Compiled by Allan Jones, Co-ordinator of Special Interest Group: Practical work in the Biosciences

Bibliography

Experimental Design and Analysis

NEW Fowler, J., Cohen, L. and Jarvis. P. 1998 (2nd ed) ***Practical statistics for field biology***. Chichester: Wiley, ISBN 0-471-98295-4 (*) The 1st edition, Fowler & Cohen, 1992, 1990, is also suitable. An excellent, customer-friendly explanation of the use of statistics for fieldwork data – highly recommended.

NEW Fowler, J. & Cohen, L., 1990. ***Practical Statistics for Field Biology.*** John Wiley & Sons Ltd, Chichester, England. This book acknowledges the peculiarities of field-based data and it's interpretation, and aims to provide biologists with sufficient grounding in statistical principals and methods to enable them to understand research reports in journals, decide on the most appropriate statistical tests for their own problems and finally to analyse and present their findings.

NEW Heath, D., 1995. ***An Introduction to Experimental Design and Statistics for Biology.*** UCL Press Ltd., University College London. This modern illustrated textbook for biologists provides a clear and authoritative introduction to the key ideas of sampling, experimental design and statistical analysis.

NEW Keith, L.H. Ph.D., 1991. ***Environmental Sampling and Analysis – A Practical Guide.*** Lewis Publishers, Inc., Michigan. A concise book that covers all the critical aspects of environmental sampling and analysis. The incredible amount of information found in this volume makes it a valuable, comprehensive reference book for chemists, technicians, consultants, lawyers, regulators, engineers, quality control officers, news and information managers, teachers, and students.

NEW McGrew, J.C. Jnr. & Monroe, C.B., 1993. ***An Introduction to Statistical Problem Solving in Geography.*** Wm. C. Brown Communications Inc., Dubuque. This book is designed to provide a comprehensive and understandable introduction to statistical methods in a practical, problem-solving framework.

NEW Richardson, D.A. & St. John, P.R., 1989. ***Methods of Presenting Fieldwork Data.*** The Geographical Association. This publication is designed to enable fieldworkers to use their imagination in selecting the most appropriate techniques for displaying the type of data they have collected, and making students confident in the use of these different and often more sophisticated techniques, many of which appear as data response questions in their final examinations.

NEW Watt, T.A., 1993. ***Introductory Statistics for Biology Students.*** Chapman & Hall, London. This book takes fundamental ideas in statistics and experimental design using the minimum of mathematics and should prove ideal for the many life science students for whom numeracy is not an obvious strength. Examples are taken from a variety of biological disciplines.

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- Quinn, G.P. & Keough, M.J. 2002. ***Experimental Design and Data Analysis for Biologists***. Cambridge University Press, Cambridge. "An essential book for any student or researcher in biology needing to design experiments, sampling programs or analyze the resulting data". Data sets, chapter questions and links to software are provided by an associated website. Complex but useful for final year undergraduates and teaching staff.