



Annual Report from the **Waikato Biodiversity Forum 2018/19**

Introduction

The Waikato Biodiversity Forum has been operating for 15 years and has a current membership of approximately 550. The Forum's membership is comprised of research and management agencies, iwi groups, private landowners, community groups and individuals who work towards improving indigenous biodiversity in the Waikato region. The Forum believes that the combined synergies of people working together provide a valuable contribution to improving biodiversity across the region. The Forum speaks on behalf of biodiversity. However, it does not necessarily reflect the views of all Forum members on every biodiversity issue.

The Forum operates independently of its constituent organisations. It is run by a part-time coordinator who receives support and guidance from a Focus Group. The Forum's work includes:

- encouraging agencies and groups to network, share ideas and work together to protect and enhance biodiversity
- advocating for the development of sound policy to enhance biodiversity protection at national, regional and local levels
- organising forums to discuss biodiversity issues, and offering support and recommendations in relation to local projects
- organising workshops for community groups on a variety of topics such as pest management
- raising awareness of the importance of biodiversity through the media, the Forum's website, and Facebook and presentations to groups
- acting as a referral agency for biodiversity information
- providing support to community initiatives which protect and enhance biodiversity.

Acknowledgements

The Waikato Biodiversity Forum would like to acknowledge and thank the following organisations for their financial support: Waikato Regional Council, Department of Conservation, Waikato District Council, Hamilton City Council, Waipa District Council and South Waikato District Council.

The Forum would also like to thank the Focus Group members for their support and contribution to the work of the coordinator's roles. Their advice and guidance provides a valuable contribution to the success of the Forum.

Finally, the Forum would like to thank the staff from Forum member organisations and community groups for their contribution and expertise during Forum events, workshops, and the on-going exchange of information with the public and other Forum members. This collective expertise makes the operation of the Forum a success and is valued by Forum members and the public.

Waikato Biodiversity Forum events

The first forum day took place on the on Friday the 23rd of November 2018. Over 60 attendees gathered at the Lake Ngaroto Sailing Club for the first-ever combined Biodiversity Forum and Landcare Networking Day, with the theme appropriately being "community partnerships in environmental management". This offered the opportunity to merge together a wide variety of the Waipa and the greater Waikato community, who are all working to ever improve biodiversity in our region. Aside from the fantastic networking opportunities offered, the day featured four esteemed speakers who all shared their experiences of a range of different approaches and perspectives on collaborative biodiversity Mahi in

the Waipa region.

Barney Mania of Ngati Apakura and Ngati Maihi descent, begun the day by welcoming all the attendees onto the site at Lake Ngaroto. The Lake had been occupied by his Apakura tūpuna at the time of the largest known battle to have ever taken place in Aotearoa, the battle of Hingakaka. The Battle of Hingakaka took place sometime between 1790 and 1803 on a ridge near Lake Ngāroto when an army of around 10,000 Maori warriors from several tribes from the lower North Island, led by Pikauterangi, a Ngati Toa chief, attempted to settle a long-running grievance over land and food resources, by destroying a settlement of 3000 people, mostly Ngati Apakura hapu, who lived on the shores and on the man-made island of Lake Ngāroto. Barney remarked that today Ngaroto is a place for people with thoughts of Kaitiakitanga (protecting our environment) who gather together to hear and see what is happening in the Biodiversity space.

Waipa District Council heritage manager Tony Roxburgh started off the talk with a review of the natural and cultural history of the Waipa basin. Much of what he stated coincided with Barney Mania's korero.

Tony described how land use in the Waipa basin has dramatically changed since human settlement. Particularly post-European settlement where wetlands were drained and forests felled, then eventually converted to pasture, which is now by far the dominant land-use in the area, as seen on the map. Tony also described how the changes of land use have also resulted in a loss of pre-European cultural sites of significance.

Tony and Susan then moved their talk onto how Waipa District Council is working to protect and enhance both natural and cultural heritage of Waipa. There are a range of projects underway in the district which include; Kakepuku Recreation and Historic Reserve, Lake Mangakaware, Matakitaki Pa, Lake Rotopiko, Te Ara Wai and Lake Ngaroto, which is a great example of these efforts. The idea here is to combine efforts to preserve and enhance natural, cultural and recreational aspects of the lake simultaneously.

Jenn Sheppard began by giving an overview of the Waipa District's 16 peat lakes, which make up just

over half of 31 peat lakes found within the Waikato peat lake system. The National Wetland Trust have proposed to reintroduce Pateke into Waipa's Rotopiko East Lake, which has been protected with a Predator proof fence since 2013. So it became essential to investigate the state of predator abundance in the lakes which surround Rotopiko, where Pateke will hopefully proliferate. Jenn's assessment was made up of two parts. The first being the predator control effort at each of Waipa's 16 lakes and the second being predator abundance.

The biggest challenges identified in conducting predator control were - domestic cat concerns; a lack of research and monitoring; safe access around lakes; how to increasing trap effort and people; managing landscapes around lakes. Recommendations identified - To widen Timms traps by 20 cm to target cats; place traps higher in winter to avoid flooding; drag carcass along bait line as lure; use variety of baits; check traps all year long; have additional traps in catchment; to reduce human scent and avoid deterring predators, check traps no more than every three weeks. Additional recommendations - Place carpet under track to deter grass and overgrown vegetation. Raise A24's with 100 mm wedge so hedgehogs can roll off. Final points - 1. We need to conduct biodiversity monitoring. 2. Need to standardise reporting. 3. We Need to share results, know what works at nearby lakes, and obtain assistance from others at nearby lakes, and furthermore to form a collective group. Pūniu River Care Inc. (PRC) is an incorporated society and New Zealand registered charity. Shannon Te Huia, the spokesperson for PRC began by explaining that core kaupapa (purpose) of the society is to enable local hapū to be involved in improving the water quality and replenishing taonga within the Pūniu River Catchment. Since the society was formed in 2015, it has grown not only in size but also in professional development of the staff and overall culture. Pūniu River Care Inc. provides local employment to help solve local problems (water quality/bank erosion/decline in biodiversity, just to name a few) while developing the skills and capability of tangata whenua.

The day then concluded with a guided walk around the Lake Ngaroto to discuss restoration efforts

around the lake. One of the key learnings during the restoration process was the initial use of mass Manuka plantings which ended up dying off en masse after about 15 years. Subsequent plantings have since utilised a greater variety of species with greater care taken to which plant is put where. This is of course now common practice in restoration projects



It was a tight fit for the more than 60 attendees at Ngaroto sailing club. Many were standing outside the club, but still able to see and hear presentations.

The second forum event took place on the 24th of May 2019 in Hamilton. The event entitled “Hamilton Restoration Workshop” was a strongly collaborative effort between the People, Cities and Nature(PCAN) project from the University of Waikato and the Waikato Biodiversity Forum. The venue chosen to host the capacity of 90 attendees was Wintec’s Longroom, located at their city campus. The event would showcase the research into urban restoration completed by PCAN since its inception in 2016. After which the workshop would then move to Waiwhakareke natural heritage park for a series of afternoon workshops covering different aspects of restoration.

Bruce Clarkson opened proceedings as PCAN’s program leader. Bruce focused on collaborative research in urban restoration. He began by showing how cities in Aotearoa, and particularly Hamilton, had very low percentages of indigenous vegetative cover. Bruce went on to explain that the majority of the population occupies these same urban areas and that the benefits of urban restoration are clear (e.g. social cohesion, carbon sequestration to counteract greenhouse gases, health and recreation benefits), then having a greater emphasis on restoring biodiversities in cities like Hamilton is an imperative and PCAN is helping to give greater direction in this.

Eva Collins followed Bruce with a talk on cross-sector partnerships between business and biodiversity. She presented a range of partnership examples, on being “Zoolandia” in Wellington, who have partnered with Meridian. She then went on to explain how this has been successful in satisfying the objectives of both parties, and gave examples of other partnerships that have been less successful in meeting mutual objectives. The bottom line was that partnerships are not easy but with the right match and good communications mutual objectives can be satisfied for biodiversity and business.

Sarah Busbridge then took stage to present her research on “building forest in the city”. Her first main finding from her research which monitored a large number of urban restoration plantings over 8 years was that plantings must be designed to achieve rapid canopy closure and promote regeneration. This meant planting with smaller spacings and growing a combination of suitable species, which may also need to be supplemented with enrichment planting of climax and shade tolerant species after. Her research also looked at what motivated people to be involved in restoration activities. She found that the perspectives of volunteers and practitioners of restoration activities were different. Practitioners tended to have an ecosystem perspective whereas volunteers often were motivated by the creation of a local amenity. She concluded that greater collaboration needed to take place between the two groups as knowledge building is a two-way street.

The next presentation came from Erana Walker, focusing on the subject of Kaitiakitanga, and how Maori practiced kaitiakitanga in an urban setting. This was the first time research on this subject had taken place. Her interviews and questioners led to a number of findings. Firstly that kaitiakitanga is taking place and this is often happening at people’s homes and Marae rather than in public spaces. Also that Kaitiakitanga often involves use of natural resources, such as kai and natural medicines (rongoa). Furthermore that there is a range of ways people learn kaitiakitanga (watched others, learnt through practice, knowledge handed down, read in book), as well as a range of ways Maori contribute to kaitiakitanga (funding, tree planting, labour, cultural guidance, species protection).

John Innes then presented on urban predator control research. The research took place in 5 New Zealand cities in a range of open spaces using a range of methods including trail cams, tracking tunnels and chew cards. The research showed the abundance of key mammalian predators. Chew

cards effectively detected possums and rats, while tracking tunnels effectively detected hedgehogs, rats. The trail cams detected everything including cats and mustelids. While some cities had varied results in terms of the density of some predators, Hamilton was fairly even across the board. The study also compared the success of bird nesting sites between urban and non-urban settings, which revealed surprisingly that urban nests were in-fact more popular.

The last presentation was from Leigh Cornes who outlined the history of Waiwhakareke and spoke about the new facilities being developed at the park as well as further plans for the future.

Leigh showed how the park had gone from having not a single native plant in 2004 to now, where 33 hectares have now been planted in indigenous vegetation. The new facilities being installed include a loop track around the lake, toilet facilities as well as a viewing platform over the lake. Please follow this [link](#) to learn more.

After lunch over 60 of the attendees headed to Waiwhakareke to enjoy the beautiful surroundings created by well over a decade of community effort and to participate in a selection of the following workshops; Planting strategies, tips and hints; Ecological restoration research - how it's done; Future Waiwhakareke plans; The unique challenges and opportunities of urban predator control - Kemble Pudney & others; Detection dogs for freshwater management; Insects & microbes in restoration; Urban weed management.



Hamilton Restoration workshop attendees waiting eagerly to enter Waiwhakareke Natural Heritage Park.

Networking and 0800BIODIV

The Forum members received four newsletters to inform them of biodiversity related information. The Forum network continues to provide a link for community group members and management agencies through dissemination of information and communication, with individual members to answer queries or refer them to other sources of information. A resource person register is maintained so that Forum members can be put in touch with the right person for advice and assistance. The Forum coordinator has a list of Forum members can act as “Biodiversity Champions” on particular issues.

The Forum coordinator operated the 0800 BIODIV line and email service which responds or refers enquiries to an appropriate person. 84 enquiries were responded to over 2018/19, mainly from Forum members, through the 0800 line and email. The enquiries continue to range from funding, weed and animal pest management, details of community group projects, volunteering on projects and planting information.

Community Group Database

The Forum's database and map of community group projects was maintained which continues to highlight the contribution that these groups make to biodiversity protection and enhancement across the region.

Workshops

Two workshops were held this year. The first of which took place in March and focused on “biocontrol”, which is the use of biological means (bugs, fungi etc) rather than chemicals to control pest plants. Biocontrol offers a cost-effective, environmentally friendly, and permanent solution to weed control. Carefully selected biocontrol agents target only weeds. They don't harm desirable plants, and don't pollute the environment. Once established, they travel wherever the weed spreads and can return again and again to kill off new weed growth—all without human input.

We were lucky to have Lynley Hayes to lead our workshop. Lynley is one of NZ's leading experts in the field, and is the main spokesperson for

biocontrol from Landcare Research who carry out all the research and development of Biocontrol agents in NZ. We also had Ben Wolf and Hamish Hodgson from the Waikato District and Regional Councils on hand to lead our field trip proportion of the day, as it is they who are in charge of implementing the biocontrols in the region. The workshop began at Landcare's offices in Hamilton, where Lynley gave a very comprehensive analysis of the biocontrol process. Starting with pest plants becoming introduced, then eventually establishing to become a problem (50-100 year process), then on to how these same plants' biocontrols are discovered, tested and eventually implemented in NZ. Not surprisingly it is a long, somewhat complicated and extremely fascinating process, involving international collaboration with countries where pest plants originate from, as well as those who also are affected by the same kinds of weeds.

After lunch the workshop moved to Edgecumbe Park for a Tradescantia stem and leaf beetle collection workshop. The beetles were released there about 4 years ago and are now well enough established for harvesting of these bioagents to take place. The group collected about 200 beetles which were enough for 4 releases to be taken by workshop participants for releasing at their own sites. The beetles are spreading on their own accord, but by collecting and re-releasing the beetles this process is significantly accelerated. The workshop then split into two groups, one headed out to Waingarua to view a tradescantia fungus release site which is spreading well, while the remainder went to Karapiro to view privet lace bug, and gorse weevil.

To learn more about the biocontrol please follow [this link](#) to Landcare Researches Biocontrol page which offers a wealth of information on this very exciting and effective weed control strategy.

The second workshop which took place on the 16th of April, was focused on Indigenous Lizards. The workshop was hosted by Maungatautari Mountain Sanctuary, who also helped with organisation of the event. The bookings for the capacity of 50 workshop attendees were reached in a short time, demonstrating the strong interest held in the community for our native lizards. Monique Nelson

Tunley (WRC) began the workshop with a very thorough and informative presentation on NZ lizards. Firstly her talk started by giving the audience some basic biology of what makes lizards distinct from other reptiles. Then she went on to describe Aotearoa's endemic lizards, which are made up of over 110 different species of geckos and skinks. Many of the attendees were quite surprised by the high number and beauty of our native species, particularly when Monique actually brought out a live Duvecel Gecko, which she has a licence from DOC to breed. This was a big hit with adults and children alike.



Close-up of Monique Nelson Tunley showing off her Duvecel Gecko to a fully captivated crowd at Maungatautari Mountain Sanctuary.

Andree Hickey-Elliott & Kathryn Longstaff of Tonkin & Taylor then talked about projects that they had worked on in the Waikato involving lizard surveys. The most recent in our region was the ecological surveys done on the southern links section of the Waikato expressway. Andree said that they used various techniques such as laying Onduline, (lightweight corrugated roofing iron like product), using pitfall traps and placing tracking tunnels to survey. But because of the highly modified habitats within the survey zone, there was only the presence of a small number of copper skinks detected. These were then moved into a predator proof enclosure.

After morning tea the workshop moved into the Maungatautari enclosure, where we split into two groups, lead by Monique and Kathryn. The two groups went looking for Lizard habitat and discussed monitoring techniques. The likelihood of actually seeing lizards was low being that it was daytime and no Onduline or pitfall traps had been placed. Monique explained that if you are lucky, you will see lizards sunning themselves on the fence surrounding the enclosure, but to give you the best chance you would spotlight at night for these cryptic creatures.

Although we didn't see any wild lizards, everyone was full of enthusiasm and wonder about all the knowledge of our often overlooked native lizards they had gained. The up-coming workshop in September 2019, will also give the public an opportunity to learn more about another fascinating and cryptic creature - our native bats. In particular the long-tail, which we are lucky to still have in parts of the Waikato and even in Hamilton City.



Monique Nelson Tunley giving the lowdown on lizard monitoring at Maungatautari Mountain Sanctuary.

Support for Community/Agency initiatives and events

27/07/19 Free fm radio interview to discuss and promote Waikato biodiversity issues and events; Attended "Project Echo" meeting 28/08/18; Supported and represented DOC at Trap library opening at 'Go Eco' 10/08/18; Attended Landcare Trust's "Innovative Weed Control Demonstration Day" 19/10/18; Participated in Connecting the Waitoa Forum 20/11/18; Participated in NZ Biodiversity Strategy Workshop 06/12/18; Attended Te Uru Rakau Presentation, Hamilton 12/12/18; Participated in Hamilton City LIBS project 12/04/19; 8/05/19 Free fm radio interview to discuss and promote Waikato biodiversity issues and events; Provided Case Study on the Waikato Biodiversity Forum for the National Biodiversity Strategy; 31/05/19 Participated in Arbor Day; Attended "Project Echo" meeting 25/06/19 Co-organised and supported Kirikiriroa Hamilton Restoration Group catch-up 30/06/19

Media

Four articles were supplied to the Hamilton Press and Hamilton News. First was an article on 8 different Hamilton Restoration Groups in October 2018. The second was an article on Friends of Manga 'O' in March 2019. The third was from the Riverlea Restoration Society RESI in April 2019 and the fourth was from Tui 2000 regarding Arbor day in May 2019. Sam was also interviewed twice on Free FM in regards to his role as forum coordinator as well as discussing biodiversity matters in the Waikato region.

Summary

The Forum has continued to involve itself in advocacy, networking and advice to organisations and groups across the region. It has worked with other organisations and groups to support biodiversity work and provide opportunities to add value to the work of member organisations and groups. Sam, on behalf of the Forum, would like to acknowledge and commend the work that agencies, community groups and individuals carry out to improve biodiversity. They would also like to thank the Focus Group members for their support and contribution to the Forum's work. Finally Sam would also like to thank Moira Cursey for her continued support of the Forum, which she has built up over the last 15 years, as it moves into the future.

Sam Mcelwee, Forum Coordinator

