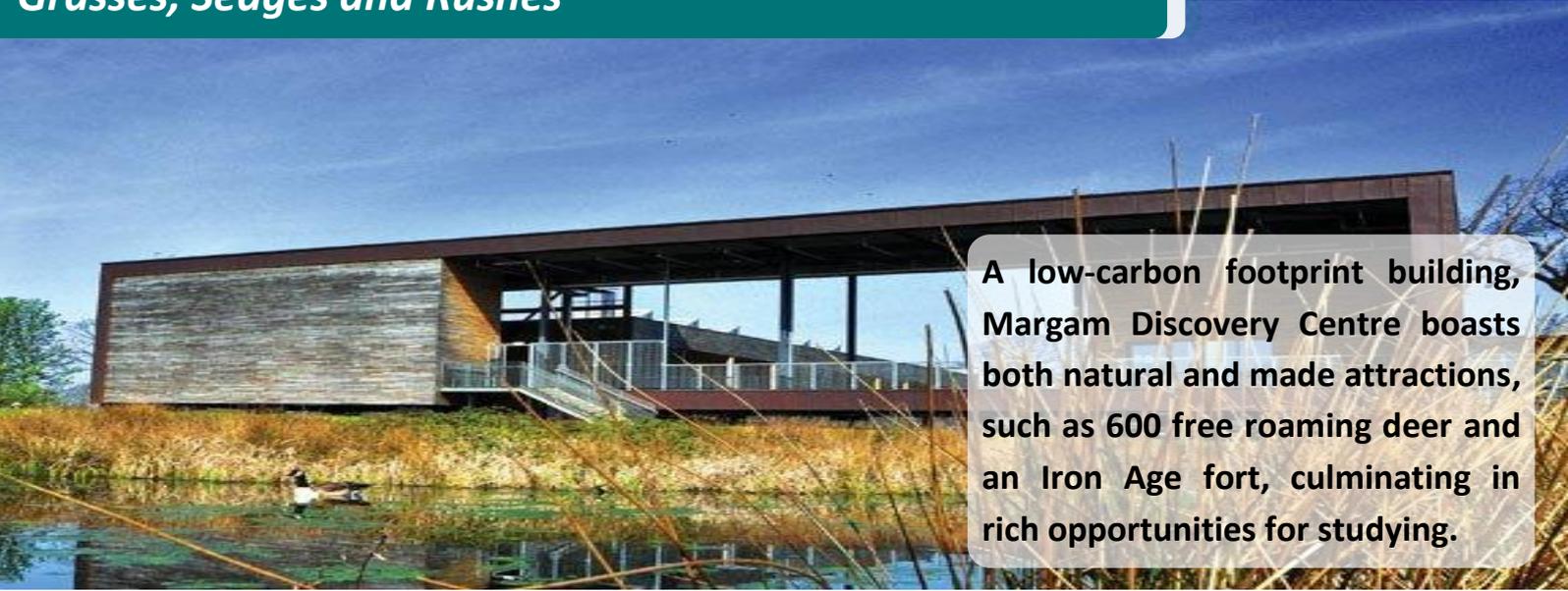


Level		Date	Days	Shared occupancy cost		
MP	O			£323	£293	£228
Centre		20-23 July	Fri - Mon	Sole occupancy cost	Non-Residential cost	

Grasses, Sedges and Rushes



A low-carbon footprint building, Margam Discovery Centre boasts both natural and made attractions, such as 600 free roaming deer and an Iron Age fort, culminating in rich opportunities for studying.

Course Overview

Grasses and grass-like plants form a key component of most plant communities yet are notoriously difficult to identify. Accurate identification is essential for site survey and management and a botanist's skill is often judged by his/her ability to 'do' grasses, sedges and rushes. This course will cover the formal taxonomic differences between the three families *Poaceae*, *Cyperaceae* and *Juncaceae*, and enable participants to identify the most common members of each. Identification keys will be introduced and participants will be encouraged to make their own voucher specimens.

The countryside around Margam Discovery Centre offers a great range of habitats from roadsides and improved grassland to moorland, water margins, fen, calcareous grassland and woodland. Field visits will be made to a range of contrasting sites, providing plenty of material from all three families, some of which will be examined in detail in the lab. Classroom sessions will precede the excursions, enabling participants to become familiar with the diagnostic features and terminology that is peculiar to these plants. Diagnostic characters are often small, so participants will be able to become confident in the use of handlenses and also to make use of the microscopes at the field centre. They will press some of their specimens, look at the available field guides and floras and use diagnostic keys.



With only three days to study such a vast number of species we will concentrate on the more common and important members of each family and on flowering, rather than vegetative, material. No-one can hope to become an expert in just three days but participants should go away with the necessary knowledge and confidence to continue to develop their skills independently, in the habitats with which they are familiar.

Course Description

Friday evening	Introduction to all three families. <i>Juncaceae</i> : the structure and identification of rushes.
Saturday	<i>Poaceae</i> : the features of grasses and the terminology peculiar to this family; examination of common grasses around the field centre; an afternoon field visit to a site rich in all three families; further detailed examination of grass specimens in the evening and introduction to the use of keys.
Sunday	<i>Cyperaceae</i> : the features of sedges; examination of sedge specimens collected on Saturday; an afternoon site visit; further detailed examination of specimens and introduction to sedge keys in the evening.
Monday	We will begin with the test that is a requirement for those taking the course for credits. Non-credit participants will also join in because the test is quite informal and they will be given help (and told the answers) as they wish. The course will conclude with a final site visit. MMU Credit-students will complete a second assignment at home in order to gain 10 Level 1 credits.

This course is part of the MMU Biological Recording programme and can be taken for credit. More details here <http://www2.mmu.ac.uk/sste/courses/short-courses/biological-recording/>

About the Tutor



Mark Duffell has had a lifetime interest in plants gaining the RHS Diploma in Horticulture, becoming 'Young Horticulturist of the Year' in 2001 and completing an MSc in Biological Recording and Species Identification. He now runs **Arvensis Ecology** splitting his time between conducting botanical surveys and teaching botanical identification and survey techniques to undergraduate and postgraduate students of universities, consultants and environmental organisations.

What to Bring

- Stout walking shoes or boots
- Outdoor clothing suitable for all potential weather conditions
- Sandwich box, vacuum flask / drinks container
- Small rucksack or bag
- Field notebook and pencil
- Dissecting kit (scalpel and forceps) – if you have a set.
- x10 or x20 hand lens if you possess one*

Useful Books and Resources:

- Cope, T & Gray, A. *Grasses of the British Isles*: BSBI Handbook 13, 2009
- Fitter, R. *et al. Grasses, Sedges, Rushes & Ferns of Britain & Northern Europe*: Collins 1984.
- Hubbard, CE. *Grasses* (3rd ed): Penguin Books 1984
- Jermy, AC *et al. Sedges of the British Isles*: BSBI Handbook 1 (3rd ed.), 2007
- Poland, J. & Clement, E.J. *The Vegetative Key to the British Flora*. BSBI, 2010.
- Rose, F. *Colour Identification Guide to the Grasses, Sedges, Rushes & Ferns of the British Isles and NW Europe*: Viking, 1989
- Stace, C. *New Flora of the British Isles* (3rd ed), C.U.P. 2010
- Stace, C. *Field Flora of the British Isles*: C.U.P. 1999.

Arrival / Departure Times

This course officially starts at 6.00pm on the Friday with dinner and registration. Coffee and cake available from 4pm onwards. Breakfast will be at 8am; Lunch will be a packed lunch. The course will end on Monday at 4:00pm.

How to Book

Provisional bookings can be made by telephoning the centre on 01639 895636, by e-mail at enquiries.mp@field-studies-council.org or by completing the online form on the FSC website: www.field-studies-council.org. You will then be asked to complete a booking form, located within the relevant brochure or available to print off from the FSC website.

Accreditation

This is one of a series of courses run jointly with Manchester Metropolitan University. There is assessment of the course through, for example, identification tests, producing survey reports or field journals, working through keys and other various pieces of work. Credits from these assessments contribute towards the MSc Biological Recording and University Certificate in Biological Recording and Species Identification. To gain credits you must be registered on the programme. To request an application pack, please contact Emma Hopkisson, Manchester Metropolitan University, The Gateway, Chester Street, Shrewsbury, Shropshire SY1 1NB

Telephone: 01743 355137

E-mail: biorec@mmu.ac.uk

The course is also suitable for non-credit students.