

# SERN News

*Volume 36 Issue 1  
Practitioner-Researcher Partnerships*



## The Long Haul

*A novel collaboration leads to island restoration success*

## Beyond the Minimum

*Partnerships deepen and improve restoration outcomes*

## If We Can, We Should

*Practitioners and researchers are two sides of the same coin*

## Addressing Shared Goals

*A grassroots collaborative focused on improving their shared landscape*



# LONG TERM VALUE OF ENGAGED, SKILLED, CITIZEN SCIENTISTS

Mel Galbraith<sup>1,2</sup> and Hester Cooper<sup>2</sup>

1. Unitec Institute of Technology, 2. Supporters of Tiritiri Matangi

Tiritiri Matangi Island, a scientific reserve in the Hauraki Gulf, is typical of many of New Zealand's inshore islands and has been degraded over its history by human occupation. An ecological restoration program began in 1984 to revegetate much of the island and to re-establish native wildlife species, gradually improving the complexity of the island ecosystem. Restoration projects such as this are now commonplace in New Zealand, and have been encouraged by government initiatives since 2010 to lessen the impact of introduced plants and animals to which the native species are not adapted. Tiritiri Matangi is managed by a government agency, the Department of Conservation, in partnership with a community volunteer collective that has formal recognition, the Supporters of Tiritiri Matangi (SoTM) (see [www.tiritirimatangi.org.nz](http://www.tiritirimatangi.org.nz)).

## PARTNERSHIPS IN ECOLOGICAL SCIENCE

The Tiritiri Matangi Island project pre-dates other recent initiatives by decades and differs from many other restoration projects in the way it engages with its volunteer workforce. The original academics heavily involved with the project – Professor John Craig and Dr. Neil Mitchell of the University of Auckland – had significant input into the first working plan for the island (Dept. of Lands & Survey, 1982) and had a broad vision for the island that included both conservation and public participation (Craig et al., 1995). To achieve their vision, the two researchers worked with students for several years on the island before volunteers first became



Tiritiri Matangi Island. Photo credit: Miriam Godfrey.

involved in the planting program in 1984. At that time, public involvement in conservation was a controversial approach in New Zealand and was not universally supported by all government agencies. Over time, the persistence of volunteer engagement led to a change in agency philosophies, with public participation becoming an integral part of conservation management. Participants in the Tiritiri Matangi project were at the leading edge of this change in New Zealand.

Volunteer restoration practitioners participating in the revegetation of the island had the opportunity to be involved with field scientists from the start, illustrating a very early example of citizen science in New Zealand. On Tiritiri Matangi a key difference from other community projects was that the planning and “power” did not remain with academics or government scientists. The volunteer workforce

was seen as a true partner and given responsibility to lead projects. An early example of this partnership and trust was a translocation in 1995 of a threatened species, the hihi (stitchbird, *Notiomystis cincta*), to the island to establish a new population. This translocation was largely organized and carried out by high school teachers and pupils. It was only the second time in New Zealand that anyone other than professional scientists had been participants in such a translocation.

These research-practitioner partnerships in turn encouraged other professionals from disciplines outside those generally associated with ecological restoration to engage with the project and offer their skills (Galbraith, 2013; Galbraith & Cooper, 2013). For example, a retired university professor and former head of a statistics department with over 20 years' experience as a biometrician has contributed expertise in both experimental design and data analysis to the restoration project on a voluntary basis. Active partnerships in ecological science between non-professional practitioners continues to play a significant role in informing the management of the island and its protected species.

### **BENEFITS OF THE RESEARCH PARTNERSHIP**

The scientist-practitioner relationship has generated mutual benefits for all participants. Professional researchers have had assistance with the collection of field data by the volunteers since the beginning of the project, and the formal status of SoTM has facilitated access to funding that would not have otherwise been available for research. Volunteer practitioners contribute expertise not only from their particular interests in natural history, but also professional skills from vocations outside of ecological science (for example experimental design, statistical analysis, financial planning, pharmacy) that adds to the knowledge and skill base of participants overall.

For the non-professional (volunteer) practitioners, there are benefits at both the project and personal levels. Many find significant pleasure and satisfaction at seeing ecological gains on the island. Those who have chosen to participate in the research taking place on the island have become highly skilled in ecological field techniques, such as data collection and species management (including banding of birds, handling of reptiles, etc.). This has demystified science, essentially breaking down the barriers that often exclude non-professionals from participation in restoration research. Over time, participation has built confidence within the volunteer organization to develop and carry out its own research initiatives, which in turn has raised the credibility of SoTM and its workforce of non-professional practitioners.

It can take 10-20 years of data collection before clear trends emerge in a restoration project, thus the long term engagement of volunteers has benefitted the project by making longitudinal



*Threatened and protected species translocated back to the island and managed through researcher-practitioner partnerships include (from top to bottom): the hihi, elegant gecko, and the rifleman. Photo credits: Mel Galbraith and Simon Fordham (gecko).*

ecological studies possible. This type of decadal research doesn't "fit" the traditional research time frames of graduate students. A volunteer may remain engaged for decades (some within SoTM have been with the project since it began 38 years ago!), and the persistence of SoTM creates a formal commitment to ongoing projects. A review of early monitoring projects for translocated species on Tiritiri Matangi revealed a "burst" of research activity around the time of an initial translocation (usually associated with a graduate student project) with little long term follow up. Over time, SoTM has addressed this by engaging its volunteers in the long-term monitoring of several species, with some now monitored (particularly for breeding success) over several decades. This long term data is invaluable to SoTM for future management of the project, and is available to researchers through collaboration.

The benefits on Tiritiri Matangi are best illustrated through non-professionals initiating and contributing to the translocation and management of protected species and ongoing participation in research on translocation success. Examples of such contributions are the translocations of the elegant gecko (*Naultinus elegans*) and the rifleman (titipounamu, *Acanthisitta chloris*), New Zealand's smallest bird. Both species have suffered a reduction in their natural distribution through habitat loss, and the establishment of new populations in secure habitats through translocation is a well-accepted management technique. This is traditionally the

domain of professional ecologists, but rigidly controlled through permitting. On Tiritiri Matangi, the translocation of the elegant gecko and rifleman was initiated and managed by SoTM volunteers, with advice and assistance from professional ecologists. Both species continue to be intensely monitored by volunteers.

## RECOMMENDATIONS FROM OUR EXPERIENCE

### *Plan the research direction*

All participants and their level of engagement in a project change over time, so it is essential that the restoration philosophies and intentions are recorded formally as a reference and to inform future research direction. For Tiritiri Matangi, SoTM maintains and updates a Biodiversity Plan (SoTM, 2013) produced through a collaborative exercise by researchers and lay practitioners that exemplifies a continuation of the research partnerships that were established at the start of the restoration. The Biodiversity Plan summarizes past restoration activities and outcomes, and provides a guideline for future restoration action. The plan is also valuable for identifying appropriate longitudinal research that volunteer practitioners can initiate and undertake.

### *Advocacy for ecological research*

The role of advocacy, especially by non-professionals, should not be underestimated. From the start, SoTM has produced a regular illustrated newsletter



*SoTM volunteer Peter Evans explains the use of nest boxes on a guided walk, and a volunteer bands a rifleman as part of monitoring activities. Photo credits: Peter Flynn (left) and Mel Galbraith (right).*

(Dawn Chorus) keeping members up to date with events on the island. This communication has been essential in generating and maintaining interest in the restoration project, and in making ecological science accessible to the lay practitioners involved. The newsletter reports on research activity and outcomes and, more importantly, provides a rationale behind the research. A further avenue for community engagement is through the guided walks offered to visitors to the island. Since the island is a public reserve, it is readily accessible and a popular destination for many (TripAdvisor New Zealand, 2022). Many SoTM members are volunteer guides, providing information in the form of short tours where visitors are introduced to the ecological science relating to the restoration.

### **Research activity should benefit the restoration project**

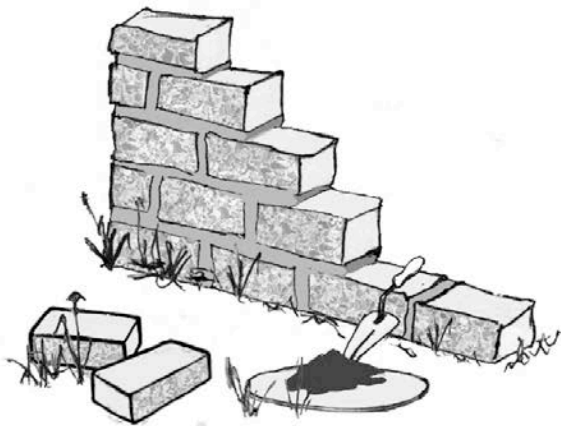
The research program associated with any restoration project should always have the project as its focus, not follow academic whims or personal interests of the researchers. The wide skill base that comes from engaging with a range of skilled practitioners has provided SoTM the means to take the lead in research and decide on the information needed for future planning. This has the advantage of building a “wall of knowledge” – information which

fits together to make a cohesive whole for the project. Furthermore, research associated directly with the restoration project, and highly relevant to its future, means non-professional practitioners are more likely to engage and participate over an extended period because they see the relevance of the work.

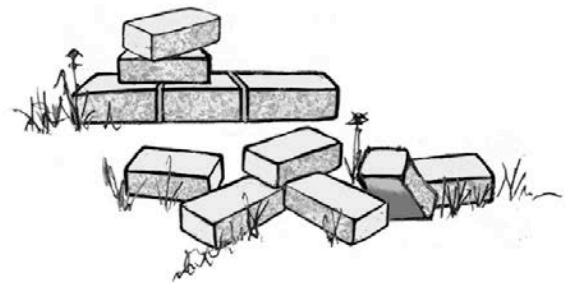
In contrast, where research is driven solely by an individual academic’s interests, too often the research topics resemble scattered “bricks” that are less likely to contribute to the success of the project. Volunteer participation is less likely in this situation.

## **CONCLUSION**

Tiritiri Matangi has emerged as an internationally recognized ecological restoration project where public participation plays a critical role to achieve ecological gains. Through cooperative and collaborative research activities, both public and organizational stakeholders involved in the restoration project have developed mutual respect and trust. The success of the Tiritiri Matangi project has generated interest and engagement throughout New Zealand and inspired other projects to follow a similar path.



Practitioner-led research outcomes – building project ecological knowledge



Researcher-led outcomes – potentially unlinked, reflecting individual interests

*Concept of a wall of knowledge compared to a scattering of information units*

## ACKNOWLEDGEMENTS

We are grateful to Carl Hayson, Chairperson of the Supporters of Tiritiri Matangi, for his support and constructive comments for this article. We extend our thanks to Miriam Godfrey, Simon Fordham and Peter Flynn for granting permission to use their images.

## REFERENCES

Craig JL, Mitchell N, Walter B, Walter R, Galbraith M, Chalmers G (1995) Involving people in the restoration of a degraded Island: Tiritiri Matangi Island. Pages 544–541. In: Saunders DA, Craig JL, Matiske EM (eds) Nature conservation 4: the role of networks. Surrey Beatty & Sons, Chipping Norton NSW.

Department of Lands and Survey (1982) Tiritiri Matangi working plan. Hauraki Gulf Maritime Park Board, Auckland.

Galbraith M (2013) Public and ecology - the role of volunteers on Tiritiri Matangi. *New Zealand Journal of Ecology* 37:266–271.

Galbraith M, Cooper H (2013) Tiritiri Matangi – an overview of 25 years of ecological restoration. *New Zealand Journal of Ecology* 37:258–260.

Supporters of Tiritiri Matangi (2013) Tiritiri Matangi Island Biodiversity Plan. <https://www.tiritirimatangi.org.nz/biodiversity-plan/> (accessed 17 January 2022).

TripAdvisor New Zealand (2022) Tiritiri Matangi Island Day Trip. [https://www.tripadvisor.co.nz/Attraction\\_Review-g255106-d3701674-Reviews-Tiritiri\\_Matangi\\_Island-Auckland\\_Central\\_North\\_Island.html](https://www.tripadvisor.co.nz/Attraction_Review-g255106-d3701674-Reviews-Tiritiri_Matangi_Island-Auckland_Central_North_Island.html) (accessed 17 January 2022).

# What is Make a Difference Week?



One week of collective  
action to benefit the planet



More than 20,000 volunteer  
hours to date



Connects local, hands-on  
restorative activities to  
global change

Learn more about how you  
can get involved and  
support MAD Week @  
[makeadifferenceweek.org](https://makeadifferenceweek.org)