

Freshwater Biological Association

Course Programme 2010



Identification courses from the specialists

Join the specialists and discover freshwater plants and animals. Participate on our training days and learn to identify and understand freshwater life.

The FBA offers a range of courses specially developed for enthusiasts and professionals.

Tutored by some of the top experts in their fields, these courses aim to equip you with the skills and confidence to sample and identify freshwater organisms, and provide you with key field and laboratory experience.

All scientific equipment is provided and participants will use FBA specialist identification keys and guides as well as other relevant literature.

FBA members receive discounts on course fees. Membership starts from as little as £20.00 for a student or £35.00 for an individual. Why not take the opportunity to receive all membership benefits and be eligible for the discounted rate on FBA courses, events and services?

A concessionary rate applies to freshwater recorders and employees of environmental NGOs. Please see website for details.

The FBA has over 75 years of experience in research and education so you can be assured of the best possible level of teaching and quality of information. Except where stated, these courses will take place at one of the FBA's sites with full access to scientific equipment and fieldwork locations.



Course participants identifying invertebrates



FBA laboratory at Windermere, Cumbria



FBA facilities in Cumbria & Dorset

For further information or to book a course please contact events@fba.org.uk

*For membership information and general enquiries please contact:
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Cumbria. LA22 0LP, UK.*

Phone: +44 (0)1539 442468; Email: info@fba.org.uk; Web: www.fba.org.uk

The Freshwater Biological Association is a Registered Charity (no 214440) and a Company Limited by Guarantee (no 263162, England) formed in 1929 to promote the study of freshwater biology.

Fish health, parasites and disease

Date: Thursday 18th March
Tutor: Roger Sweeting
Cost: £120; early bird rate £105; FBA member £95
Location: FBA Windermere, Cumbria

This is an introductory course for people wanting to understand more about the parasites and diseases of freshwater fish. It will include general principles of parasitology, fish physiology and some practical dissection and microscope work. Roger Sweeting has spent many years studying fish health and has a particular interest in fish parasitology.



Identifying freshwater invertebrates

Date: Saturday 20th - Sunday 21st March
Tutors: Terry Gledhill & Mike Dobson
Cost: £210; early bird rate £195; FBA member £185
Location: FBA Windermere, Cumbria

This two day course will involve the collection and identification of aquatic invertebrates from both running and stillwater habitats, and will feature sampling methods, bankside sorting and lab-based identification. Terry Gledhill of the FBA trained under T. T. Macan, has extensive freshwater research and teaching expertise, and has published widely including the FBA key 'British freshwater Crustacea Malacostraca'. Mike Dobson is the Director of the FBA and has extensive experience of teaching invertebrate identification at all levels.



Identifying freshwater invertebrates with a specialist mayfly and stonefly day

Date: Wednesday 24th - Thursday 25th March
Tutor: Craig Macadam
Cost: £210; early bird rate £195; FBA member £185
Location: Scottish Centre for Ecology and the Natural Environment (SCENE), University of Glasgow, Loch Lomond

Craig Macadam of Buglife and the Ephemeroptera Recording Scheme will tutor a two day course which will involve the collection and identification of aquatic invertebrates from the various water bodies near the idyllically located University of Glasgow field station on Loch Lomond. The purpose of day one is to introduce freshwater invertebrates and how to sample and identify them. Day two will focus on the identification of mayfly and stonefly larvae.

Identifying macroalgae

Date: Monday 19th -Tuesday 20th April
Tutors: Martyn Kelly & Allan Pentecost
Cost: £275; early bird rate £260; FBA member £250
Location: FBA Windermere, Cumbria

A two day course on how to recognise the larger freshwater algae. Field and laboratory-based exercises will introduce participants to the biology and identification of those freshwater algae most likely to be encountered during freshwater surveys. Martyn Kelly is a freelance consultant, specialising in the use of algae for environmental monitoring. Allan Pentecost of the FBA has studied algae for 40 years and has published many research papers and a book on algal ecology and taxonomy.



Identifying freshwater invertebrates

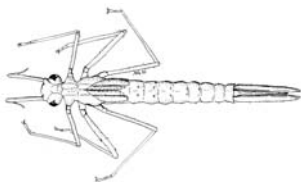
Date: Thursday 22nd - Friday 23rd April
Tutors: John Davy-Bowker & Mike Dobson
Cost: £210; early bird rate £195; FBA member £185
Location: FBA East Stoke, Dorset

This two day course will involve the collection and identification of aquatic invertebrates from running water habitats, and will feature sampling methods, and lab-based sorting and identification. John Davy-Bowker is a knowledgeable freshwater biologist with considerable research and teaching experience. Mike Dobson is the Director of the FBA and has extensive experience of teaching invertebrate identification at all levels.

Identifying larval dragonflies and damselflies

Date: Monday 26th - Tuesday 27th April
Tutor: Steve Cham
Cost: £210; early bird rate £195; FBA member £185
Location: FBA East Stoke, Dorset

This two day course focuses on the larval stages and exuviae (skins) of British Odonata. It will include sampling methods, field and laboratory identification, and an overview of dragonfly ecology and life histories. Steve Cham is the organiser of the Dragonfly Recording Network and author of the 'Field guide to the larvae and exuviae of British dragonflies. Volume 1: Dragonflies' and the recently published 'Field guide to the larvae and exuviae of British dragonflies. Volume 2: Damselflies'.



Introduction to identifying freshwater beetles

Date: Wednesday 28th - Thursday 29th April
Tutor: David Bilton
Cost: £210; early bird rate £195; FBA member £185
Location: FBA East Stoke, Dorset

This two day course is aimed at participants with a basic knowledge of freshwater beetles, who want to gain confidence in identifying to a more advanced level. It will include an overview of the group, aspects of anatomy to help with identification and tips not found in the keys. David Bilton is a freshwater ecologist who has worked with water beetles for over 20 years.

Identifying caddis

Date: Thursday 13th - Friday 14th May
Tutor: Ian Wallace
Cost: £210; early bird rate £195; FBA member £185
Location: FBA Windermere, Cumbria

Caddis (Trichoptera) are a varied group of insects that are used in water quality assessment. They are also significant in fly fishing. Participants will be shown various methods of collecting larval and adult caddis. At the end of the course they should be able to identify any caddis larva or adult to family level, and also be able to identify a range of species. The course is aimed at biologists and naturalists who want to develop their knowledge of this group of insects. Ian Wallace is the national coordinator for the Trichoptera Recording Scheme, author of many guides to caddis including the FBA key to case-bearing caddis, and curator of conchology and aquatic biology at the National Museums Liverpool.



Entomology for anglers

Date: Saturday 22nd May
Tutors: Stuart Crofts & Andrew Dixon
Cost: £50
Location: FBA Windermere, Cumbria

The purpose of this course is to increase fly-fishers' understanding of entomology, which could make a big difference to their catch. Understanding the life cycle of the flies that are being imitated helps better decisions to be made on what a fish is feeding on, when and where that type of food will be available, and how best to represent that food form. The course will describe certain aspects of the natural fly which can be incorporated into imitations, explain why some flies are more significant than others and why some important flies are often neglected by anglers. It will also involve a field visit to a river site to collect some of the species the fly-fisher encounters. This will be followed by practical advice on how to identify them under the microscope.

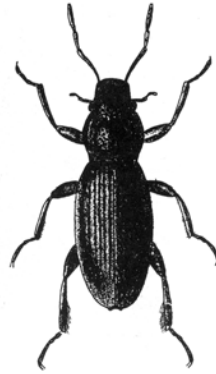


Anglers Stuart Crofts and Andrew Dixon, have both fished for England at national and international level and have studied entomology for many years. This course will be repeated on Saturday 29th May at FBA East Stoke, Dorset.

Entomology for anglers

Date: Saturday 29th May
Tutors: Stuart Crofts & Andrew Dixon
Cost: £50
Location: FBA East Stoke, Dorset

For details, please refer to the same course held 22nd May at FBA Windermere, Cumbria.



Identifying aquatic beetles

Date: Wednesday 2nd - Thursday 3rd June
Tutor: Garth Foster
Cost: £210; early bird rate £195; FBA member £185
Location: FBA Windermere, Cumbria

This two day course will concentrate on the collection and identification of water beetles. The aim of the course is to increase confidence in beetle identification and will include: beetle morphology as used for identification, field survey techniques, the use of identification keys, microscope work, and some aspects of conservation. Garth Foster is the coordinator for the Aquatic Coleoptera Recording Scheme for Britain and Ireland and has done nothing else for 45 years!

Identifying freshwater invertebrates for beginners

Date: Saturday 12th June
Tutor: Mike Dobson
Cost: £50
Location: FBA Windermere, Cumbria

This course is aimed at complete beginners and will develop the skills required to identify freshwater invertebrates and to use identification keys. Mike Dobson is the Director of the FBA and has extensive experience of teaching invertebrate identification at all levels.

Freshwater fish: assessment of condition and ageing

Date: Tuesday 27th July
Tutor: Roger Sweeting
Cost: £120; early bird rate £105; FBA member £95
Location: FBA Windermere, Cumbria

This course is aimed at fisheries managers, fishermen and naturalists who want to know more about the fish that they see, catch or handle. Without recourse to dissection or detailed microscopy it is quite staggering how much we can piece together about a fish's well-being and condition, its age and growth, life history and sexual development. This course aims to provide an insight into the ways of observing fish for these purposes. Roger Sweeting has spent many years studying fish health and helping to develop an understanding of how to improve fisheries for Thames Water, the National Rivers Authority (NRA), the Environment Agency and latterly the FBA.

The Chironomid Pupal Exuvial Technique (CPET)

Date: Thursday 29th - Friday 30th July
Tutor: Les Ruse
Cost: £210; early bird rate £195; FBA member £185
Location: FBA Windermere, Cumbria

Midges make monitoring manageable! Collecting and identifying chironomid midge pupal exuviae is easy and rewarding. Chironomid (non-biting midge) species composition and relative abundance are sensitive to physical and chemical change in waterbodies. The collection of floating chironomid pupal exuviae (skins) at the leeward shore of standing water bodies, or behind obstructions within flowing water, provides a simple and safe means of obtaining abundant macroinvertebrate data. Using the FBA guide to chironomid pupae assists amateur naturalists,

anglers and professionals to produce inventories of their local waterbodies or monitoring sites. CPET provides a unique method of obtaining representative macroinvertebrate samples, is particularly suitable for large waterbodies, and is independent of the sampler because of its passive derivation. This two day course will provide training on: sampling chironomid pupal exuviae from waterbodies; laboratory techniques and sample preparation; the morphology of chironomid pupae; identification of chironomid pupae to the level of the Wilson & Ruse FBA Guide; and CPET analyses to assess water quality. Les Ruse is a biologist in the Water Industry starting 30 years ago with Anglian Water and now works for the Environment Agency. He researched the micro-distribution and ecology of chironomid larvae in river substrata while under the tutelage of Ronald Wilson at Bristol University.

Identifying freshwater bugs

Date: Saturday 9th October
Tutor: Sheila Brooke
Cost: £120; early bird rate £105; FBA member £95
Location: FBA Windermere, Cumbria

This course will cover aspects of collecting, identifying and recording freshwater Heteroptera, a fascinating and diverse group. Sheila Brooke runs the Aquatic Heteroptera Recording Scheme and has considerable experience of identifying and recording true bugs.

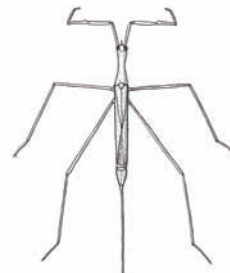


Image: *Hydrometra* sp. (water stick insect) A. A. Savage, FBA

Freshwater biomonitoring: the importance of standardising methods for assessment

Date: October (exact date TBC)
Tutor: Roger Sweeting
Cost: £150; early bird rate £140
Location: FBA Windermere, Cumbria

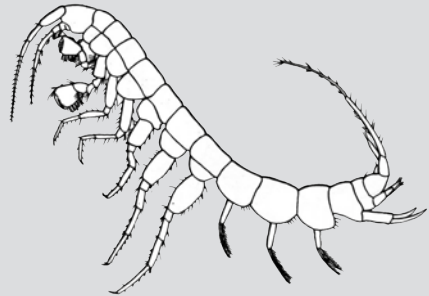
Following adoption of the Habitats Directive and the Water Framework Directive (WFD) into law across Europe, there is a need to have methods that are recognised internationally as well as nationally. This course will describe the methods used for biomonitoring and assessment, their evolution and construction and their incorporation into national and international standards. It is aimed at people who carry out or manage investigations into freshwater habitats and their quality, and aims to give them a better understanding of the context and continuing development of these standards. Roger Sweeting chairs the water quality committee in the British Standards Institution (BSI) and chairs the European biological water quality analysis committee for Comité Européen de Normalisation (CEN).

While every effort will be made to operate the courses as advertised, it may be necessary to alter or cancel courses due to unforeseen circumstances. Please see booking form for complete terms and conditions. Please note that courses will only run subject to sufficient participant uptake.

Early bird rates apply to fees paid at least eight weeks before the start of the course. Please note that only one discount can be applied at any one time.

We are grateful for financial support from the John Spedan Lewis Foundation.

Future courses and bespoke tuition



Subterranean fauna

We are offering tuition in sampling and identification of subterranean (stygobitic) malacostracan crustaceans, covering sampling techniques, morphology and identification of this group of obligatory inhabitants of hypogean habitats which include boreholes, caves, wells, deep groundwater and the hyporheic. Please contact us for further details.

Electron microscopy

We are offering individually tailored tuition in the use of both transmission and scanning electron microscopy, including preparation methodology, microscope technique etc. Please contact us for more details of timings and costs.

If you have any ideas for courses that you would like to see included in future programmes or would be interested in tutoring, please contact Melanie at: events@fba.org.uk

Publication due March 2010 (New, larger format!)

Mayfly Larvae (Ephemeroptera) of Britain and Ireland: Keys and a Review of their Ecology by J.M. ELLIOTT & U.H. HUMPEsch, FBA Scientific Publication No. 66, ISBN 978-0-900386-78-7, 152 pages.



This new edition on the larvae of mayflies replaces an earlier one by the same authors, published by the FBA in 1988 (Scientific Publication No. 49). Since then another three species have been recorded from Britain, bringing the total to 51 species recorded from Britain and Ireland, although one of these (*Heptagenia longicauda*) does not occur in Ireland and may no longer occur in Britain. Similarly, *Arthroplea congener* has not been recorded since an adult was found in 1920. Several changes to familiar names are included in this latest edition, particularly in the family Heptageniidae; thus *Heptagenia lateralis* is now placed in a new genus, *Electrogena*, and is joined by *E. affinis*, a new though possibly rare species for Britain. Another notable change is that of *Ephemerella ignita*, now placed in the genus *Serratella*. Two new species are recorded in the genus *Caenis* (*C. pseudorivulorum* and *C. beskidensis*). All these and other recent advances in classification and taxonomy have been incorporated into a new key to 10 families of the Ephemeroptera, compared with only 8 families in the earlier edition. The key to families is followed by a series of new or updated keys to identify 51 species in 20 genera. These are illustrated by numerous line-drawings that show the important key characters used for identification, supplemented (as in the 1988 edition) by a dozen sketches of common

mayfly larvae drawn by Professor Mizzaro-Wimmer and (a new addition) a further 12 colour photographs of live larvae. These greatly enhance the text and will help beginners and others to familiarise themselves with the general appearance and diversity of mayflies.

Apart from the keys for identification, a wealth of basic information on their ecology is summarised in 40 pages of tables and text, plus text-figures showing the life-histories of most species. A final section of text covers the importance and use of mayflies for applied purposes, especially in relation to pollution and ecological assessment of aquatic environments. The two authors, Professor Malcolm Elliott (Freshwater Biological Association) and Professor Uwe Humpesch (University of Vienna), have an unrivalled practical knowledge of the mayfly fauna of northwestern Europe, gained from many years of study, and the results of their own studies are incorporated into the text. Both are fully acquainted with the extensive scientific literature, published in several languages, and this is distilled into a readable form, citing more than 500 references. The authors previously also collaborated on A Key to the Adults of the British Ephemeroptera, published in 1983 (FBA Scientific Publication No. 47).

Even for those who are already familiar with mayfly larvae, this latest edition is an essential requirement for accurate and up-to-date identification, including the latest nomenclature for this important and popular group of freshwater insects.

Price £27.00 plus postage (see FBA website for postage rates and further information on how to order).

FBA members are entitled to a 25% discount on the book price.