

Field Course

Biology 305 Practical Taxonomy for Field Biologists

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General content

This is a technique-based course. Examples used will be from the montane and alpine flora of the Cass region but focus will be on general principles, so that most acquired skills will be transferable to other regions and other groups of organisms.

Assessment

Practical test at end of course 50%, field reference collection 25%, voucher specimen preparation 25%.



For more information

- Visit the website, www.biol.canterbury.ac.nz which will have a course outline, more details about the field station, and answers to some frequently asked questions.
- Contact the course co-ordinator, Dr Jo Ward, School of Biological Sciences Room 466, phone ext 6742 or direct dial from outside university 3642742, email josephine.ward@canterbury.ac.nz

How to apply

Applications to enrol open October 6 2004.

Instructions on how to enrol can be found in the UC **Summer Programme Brochure**, available from the Registry concourse, and on the website, www.summer.canterbury.ac.nz, or phone 0800 varsity (827748).

Course code: BIOL 305 Practical Taxonomy for Field Biologists

Degree credits: 3 points.

Duration: 7 days (excluding travel).

Venue: Cass Field Station.

Dates for 2005: February 5-11.



Who should take this course?

Practical Taxonomy for Field Biologists is an intensive, short summer course designed to meet the need for training in the collection, preparation and identification of biological material. It will be valuable for students who intend to seek employment in areas such as field ecology, conservation, biodiversity, and taxonomy or biosystematics. It will also be of interest to members of the workforce who need to acquire or upgrade taxonomic skills, e.g., from Crown Research Institutes, Department of Conservation, Regional Councils, Botanic Gardens, horticulture and teaching.

The course is open to students with 12 points in Biology at level 2 and to others with suitable work experience.



Goals of the course

To enable participants to

- become familiar with the common organisms of any area quickly
- identify organisms accurately
- identify introduced species and potential biosecurity threats
- maximise usefulness and minimise environmental impact when collecting specimens
- prepare high quality voucher specimens
- name organisms correctly and use scientific names to access information
- appreciate patterns of variation within populations
- appreciate unique and unusual aspects of the New Zealand biota

Venue

The University of Canterbury is uniquely placed to present this course. It is New Zealand's strongest university in biodiversity expertise, it is geographically placed in the centre of a remarkably rich area of biodiversity, and it is unique among New Zealand universities in possessing field stations. The geographically widespread and ecologically diverse locations of these stations make a great breadth of field experience possible for Canterbury students.

The venue for the Practical Taxonomy for Field Biologists course is the Mountain Biological Field Station. It is situated at Cass, 105 km west of Christchurch in the mountains of the Waimakariri Basin, with ready access to a wide range of habitats and a huge diversity of plants and animals. The field station provides comfortable accommodation and laboratory facilities with the natural world at the doorstep. Step out into Canterbury's iconic montane tussock grassland, walk for a few minutes to reach beech forest, wetlands or the subalpine zone, or take a short drive to experience the unique braided river floodplains or the contrasting alpine areas of the Craigieburn Range and the Main Divide.



Specific content

- Preparation of a field reference collection which is designed primarily for reference in the field and also as a means to access more detailed information.
- Understanding the process of using identification keys. How to increase the probability of getting a correct identification and how to check for correctness. Participants will be able to work at different levels according to experience.
- Construction of identification keys. Participants will jointly collect field data, construct a key, test it, then proceed to individual key construction.
- Collection of biological specimens: collecting for maximum value and in accordance with regulations and ethical considerations. Discussion and practical exercise.
- Preparation of voucher specimens, why these are necessary and how to safeguard them. Demonstration, discussion and assessed practical exercise.
- Scientific names: how to find the correct name for an organism, understanding name changes, using names to access information. Lecture, discussion and practical exercise.
- Distinguishing different patterns of local variation due to age, season, habitat, genetic recombination, genetic polymorphism, hybridisation and species separation. The different variation patterns will be depicted and discussed in the field.
- Observation and discussion in the field of notable features of the New Zealand biota including examples of adaptive radiation, convergent evolution, adaptations to novel habitats, extreme structural modifications, species mosaics, hybridisation.