***** COURSE ANNOUNCING *****

Introduction to meta-analysis in ecology

Organized by Simonetta Fraschetti

Laboratory of Zoology and Marine Biology
Department of Biological and Environmental Science and Technology
University of Salento,
Lecce, CoNISMa, I-73100 Lecce, Italy

Instructors:

Fiorenza Micheli (http://micheli.stanford.edu)
Craig W. Osenberg (http://people.biology.ufl.edu/osenberg)
Joachim Claudet (http://joachim.claudet.free.fr)

Duration: Three days

Dates: 14-16 December 2010

Location: University of Salento, Lecce Italy

Course aims and objectives:

Meta-analysis is the quantitative synthesis and analysis of a collection of independent studies. It provides a more objective and powerful way of summarising evidence across studies than descriptive reviews. The importance and utility of this quantitative method for answering new questions and synthesizing existing results in different fields of scientific research is demonstrated by the dramatic increase in the number of studies using meta-analysis in the last ten years.

The course will provide the basics of meta-analysis. The emphasis of the course is both on the conceptual understanding and practical use of this method, as applied to ecological questions. It will consist of lectures, discussions, and practical exercises.

Course outline:

Lecture 1. Introduction: Definition of meta-analysis, qualitative review vs. quantitative synthesis, history, approaches.

Lecture 2. Performing a meta-analysis: Defining the question(s), effect sizes, data extraction, research and publication bias, data analysis (e.g., fixed and mixed models), non-independence.
Lecture 3. Presentation and interpretation of meta-analysis results.
Lecture 4. Applications: Overview and discussion of different case studies utilizing meta-analysis.
Practical 1. The process. Students will walk through all the steps and calculations for one practical example, with emphasis on issues related to data extraction, data summaries, effect size, and analysis.
Practical 2: Application. Using a dataset provided by the instructors, students will define and answer questions they develop using this dataset.
Practical 3: Putting it all together. Using a set of studies provided by the instructors, students will extract data and perform analyses of this data. We will compare results and interpretations among different student groups to evaluate the process and challenges in doing meta-analyses.

Who the course is intended for:

This is a practical course, with no explicit pre-requisites, but familiarity with ecological concepts, experimental design, and statistics is an advantage.

Participants must attend all sessions of the three-day course, which will be limited to 30 applicants (PhD students, post-doctorals and researchers).

Course fee:

The course fee is 500,00 euros for PhD students and 600,00 euros for post-doctorals and researchers. The fee includes all course materials, complete set of literature, free internet access, lent PCs, full board, lunch, coffee break with cakes and pastries. Participants are responsible for dinner and accommodations (but discount rates are provided for hotels and B&B near the course location).

Applications:

Applications must arrive (by e-mail) no later than July 10th 2010 to Simonetta Fraschetti (simona.fraschetti@unisalento.it). All applications should include the application form and a short CV. Applicants will be notified of admission decisions no later than July 31th 2010. Successful applicants will receive additional information concerning the course, including a packet of readings, a detailed programme, and information about accommodation, local transportation and payment.