

Dr Adam Vanbergen – *Curriculum Vitae*

CEH Edinburgh
Bush Estate
Edinburgh EH26 0QB
Tel: 0131 445 8527

Nationality: British
Date of birth: 15 February 1971
E-mail: AJV@ceh.ac.uk

PROFILE: I lead the invertebrate research group at CEH Edinburgh. I use an empirical approach underpinned by taxonomic expertise and statistical modelling to understand the role of invertebrate interactions and diversity in ecosystem function. Invertebrates are integral to many ecosystem services, such as soil function and pest control. Accordingly, I seek to advance mechanistic understanding of the effects of environmental change on invertebrate diversity and interactions and the services they provide across spatial scales and ecosystems. This enables me to identify general responses across species to advance understanding of biodiversity responses to anthropogenic impacts.

EDUCATION:

- 2002–2006 (part-time): PhD, CEH & Cardiff University, *'Landscape to host-plant scales: bottom-up heterogeneity affects invertebrate diversity & interactions'*
- 1995–1998: BSc (First Class) Environmental Biology, University of Greenwich, London.

WORK EXPERIENCE, ROLE & PROJECTS

- 1. Science Co-ordinator, Insect Pollinator Initiative (IPI) Research Programme** (BBSRC, NERC, DEFRA, The Scottish Government, Wellcome Trust, LWEC) **2010-2014**
 - My role, in addition to monitoring project delivery, is to take an overarching programme perspective to identify and promote synergies among the funded research projects in terms of additional and improved science outputs and knowledge exchange activities.
- 2. Director & Trustee of the British Ecological Society (BES) 2008-2012**
 - Seat on the BES Council and on the grants and publications sub-committees, member of research grants assessment panel and publications strategy and journal appraisal working groups.
- 3. Invertebrate Ecologist NERC-CEH Band 6 2003-present**
 - 2010-2011 (PI, CEH Science Budget) I am leading a multidisciplinary (terrestrial ecology-hydrology) proposal to understand how the interaction between flood intensity and habitat structure effects the composition and trait structure of river island invertebrate assemblages and linked ecosystem processes.
 - 2010-2011 (PI, CEH Science Budget) I lead a pilot project combining molecular ecology, modelling, and field ecology to understand the effects of mass-flowering fruit crops on wild plant-pollinator interactions and wild plant mating success. We are applying novel genetic approaches to understanding how the sustainability of pollination can be affected by land-use.
 - 2008-2011 (PI, CEH Environmental Change Integrating Fund) I lead a large multidisciplinary (ecologists, soil biogeochemists, modellers) CEH group investigating how land use extensification modifies the provision of above- and below-ground ecosystem services (pollinators, predators, soil diversity and function) across a range of UK habitats.
 - 2008-2009: (PI, BES Small Ecological Project Grant) I examined how agricultural modification of birch forest affected plant diversity, plant-pollinator interactions, and plant mating success. This project initiated collaboration with molecular ecologists to understand better the impact of changing pollinator diversity for plant populations.
 - 2006-2009 (Co-I, EU FP6 Co-ordinated Action, RUBICODE Rationalising Biodiversity Conservation in Dynamic Ecosystems RUBICODE Contract Number:036890) I was one-of-three CEH team members, and the representative on the work package examining trait-based assessment of ecosystem services, contributing to this European collaborative project to review the information on ecosystem services in Europe and provide a framework to rationalise conservation strategies.
 - 2007-2008 (PI, CEH Science Budget) I led a project to understand the consequences of introducing cattle to birch woods for complexity of soil communities (nematodes, arthropods, bacteria) and linked ecosystem functions (decomposition).

- 2006-2007 (PI, CEH Science Budget) I led a project that demonstrated with mixed effects modelling the indirect impact of introducing cattle to birch woods for plant communities, insect abundance and host-parasitoid interactions.
- 2003-2004 (Co-I, BES Early Career Grant: MILES, PI: Dr R. J. Mitchell) I led the soil biodiversity (collembola) component of this collaborative project between CEH and Macaulay Institute, which examined the effects of birch invasion of heather moor for plant-soil communities.

4. Invertebrate Ecologist NERC-CEH Band 7 1998-2003

- 2000-2003 (Co-researcher investigator EU FP5 *Biodiversity Assessment Tools Project BIOASSESS*) I coordinated the UK partner (CEH, BTO, NHM) collaboration in this European collaborative investigation into how multiple plant and animal groups responded to landscape structure, and their suitability as indicators of biodiversity change.
- 1998-2001 (Research assistant, NERC EDGE grant: *Pathogen variability & dynamics in insect populations*) I worked closely with the post-doc to understand how differences in ecological dynamics between insect populations affected the interaction with, and genotypic diversity of, of a pathogen of the pine beauty moth.
- 1998-2001 (Research assistant, CEH Integrating fund project: *Population dynamics of fragmented plant-insect communities*) I worked closely with the post-doc to understand to the role of Winter moth local adaptation and natural enemy interactions in its population dynamics on different host plant species.

PhD SUPERVISION

- Supervisor: Sarah McCormack – NERC CASE PhD, '**Biochar and bio-trophic carbon storage in temperate soils**', 2010-2013, Lancaster University/SCRI
- Supervisor: Scott McKenzie – NERC CASE PhD student '**Effects of elevated CO₂ on plant mediated interactions between aboveground and belowground herbivores**', 2010-2013, Cardiff University/SCRI
- Supervisor: Will Hentley – NERC Allocation PhD '**Trophic cascades in a changing climate – effects of elevated CO₂ on plant defenses**', 2010-2013, Cardiff University/SCRI
- Supervisor: Cathy Fiedler – NERC Allocation PhD '**Pollinator-mediated interactions between native plants and the invasive Himalayan balsam**', 2009-2012, University of Leeds
- Supervisor: Lynne Robinson – Co-funded PhD '**Plant-mediated impacts of soil food webs on foliar-feeding insects and their parasitoids**', 2008-2011, University of Sussex

DEVELOPMENT ACTIVITIES AND COURSES

- 2010 NERC advanced grant writing (Landd consultancy-CEH)
- 2010 Building & Maintaining effective project Relationships (Kingswood)
- 2010 Science-Policy workshop (NERC-BES)
- 2009 Overview of PRINCE2 methods (SSC)
- 2009 Introduction to R (Mango Solutions)
- 2009 Risk Assessment for Project managers (NERC)
- 2008 PhD supervision workshop (CEH & QML)
- 2008 Managing projects (JTS)
- 2008 Communicating science to the public (JTS)
- 2007 Performance appraisal and management (JTS)
- 2007 Nematode Identification and Ecology Course (10 day Residential, Wageningen University)
- 2003 ArcGIS: introductory course (BGS NERC)
- 2002-2006 Part-time PhD CEH & Cardiff University (NERC)
- 2002 Regression and Curve fitting (BIOSS)
- 2002 Advanced Regression techniques (BIOSS)
- 2002 Scientific writing (JTS)
- 2001 Use of REML (BIOSS)
- 2000 Minitab: ANOVA, Linear regression and Graphical applications (CEH)