Overview of the course

This course will give you an overview of soil ecology, provide you with skills and experience in identifying soil organisms to various taxonomic levels, and provide you with the information you need to collect, examine, identify and record soil organisms. In particular the course concentrates on Springtails (Collembola) and Soil Mites (Acari), but the entire soil fauna is introduced and attendees have some latitude to pursue what interests them most.

The course consists of a varied mixture of presentations, field collection, practical training in microscopy techniques for soil mesofauna and, above all, plenty of practice at identifying soil mesofauna under the guidance of some of the UK’s top experts in these taxonomic groups.

Attendees are introduced to the ways in which they can personally contribute to the advancement of soil biodiversity science in the UK by playing an active role in the soil biodiversity surveillance network.
Course Tutors

Dr Matthew Shepherd is a Senior Environmental Specialist in Soil Biodiversity with Natural England, providing advice and training on soils, soil biology and biodiversity to support Natural England’s work. His responsibilities include advising Defra on soils issues and developing & managing soils research and monitoring.

Dr Felicity Crotty is a Soil Scientist working on the Allerton Project for the Game and Wildlife Conservation Trust. She aims to promote soil health and sustainability through increasing our understanding of soil biology, particularly soil fauna.

Dr Peter Shaw is a Reader in Zoology at the University of Roehampton specialist in the ecology and genetic diversity of UK collembola (springtails) and the colonisation patterns and conservation management of industrial wastes.

Course objectives

This course is most suitable for volunteers involved in biological monitoring or recording, entomologists, soils specialists, students interested in developing a soil biological specialism.

By the end of the course participants will:

- appreciate the diversity of soil organisms;
- relate soil life to soil function and understand management impacts on this;
- collect, extract, examine, preserve, handle, identify and record soil organisms, using microscopes and other technical equipment;
- identify springtails to species, soil mites to cohort/supercohort;
- recognise and learn about nematodes, tardigrades and other soil mesofauna groups;
- appreciate the range of identification resources available, and access specialist support networks; and
- understand how genetic barcoding, metagenetic approaches, morphological identification, recording and experimental work relate to developing approaches to soil biodiversity.

What to Bring

- Note-taking equipment (pen and paper is fine!).
- Any relevant ID guides or other literature that you think might be useful.
**Timetable (provisional)**

Course content may be rearranged subject to tutor availability, resources, etc.

**Friday:** Introduction to soil biology, field collecting, extraction methods, microscopy, nematodes and functional feeding groups, other soil water organisms.

**Saturday:** Springtails day – collembola ecology, anatomy, taxonomy and identification, including field and lab sessions. Evening session on biological recording and support networks.

**Sunday:** Soil Mites day – Felicity Crotty, mite ecology, anatomy, taxonomy, identification, then Evening session on barcoding and metagenetic approaches, soil biodiversity in Natural England's work.

**Monday:** Soil Meso-fauna bioblitz – attempt to identify/classify and record all the mesofauna from samples collected on day 1, putting all new skills into practice.

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**Course fees**

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<th>Sole occupancy: £450</th>
<th>Shared occupancy: £395</th>
<th>Non-resident: £330</th>
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**The residential course fee includes**

- Full Board accommodation with sole occupancy (*shared occupancy is available at a reduced fee*) including cooked breakfast, picnic lunch, afternoon cake and evening meal.
  - Vegetarian and other dietary options are available
  - Tea and coffee making facilities are available throughout the day
- Transfer to and from Shrewsbury train station
- Up to 10 hours of tuition a day, with breaks for meals and refreshments
- In course transport and necessary admission fees
- Use of centre facilities including library, workrooms, studios and the Centre grounds
- Rigorous and proven health and safety procedures including 24 hour emergency cover
- Insurance to cover cancellation, personal belongings, personal accident, legal liability and medical emergency / emergency travel arrangements

**The non-resident course fee includes all of the above except breakfast and accommodation.**

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**To make a booking contact:** FSC Preston Montford directly by:

- Telephone: 0845 330 7378
- E-mail to: enquiries.pm@field-studies-council.org
- Online at: www.field-studies-council.org/prestonmontford
**General Information 2018**

**FSC Preston Montford** was opened as an outdoor education centre in 1957 by the Field Studies Council. Since then it has been delivering high quality, inspirational curriculum related outdoor education. Our teaching staff are expert in their field and we work with the widest possible range of learners; from pre-school to Masters level. We can provide courses for schools, universities or individuals; for infants, school students, undergraduates or enquiring adults; anyone with an interest in the natural world. We offer day and residential courses and the Centre is available as a venue for others to use; there are bed and catering facilities for 130 visitors along with 6 fully equipped teaching and meeting spaces, a library, common rooms and a bar.

### About The Centre

**Location and site:** FSC Preston Montford is very accessible by road or rail. The site is 10 km west of Shrewsbury just 3 minutes drive from the A5 and 15 minutes drive from Shrewsbury Station.

**Buildings:** The campus has a complex of three main buildings built between 1700 and 1990 located around a central pond. Each building has bedrooms, classrooms and office space with additional classroom or meeting spaces set in a wooded garden area. The Main House has undergone a major re-furbishment in the first half of 2014 to provide modern bed and bathroom facilities as well as enhanced reception, meeting and library space. The Wenlock building has also undergone re-furbishment in the middle of 2016 to provide modern bed and bathroom facilities.

**Facilities and services:** A dining room and kitchen are part of the Main House; all catering is done in house with a fully trained and experienced Catering Team who cater for a full range of dietary requirements. The main teaching, recreation and dining areas are on ground floor level and some accommodation is available for wheelchair users. The different ages of our Centre buildings means that bedrooms range in style from dormitories to twin rooms with full en-suite. The centre has a wide range of specialist equipment for teaching geography, ecology and other subjects outdoors as well as microscopes and laboratory equipment for examining and analysing samples indoors. Classrooms are fully equipped with interactive whiteboards and Wi-Fi access. There are common rooms, drying areas, a library, a shop and a bar. We operate a 24 hour duty system and all staff are first aid trained and DBS checked.

**Site and grounds:** The Centre has 11 hectares of ground with a range of habitats. To the north lies the River Severn Montford SSSI which has a bank of semi-ancient woodland growing on a steep bank of glacial drift. Most of the area is grazed fields with hedges, 18th century specimen trees and some more recently planted copes. The eastern side of the estate is an area of more specialised habitats; ponds, wildflower meadow, ancient orchard, the remains of a walled garden and a Bee hotel. Around the campus there is a sensory garden with a willow classroom area, weather monitoring plot, compost heap with wormery and installations for simulating rainfall-runoff relationships. The lawns, ponds, grassland and woodland are used for introductory teaching activities as well as student recreation.