

THIRD-YEAR FIELD 2010

The summer mapping field school is an essential part of GEOL 302, and is a prerequisite for graduation in Geology. Both the GEOL 302, and GEOL 351 field schools take place during the two weeks before classes begin. GEOL 302 will be based at Glenrowan Station in the Swinburn area, at the edge of the Maniototo basin. ***Those also enrolled in GEOL 351 will first attend a field exercise in the Catlins. Times and dates below.*** Note there t here will b e a s eparate geophysics exercise marked as a component of GEOL 302, to be run on a weekend early during the first semester.

STUDENTS ENROLLED IN GEOL 351, Depart:

9 am Monday 8th February, North door, Geology Department
(be here at 8:30 am to load gear)

This is a field + classroom based structural mapping and stereonet exercise. You will make observations at selected outcrops throughout the Catlins area. Using a combination of geological maps and stereonet analyses you will combine these structural data to develop a coherent understanding of the larger structure of the Catlins area. You will submit a report on the area at the end of the exercise. We return to Dunedin early afternoon on the 11th of February.

Important notes:

Accommodation is at Pounaweia Convention Centre (PCC) (ph. 03-419-1110).

Food Cost = \$40 - pay to JGW in advance.

If you have special dietary requirements (e.g. vegetarian / vegan / gluten-free) please advise Adrien Dever of this ASAP or you might starve.

PCC is 'dry' - no alcohol permitted

Lunch will be provided on the first day (the day we leave Dunedin)

Gear List:

Water bottle – at least 1.5L, FULL OF WATER

Sunblock and sunhat

Rainproof field clothing and boots

Sleeping-bag / pillow / towel

Silva Compass (302 students must purchase these from John Williams (JGW). Compasses will be issued to other students for the duration of the trip)

A4 writing pad

Hard-backed field notebook (suggest Warwick 4B1)

0.5 HB or harder propelling pencil with spare leads

Coloured pencils and a thin black ink pen for drafting reports / maps

Ruler, Protractor, Eraser, Pens, etc.

Calculator (simple!)

Stereonets, stereonet paper, base-maps, A3 Map cases and orange day-glo safety vests etc. all supplied

Students enrolled in GEOL 302 will meet at the North Door of the Geology Department on:

Friday 12th February 2010, at 9:30 a.m.

Accommodation for GEOL 302 at the Swinburn field camp will be basic, as we aim to keep the accommodation and food costs as low as possible (these costs are partially passed on to you). Tents are strongly recommended.

Before leaving the Swinburn field camp, students will be required to turn in a geological report on the area to accompany the map made in the field. If you have a laptop computer, it may be used to produce your report (I'll collect on USB drives before departing Swinburn)

Additional Fieldtrip, Independent Fieldwork, and report for GEOL 302

Near the beginning of the first semester, students will be required to select an area for independent study, and discuss this with a suitable Geology Department staff member who will be supervisor for the project. *The area can be of any size, with smaller areas appropriate where there is more outcrop and/or greater complexity - consult with your supervisor.* About seven days' work will be carried out in the selected area, during which the supervisor will visit for 1/2 to 1 day to help with specific problems. Sufficient data will be gathered in the field area to construct a geological map at large scale (often 1:10 000). Samples will be collected for laboratory examination. All data will be brought together and interpreted in a geological report on the area.

There is a field trip in the August vacation (Friday 27th – Tuesday 31st August). This trip examines large and small scale structures and stratigraphy along the Alpine Fault in Westland, and detailed structure of the Haast Schist.

James White, Swinburn coordinator

Those intending to enrol for Geology 302, Field Studies 2, and Geology 351, Structural Analysis of Deformed Rocks, are asked to notify the Department as soon as possible after their examination results are published **and preferably before the 9th of January 2010**. Detach and return the section below:

Address replies to: James White, Department of Geology, University of Otago, P.O. Box 56, Dunedin

Please include the following information:

- (a) Name: Phone No: Mobile:
email:
- (b) **Whether or not you are enrolled in GEOL 351** Yes / No
- (c) Any special dietary requirements (e.g., **vegetarian, food allergies, etc.**)
- (d) Address to which information may be sent if necessary
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- (e) If it is possible for you to **bring a tent** (and how big, i.e. 2 person). **Yes / No** **person tent (bigger is better)**

If you do not notify the Department it will be assumed that you will not be registering for GEOL302 or GEOL351 in 2010.

UNIVERSITY OF OTAGO : GEOLOGY DEPARTMENT

THIRD YEAR FIELD SCHOOL 2010

SWINBURN AREA, CENTRAL OTAGO,
(+/- CATLINS, GEOL 351)

Rendezvous and departure for the mapping project(s):

We will assemble at 9.30 am, Friday 12th February. You may want to bring lunch, because after loading up we will proceed to the field area.

Field sites and exercises

The main mapping area for GEOL302 will be in the Swinburn area near Ranfurly. We will map the area, study the rocks, use stereophotos, and examine thin sections with the aim of interpreting how the rocks formed and deformed.

Food and accommodation at Swinburn

Food is a charge on the party as a whole and \$200 for 302 and 351 (\$40 for 351 only) must be paid to John Williams **BEFORE** the start of the trip). This does not cover "nibbles", such as chocolate, scroggin, favourite beverages, etc, which you may bring on Monday; shop access will be limited during the time at Swinburn.

We will be staying in basic shearers' quarters, but there are only 8-10 bunks. The "facilities" include a longdrop, one or more porta-loos, one bathtub and a washbasin. Most students wash off with a trip to the river every day or so. Cooking is done by assigned groups under supervision of the camp manager and using gas grills and a small kitchen (oven, zip, toaster, small refrigerator, kitchen table) at the quarters. If you can conveniently bring a tent, please do; there's plenty of fairly flat ground for tents, so large tents are also suitable. A sleeping pad will be useful. Map work in the evenings is done mostly in a large wool shed.

Map board

A mapping clipboard or other rigid A4 or (preferably) larger board will be needed upon which you will draft your map as you work in the field - it is expected that simple boards will be available from John Williams - check in advance. In windy conditions, the map needs to be secured to the board, e.g. by clips or elastic bands - bring some of these with you.

Equipment

You will need to bring basic tramping gear, plus mapping equipment. **Light** tramping boots are strongly recommended; be prepared to get them wet in the river. Ankle-length gaiters or puttees are good for keeping prickly seeds out of socks and boots. Be prepared for a lot of sun, encounters with matagouri and thistle patches, and considerable walking in moderate topography. A typical day involves a very cool morning, rapid warming in the late morning, a hot afternoon (up to 30°C or so), and a pleasantly warm evening. However the weather can be changeable, and it may snow so bring wet weather gear as well.

THINGS TO BRING:

- Eating utensils: plates, cups, forks knives and spoons, etc.
- Sleeping-bag; Spare clothing (including swimming togs); Torch
- Soap, towel, etc, and basic personal first aid items, e.g. tape for blisters, cuts, etc.
- Sun hat; Sunscreen, Light cotton clothes to cover burnt skin; Water bottle
- Geological hammer (available from dept. – see John G Williams = JGW); Hand lens (available from dept, JGW);
- Notebook; Marker pen; Protractor; Ruler; Calculator; Compass (see below)
- Assorted pencils, including coloured pencils
- Digital camera (optional)
- GPS unit (optional)
- Laptop computer (optional)

Bring paper and drafting pens - you will complete the map and report in camp before we return to Dunedin. It will be absolutely necessary to ink and colour your map, and to write up the geological descriptions and interpretations, during the mapping session.

Compass

A compass for measuring structural features is **essential** equipment for the field camp and the independent project. If you can beg or borrow one for the year, OK. Otherwise, the Geology Department has a stock of new plastic compasses which are quite adequate for general geological field work, and are currently used by most research students and some staff. These compasses are available for purchase at departmental cost \$105 – see John Williams.