

Advanced Community Analysis

Wednesday 1st – Thursday 2nd December 2010

Course Director: **Dr. Mark Gardener**

This course is designed to show you how to use the powerful (and free) R program to carry out a range of community studies. It assumes you have some prior knowledge of R, for example the previous course, R101.

We begin with a review of some basic community statistics and a refresher on the use of R itself. Next we look at diversity and community structure. We then build on these themes by examining hierarchical cluster analyses and show how to draw dendrograms to visualise similarities between communities. Then we will start to look at multivariate analyses and will cover a range of methods including correspondence analysis. These methods produce a wealth of output and we will look at a variety of ways to de-clutter the results and draw appropriate conclusions by producing detailed graphs.

Main themes covered:

Review of community statistics.
Diversity and community structure.
Hierarchical cluster analyses.
Introduction to multivariate analyses...
Principal Components Analysis.
Correspondence Analysis.
Canonical Correspondence Analysis.
Detrended Correspondence Analysis.

R is free and Open Source software. If you have not already got a copy on your computer, copies of the program (from the R foundation for statistical computing) will be provided along with additional analysis

© R Development Core Team (2007). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria. ISBN 3-900051-07-0.

This course is suitable for anyone who would like to analyse and present their

biological data professionally using what is fast becoming a recognised academic standard package. Benefits include:

- Scientific rigour and credibility
- A professional approach to data handling and presentation
- Enhancing analysis skills to apply to many conservation situations
- Enhanced awareness of the correct use of a statistical approach.

It is designed specifically for the conservation sector. Example participants on similar courses have included Masters students and those employed or volunteering for Government Agencies, Recording Societies, Ecological Consultancies, Wildlife Trusts and County Councils.

What to Bring:

A laptop with administrator rights and a 'Memory Stick'. Preston Montford shop stocks memory sticks and can provide a laptop **if notified in advance**.

Courses in Data Analyses in Conservation and Ecology

These courses are designed to form an integrated approach to data handling and analyses in conservation biology and ecology.

All courses will be practical and inter-active and will focus on examples from a range of biological recording areas.

Examples and handout material will be provided on a CD-ROM with a course file along with software as required.

There are 6 courses in the series:

D101: Data Analysis for Conservation Biologists I.
2nd - 3rd August 2010

D201: Data Analysis for Conservation Biologists II.
4th - 5th August 2010

D202: Diversity & Community Analysis in Conservation.
1st - 2nd September 2010

R101: Advanced Data Analysis I
25th - 26th October 2010

R201: Advanced Data Analysis II
27th - 28th October 2010

R202: Advanced Community Analysis.

COURSE FEES AND WHAT'S INCLUDED

Single Room Resident:	£215 incl tuition, full board and accommodation
Shared Room Resident:	£205 incl tuition, full board and accommodation
Non-resident:	£170 incl tuition, lunches and evening meals

COURSE TIMES

Course members, both resident and non-resident, should plan to arrive in time for lunch at 1.00pm. There will be staff on reception to welcome you from 12:00am onwards.

It is sometimes possible for visitors on courses to stay over additional nights - please don't hesitate to ask if you would like this facility.

BOOKING PROCEDURE

To book a place on this course please complete the booking form and send it together with a deposit of £50 (cheque payable to Field Studies Council) to the address below. Payment of the balance of the course fee will be due 30 days before beginning of course. Cancellation after this date may leave the customer liable for the full amount - a condition which is accepted when the booking is confirmed. You are recommended to take out personal cancellation insurance to cover this eventuality.

Field Studies Council
Preston Montford Field Centre
Montford Bridge, Shrewsbury, SY4 1DX
Tel: 01743 852 040 Fax: 01743 851 066
Email: enquiries.pm@field-studies-council.org

ACCOMMODATION AT PRESTON MONTFORD

Our Darwin building has twin bedded rooms, each with en suite facilities; as a general rule, we will allocate these rooms (if available) to couples and people willing to share - thus giving more people the benefit of these facilities. People paying the single room fee will be guaranteed a room to themselves (with wash hand basin); toilets, showers and bathrooms are along an adjoining corridor.

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PRESTON MONTFORD



Advanced Community Analysis

1st – 2nd December 2010

Wednesday – Thursday

Arrive in time for 1:00pm Lunch on Wednesday
Depart 4.00pm on Thursday

Course directed by:

Dr. Mark Gardener