

Ben Collen (1978–2018)

Inspirational conservation scientist.

Ben Collen, who has died aged 40 after an intensely brave 16-month battle with bone cancer, was a leading conservation biologist, a passionate advocate for wildlife and wild places, and an inspirational figure in the ecology and conservation communities. Ben's research focused on assessing and understanding the precipitous loss of wildlife across the world, in particular developing indicators of population size and extinction risk to better track the ecological health of our planet. These indicators have already been used at the highest levels of policy in setting global agendas, which testifies to Ben's calm ability to successfully negotiate that most difficult of interfaces: between science and policy. Despite the serious nature of the subject — and even throughout his illness — Ben showed how much fun a scientific career can be, inspiring students and colleagues alike with his generous nature, kind support and mischievous spirit.

Ben's research melded his clear thinking about which questions are truly important with a shrewd eye for which were tractable. For example, seeing that invertebrates and freshwater biodiversity were often ignored when formulating global conservation strategies, Ben led ambitious first global assessments of their conservation status; likewise, he showed how using a sample-based approach with the International Union for Conservation of Nature (IUCN) Red List could provide information on extinction risk patterns beyond a few comprehensively assessed taxonomic groups, in a cost-effective way. His many contributions to biodiversity monitoring and conservation science were recognized in 2014, when he was awarded the Marsh Award for Conservation Biology.

Ben grew up in the Norfolk countryside with his two sisters, where he showed an interest in wildlife and wild places from an early age. When his family moved to Milan during his teens, Ben developed what would become a lasting love of international adventure and exploration (he would travel to 71 countries). Back in the United Kingdom, Ben started a degree in biology at Imperial College in 1997. A year's research placement studying African wild dogs in Kenya turned an abiding interest in wildlife into a strong drive to conserve biodiversity. In 2001, Ben's masters research project — on primate



Ben Collen in 2014 at Blakeney Point Nature Reserve, Norfolk. Credit: Tim Blackburn

macroecology with Nick Isaac and Guy Cowlishaw at the Institute of Zoology (IoZ), Zoological Society of London — led him to discover an institute full of like-minded wildlife conservationists and the power of synthesizing comparative data to draw conclusions applicable to whole groups of species. He stayed at IoZ until 2013, first as a PhD student investigating comparative patterns of declines and extinctions of populations and species (under the supervision of Georgina Mace at IoZ and Andy Purvis at Imperial College London), then as a research fellow with Jonathan Baillie in the Indicators and Assessments Unit (IAU), and finally as the Head of IAU.

During his time at the IAU, Ben began to apply his comparative and macroecological skills to wildlife conservation problems. He was part of the inception of the Evolutionary Distinct and Globally Endangered (EDGE) of Existence programme (N. J. B. Isaac et al., *PLoS ONE* 2, e296; 2007), an initiative prioritizing species for conservation attention by integrating estimates of species relatedness with IUCN threat categories. Ben played a key role mediating between the team's competing passions and different

emphases. EDGE Mammals was launched in 2007 and subsequently expanded to many other taxa. The EDGE programme also introduced Ben to pygmy hippos, thenceforth an abiding passion. He was the first to capture camera-trap pictures of them in the wild and to confirm a population in Liberia, developing a rigorous standardized camera-trap methodology.

Ben's best-known work — his pivotal intellectual contributions to key indicators of biodiversity — began while he was at the IAU. Together with Jonathon Loh (then on secondment from the World Wide Fund for Nature), he rejuvenated the Living Planet Index (LPI) (B. Collen et al., *Conserv. Biol.* 23, 317–327; 2009). The LPI had initially been developed in the late 1990s as an 'index tracker' aiming to sensitively reflect temporal trends in vertebrate population sizes, and already had considerable policy traction, but needed an overhaul. Ben turned his statistical and macroecological expertise to good effect, putting LPI's inference on a much sounder footing, revolutionizing the workflow for incorporating and analysing new data, and engaging a wide range of partners.

The remodelled LPI has become one of the world's main ways of tracking the state of the natural world, providing a powerful and sobering assessment of the ongoing decline in wild nature. Ben also helped to develop national and sample-based approaches to assessing extinction risk; this work has motivated IUCN Red List assessments of many species in other taxonomic groups, and has enabled the Red List to provide more and better information to governments, non-governmental organizations and other conservation planners. These indicators have fed into landmark syntheses of the state of the natural world, in many of which Ben played a key role: for example, showing conclusively that the Convention on Biological Diversity's 2010 target for biodiversity was not met (S. H. M. Butchart et al., *Science* 328, 1164–1168; 2010); and that biodiversity declines would have been even more severe were it not for certain conservation successes (M. Hoffmann et al., *Science* 330, 1503–1509; 2010). These syntheses have helped to shape the Aichi Biodiversity Targets for 2020 and the Sustainable Development Goals for 2030.

A career decision to increase his research focus saw Ben join and shape the newly formed Centre for Biodiversity and Environment Research at University College London (UCL) as a lecturer in 2013, where he was promoted to Reader in 2015. Ben embraced university life with his characteristic energy and sense of fun, building a large research group and rejuvenating UCL's iconic ecology undergraduate field course at Blakeney Point, frequently returning to Norfolk. His research programme focused on both the causes and consequences of wildlife population trends, and he continued to set up long-term field

programmes with his many colleagues around the world even through his illness. He made the most of every day.

An incredible conservationist, a wonderful mentor, an amazing colleague, a true friend, passionate, inspiring, brilliant, irreverent, caring, gentle, kind and generous — these are just some of the many descriptions of Ben from students, colleagues and friends from all around the world. Ben's legacy will live on in the many lives he touched and through the tools he made to help us better understand and care for our planet. He is survived by his wife Alanna and their daughter Otilie. □

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