



ANNUAL REVIEW 2018-19



BRITISH
ECOLOGICAL
SOCIETY

A YEAR TO LOOK ON WITH PRIDE

It's been another year full of highlights for the British Ecological Society. Selecting what makes the pages of this, our Annual Review for the year from November 2018 to October 2019, has once again been a difficult task. This is my second year as president, and as the year draws to a close, so does my two-year term. But I could not be prouder of all that the Society's does. We could fill another ten Annual Reviews with all the achievements that I have been lucky enough to see.

Support for ecological science remains, rightly so, at the core of what the BES does. Our six journals continue to publish the latest ground-breaking research, and our newest journal *People and Nature* has exceeded all expectations for paper submissions on the interactions between humans and the natural world (see p.4).

I was delighted to be in the Yorkshire Dales for the Society's summer school for 16–18 year olds at Malham (cover and p.6). This week-long field studies course gave a group of 30 students from low-income and ethnic minority backgrounds an incredible taster of all that ecology is about. I was inspired by their willingness to throw themselves into the experience, discovering ecology, hearing from experts and learning from each other. I left Malham feeling that the future of ecology will be in safe hands with students like these.

The Society remains strong and can do so much, thanks to its enthusiastic and committed membership. The back cover shows just how many people get involved with their society, in many different ways.

Richard Bardgett
President of the British Ecological Society

The BES has over 6,000 members who benefit from the support their membership offers for their science and careers. While most members are based in the UK, we are a truly international Society with members in 125 countries across the globe.

We work hard to make sure we are a welcoming home for all ecologists. I was proud to see the number of new initiatives at our Annual Meeting in Birmingham to recognise our diversity as a community (p.4). With gender neutral toilets, quiet spaces, pronoun stickers, childcare on site and 'please offer me a seat' badges, we strive to make our flagship event of the year a friendly and welcoming environment for everyone.

One large change for the Society this year has been a move to a new home in central London, in between Islington and Old Street (p.7). The bright new office has been designed and fitted out to our needs with sustainability a key concern throughout. The result is fantastic and testament to the hard work of all those involved. Make sure you visit when you get a chance.

By the end of the year we will have a new strategy for the years 2020–2023 providing a framework for our future direction. The strategy will set out our values and goals, based on inputs from across the Society and extensive external consultation, and it will be full of bold ideas and ambition. Its formation has been a positive discussion throughout the year, and strongly reflects the view that there has been no more important time for ecological research and for our voice to be heard.



ABOUT US

The British Ecological Society is the largest scientific society for ecologists in Europe with over 6,000 members in 125 countries around the world.

We support the global community of ecologists at all stages of their careers through our journals, meetings, grants, and education and policy work. The first ecology society to be established anywhere in the world, we have been the champion of ecology for more than a century.

WE GENERATE, SYNTHESISE AND EXCHANGE ECOLOGICAL KNOWLEDGE

WORKSHOP IS SIG-NIFICANT SUCCESS

Oklahoma in the USA was the location for the Movement Ecology Special Interest Group (SIG)'s 'Animal Movement: A to Z with lots of R' workshop.

"The workshop consisted of some of the most effective and valuable training we've received," said a group of early career researchers. Several of them have since let the organisers know they're already using the workshop materials in their own research.

The week-long event in July focused on the methodology required for movement data analysis, from data visualisation techniques to advanced statistical models. This was just one of the many events, workshops and conferences held by BES special interest groups this past year to support researchers in different disciplines.



Sediments give a picture of lake biodiversity in the past.

© IISD EXPERIMENTAL LAKES AREA, CANADA

DNA BUILDS NEW PICTURE OF PAST BIODIVERSITY

"Understanding how ecosystems change in response to natural or human activities is critical in aquatic habitats where biodiversity loss is amongst the most dramatic on earth," says BES grant winner Joanne Littlefair, a postdoc at McGill University in Canada.

Making predictions about biodiversity in the future means understanding the impact that humans have had already. This requires a way of seeing into the past, and is where analysing sediments at the bottom of lakes comes in.

Lake sediments accumulate year on year, trapping what's left of organisms that lived and died at that time. Trace amounts of DNA can now be detected in these sediments, potentially allowing scientists to reconstruct a full picture of the species that lived in the lake at different times – even those species that aren't typically well preserved. But how do we know that this genetic data truly reflects changes in historical lake life when there are few other datasets that go back so far to compare against?

Joanne will use her BES grant to pursue a solution. "I will use sediment cores taken from the IISD-Experimental Lakes Area in Ontario where experiments were performed decades ago on lake eutrophication (when excessive nutrients cause dense algae growth) and acidification." This site offers well-documented changes in the fish and zooplankton communities in response to whole-ecosystem experiments and allows comparison with what Joanne and colleagues find using genetic approaches to analyse trace DNA.

"This is a unique opportunity to benchmark DNA sedimentary techniques," she explains.

To carry out this study, Joanne will receive £17,000 over 18 months through her successful application for a large research grant from the BES. This is one grant of many awarded by the Society, seeing close to £375,000 distributed each year to take forward the latest ideas in ecological research.

TESTING WHETHER 'BLINDING' REDUCES BIAS IN SCIENCE PUBLISHING

A two-year trial in the journal *Functional Ecology* is under way to assess whether hiding author details during peer review reduces bias against underrepresented groups. An estimated 2,500 submitted papers will be included in the largest randomised control trial of its kind to date.

Currently the most common process in ecology journals is single-blind peer review. While the authors of a paper are 'blind' to who the reviewers are, the reviewers are able to see the authors' names and affiliations. This has led to concerns that, consciously or unconsciously, knowledge of an author's gender, university position or nationality could influence how reviewers assess the research. As a result, some journals have introduced 'double-blinding' where the reviewers are 'blinded' as well.

Papers submitted to *Functional Ecology* are being randomly allotted to single- or double-blind peer review to test whether knowing author characteristics does affect peer-review scores and acceptance of papers. The results will help determine the best ways of minimising sources of potential bias in the publishing process.

Catherine Hill, Director of Publishing at the British Ecological Society, said: "The British Ecological Society is committed to improving openness and inclusivity in our science. It's vitally important that the research we publish is reviewed and selected in the most impartial way, regardless of the authors' backgrounds."

WE COMMUNICATE WORLD-LEADING ECOLOGICAL SCIENCE

TAKING OUR RESEARCH TO WIDER AUDIENCES

The virtual issue, *Why Ecology Matters*, is a curated collection of research articles from all six BES journals which showcases how ecology can make a difference in our world.

Published in October, the issue reflects the structure of our New Scientist Live exhibit (see p.5) and includes a section dedicated to citizen science. This is the first time our publications output and public engagement efforts have been connected in this way.

The articles, accessible via each of the journal websites, were free to read for a month after the event, giving those with an interest in ecology an opportunity to engage with our content.



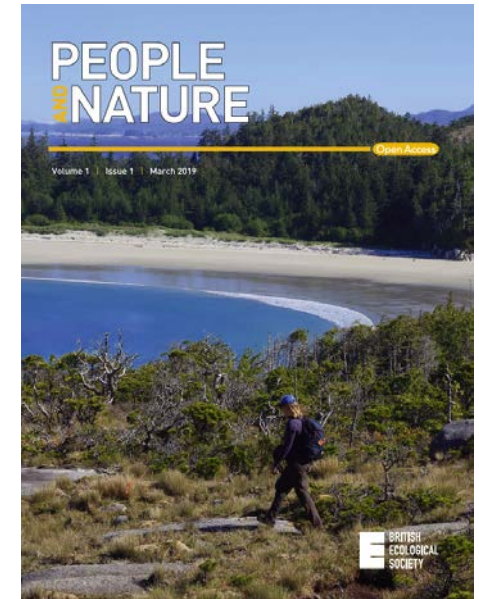
LEADING THE WAY AT OUR ANNUAL MEETING

We strive to make our Annual Meeting the most welcoming international conference dedicated to ecology.

This year, we introduced e-posters where researchers could present their work on interactive touchscreens. Delegates could scroll through these at their leisure, click out to external data and ask the presenters questions via the software.

We also launched a new conference app, seeing a giant improvement in the number of delegates using it throughout the conference (80% of delegates compared to around 30% in previous years). The app provides a number of useful new features, including the ability to connect with other attendees and live Q&As in conference sessions.

Importantly, we introduced several new equality and diversity initiatives to ensure we are supporting our full community. We provided pronoun stickers for people to add to their name badges and 'please offer me a seat' badges for those that find it difficult to stand. We ensured gender-neutral toilets were available and held our largest LGBTQ+ mixer yet. Finally, we offered a full childcare facility for parents and carers for the first time.



This year saw the launch of our sixth journal *People and Nature*. It publishes work from across many disciplines that explores relationships between humans and nature. We're pleased to say the number of high-quality submissions we've received is far greater than we originally expected. Clearly the time was right to launch a journal in this space.



In April, 300 delegates arrived in Edinburgh for the first joint meeting of the BES Tropical Ecology Group and the Society for Tropical Ecology (gtö). The symposium celebrated collaborative science and brought together ecologists not just from the UK and Europe but also from across the tropics.

WE SHARE THE EXCITEMENT AND RELEVANCE OF ECOLOGY

NEWS COVERAGE LEADS TO NETFLIX CALL

In September we issued a press release on research that examined the content of recent BBC and Netflix nature documentaries. The researchers found that although the documentaries increasingly mentioned threats to nature, visual depictions of the threats remained scarce. They argued this potentially misleads audiences on the state of the natural world. The research, published in our open access journal *People and Nature*, was reported in several outlets including *The Independent*, *Wired* and *Scientific American*. The media attention prompted the producers of *Our Planet*, one of the documentaries examined in the paper, to contact the authors. They wanted to discuss the findings and how these concerns should factor into the making of nature documentaries. It's a clear example of how media coverage can lead research to have wider impacts.

FESTIVAL HEADLINERS

The BES public engagement team put on its largest public exhibition to date in October. The Society headlined the Earth Zone of New Scientist Live, an annual science festival welcoming over 40,000 public visitors to the London ExCel centre.

The immersive, multisensory exhibit featured images from our Capturing Ecology photography competition enhanced by sounds and smells of the wild, thanks to significant financial investment from New Scientist Live. Visitors also met ecologists from a range of fields to discover the value of our science in tackling global challenges facing us and our natural world.



Rob Brooker with MSPs John Mason and Richard Lyle (l – r)

WHEN POLITICS REALLY IS A DIRTY JOB

Members of the Scottish Parliament (MSPs) joined BES scientists in a muddy field near Dundee to hear about sustainable farming systems, in an event hosted by the BES Scottish Policy Group.

MSPs John Mason, Richard Lyle and Maureen Watt, who were all members of the Parliament's Rural Economy and Connectivity Committee, said they found seeing some of the research first hand to be of real value.

They discussed a range of topics with expert BES members Helaina Black, Rob Brooker and Davy MacCracken, from the benefits of innovative inter-cropping systems to the challenges facing farmers from extreme weather events and climate change.

WE INSPIRE, ENGAGE AND RECOGNISE TALENT

INSPIRING THE NEXT GENERATION

Students from low income and ethnic minority backgrounds get an unrivalled opportunity to experience ecology on our summer school for 16–18 year olds.

Early morning birdwatching, days spent out in the field and the lab followed by evenings discussing all they've found with experts and mentors – it's no wonder the students come back exhausted. This July, 30 students from schools around the country descended on a field studies centre in Malham tarn in the Yorkshire Dales. The week-long residential course provided them with an incredible opportunity to find out what ecology is.

“We want to take students from less traditional backgrounds and expose them to the relevance of ecology in our world and the breadth of opportunities open to them,” explains Karen Devine, who led the summer school and is Head of External Affairs at the British Ecological Society. “The majority come never having heard the word ‘ecology’, never mind considered taking a course in ecology at university.”

Mornings and afternoons often start with a session that's purely on the science, then there's an example of how that science is used. The students get to work with experts who really know their stuff, talk to university students who help out as mentors and hear about a whole range of careers available in ecology. It gives a really rounded picture of ecology all the while being immersed in the nature around. Many become committed to pursuing careers in the subject.

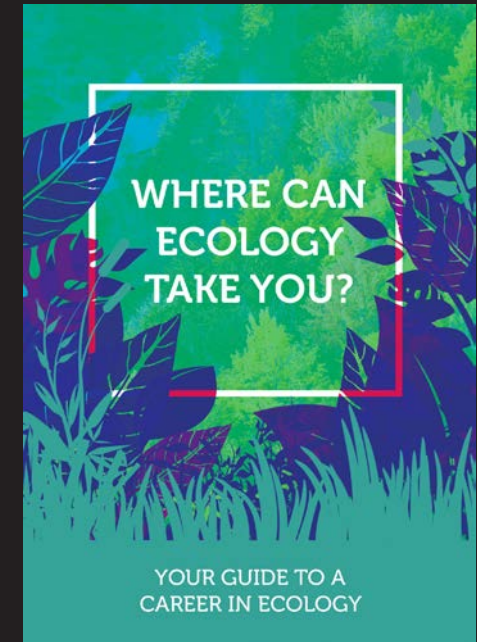
“It's inspirational really,” says John Condron, who with his wife Naomi supported this year's summer school. John and Naomi are Directors

of consultancy firm Ecology Resources Ltd, a company they founded three years ago. They've provided a bursary for a student to invest in the equipment, books or field courses they may need to pursue a career. “From what I've seen, the summer school reaches out to groups of students that otherwise would not have the same access as some of their peers,” says John. “That's very important. It can open up the eyes of kids to nature, ecology and wildlife.”



We want to thank everyone who has given to our ‘Ecology – the next generation’ appeal. The more support we receive, the more we can offer students and the more students we can reach.

One student said, “It's amazing to meet so many committed scientists who have exposed me to experiences I would never have had the opportunity to do.” Another added, “Who needs sleep when you can do ecology?”



NEW INTRODUCTION TO ECOLOGY CAREERS

‘Where can ecology take you?’ is a joint careers resource from the BES and the Chartered Institute of Ecology and Environmental Management (CIEEM). From scientific research to ecological consultancy, the leaflet gives readers an introduction to the kind of work that ecologists do, the many different types of roles that are available and potential employers to consider. The aim is to increase awareness of ecological careers among 16-year-olds and above. The education team is currently developing a further careers resource to provide a greater depth of insight and information for pursuing different careers.

WE ARE BUILDING A SUSTAINABLE, RESILIENT AND EFFICIENT BES

OUR NEW HOME FOR ECOLOGY

The British Ecological Society moved into a vibrant new office in August.

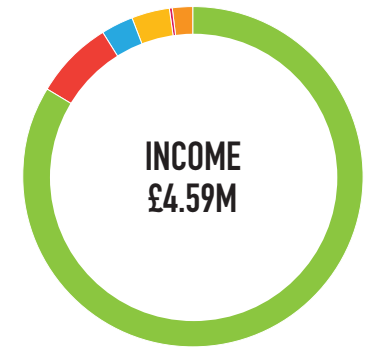
The fantastic new premises give us our own dedicated home in central London. The bigger space, which we have bought and fitted out, has been designed to take the Society forwards and better serve our members. It gives us the purpose-built workspace and meeting rooms we need, all using a range of bold colours and images that reflect the natural world.

We've worked hard to apply a gold-standard of sustainability throughout, minimising our environmental footprint during construction, in the selection of furniture and in ongoing energy use.

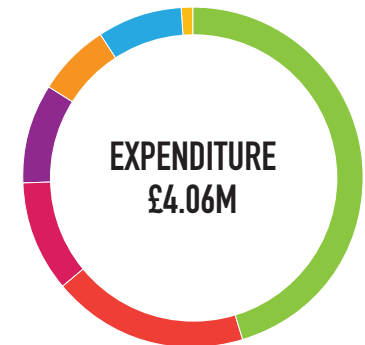
There are different breakout spaces to encourage collaborative working between staff, meeting rooms that work well for small events and a terrace out onto a canal basin that brings natural light into the working areas. We look forward to welcoming members and visitors in the coming weeks and months.



IN 2018, WE INVESTED OVER £4.5M
IN FOSTERING ECOLOGY



Publications	£3.82m
Conferences	£0.34m
Membership fees	£0.14m
Investments	£0.19m
Donations	£0.01m
Other	£0.09m



Publications	£1.85m
Conferences	£0.76m
Grants	£0.42m
Education	£0.39m
Policy	£0.27m
Member engagement	£0.33m
Investment fees	£0.04m

THANK YOU!

We are a society run for ecologists, by ecologists. We couldn't achieve all that we do without the time, expertise and enthusiasm of hundreds of members and volunteers. Thanks to everyone for your support over the past year and for getting involved in your Society.

90

Over 90 ecologists sit on our Board and committees, setting the direction for our work

270

270 reviewers consider 500 applications every year to our grants programme

60

60 student volunteers make sure everything goes smoothly at our big conferences

100

100 people lead the work of our 19 special interest groups through their committees

30

Around 30 ecologists enthuse and inspire the public on BES stands at science festivals

40+

40+ volunteers support others in their careers through our various mentoring schemes

100

100 experts contributed insight and informed our responses to government policy consultations last year

4,000

4,000 people devote their time to our journals as reviewers and Associate Editors each year



**BRITISH
ECOLOGICAL
SOCIETY**

British Ecological Society
42 Wharf Road
London N1 7GS
Tel: +44 (0)20 3994 8282
hello@britishecologicalsociety.org
www.britishecologicalsociety.org