Looking down the 'staircase' of glacial cwms or corries below the summit of Snowdon

The Drapers’ Field Centre
Betws-y-coed
Conwy Valley
North Wales
LL24 0HB

01690 710494
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Friday 15 – Sunday 17 February 2013
Level 1 (some gentle walking)
Led by Dr Martha Newton

FSC Rhyd-y-creuau

The Field Studies Council (FSC) is an environmental education charity committed to helping people explore, understand and be inspired by the natural world. Each year over 100,000 people experience the FSC through visits to our network of 17 Centres
Mosses and Liverworts

Overview
The course is intended to provide a sound introduction to this intriguing group of plants. It is particularly suited to beginners, but will also appeal to those who wish to revise their knowledge before taking it further in an area which supports a rich and varied flora. The emphasis throughout the weekend will be placed on identification, and individual help will be given at all levels, both in the field and in the laboratory. North Wales’ damp climate provides ideal growing conditions for mosses and liverworts and thus a diverse number of very good specimens can be found at field sites close to the Centre, which this course takes advantage of.

A detailed insight into the life of mosses and liverworts will be provided by slide lectures and discussion and by first hand observation. This will be achieved by taking full advantage of a wide range of habitats within easy reach of the Centre, and will be supported by evening work using microscopes. It will thus be possible, not only to develop skills in recognising species in the field, but also to confirm them by using identification keys.

Who is the course aimed at?
This course is aimed at those who are beginning in this area, and aims to be a good introduction to different mosses and liverworts.

Course objectives
- Introduce a number of mosses and liverworts in the field, and develop identification skills.
- Equip participants with many of the skills needed to identify independently, using keys.
- Introduce this intriguing group of plants.

Links with National Vocational Qualifications
The course covers the underpinning knowledge for COSQUEC Landscape and Ecosystems Level 2 COS 003 (Elements 1 and 2) and Level 3 COS 015 (Elements 1 to 5).

Provisional Programme

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| Friday | Welcome & introduction to the Centre.  
|       | **Evening:** An illustrated talk outlining the special features of mosses and liverworts. |
| Saturday | Conwy Valley – plenty of opportunities to learn how to recognise common and conspicuous species in mixed woodland, a disused quarry and grassland using field characteristics.  
|       | **Evening:** Practical work with microscopes and identification keys. |
| Sunday  | Afon Lledr – western oak wood and river banks. |

Course times
Course participants are requested to arrive on the day of arrival at the office reception for registration from 4.15 - 5.15pm. Supper will be between 6pm and 7pm. An introductory talk will follow. Departure is at about 4pm on the final day. On Sunday a lift to Llandudno Junction is available, free of charge, for those returning by train.

Course fees
- Single occupancy: £245  
- Shared occupancy: £215  
- Non-resident: £165 (includes all tuition, picnic lunches and evening meals)

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Mosses and Liverworts

About the Tutor
Dr Martha Newton is a biological consultant, specialising in bryophytes, with a wide experience of teaching at all levels. Formerly at Manchester University, her publications are concerned with British and Antarctic bryophytes as well as mosquito cyto-genetics. She has also worked at Liverpool Museum on the revision of Flora Europaea. She is a British Bryological Society hepatic referee and has also held the posts of Secretary and Membership Secretary. She has also served for 17 years on the editorial board of the Journal of Bryology. Martha is able to provide students with individual help at all levels. She places strong emphasis on field characteristics and ecological indicators, encouraging confidence in the use of keys, and endeavours to make her courses as enjoyable as they are useful.

About the Centre
At the gateway of Snowdonia National Park, the Centre itself is a Georgian house set in two hectares of wooded grounds with Eco Centre status, allowing you to experience a sustainable lifestyle, only 1 hour 50 minutes from Manchester and 3 hours 40 minutes from the M25.

What is included within the fee?
- Expert tuition by fully trained staff.
- Full board accommodation including a cooked breakfast, picnic lunch, homemade cakes and an evening meal. Vegetarian and other dietary options are available if booked in advance.
- Use of resources including library, workrooms, studios and the Centre grounds.
- Transport to all field sites, where required, during the course.
- Rigorous and proven health and safety procedures including 24 hour emergency cover.

Books to Bring with You

Background Reading

All these books, and more, will be available for you to see during the course.
Mosses and Liverworts

What to Bring
Although excursions will not be strenuous, they will involve rough and wet ground. Wellingtons and/or waterproof walking boots, waterproof clothing and a small rucksack are necessary and may be borrowed from the Centre. A thermos flask and lunch box are useful. It is advisable to bring warm clothing. In addition, the following items will be needed:

- Fine forceps (blunt ended tweezers are not suitable)
- Fine scalpel (eg Swann Morton no 11)
- Hand lens (at least x10, but x20 if you have one)
- Stout penknife
- Selection of small polythene bags
- Small notebook and pencil
- Old newspapers (for making moss packets)

Rhyd-ycréau has a supply of dissecting microscopes and some compound microscopes for use during the laboratory sessions. However, if you would like to bring your own microscopes, it would help if you would let us know, please (to help us set up the laboratory).

Directions to the Centre
We are located on the A470, between Betws-y-coed and Llanrwst. If you are coming from the North Wales coast, go through the town of Llanrwst and continue along the A470 towards Betws-y-coed for 3 miles. The Centre is on the right at a bend with woods on both sides.

Alternatively, from the A5 to the south take a right along the A470, just before you go into Betws-y-coed, follow this road for a mile and we are on the left.

A ‘School’ highway sign appears just before the (partially hidden) wooded entrance, which ever direction along the A470 you are travelling. The Centre postcode is LL24 0HB.

If you are travelling by train our nearest station is Betws-y-coed. We pick up guests free of charge from this station to help support those using public transport. All you need to do is let us know when your train will arrive.

To book a course, simply:
Telephone the Centre on 01690 710494 or complete the online form on the FSC website: www.field-studies-council.org