

Workshops at our 2018 Annual Meeting

Workshops are interactive sessions that encourage networking, skills development, and creative thinking. There will be three types of workshops at our 2018 Annual Meeting:

1. [Paid for pre-meeting career development workshops \(full day with lunch\) on Sunday](#)
2. [Paid for pre-meeting workshops \(up to 4 hours\) on the Sunday afternoon](#)
3. [Free 1-hour workshops over the lunch break on the first and second day of the meeting](#)

1. Sunday Career Development Workshops

Early Careers Development Day

BES External Affairs Team, Amy Padfield

Join us for an early career development day to identify and increase opportunities for career progression. The day is for early career researchers looking to enhance their career prospects. In response to feedback from previous years, we will be covering networking, CVs, interview techniques, staying employable in and out of academia, and funding opportunities to name a few. You are welcome to bring along your CV and we will find the time to sit with you to provide a little advice and guidance.

Mid-career workshop: Securing your first promotion

BES External Affairs Team, Karen Devine

Following feedback from our members, this workshop is aimed at supporting those who are not early career researchers anymore but are seeking their first promotion to a permanent or more senior role.

We will explore the common themes within promotions criteria and consider how best to plan and showcase evidence for promotions. This is an interactive workshop and delegates are encouraged to bring their CV's, will be conducting self-assessment within small groups, receiving and offering peer support to identify existing evidence and reviewing gaps in evidence.

We will look at a range of mechanisms for meeting criteria including mentoring, networking, and external roles.

The workshop will include UK and international perspectives and opportunities to identify how to best fill gaps in the CV.

2. Sunday Workshops

Developing ecological monitoring devices using Raspberry Pi technology

Lucinda Kirkpatrick (Universiteit Antwerpen), Emily Simmonds (NTNU), Robbie Whytock (University of Stirling), Suzanne Vogel (University of Oxford), Tomos Potter (University of Oxford).

Being able to monitor biodiversity is key to understanding how it changes and how we can protect it. However, monitoring devices often require specialist knowledge and can be expensive, limiting the possibilities for citizen science projects or projects with a limited research budget. Raspberry Pis are inexpensive, small, open source and easy to use single board computers which allow users to build and configure their own monitoring devices. However, the building and programming of these devices can be off-putting, particularly if practitioners don't come from an engineering background.

In this 4 hour workshop, we will provide a hands-on introduction to building either an acoustic detector or a camera trap. Participants will get to grips with Raspberry Pis, and will leave with a fully functioning detector if they bring the necessary materials. The acoustic detector, "Solo", is more entry level while the camera trap is more advanced; participants are free to select which detector they would like to build. The first 30 mins will cover information on Raspberry Pis, how they operate and where to access different tutorials (the Raspberry Pi "ecosystem"). Then, after running through a tutorial on how to build both detector types, we will split into small groups, and spend the next two – three hours building and programming the two detectors. Finally, we will spend the last 30 – 45 minutes discussing how Raspberry Pis could be useful for a range of different purposes. Spaces will be limited to 30 people, and it is strongly advised that participants bring the materials necessary for building at least one of the two monitoring devices.

Essential Facilitation Skills Workshop

Dr Dee Hennessy of [Creative Exchange](#)

Good facilitation is crucial for workshops and interactive events, but most of us don't know what it really involves. Built upon the successful Facilitator Development Programme designed for the Department of Health, this four-hour workshop introduces the C8 competence framework for successful facilitation. A series of intensive exercises and coached observations, will introduce the framework and equip you to bring it to life through:

- Understanding: demonstrating a working understanding of the C8 framework
- Confidence building: practicing what is contained within it
- Application: linking this to practical opportunities within your own work
- Reflection: reviewing development achievements and setting out future goals

The workshop is run by Dr Dee Hennessy of [Creative Exchange](#) who leads one of the four teams on UKRI's approved framework for creative facilitation. Her training at the Department of Health was described as "platinum standard".

There are limited places on this workshop to ensure individual feedback and coaching.

Meetings Committee recognises participation in this workshop as evidence of facilitation skills for future workshop and event proposals.

Genomics for evolution and ecology – an interactive introduction to the Ensembl genome browser
Erin Haskell (EMBL-EBI) and Pasky Miranda (University of York)

The [Ensembl](#) and [Ensembl Genomes](#) projects provide accessible genomic data across the tree of life including vertebrates, bacteria, fungi, metazoa, protists, and plants. We provide annotated genome assemblies and incorporate data from external databases (e.g. UniProt, NCBI and Gene Ontology) to create a unified database for genome and gene information.

This workshop will showcase how you can browse and extract information from these annotated genomes. We will:

- show you how to browse the genome and search for genes
- find the sequence, function, and any known variants of genes
- explore genetic conservation across species, either at the chromosomal/scaffold level (synteny) or gene level (homology)

This workshop is aimed at researchers with knowledge of basic genetics who wish to understand how to access genomic data online. This workshop will consist of short presentations, followed by demonstrations and exercises so that you are able to understand the background to the data, as well as how to access it through the website. Therefore, you will need to bring a laptop. A survey will be provided during the registration process, so that we can tailor the workshop content to your species and research area of interest. All materials will be available after the workshop, including presentations, a coursebook with annotated screenshots of the demonstrations, and an exercise book along with detailed answers to all exercises. On completing this workshop, you should be able to understand the data types in Ensembl, and how to search and download data from the database.

Introducing the open-access COMPADRE (plants) and COMADRE (animals) databases, and associated tools and materials, with special emphasis on comparative analyses of life history and population biology.

Rob Salguero-Gomez (University of Oxford) and Owen Jones (University of Southern Denmark)

Matrix population models (MPMs) describe population dynamics in discrete time using discrete stages (e.g. age/size classes, developmental stages). Myriad demographic outputs can be obtained from them, including life expectancy, degree of iteroparity, population growth rates, etc. The sister databases [COMPADRE](#) and [COMADRE](#) contain thousands of MPMs for hundreds of species, and are thus powerful resources to tackle questions in population biology.

Our 4hr workshop first introduces MPMs and key metrics that can be obtained from them. We then outline the rationale behind the databases, their structure and how to query them. The databases are provided as R objects and we will focus on skills to use the companion R package which facilitates using these data objects. Attendees will use these skills to analyze a set of MPM data obtained from COM(P)ADRE to address example comparative topics. Topics may include (i) risk of quasi-extinction across taxa, (ii) correlations between growth form or taxonomic group and life expectancy, (iii) links between demographic and stochastic environmental changes, (iv) evaluation of phylogenetic signal in demographic traits.

Attendees are expected to have intro-level skills in R, and to bring their own laptop with R installed (and ability to install R packages).

3. Lunchtime Workshops

8 questions to make you a pedagogical pro

Darcey Gillie (University of Sheffield Careers Service)

This workshop distils roughly a century of research into pedagogy and cognitive psychology into 8 questions which can be used to design more effective, engaging, and theoretically sound teaching and learning strategies.

We will introduce participants to some of the most fundamental pedagogical theories and concepts we need to support our work as teachers, science communicators, those involved in public outreach, or anyone with professional involvement with any of these roles. Participants will have the opportunity to put ecological survey skills into action by using the Theory Spotters Guide to identify and monitor presence of specific pedagogical approaches during the workshop. Working in small groups, participants will be able to discuss, explore, debate and capture ideas about how they might use the eight questions to teach basic ecological principles. Discussions will continue outside of the workshop space: participants' ideas will be displayed with an invitation for other meeting delegates to add their own contributions.

An Introduction to a Novel Climate Downscaling Procedure for Microclimate and SDM Research.

Rob J Lewis (Aarhus University) and Vincent Pellissier (Aarhus University)

Predicting climatic conditions at relevant scales for organisms has proven a very important step towards understanding the ecology of organisms, ecosystem dynamics and modelling spatial and temporal distributions of species. Climatic downscaling procedures are widely used for such purposes, however at fine spatial scales (ca. 25m-100m) extant methods can poorly represent detailed local variations.

In this workshop, facilitators will introduce a novel climate downscaling procedure, one which through explicit consideration of multiple environmental variables (e.g. land-class, geodiversity, oceanicity...) and through accounting for the non-stationary relationships of these variables across space, improves the environmental realism of fine-scale climate data. The workshop will begin with an introduction to the method and a run-through of the climate downscaling R package, briefly touching on its design, data and spatial statistics. Participants will then work interactively with the facilitators downscaling real climatic data, and gain hands-on experience within R on the features and functions of the package. The workshop will close with an interactive discussion synthesising the potential research questions applicable to the method.

Participants will leave with knowledge and experience of modelling fine resolution climate data and a broad understanding of its application within the realms of microclimate and SDM research. Participants will receive access to the R package and a detailed guide to adopt the method in their own research. This workshop will be useful for community, macro and population ecologists with interests in methods in ecology and modelling. Solid understanding of spatial statistics is not required but knowledge and experience of the R platform is essential.

How to Create Engaging Video Content Using Just a Smartphone

Peter Barker (Orinoco Communications)

Video is the most engaging form of digital media around at the moment, making it the perfect tool for the communication of research, and thanks to advances in smartphone technology video content is now easier to produce than ever before. This interactive, introductory workshop is designed to

give participants a solid grasp of the basic principles and techniques needed to start their journey as video content creators.

The hour-long, hands-on workshop will cover some general principles of how to create engaging videos, such as defining a target audience, choosing a video format that works for you, and planning a shoot, before moving onto the technical part of the session when participants will learn some of the key concepts for shooting attractive, professional-looking content using their smartphones.

Interactivity is a key feature of this workshop, as participants will be asked to form small groups to come up with an idea for a short scicomm video, then work together through the series of steps before finally putting into practice all they've learnt to shoot a short, one minute video towards the end of the session.

The session is open to anybody with access to a smartphone or tablet.

The Inclusivity Challenge

Lesley Batty (Birmingham University) and Dan Forman (Swansea University)

Fieldwork is one of the core activities within ecology, whether that is in teaching or research but how do we ensure that everyone can experience the great outdoors? We want to ensure that all ecologists are able to access the field and the aim of this campfire session is to increase awareness of the opportunities, tools and solutions to ensure that field based teaching approaches in ecology are fully inclusive and accessible.

Following a short introduction, attendees will work through a number of case studies in small groups in order to generate a series of possible solutions that can be enacted (e.g campus based teaching, virtual field trips). Groups will discuss, identify and develop inclusive solutions to increase the value and accessibility of ecology. Participants will be encouraged to consider a wide range of challenges and to think about options beyond the usual replacement activities. We will generate a series of guidelines from the workshop that will be disseminated through the Teaching and Learning SIG and Education and Careers Committee.

Introducing early career researchers to publishing in international journals

Emilie Aimé (BES Managing Editor)

Publishing in high-quality ecology journals – insider tips from the BES Journals, Nature Publishing Group and Royal Society Publishing.

Population modelling... minus all that wretched coding

Iain Stott (University of Southern Denmark)

Do you study a population of an awesome species, and want to evaluate its dynamics? But maybe you're not a coder... what can you do?

Do you know how to code but need to compare many models? You can do it but... coding it is a chore.

Do you need good tools to teach population ecology? More than just a lecture slide, something interactive... but where can you find it?

Do you just want to understand what the title of this workshop means? Perhaps you're sceptical, but... you NEED find out!

Come along!

This short workshop will present 'ShinyPop', a WebApp for population modelling using Matrix Projection Models (MPMs), implemented using RShiny. All the power of R, all the ease of a simple web interface. No coding!

It will showcase the abilities of the popdemo and Rage packages, including: population projection; stable, transient and stochastic dynamics; sensitivity and nonlinear perturbation analysis; age-trajectory and life cycle analysis. Please bring your own MPMs if you like, but the app connects to the COM(P)ADRE Plant and Animal Matrix Databases, so even if you don't have an MPM yourself, you have plenty to play with.

The app works on almost any internet-connected smart device. Come with your laptops, tablets, smartphones... ok, smartwatches is pushing it a bit. We'll do some population modelling... minus all that wretched coding.

Setting up a successful field course workshop

Alice Mauchline (University of Reading) and Dan Forman (Swansea University)

Field based learning is one of the most important components of any environmental and ecology study, permitting insight and understanding of key concepts and applications in a real world setting whilst providing unique opportunities to develop key practical skills. The purpose of this interactive peer-peer workshop session is to provide an informal but guided forum to share ideas and best practice for inexperienced individuals when developing field based learning and is intended for individuals who are interested or currently engaged in the teaching of field based ecological and environmental subjects at any level, but will be especially relevant for those working and teaching in higher education. Participants will benefit from the provision of shared information and advice from experienced individuals relating to core elements of the important aspect of ecological teaching via field based learning. This will include developing learning outcomes, inclusivity, practical skill development and competences, logistics, risk assessment and other potential pitfalls and opportunities. We will also produce a list of "golden rules" and access to additional resources when planning field work which would be made available (online) by the Teaching and Learning SIG and the Enhancing Fieldwork group after the event.

Social Media for Science Communication

Steph Januchowski-Hartley (Swansea University) and Daniella Rabaiotti (Institute of Zoology)

In this workshop participants will gain an introduction to different social media platforms and get an opportunity to create and enhance their online profile to more effectively communicate their science. A strong focus will be on communication about science and scientific findings using Twitter, particularly building an audience and the use of hashtags and online games.

Saving the world with Lego: Using Lego Serious Play to address research proposals

Martha Crockatt (Earthwatch) and Alan Jones (Earthwatch)

Lego Serious Play is an established communication tool that allows effective exchange of ideas in groups. Lego allows us to engage with problems visually and in three-dimensions, allowing complex abstract problems to be evaluated in a creative way. A key feature of the medium is that it encourages everyone to contribute in group setting – and ensures that not just those with the loudest voices prevail. At this workshop we will demonstrate how Lego Serious Play can be used to address the big ecological challenges of our time. Following an induction session with our experienced workshop facilitators, participants will gather together to work in small groups and develop solutions to these big problems, using Lego to both model and discuss them. At the end of

the workshop groups will present back their solutions, using Lego again as a unique communication medium. Our workshop will give you the opportunity to learn more about this powerful tool for effective group work and communication, while potentially generating some interesting ideas for solving big ecological problems.

Turning science into policy, via government consultations and inquiries

BES Policy Team

Government consultations and inquiries are the main way in which the Government hopes to obtain evidence to inform future policies, yet scientists are often unaware of the opportunities or uncomfortable at the prospect of engaging. This session will explain the main types of consultations and inquiries and how they are intended to inform policy-making. It will then provide training and advice on how to choose the right consultations and inquiries to respond to, how to present written or verbal evidence and how to maximise your chances of being asked to speak at an inquiry.

Wellness and Resilience: maintaining your ability to stay healthy

Richard English (BES Communications Manager) and Mind (Charity)

Building on our stress-management workshop of 2017, we will be focusing on mechanisms that build **resilience**: the ability to bounce back from work and personal issues more quickly and with less stress.

It will be a positive, empowering workshop providing practical skills to create and maintain good mental health and encourage people to challenge stigma.

The workshop will enable people to:

- Gain a mix of practical skills, exercises and resources to maintain good mental health
- Understand the importance self-care for themselves and others
- Improve and maintain their own and others' mental health
- Understand the importance of challenging stereotypes and stigma
- Become a mental health advocate and help create a mentally healthy workplace
- Understand the physiological and psychological effects of stress

This workshop is for those who have experienced mental health issues and want to learn coping mechanisms, as well as supervisors/managers who want to learn how to support their team and create an accepting, mentally healthy work place.

The facilitator will use a presentation to frame the session, but the workshop will benefit from *optional* attendee participation. You are under absolutely no obligation to share, although we aim to create a safe space in which people feel comfortable.