

SUMMER RESEARCH 2024/25

PROJECT ABSTRACT



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

PROJECT # 56

SUPERVISOR/S:	Dr Chrissie Painting
PROJECT TITLE:	Streamside romance: investigating the ecology and mating behaviour of a Waikato fishing spider
FIELD:	Animal Behaviour/Evolutionary Ecology
DIVISION/SCHOOL:	HECS - Te Aka Mātuatua School of Science
PROJECT LOCATION:	Hamilton

PROJECT ABSTRACT:

Dolomedes dondalei is a large fishing spider found in fast-moving, shady streams around the Waikato. It feeds by dangling its front legs into streams, preying on insects that float by – however, it is also known to feed on small fish! Other species in the *Dolomedes* genus around the world are known for their extreme mating behaviours, including spontaneous male death, sexual cannibalism and genital mutilation. Our group is interested in how these extreme mating behaviours evolve and to do this, we require data from a large number of *Dolomedes* spiders for a comparative study. This summer project will help to contribute to this dataset by collecting data alongside a MSc(Res) student on the life history, morphology and reproductive behaviour of *Dolomedes dondalei*. The project suits someone who is not afraid of rather large spiders, or at least willing to get to know them, is happy with outdoor field work at night, and has the patience to watch spiders' mate (or not!) in the lab. You'll be encouraged to take part in developing new methods using a high-tech fluorescence microscope and take part in data curation, analysis and manuscript writing if this is of interest.

STUDENT SKILLS:

- Willingness to work in the forest at night & reasonable fitness to walk for several hours on uneven ground
- Confident with handling spiders or a willingness to learn
- Patient, organised and willing to monitor experiments for several hours at a time
- Can follow instructions and work independently using their initiative
- Good communication skills to liaise between supervisors and technical support, and provide regular updates of progress
- Competency in excel, statistical analysis, report writing and science communication
- A full drivers license is ideal but not required

PROJECT TASKS:

1. Collect fishing spiders from the field & rear them in the lab
2. Set up & monitor mating experiments in the lab
3. Perform dissections to confirm mating & quantify sperm
4. Assist in managing the laboratory cricket colony
5. Ecological observations of spiders in the wild
6. Curate data from mating experiments & analyse findings

EXPECTED OUTCOMES:

- Student's Research Poster (as per clause 6 of the [Scholarship regulations](#))
- A dataset of the microhabitat and population structure of fishing spiders
- A dataset of mating behaviour of fishing spiders
- A healthy & abundant lab cricket colony
- Co-authorship on a publication on the mating behaviour & ecology of fishing spiders in the Waikato

