT NATURE

Immerse yourself in nature at the Sanctuary and witness seven artists from around Aotearoa create sustainable, ephemeral artworks using only natural materials.

Sculpt Nature was first launched in 2022 as a nine-day eco-sculpture symposium and competition. The competition aims to bring together the creative arts and conservation sectors through a symposium event. The sculptors' work will inspire a greater connection between the public and the natural environment while spreading the message of ecosystem restoration to the wider community.

The Sanctuary will be open from 2 to 4 PM from 18 to 27 October at no cost to Sculpt Nature visitors.



SANCTUARY LINKS TO NELSON ARTS FESTIVAL



SOUNDS OF THE SANCTUARY

We invite nature lovers and music aficionados to immerse themselves in the Sanctuary's magical fusion of music and the natural world. New Zealand String Quartet presents an unforgettable experience that evokes the beauty of nature and birdsong.

The carefully curated programme begins with Gareth Farr's *Te Kōanga*, a celebration of life and regeneration that echoes the Sanctuary's lush flora and fauna. Haydn's *Opus 64, No.5*, famously known as "The Lark," follows, with its melodies that soar like birds, echoing the vibrant avian life that thrives within the Sanctuary's protected haven.

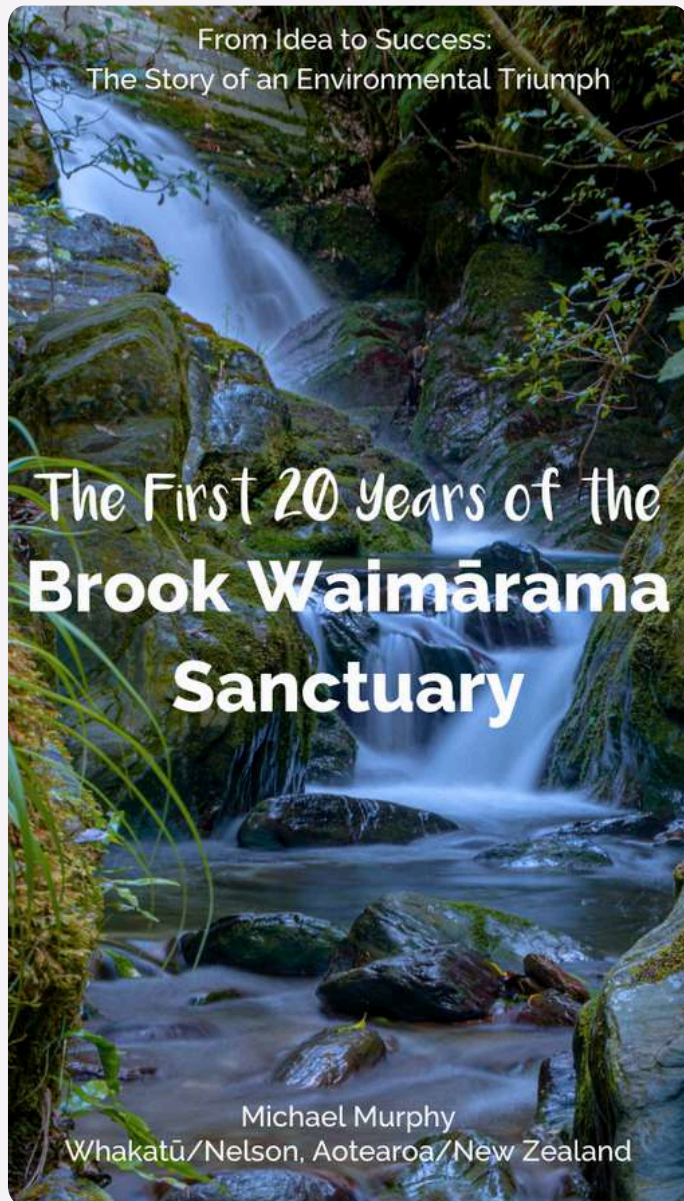
Join us on 28 October at 12 pm or 4 pm. Tickets available at nelsonartsfestival.nz/

AFTER DARK III: SIX LEGGED GHOST HUNT

Join RNZ's Critter of the Week researcher, illustrator, and author Lily Duval for a twilight romp through Brook Waimārama Sanctuary to learn more about our insect world – particularly the vital role 'six-legged ghosts' play – and how you can care for these creatures and their habitats on 28 October from 8-9:30 PM. [Click here](#) to purchase your tickets.



PROMOTIONS



SANCTUARY BOOK LAUNCH

To mark the Sanctuary's first 20 years, the Sanctuary has compiled a collection of stories and information from many of the people involved in the Sanctuary's establishment and development.

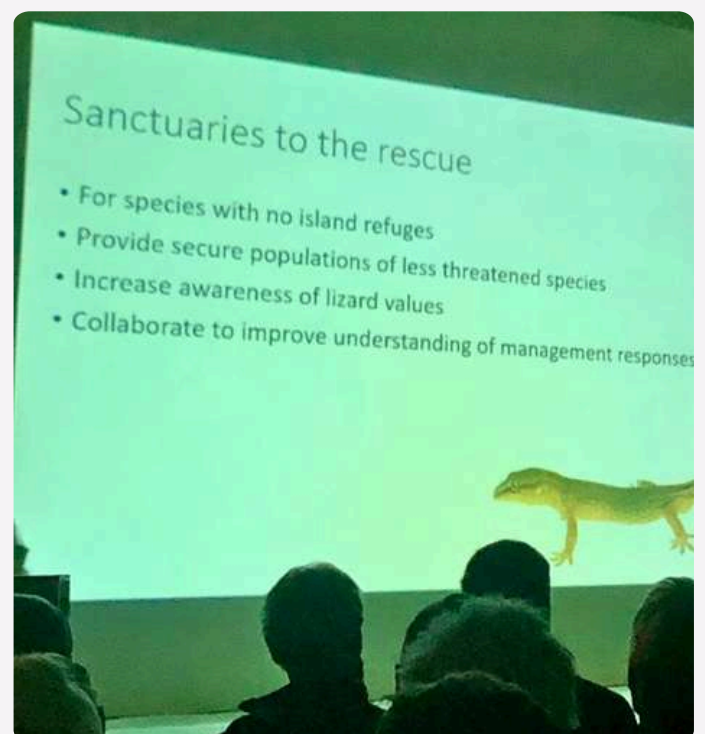
Our thanks to Michael Murphy for writing the history, stories, and succession of the Brook Waimārama Sanctuary. We can't wait to share more with you soon, so keep an eye on our social media for launch dates and publishing party details.

The book will be available online from 25 October, a limited number of hard copies will also be available for purchase.

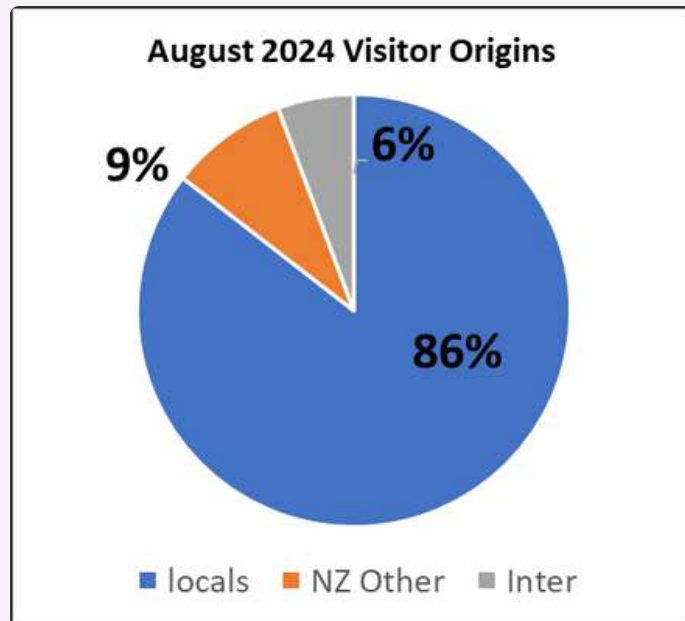
SPEAKER EVENT SERIES

James Reardon, herpetologist by training (that's the study of reptiles and amphibians) and applied conservation scientist with the Department of Conservation, spoke this month to our volunteers about the importance of Sanctuaries and mice-free areas in protecting our native lizards, skinks, and geckos.

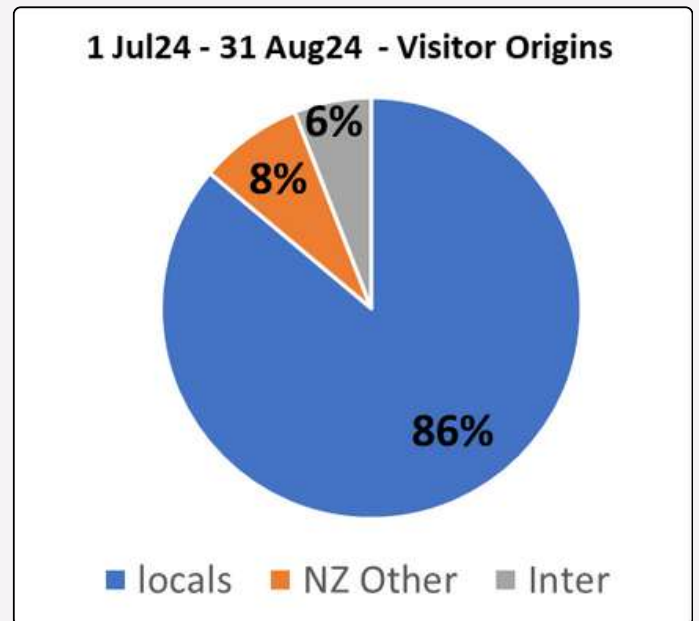
Gaining access to exclusive events and educational workshops like this are just another benefit of being a volunteer with the Sanctuary, so sign up today!



VISITOR GRAPHS



The Sanctuary recognises the importance of locals supporting the Sanctuary.



Visitor numbers in the first two months of the new 2024/25 financial year

NBS PROMOTION

Our banking provider and major sponsor NBS is giving their clients more reasons to smile with their Target Saver Account offering. Open a savings account today with a minimum of \$100 and you could be in to win a share of \$25,000 every month! Every \$100 in your Target Saver Account is a chance to win one of five \$5,000 cash prizes every month. Visit their website or call into your local NBS branch to learn more. Terms and conditions apply, visit nbs.co.nz.

STAFF NOTICES

- We welcome to the team Kim Batchelor and Tui Fisher to the role of Campground Manager in August, assisted by
- Matt Greenwell who will be the administration coordinator, aiding with the administrative and back-office tasks for the BWST office and campground operations.
- In early September, we appointed Claude Gavey to assist with cleaning duties in the Campground, Visitor Centre, and town office as needed.



Be in to win a share of
\$25,000
 every month with your
NBS Target Saver Account.

For promotion and draw details, and the full terms and conditions, please visit nbs.co.nz.

SPONSOR PROFILES:



At Nelson Marina, we are proud to sponsor the Brook Waimarama Sanctuary as part of our commitment to environmental stewardship. As a certified Clean Marina, our mission to protect the ecology of the ocean aligns seamlessly with the sanctuary's dedication to preserving land biodiversity. By supporting the sanctuary, we strengthen our shared goal of fostering a sustainable ecosystem that benefits marine and terrestrial habitats, ensuring a healthier environment for future generations. Together, we are working towards a more balanced and thriving natural world.



Silky New Zealand has recently become a new Sanctuary sponsor, offering 'in-kind sponsorship' to supply equipment worth up to \$3,000 annually. This sponsorship will cover equipment that volunteer teams use. We have formalized arrangements, and the Sanctuary will now supply basic work equipment thanks to this new sponsorship arrangement. In addition to this new sponsorship, Sanctuary volunteers can now buy selected items (for personal use) at the store and online for 15% off with code BROOK15.



**CITY OF NELSON
CIVIC TRUST**
EST 1973



City of Nelson Civic Trust has donated funds to support the Sanctuary's Sculpt Nature Competition and to extend the current heritage walking trail by supporting the creation of two more signs located at the Sanctuary's coalmine and the 'Kidson wall', located in the Brook Valley Holiday Reserve.

The City of Nelson Civic Trust supports the development of cultural, artistic, and social amenities and the preservation of historic landmarks for the enjoyment of Nelson and its people. For over 50 years, the City of Nelson Civic Trust has funded various projects with donations totaling more than one million dollars.



WET JACKET WINES FUNDRAISER

Over 80 people attended the Wet Jacket wines Sanctuary fundraiser hosted at the Tides Hotel on 24 September. After a slow start to ticket sales, this fundraising event turned into a sell-out success with a waitlist of 50+ people wishing to attend.

Dan Kral of Wet Jacket Wines, originally a Nelson boy (!) hosted the event in the packed Moana Room at The Tides hotel. The evening was a great success, Dan led attendees through a wine tasting of five Wet Jacket/Putangi wines and related stories about the origins of the wine label names, the label founder and driving for Greg Hay and his and the company's commitment to conservation efforts. Greg is a Trustee of the Fiordland Conservation Trust.

We don't yet know how much was raised for the Sanctuary, but we'd like to thank everyone who attended for their raffle ticket purposes - enjoy all that wine you purchased! Wet Jacket Wines can be purchased through their website, [click here](#).

WAYS YOU CAN MAKE A DIFFERENCE TODAY

BUY A YEARLY PASS

The number of paid-up supporters now stands at over 2,000. Why not join today as a financial supporter? Your annual subscription entitles you to free entry to the Sanctuary (on days/times we are open to the public).

If you're already a supporter and need to renew your subscription, you can do that [here](#) on our website.

If you're not a paid-up supporter, we encourage you to become one before prices rise. [Click here to sign up](#)



DONATE TO SPECIFIC PROJECTS


If you want to support the following projects we are working on directly;

- Species introductions program support- for example, the mouse-free area preparation
- Pest fence strengthening
- Operational requirements

Please email: info@brooksanctuary.org.nz

VISIT THE NEW CAMPGROUND

BROOK VALLEY
HOLIDAY RESERVE



Need a place to stay? Our campground is located just in front of the Sanctuary.

Book Now: brookvalleyholidayreserve.nz

SUPPORT THE FOUNDATION TRUST

You can invest money into the BWST knowing that the funds, no matter how big or small, can achieve a greater impact than what is possible through personal giving.

The foundation illustrates clearly to our key partners and supporters the BWST's intention to build capital reserves, build contingency, and become more self-sustainable over the longer term. For more information, visit [here](#).

VOLUNTEER

We currently have a variety of volunteer roles available, including track cutting and maintenance, wildlife monitoring, fence line monitoring, weed control, events and fundraising, visitor centre hosts, tour guiding and more!

Please get in touch with Sabrina at volunteerconnector@brooksanctuary.org.nz or visit our website for more information - [Become a Sanctuary Volunteer - Brook Waimārama Sanctuary](#) (brooksanctuary.org.nz)

ENDEMIC SPECIES FEATURE: KŌARO

KŌARO Whitebait *Galaxias brevipinnis*

Here in New Zealand, “whitebait” are the juveniles of six species of fish. Five of these are migratory galaxiids: inanga, banded kōkopu, giant kōkopu, kōaro (which is the focus of this feature) and shortjaw kōkopu. Four of these species are endangered. The sixth species is common smelt. Although galaxiid species are found in many places in the Southern Hemisphere, the banded, giant, and shortjaw kōkopu only exist in New Zealand.

The Kōaro is the most common migratory fish species found in the Brook Waimārama Sanctuary; it's common throughout Aotearoa and is also present in Australia. Kōaro are a species in the family Galaxiidae.

An interesting feature of these fish is that they have very delicate skin and no scales. This requires care when handling the fish and you must make sure your hands and equipment are wet. Kōaro are also distinguishable from other galaxiids by their tubular bodies. Kōaro are the extreme climbers of our native fish species and are often seen climbing out of whitebait buckets as juveniles. Kōaro have two sets of paired fins on the underside of their tubular bodies that help create a strong surface tension that assists the fish in climbing up any wet vertical rock surface as long as they are not dislodged by strong water flows.

Kōaro and three other native migratory fish are in sharp decline; recent modelling data of adult populations suggests four of the five native species that make up the whitebait run will be extinct by 2050.

There are multiple factors contributing to this tragic outcome:

- climate change - warming our waters, increasing likelihood of catastrophic flooding,
- rivers are becoming increasingly polluted due to weak fresh water protection laws and intensive dairy farming,
- the use of synthetic nitrates used in industrial horticulture. The over-abundance of nitrates in the water along with more light due to deforestation spur mass algal blooms that can drastically reduce oxygen in the water and cause a lot of sediment rendering the habitats unliveable and causing mass death of life in our streams and rivers.

Chelsea and Henry, two rangers at the Brook Waimārama Sanctuary have spent a year collecting data through use of two fyke nets provided by the Nelson City Council and we have seen that inner city construction is also a detrimental factor in migratory fish passage.

Kōaro and other fish need rocks to hide under during the day as they are nocturnal and there is nowhere for them to hide in the concrete culverts that some of our inner city rivers now have.

These culverts can often heat up in summer to well above 20C degrees, the warmer water holds less oxygen, creating conditions that is less than ideal for kōaro and other aquatic life. As a result we have very small numbers of fish of migratory size making it up to the dam gates.

It will take a lot of change and reforestation to mitigate the factors contributing to the decline of our fish species described previously. One thing that would aid the survival of kōaro and other whitebait species would be to reduce or better manage the annual whitebait fishing take. One cup of whitebait contains around 500 fish, it's estimated that it would take 650,000 eggs laid to produce 500 fish. There is currently no way of knowing how many whitebait are taken each spring nor the impact on surviving whitebait populations. While there are some specific rules around how to catch whitebait, there is currently no catch limit.

If you would like to see a kōaro up close please feel free to visit Whetū the advocate kōaro in the tank at the Sanctuary Visitor Centre.

A little more about kōaro

Living for 15 years or more, kōaro travel as far as 400 km inland, and climb as high as 1300m.

These solitary fish are often found in fast-flowing, cool, tussock or forest streams. They commonly grow to about 160–180 mm, but can reach 290 mm. In bright light, their skin shines with iridescence.

Source: www.doc.govt.nz/



Kōaro | Climbing Galaxias - *Galaxias brevipinnis*
Photo Credit: Chelsea Haley

Compiled by Chelsea Haley