

Southland Toi Toi Wines Expedition 2023

By Pete McClelland, Dawn Palmer, Sean Jacques, Joseph Bliss | March 28, 2023



**Eyre Mountains
Toi Toi Wines/Heliworks sponsored
New Zealand Bird Atlas and Rock Wren Survey
25th-26th February 2023**

Undertaken by Southland and Otago branches of Birds NZ/OSNZ

Pete McClelland, Dawn Palmer, Sean Jacques, Joseph Bliss



Background

New Zealand Bird Atlas

Birds New Zealand/the Ornithological Society of New Zealand (OSNZ) undertakes a population survey of all bird species over as much of New Zealand as possible every 20 years. Each survey is carried out over a five-year period to allow coverage of as much country during each of the four seasons as possible. The survey is then compared with previous ones to gauge the state of New Zealand native and introduced avifauna. The current atlas survey period launched on 1st of June 2019 and will run until 31st May 2024.

The survey divides New Zealand into a 10x10km grid with the aim of surveying each square in each of the four seasons, with both diurnal and nocturnal effort. Not surprisingly easily accessed areas, especially those near a large population base, are disproportionately represented in the data while isolated and hard to access areas can be missed entirely. The Eyre Mountains are one of these sites.

Pīwauwau/rock wren

The Department of Conservation (DOC) (<https://www.doc.govt.nz/>) last undertook a pīwauwau/rock wren (<https://ebird.org/species/soiwre1/>) survey in the Eyre Mts in 2006/2007. That survey searched much of the suitable habitat in the southern Eyre Mt areas – generally large boulder fields in the alpine zone. That survey found birds at 43 sites roughly clustered in to 6 groups. However, the spacing of birds within the groups varied significantly. Rock wren are classified as Threatened – Nationally Endangered with an estimated population of mature individuals ranging between 1000 – 5000 (*).

* – (Robertson, H.A., et.al. (2021): Conservation Status of birds in Aotearoa New Zealand, 2021. New Zealand Threat Classification Series 36. NZ Department of Conservation, Wellington (<https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztcs36entire.pdf>))



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Pīwauwau/rock wren *Xenicus gilviventris* © Joseph Bliss Macaulay Library

Personnel

Weather is always an element that can cause delays or postponement of survey work in the Alpine Zone. For this reason, the project team leaders relied on experienced and active atlasers residing in Southland and Otago to minimise inconvenience should postponements occur. This criterion also ensured the desired data would be collected.

Six Otago members joined thirteen Southland members to survey on the weekend of 25th and 26th February 2023. These were split into 2 general groups – alpine, who had to gain access to their sites by helicopter, and *lowland*. The lowland teams walked or relied on 4WD to reach their sites. Teams were allocated Atlas areas based on experience and fitness and were as follows:

Alpine Team

1. Megan Bogisch / Helen Fairlamb – Helen Peaks
2. Sean Jacques (Rock wren survey coordinator/ safety lead) / Penelope Gillette – Jane Peak
3. Bradley Shields/ Jordon Traill – Eyre Peak
4. Joe Bliss (Alpine team coordinator) / Anna Harris – Bowels of the Earth
5. Katie Ward-Allen (safety equipment lead/ GPS track collation)/ Mike Hargraves -Head of the Long Burn
6. Dawn Palmer (logistics, helicopter and landowner contact, Otago lowland team coordinator, map preparation and photography collections) and Pete McClelland (Southland lowland team coordinator, project coordinator, liaison with NZ Atlas project leads) – Symmetry Peaks

Lowland

1. Shawn Herron, Anja Kohler, – Kiwi Burn / Oreti River
2. Glenda Reese, Francois Flanagan, – Athol Area
3. Petrina Duncan, Georgina Pickerell -Eyre Creek
4. Richard Schofield – Irthing Stream, West Dome



Georgina Pickerell searching for birds, Eyre Creek; taken by Petrina Duncan



Funding

In 2022 [Toi Toi Wines \(https://www.toitowines.co.nz/\)](https://www.toitowines.co.nz/) donated \$30,000 to the Atlas project to help target poorly represented areas. This was divided into 6 x \$5000 for the 6 less surveyed regions. While not initially on the priority list, Southland branch of OSNZ approached the managers of the fund about the branch supplementing the fund to support a joint Atlas/rock wren survey in the Eyre Mts as this required the use of helicopters to access the alpine area in this under-surveyed region.

OSNZ Southland had previously been approached about funding a resurvey of rock wren using the Alloo Fund, a bequest received in 2016, but it was unable to financially support the work. When the opportunity to combine the rock wren survey with a broader bird atlas effort arose through a [Toi Toi Wines \(https://www.toitowines.co.nz/\)](https://www.toitowines.co.nz/) bird atlas sponsorship grant of \$5000, OSNZ Southland was able to contribute to the cost, making the survey of this remote area possible.

The remote, alpine environment of the rock wren habitat required alpine teams to be flown in and then retrieved the following day. The distribution of the sites across the high peaks scattered through the middle of the Eyre Mountains resulted in helicopter costs exceeding the combined budgets but fortunately [Heliworks/Action Helicopters, \(https://www.queenstownhelicopters.nz/\)](https://www.queenstownhelicopters.nz/) who are based in Queenstown, subsidized the trip to make the cost fit within the available funds. This was especially important as on the day of pick-up low cloud required significantly more flying time than expected.

OSNZ Southland also covered the cost of accommodation on the Friday night but all teams were self-sufficient with their own food and transport to Athol and Queenstown which was greatly appreciated.



Heliworks/Action Helicopters ferrying alpine teams into place; taken by Megan Bogisch.

Safety Briefing

The Atlas expedition maintained a strong focus on the safety of the effort and its team members.

All of the Alpine and Otago members met at Athol on the night of the 24th for a team briefing and review of the survey methodology and risk management plan. A comprehensive task specific plan was prepared for the alpine work due to the greater risk associated with working in that area. Some of the lowland teams travelled directly to their allocated areas the morning of the 25th having been given a copy of the plan earlier and providing verbal confirmation of their understanding of it to their team leader.

Each alpine team was responsible for supplying their own camping equipment and food; acquisition and distribution of safety gear was coordinated by Katie Ward-Allen and Joseph Bliss.

Alpine teams were allocated areas to match their skill and confidence levels. All alpine team members were experienced in the alpine environment and had worked around helicopters. Each alpine team member had a PLB, an In-Reach satellite-based texting and tracking device and a VHF radio for communicating with the helicopter as well as mobile phones. High-visibility vests were worn by the alpine teams when being transported by helicopter. Each team planned their intended routes between their allocated rock wren sites as well as their camp site/ hut locations for the night confirming their plans with the team leaders.

It was stressed that teams should only visit sites they were satisfied they could reach safely, with no pressure to visit all the rock wren sites within their area.

A sign out time was set up for all teams at the end of their surveys to allow for a response if required. There were no injuries although one pack was “lost” down a scree slope and had to be collected later.



Leaving Katie and Mike to survey in the head of the Long Burn; taken by Pete McClelland

Methodology and Logistics

On the morning of the 25th alpine teams 1, 2 and 3 drove to Queenstown where they boarded the helicopter and were flown to their respective sites. Teams 4, 5 and 6 drove part way up Robert Creek, a tributary of the Mataura catchment and were flown to their sites by helicopter from there. This was reversed for the pick-ups on the 26th except for team 6 which walked back down to Robert Creek. The lowland teams all drove to their various sites. All teams confirmed by text message that they were safely out of their survey areas on completion of their effort. This ensured everyone was safe and accounted for.

The six alpine teams were deployed into one of the six historical rock wren cluster sites. The lowland teams were focused on areas that either hadn't been surveyed or were greatly underrepresented within the current atlas survey efforts. All teams were instructed to do as much atlas surveying as possible and to record travelling checklists when moving for as long as they could sustain the focus on atlasing. Checklists were recorded using travelling counts which aimed to capture observations while walking, these were generally truncated into efforts of up to 1km and / no more than 1-hour or undertaken as stationary counts from specific locations.

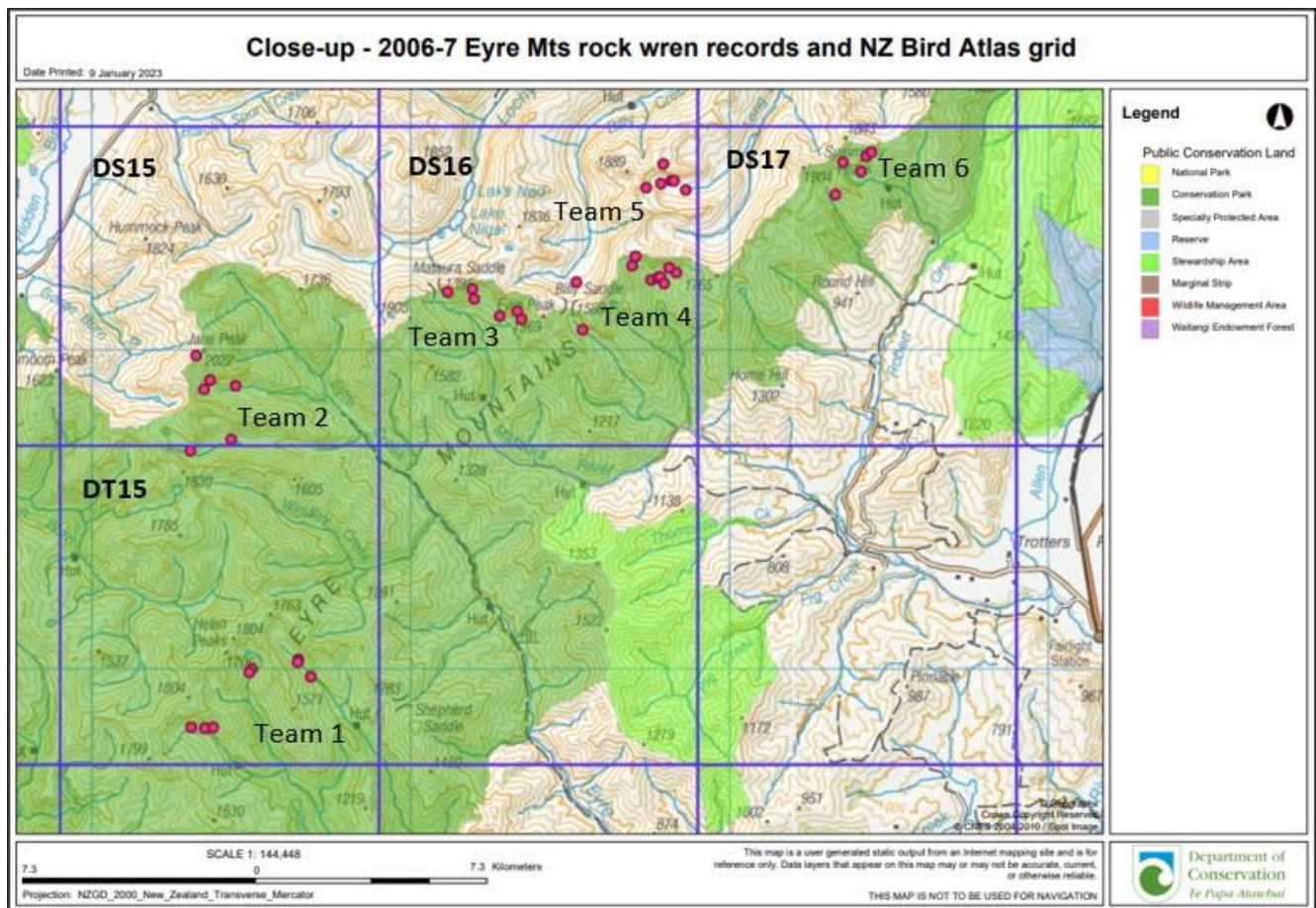
New lists were started when the surveyors entered a new habitat type. Nocturnal lists were also encouraged among team members.

Survey checklists were recorded using the eBird phone app and uploaded when mobile coverage became available.

The six teams working in rock wren habitat targeted as many of the sites where rock wren were recorded in 2006/ 07 as safely possible, checking other suitable habitat as they travelled between sites in the area. They recorded waypoints and habitat descriptions where Rock Wren were found as well as atlas checklists at these sites and when searching the surrounding alpine habitats.

The field work was timed to replicate as closely as possible the original 2006-07 project, to coincide with when Rock Wren numbers would be at their highest post breeding, and as many suitable, skilled and enthusiastic surveyors were available. The original survey was undertaken by one person (Jono More) with good helicopter support and this project was designed to replicate as closely as possible his search effort using multiple people over a more confined period. All checklists were collated into [NZ Bird Atlas Trip Report \(https://ebird.org/atlasnz/tripreport/108939\)](https://ebird.org/atlasnz/tripreport/108939) which showcases the collective achievement of the atlasing expedition.

The weather on the weekend was becalmed, fine and mild with a blanket of low cloud rising into the alpine survey areas on Sunday.



Distribution of rock wren in the 2006/07 survey and four atlas squares searched by the alpine teams in February 2023.



Surveying rock wren habitat near Helen Peaks; taken by Megan Bogisch



Team 4's camp site above the Bowels of the Earth, taken by Joseph Bliss



Team 4 searching the ridge at the head of Billy Creek, taken by Anna Harris.



View from near the Billy Saddle along the alpine ridge with Symmetry Peaks in the distance, taken by Joseph Bliss.



View over the rising cloud cover on the morning of the 26th February, the Team 4 camp site was near the lower tarn in this view; taken by Joseph Bliss.

While most of the work was undertaken within the Eyre Mountain/Taka Ra Haka Conservation Park the adjoining landowners were all contacted to make sure they knew what was going on with helicopters flying over and around their land.



View over the farmland south of the Eyre Mountains, taken by Glenda Rees



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Miomiro/tomit (male), Cainard Road, by Glenda Rees.

Results

Four of the six teams (Teams 2, 3, 4 and 5) found rock wrens (<https://ebird.org/species/soiwre1/>). Most were in or near areas where they were recorded in 2006/07. However, Teams 1 and 6, were at the margins of their previously recorded range, and failed to find any. This may be indicative of a contraction in their range although it may also reflect less time spent searching in these areas in favour of a wider atlasing effort. A detailed report on the rock wren survey has been prepared by Sean Jacques to help DOC prioritise future work in the Eyre Mountain/Taka Ra Haka Conservation Park.

A summary of preliminary results indicates a total of at least 35 birds at 22 sites were observed, grid references were recorded using a handheld GPS. This compares with the 2006/07 surveys which found a total of 86 rock wren at 43 sites with each search effort extended over a period of about 3 or 4 days. The data also suggests that the localised density of Rock Wren recorded in the 2023 survey may be higher than that recorded in the 2006/07 surveys.

The 2023 teams were able to revisit (within about 200m), 25 of the 43 2006/07 sites. Twenty-three rock wren were reconfirmed at or near 12 of these sites.

Interestingly a stoat was recorded near Symmetry Peaks in 2007 and stoat tracks were also found in snow high in The Bowels of the Earth catchment during the 2023 survey.

Stoat tracks high in the Bowels of the Earth, taken by Joseph Bliss

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Rock wren in the Bowels of the Earth, image taken by Joseph Bliss

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A pair of rock wren in Aciphylla, snow totara and porcupine shrub; taken by Joseph Bliss

Rock wren sites from 2006/07 and 2023 surveys and alpine atlasing routes taken (blue).

Atlas

During the February 2023 atlas expedition more than 300 bird lists were compiled in 16 different Atlas squares taking some of the squares from being among the lowest visited areas to being well represented in the surveyed areas of New Zealand.

The distribution of checklists recorded during the Southland Toi Toi Wines Eyre Mountains atlasing expedition 25th-26th February 2023.

Notable observations

In addition to the continued, if range reduced, presence of rock wrens, a single [kea](https://ebird.org/species/kea1/) (<https://ebird.org/species/kea1/>). (threatened: nationally endangered) was heard, and [kārearea/Eastern falcon](https://ebird.org/species/nezfal1/) (<https://ebird.org/species/nezfal1/>). (Threatened: Nationally Vulnerable) were recorded in 5 checklists. A single [taranui/Caspian tern](https://ebird.org/species/caster1/) (<https://ebird.org/species/caster1/>). (Threatened: Nationally Vulnerable) was recorded in the mid-Eyre Creek catchment. [Pīhoihoi/New Zealand pipit](https://ebird.org/species/auspip3/) (<https://ebird.org/species/auspip3/>). (At-Risk: Declining) were recorded in 26 checklists. [Māpunga/black shag](https://ebird.org/species/grecor/) (<https://ebird.org/species/grecor/>). (At-Risk: Relict) were recorded more frequently (12 checklists) than [kawaupaka/little pied shag](https://ebird.org/species/lipcor1/) (<https://ebird.org/species/lipcor1/>). (At-Risk: Relict), in 3 checklists.

Kakaruai/South Island Robin (Petroica australis), within the beech forest of the Kiwi Burn taken by Anja Kohler.

Good populations of tītīpounamu/rifleman (<https://ebird.org/species/riflem1/>), were found at 22 sites in the forests of the Kiwi Burn, Irthing Stream and Firewood Creek. Kakaruai/South Island robin (<https://ebird.org/species/nezrob3/>), were recorded in 7 checklists within the beech forests of the Kiwi Burn, Oreti River area and Irthing Stream.

Nocturnal surveys recorded four ruru/morepork (<https://ebird.org/species/morepo2/>) at two sites including one at the Jane Peak camp site in the alpine zone and three near the Kiwi Burn hut.

Discussion and Recommendations

While it was pleasing to still find rock wrens present in reasonable numbers at some sites, their apparent absence from the southwestern and eastern extent of their 2006/07 range in the southern Eyre Mountains is concerning as it indicates that their range is likely to be slowly reducing. It is highly likely that this is due to the presence of introduced predators – particularly stoats. Stoat footprints were found in the snow at one of the 2006/07 sites in the Bowels of the Earth, the presence of rock wren were not reconfirmed by the 2023 survey efforts at that site.

While both logistically challenging and relatively expensive it is highly desirable that some form of predator control is put in place to protect the remaining birds.

It is recommended that another survey of the southern Eyre Mountains is undertaken in 5 years to monitor the population and an assessment undertaken to determine the risk to the population, otherwise this unique, endemic species could simply disappear unnoticed. It is further recommended that an opportunity to survey the northern Eyre Mountains be explored with the Station owners there.

The low number of [kea](https://ebird.org/species/kea1/) observations (just two distant calls heard in the same area believed to be a single bird) is a major concern as the Eyre Mountains was previously a stronghold for this species. In 2021, the conservation status of this species was reconfirmed as Threatened: Nationally Endangered as a result of a forecast for a continuing population decline of 50 to 70 percent over the next 10 years or 3 generations (whichever is shortest) 2, its range is also believed to be contracting.

Additional Summer Atlasing efforts in the Eyre Mountains

In addition to the primary expedition in February, a small earlier atlasing expedition into the Lochy River valley was undertaken on 28th and 29th January 2023. This was enabled by the support of Halfway Bay, Cecil Peak and Walter Peak Stations. Two Atlasers were transported to the upper reaches of the Lochy River by the Halfway Bay Station Manager. They walked back down the valley over two days, spending the night near the Killiecrankie Creek confluence. Habitat in the valley is a mixture of subalpine shrubland, grey shrubland, mixed mountain and silver beech. The valley floor is dominated by pasture grasses where open, flanked by grey shrubland and subalpine shrubland dominated by snow totara in places on south-facing slopes. Beech forest extends to the Lochy River lower in the valley where the terrain becomes more constricted. Bluffs near the Billy Creek confluence transition into scree slopes further up the valley on the northern aspects.

Fifty-one checklists were completed recording 33 species. Of note were a good population of [pīpipi/brown creeper](https://ebird.org/species/pipipi1/) (10) found in the forest upstream of the Cascade Creek confluence. High numbers of [tītītipounamu/rifleman](https://ebird.org/species/riflem1/) were encountered in the mixed silver-mountain beech downstream of the Cascade Creek confluence, and [miromiro/tomtit](https://ebird.org/species/tomtit1/) were common throughout the valley, even abundant in places throughout. A pair of [kārearea/Eastern falcon](https://ebird.org/species/nezfal1/) with a fledgling were recorded near the Billy Creek bluffs. [Pīwakawaka/New Zealand fantails](https://ebird.org/species/nezfan1/) were recorded less frequently than expected, but when seen, they tended to be quiet, so may be under-represented in the checklists. [Riroriro/grey warblers](https://ebird.org/species/gryger1/) were heard throughout the valley, and one [pīpīwharauoa/shining cuckoo](https://ebird.org/species/shbcuc1/) was heard while travelling up the valley west of Collins Creek. [Pūteketeke/Australasian crested grebe](https://ebird.org/species/grcgre1/) (Threatened: Nationally Vulnerable) were recorded in Halfway Bay.

At-Risk species recorded include [pīhoihoi/New Zealand pipit](https://ebird.org/species/auspip3/) (declining), and [māpunga/black shag](https://ebird.org/species/grecor/) (relict: data poor).

(<https://ebird.org/atlasnz/tripreport/108939>).

The distribution of Eyre Mountains Atlasing effort in the Summer of 2023 as part of the January and Toi Toi Wines sponsored atlas project for the Eyre Mountains in February.

Acknowledgements

This project was a major undertaking for the planning team on top of normal work and family commitments. All members stepped up and took on the required tasks with enthusiasm and dedication. The experience of the planning team including members having key contacts within the DOC Tier One

survey team for both participants and safety equipment, and with local landowners proved crucial to the success of the project. As usual many more people were keen to participate in the survey but were unable to for various reasons. We were fortunate to have experienced volunteers to replace those who were unable to participate in this survey.

The dedication and enthusiasm of all team members was very rewarding and appreciated.

BirdsNZ (<https://www.birdsnz.org.nz/>) and Southland BirdsNZ are particularly grateful for the support of [Toi Wines](https://duckduckgo.com/?t=ffab&q=toi+toi+wines&atb=v344-1&ia=web) (<https://duckduckgo.com/?t=ffab&q=toi+toi+wines&atb=v344-1&ia=web>) for providing the sponsorship that prompted the project. This was supported by:

- [Action Helicopters/Heliworks](https://www.queenstownhelicopters.nz/) (<https://www.queenstownhelicopters.nz/>) who subsidised the flying time to make the project affordable.
- Dan Burgin of [Wildlife Management International](https://wmil.co.nz/) (<https://wmil.co.nz/>) as the NZ Bird Atlas contact and provided huge support and encouragement.
- The adjoining landowners who all supported the project – Mount Nicholas, Walter Peak, Halfway Bay, Fairlight, Canaird, Eyre Creek and Cecil Peak Stations. Their support for and interest in the broader project over both January and February is acknowledged and was greatly appreciated.
- [DOC](https://www.doc.govt.nz/) (<https://www.doc.govt.nz/>) for permitting the teams to access the Mountain/ Taka Ra Haka Conservation by helicopter.
- DOC Tier one survey team for allowing us to use some of their PLB, In-Reach devices and radios for the project.
- Support of Otago BirdsNZ members for joining the atlasing teams and contributing to the achievement of the expedition.
- The combined effort of all who participated in and supported the project has resulted in a safe, extensive and therefore successful atlasing expedition, without this collaboration and the support of the large team of Southland BirdsNZ members there simply wouldn't have been a project

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