

Student Conference on Conservation Science 2017

WORKSHOP OUTLINES

There will be workshops on ten topics, held on Tuesday 28 March at 14.00 to 15.30 and after the Poster Session at 18.45 to 20.15 on Wednesday 29 March. Some workshops will be offered only in one of these sessions and some in both. We will inform you about how to sign up for workshops when you arrive at the conference. Meanwhile, **PLEASE USE THESE OUTLINES TO HELP YOU MAKE UP YOUR MIND WHICH ONES YOU WOULD MOST LIKE TO ATTEND. PLEASE DO NOT TELL US YET – YOU CAN DO THAT AT AFTER YOU ARRIVE AT THE CONFERENCE.**

Workshop A: How to write a scientific paper, or How to avoid Snoopy's problem... (Sessions 1 & 2)

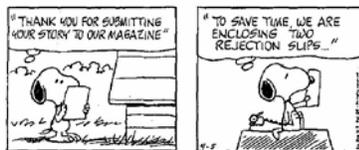
Martin Fisher

Editor of Oryx, Fauna & Flora International, Cambridge

Would you like this to be you? Are you determined that your first scientific paper will be rejected (so many are!)? Attend this workshop to find out how to ensure that this happens... or perhaps even how to avoid it...

Common pitfalls, glaringly obvious errors, verbosity - all these and more easy strategies to ensure that you receive your first rejection slip will be covered in painful detail...

It's the final year of your PhD, you've finally gathered some data, and you are going to be famous... well, at least you plan to write your first scientific paper... Do yourself a favour, do the Editor a favour, attend this workshop!



**Workshop B: Economic Analysis of Natural Capital and
Ecosystem Services
(Session 1 only: 28 March)**

*Ian Bateman
UK Natural Capital Committee and
Land, Environment, Economics and Policy Institute (LEEP)
University of Exeter, UK*

The workshop will provide an overview of the application of economic analysis techniques to decisions concerning natural capital and the ecosystem services it provides. The workshop will consider recent research on the incorporation of issues such as spatial variation within such analyses and give examples of how competing land uses might be tackled. The workshop will also tackle the issue of valuation and its limits by considering an application to biodiversity. The workshop will also provide some policy context by overviewing the work of the UK Natural Capital Committee – the only such body of its kind internationally.

**Workshop C: Planning a conservation research programme
(Session 2 only: 29 March)**

*William J. Sutherland
Department of Zoology, University of Cambridge*

Some conservation research programmes are unsuccessful due to unpredictable circumstances such as illness, unusual weather or unforeseeable political problems. Many others could never be successful as they were poorly planned. A small amount of sensible planning can make considerable differences. In this workshop we will use a series of exercises to demonstrate a process called reverse planning.

Workshop D: Biodiversity and development projects: striking the balance between science and practice in biodiversity offset design (Sessions 1 & 2)

*Robin Mitchell & Eugenie Regan
The Biodiversity Consultancy, Cambridge, UK*

Biodiversity offsetting refers to schemes designed to compensate for adverse impacts of development projects, such as wind farms, roads or ports, on biodiversity, so as to avoid them causing long-term biodiversity losses. To compensate for any loss, they must create additional equivalent biodiversity somewhere nearby: by planting a woodland, digging a wetland, restoring degraded native grassland, increasing the productivity of fish spawning habitat, and so forth. Offsetting is becoming a widespread tool in biodiversity management and many countries have enacted laws or introduced policies requiring biodiversity offsets for the impacts of certain kinds of development projects. Yet there are many practical challenges to the effective design and implementation of offsets. This workshop will introduce the current science and practice of offset design and students will work through an example in small groups. This will be followed by an open discussion on the challenges and limitations of offsetting and participants own experiences of it. Attendees will come away with an understanding of the scientific principles and process behind offset schemes as well as an idea of the stakeholder-led compromises that need to be made to achieve optimal compensatory outcomes.

Workshop E: Common pitfalls of social survey design and how to avoid them (Session 1 only: 28 March)

*Julia P. G. Jones
School of Environment, Natural Resources and Geography, Bangor University*

Many conservation scientists come from a natural science background but there is increasing awareness that successful conservation is interdisciplinary and must use knowledge and methods developed by the social sciences. Conservation scientists may need to collect quantitative data on aspects of human livelihoods e.g. estimates of volumes and spatial patterns of harvesting of a target species may be needed to quantify the sustainability of the harvest, or the likely socio-economic impacts on local people of efforts to reduce the harvest. They may also seek to understand people's attitudes, social norms and other possible influences on their behaviour. All surveys need to be designed to ensure the target population is successfully sampled, that biases are considered and minimised and ethical implications considered. In this brief workshop we will focus on how to minimize bias in a quantitative social survey. The workshop would particularly

suit conservationists whose training to date has been mostly in the natural sciences but all are welcome.

Workshop F: Raising funds for your conservation project (Session 1 only: 28 March)

*Rosie Trevelyan,
Tropical Biology Association, Department of Zoology, University of Cambridge*

Getting money for your project can be a matter of being in the right place at the right time. This workshop assumes you are not. Why is it that everyone you meet seems to have a grant and you do not? I will outline how to write a grant proposal, giving examples of good practice and bad practice and some tips on what referees like and dislike. We will also look at fund-raising strategies. Finally, we will put theory into practice by trying out some of the techniques introduced to-day.

Workshop G: A Basic Introduction to Statistics for Conservation Science: Study Design and Analysis (Sessions 1 & 2)

*Alison Johnston
British Trust for Ornithology, Thetford, Norfolk, UK*

Good conservation decisions are informed by ecological knowledge, which is obtained by well-designed studies and surveys and appropriate statistical analyses. Therefore study design and analysis are important foundations of conservation science. This is an introductory workshop that will be split into two sections. Firstly, we will introduce some basic principles of study design, including representative samples, stratification, bias and power analyses. We will discuss the importance of these aspects of study design in producing a dataset that is suitable to answer your conservation questions. The second section of the workshop will explore basic principles of statistical analysis, such as statistical significance, identifying important ecological variables and pseudo replication. The workshop will end with some guidelines for producing graphics, an important aspect of communicating your analytical results in scientific papers and to conservation decision makers. The workshop will cover some basic general principles on all these topics. Due to the limited time, these principles will be generally described, but there will not be time to answer questions about your specific datasets.

Workshop H: Practical Conservation Genetics (Session 1 only: 28 March)

Bill Amos

Department of Zoology, University of Cambridge

The role of genetics in conservation is often misunderstood. Some seem to believe genetic analysis is close to magic, while others take the view that gathering genetic data is an expensive waste of effort. Equally, some see genetics as playing a central role in dictating the health of a population, while others feel it is less important. This workshop aims to give an overview as to what can and cannot be done using current methods. It will also explore some of the key areas of misunderstanding. Although the primary presentation will be in the form of a lecture, I hope people will bring along their own questions that can be discussed in an open forum.

Workshop I: Economics is cool... And important for conservation (Session 2 only: 29 March)

Brendan Fisher

Rubenstein School of Environment and Natural Resources, University of Vermont, USA

In a world of global environmental change we are faced with several interrelated challenges for ecological sustainability. Increasingly it is recognized that these challenges are not going to be solved by conservation and natural scientists alone, but rather by coordination amongst natural scientists, social scientists and political institutions with input provided by all concerned stakeholders.

In this workshop we will look at the nature of ecosystem services as public goods (e.g. biodiversity, carbon sequestration, maintenance of natural stocks) and how this characteristic affects their distribution and allocation. We will play a few economic games to better understand human and societal decision-making and use these games and the economic insights they generate to demonstrate conservation coordination problems, free-riding, and the pitfalls in governing public goods. In this workshop you will learn how to use few basic economic concepts and tools in order to help inform conservation-development decisions.

Workshop J: Using Conservation Evidence to answer conservation questions (Session 1 only: 28 March)

*William J. Sutherland and Claire Wordley
Department of Zoology, University of Cambridge*

How we answer questions like these:

- What should be done to conserve kittiwakes on the Isle of May in Scotland?
- Do planted 'bird seed' strips benefit farmland birds more or less than uncultivated field margins do?
- What's the best thing to do to stop seabird getting caught by fishers?

There is increased use of the term 'evidence-based conservation', but how can evidence be applied in practice? In this workshop we will explore how to ask answerable questions, and how to use the website www.conservationevidence.com to answer those questions without undertaking extensive and expensive literature reviews. We will look at unpacking complex questions into ones which can be realistically addressed; explore the functionality and uses of the website www.conservationevidence.com; and undertake small group exercises to put into practice what we have learned and use Conservation Evidence to answer a realistic conservation question. This workshop will be particularly useful for students who aim to work in conservation decision making at any level.