

SUMMER RESEARCH 2024/25

PROJECT ABSTRACT



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

PROJECT # 58

SUPERVISOR/S:	Dr Ang McGaughran & Michael Barton
PROJECT TITLE:	Investigation of potential ecological corridors throughout Tauranga City
FIELD:	Biology/Terrestrial Ecology
DIVISION/SCHOOL:	HECS - Te Aka Mātuaatua School of Science
PROJECT LOCATION:	Tauranga
EXTERNAL PARTNER:	Tauranga City Council

PROJECT ABSTRACT:

In 2022 Tauranga City Council adopted its Vision for Tauranga after asking the community about their values and hopes for the city. The highest priority from this consultation was to protect and enhance the natural environment; thus, the first of the three identified key pillars is the “Environment – Prioritising Nature”. Specific objectives are to have thriving nature and biodiversity at the heart of our communities and to bring nature back into the city.

Tauranga has some outstanding natural features, with great ecological corridors from the Kaimai ranges to the harbour and sea. Some have been well looked after, but others need help and could also start to thrive if we understood more about how to connect remaining pockets of high-quality vegetation with thriving pathways along which flora and fauna could disperse. Understanding where we could best focus our efforts and money in the form of planning followed by good maintenance and restoration processes is key to achieving the overarching goal of bring nature back into our city.

Surveys and reports have been completed at a macro level by Bay of Plenty Regional Council and the Department of Conservation, providing higher level reference material, but more detailed analysis within the city boundaries on a micro level are needed to ascertain the best opportunities to enhance connectivity.

You will combine past research into a library of local studies done on the ecology of Tauranga to determine the past ecological state of the land the city occupied pre-human settlement. You will also undertake local fieldwork to identify and map flora using surveys and environmental DNA (eDNA) samples. Outputs from the project will include the identification of potential ecological corridors and preliminary analysis of eDNA data, contributing to the broader Vision for Tauranga objectives to prioritise nature in our city.

STUDENT SKILLS:

- Basic understanding of ecological systems is essential.
- Experience working in a laboratory and/or field setting is preferred.
- Plant identification including plant pest identification is highly desirable.
- Digital literacy including online mapping and searching online databases would be beneficial.
- Driver’s license is essential.
- Good data recording and management skills are essential.

PROJECT TASKS:

1. Combine past research into a library of local studies done on the ecology of Tauranga to determine the past ecological state of the land the city occupied pre-human settlement.
2. Undertake fieldwork in the Bay of Plenty region, including mapping of flora and collection of eDNA samples.
3. Create maps with locations of potential ecological corridors identified.
4. Preliminary analysis of eDNA data.
5. Creation of a research poster and presentation of research (oral presentation and short written report) to Tauranga City Council.

EXPECTED OUTCOMES:

- Student's Research Poster (as per clause 6 of the [Scholarship regulations](#))
- The student will learn key techniques in mapping of biodiversity.
- The student will map ecological corridors across the city within Tauranga City Council boundaries.
- The student will create a final research poster, oral presentation, and brief written report summarising the project and what they have achieved.