

A Week in Doubtful Sound: Seaweed Taxonomy Workshop and Subtidal Survey.

Sheryl Miller

A workshop was held 1st – 7th October in Doubtful Sound where marine students were taught how to identify subtidal macroalgae. A subtidal survey was then carried out to determine:

- the number of alga species per unit area at different depths along Doubtful (modified) and Thompson (not modified) sounds. The depth strata were determined from a preliminary survey.
- percent cover of corallines and their distribution
- landscape survey with underwater video.

This is the first known subtidal survey to quantify algae in Doubtful Sound. Macroalgae were surveyed within four depths strata to a depth of 18 meters, using randomly placed quadrats (1m x 1m) at twelve paired sites throughout the two sounds. Unknown algae were collected and later identified in the laboratory. Smaller seaweeds, including coralline algae were surveyed using a 25 cm x 25 cm quadrat, also randomly placed within the four depths strata. Students learnt how to identify macroalgae and to plan and implement an underwater field survey of macroalgae diversity.

Arthropod Morphospecies vs. Taxonomic Species: A Comparative Field Study with Araneae, Coleoptera and Lepidoptera

José Derraiik

In times of “Biodiversity Crisis” there is an increasing need for faster and cheaper ways to perform species inventories. This situation is especially troublesome for invertebrates, a group as diverse as it is unknown, and whose taxonomy is a major barrier for conservation action. The use of morphospecies instead of taxonomic species has been proposed as a way around that problem. The present study was conducted in a modified native shrubland in New Zealand’s South Island where Lepidoptera, Coleoptera and Araneae were sampled in autumn by beating and pitfall traps. All specimens were separated into morphospecies by a non-specialist and then identified by specialist taxonomists, and the results compared. Results were analysed with respect to correct separations (one taxonomic species to one morphospecies), lumping (more than one species classified as a single morphospecies) and splitting (one species separated into more than one morphospecies). Among the individual orders, Lepidoptera yielded very accurate results (91% correct separation) followed by Coleoptera (63%), while there was a poor result for Araneae (50%). The overall difference between the morphospecies and taxonomic species estimates for the site was only 3.3%, but that was actually caused by the splitting and lumping results often balancing each other. Morphospecies present a useful tool for invertebrate inventories