

BTNY202: Plant and Fungal Diversity

Teaching Staff: Dr Janice Lord and Dr David Orlovich

This course explores patterns of plant and fungal diversity with a particular emphasis on New Zealand. The fungal diversity section of the course begins with an overview of systematics then introduces you to the amazing Kingdom of fungi where you will carry out your own molecular research to identify new species. The plant diversity section of the course begins with an overview of the New Zealand flora, then examines plant evolution on islands. We then investigate polyploidy, breeding systems and lifestyles as factors in speciation, and look at relationships between plants and human society.

LECTURES

Section I (13 lectures): Fungal diversity, systematics and molecular phylogenetics

Section II (13 lectures): NZ plant evolution, diversity and ethnobotany

FIELD TRIPS

- Dunedin Botanic Gardens
- Weekend day trip to Leith Saddle

LABORATORIES

- Introduction to fungal diversity
- DNA extraction and PCR
- Phylogenetic reconstruction with molecular data
- Leaf adaptations to environment
- Field plant identification techniques
- Floral biology, pollen morphology and testing honey purity

ASSESSMENT

Fungal Phylogeny project 20%; Mid course Examination 30%; Plant Diversity project 20%; Final Examination 30%