

CBB Summer Projects 2023-2024

Project number	Supervisor names	Project title	Possible project activities	Requirements
CBB-1	Jacqueline Beggs (University of Auckland) with Peter Bellingham, Manaaki Whenua	Ecology of Rangitahua	As part of a larger programme of research (Te Mana o Rangitāhua) led by Ngāti Kuri and Auckland Museum, this project will assess the impact of removing introduced cats and rats on the invertebrate fauna of the Kermadec Islands (Rangitāhua). You will document and measure Rangitāhua specimens in museum collections, comparing the diversity and morphology of insects prior to predator eradication with post-eradication specimens. You will also help with the processing of newly collected material from Rangitāhua, there may be the opportunity to work with freshly collected specimens. You will develop a range of ecological skills, particularly in relation to morphological measurements, species identification, data management and statistical analyses.	
CBB-2	Jacqueline Beggs (University of Auckland) with Marleen Baling (Unitec) and Richard Gibson (Auckland Zoo)	Impact of rainbow skinks in NZ	The introduced rainbow skink (<i>Lampropholis delicata</i>) is a small insectivorous skink that arrived in Auckland in the 1960s and has spread throughout the North Island. It will likely continue to spread and become abundant in many parts of New Zealand. This introduced species shares significant habitat overlap with endemic skinks. Understanding how <i>L. delicata</i> affects our endemic reptiles is vital for implementing practical conservation and pest management strategies. We know from earlier studies that <i>L. delicata</i> has reasonable hatching success at temperatures as low as 20oC and it is predicted they could establish as far south as Christchurch. As the range of <i>L. delicata</i> expands and the temperatures in New Zealand rise, they may be able to expand much further and much faster than anticipated. One constraint will be the minimum temperature required for successfully hatching eggs. Our project has a captive population of rainbow skinks that will be used to experimentally determine incubation success of <i>L. delicata</i> eggs at a range of temperatures, including scenarios representative of predicted climate warming in New Zealand. You would help with caring for the laboratory animals and running lab experiments. This may also include work assessing the climbing ability of skinks and evaluating their diet.	

CBB-3	Juliane Gaviraghi Mussoi and Kristal Cain (University of Auckland)	Behaviour and song complexity of common mynas	Common mynas (<i>Acridotheres tristis</i>) are a widely distributed bird adapted to a range of environments and conditions. It has also coped well with anthropogenic change. However, there is still a lot that we don't know about their songs and behaviour. In this project, you will annotate and analyse video/audio data collected from captive mynas in order to identify individual differences. You will learn how to work with software like Raven, BORIS, and R, which are commonly used in animal behaviour research. Note: this study is entirely computer-based but there will be limited opportunities for some fieldwork if interested.	
CBB-4	Anne Gaskett (University of Auckland)	NZ lizard interactions with fruit	What do native lizards and geckos like? How did Aotearoa's fruits evolve to match? We are measuring fruit colours and smells, testing their attractiveness. How do reptiles see those colours? Could we use scents to attract reptiles during field surveys? Our fieldwork can be in highly accessible locations or more remote options. We can lend you field gear like raincoats, gumboots etc.	
CBB-5	Anne Gaskett (University of Auckland)	Seabirds and conservation	Seabird threats involve sensory issues. Do they mistake the colours and smells of plastics for food? Which species ingest plastics? Which city lights are worst for birds? Could we change lights, or turn them off at certain times to reduce collisions? You'd use our spectral gadgets to measure the colours of things, join us on daytime fieldtrips around Tāmaki Makaurau to collect fruit, flowers, dead seabirds, seabird poo etc., and help us in the lab as we survey seabird guts for plastics, or analyse fruit smells.	
CBB-6	Jamie Stavert (Department of Conservation)	Research for conservation	<p>Possible placements include- Tara iti ecology and behaviour (post fledgling parental care, behaviour in captive rearing facility).</p> <ul style="list-style-type: none"> - Fire ecology of gumlands (Ahipara Plateau). Fieldwork setting up vegetation plots. Work is with whanau, PhD, and MSc student. - Urban ecology on Te Atatu Peninsula. Intertidal marine monitoring, freshwater monitoring, bird surveys. - Possible fieldwork with Operations Bio rangers. - Desktop work, data wrangling and analysis . 	Drivers licence useful but not essential

CBB-7	Rebekah Fuller (Ngāpuhi) with Sarah Killick (Auckland Council)	What is clean? Understanding biosecurity risk associated with vehicles moving to Hauraki Gulf islands	Soil on machinery and other vehicles traveling to offshore islands poses a risk of transporting kauri dieback and other diseases. This work will look to better understand the risk associated with differing levels of vehicle cleanliness. Students may be involved with: <ul style="list-style-type: none"> - survey design and implementation -taking samples of soil from vehicles at the waterfront - observing the kauri dieback detector dogs at risk (part of assessing their efficacy) -desktop data reviews 	
CBB-8	Gabi Ezeta (Auckland Council)	Conservation work in both rural and urban environments	Variety of opportunities to work on urban and rural environments including but not limited to pest animal and plant control and monitoring, working at community nurseries, supporting community engagement events and campaigns with groups such as the, dotterel minders, Pest Free South Auckland.	Drivers licence required
CBB-9	Liz Brooks with Izabela Joshi (Auckland Council)	Te Wharekura kiosk, and island and marine biosecurity advocacy	Assisting with biosecurity advocacy to people traveling within the Hauraki Gulf. Also working in Te Wharekura kiosk at the Western end of the Ferry terminal, and meeting the public interested by the exhibition (focused on environmental and cultural outcomes) supporting people's interest in the content and explaining a bit more if there are questions. This exhibition is digital and self-explanatory so there is no need for staff other than supporting the public's interest in the content during busy times of the year (summer, weekend and school holidays). There will be a permanent staff member there, who will be able to provide cultural and environmental induction for each student – it is a real opportunity to learn more about kaitiakitanga, and Ngāti Whātua Ōrākei ahi-ka and whakapapa.	Some te reo Māori skills would be ideal but not essential.
CBB-10	Patrick Garvey (Manaaki Whenua-Landcare Research) with Emma Feenstra (Massey University)	Cats and scats - using camera trapping and scat to detect predators	Camera trapping for cats in Te Atatu (project led by Patrick Garvey), and opportunities to help with other projects e.g. Emma Feenstra's research on scat detection dogs	