

# Curriculum Vitae

Ben Alex Woodcock

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## Education:

1999-2002    PhD (Imperial College, London & Centre for Ecology & Hydrology, Banchory): The role of secondary Scottish woodlands in maintaining invertebrate biodiversity.

1995-1998    BSc (Imperial College, London): Zoology (1<sup>st</sup> Class)

## Awards:

James Prize in Ecology, November 1998 (Imperial College, London)

Honorarium from University of Reading, August 2004.

Honorarium CEH Jan 2013.

## Employment history:

- **2008-Present:** Biodiversity & Conservation Management Group, Centre for Ecology & Hydrology, Wallingford, UK
- **2002-2008:** Research Fellow at Centre for Agri-Environmental Research (University of Reading).
- **May –September 2001** Research assistant on the EU funded BioAssess project developing biodiversity assessment tools from a range of plant and animal taxa.
- **March 2001** Research assistant on the EU funded Environmental Chain Network (ECN) project.
- **June-August 2000** Research assistant on the Ecological Dynamics and Genes (EDGE) project carrying out insect-virus bioassays and insect feeding trials.

## Current and recent research projects:

- The impact of neonicotinoid pesticides on honeybees and wild bees. I am currently involved in Syngenta and Bayer CropSciences industry funded research into the impacts of neonicotinoid pesticides on bees. Specifically how the expression of these pesticides in mass flowering crops like oilseed rape can affect their long term mortality.
- Monitoring of EK21, OK21, HK21 and OHK21 Options: Legume and herb-rich swards (ECM6412)
- Evaluating the relative importance of site and landscape characteristics on invertebrate communities in grasslands restored through agri-environment schemes (ECM6418).

- **Indicators of Restoration Success (BD5101):** A DEFRA funded project combining both field and lab based studies to assess limiting factors during the restoration of grassland communities.
- **Widescale enhancement of Biodiversity (BD1466):** A DEFRA funded project investigating the floristic and faunistic enhancement of agriculturally improved mesotrophic lowland grasslands using simple seed augmentation, cutting and grazing management practices.
- **Susgraz II (BD1460):** A DEFRA funded project investigating the consequences of variable grazing and hay cutting regimes for the maintenance of species rich neutral grassland while controlling for pernicious weeds (*Cirsium* spp.).
- **The consequences of soil compaction in grassland systems (BD2304):** A DEFRA funded review of the consequences of soil compaction in agricultural pasture land.
- **Potential for Enhancing beetle Biodiversity in Intensive livestock Farms (PEBIL project, DEFRA BD1444):** Investigating the use of field margins within intensive livestock farms as a method to diversify invertebrate communities and provide food resources for declining farmland bird populations.
- **Efficacy of hay spreading to increase the diversity of grassland enhancement and arable revision sites (Hayspreading project, DEFRA BD1441):** Investigating management used in the restoration of mesotrophic and calcareous grasslands and its effects on plant and insect assemblages.
- **Extensive grazing of semi-improved grassland to enhance faunal biodiversity (Patchiness project, DEFRA BD1445):** Investigating effects of grazing intensity and cattle breed on sward structure and invertebrate assemblages.
- **Sustainable Arable Farming for an Improved Environment: (SAFFIE, DEFRA link project LK0926):** A large scale collaborative project looking at the role of both field margin and within crop management in reversing declining population trends of arable farmland birds and other farmland biodiversity.
- **Wetting up Farmlands for Birds (WUFFB, DEFRA BD1323):** Investigating the benefits for both farmland birds and invertebrate assemblages of wetting up soils over the summer period using a variety of methods.
- **Grassland plants for fauna (English Nature Review):** A desk based study intended to identify key floral species that can be used to promote invertebrate biodiversity within intensively managed grassland systems.
- **The response of calcareous grassland biodiversity to contrasting management regimes on Salisbury Plain (Defence Estates MOD and English Nature DE043167):** Investigating the implications of long term changes in grazing management on invertebrate assembles within the calcareous grasslands of Salisbury Plane.
- **Grazing management in the restoration of flood-plain grasslands (MG4 *Alopecurus-Sanguisorba* grassland):** A long term study into investigating plant and invertebrate responses to restoration management of threatened floodplain meadow.
- **Soil and Water Protection Project (SOWAP):** As a consultant I have been involved in the invertebrate component of this project which is investigating the effects of non-inversion/ conservation tillage on invertebrates in agro-ecosystems.

## Professional activities

- **Subject editor** for the journal **Bulletin of Entomological Research (2008-2014).**
- **Board member** of the journal **Agriculture, Ecosystems & Environment (2015 - )**

- **Associate Editor** for the **Journal of Animal Ecology**.
- **Associate editor Animal Conservation**
- I am a past member of the panel assessing British Ecological Society small grants.

## Other

- Member of the British Ecological Society and the European Dry Grassland Group.
- **PhD students:** I have supervised four PhD students: 1) Khalid Asiry working on intercropping in arable farming systems and its impact on pest management (passed); 2) Robin Blake working on the use of graminicide in the management of arable field margins for invertebrate biodiversity (passed); 3) Mark Otieno working on ecosystem function of pollinator and biocontrol systems in Uganda (passed); 4) Sara Ball working on landscape scale impacts on multi-trophic interactions (completion data 2013).
- Insect identification for arable reversion project 2005-2011 for Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust.
- **Various dates 1995-2000** Curation at the Hope Entomology Collections, Oxford University Museum of Natural History and the National Museums and Galleries of Wales, Cardiff .

## Other experience & qualifications:

- **STATISTICS:** Experienced in standard computer software (MS Word, Excel) and in the application of advanced statistical packages, with a particular focus on multivariate statistics such as multiple regression, non-linear and mixed models and various ordination methods (SAS, R, CANOCO).
- **TAXONOMY:** Experienced in the identification of Coleoptera (in particular Curculionoidea, Chrysomelidae, Staphylinidae & Carabidae) as well as being confident in spiders and flies (Calypterates & Acalypterates) and confident in spider identification.
- **NPTC certificate** of competence in the use of pesticides for both hand held applicators and mist and fogging devices (PA-6A and PA-9).
- **UK driving licence** (Clean). I have also undertaken the Lantra Award for ‘4x4 Professional off road driving’ and ‘Health and Safety and risk management in winching’.
- **ITC Level 2 certificate in outdoor first aid.**
- Completed the Institute of Occupational Health and Safety approved course ‘**Safety Management in a Research Environment**’.

## Public understanding of science:

- Multiple publications in the popular science journal ‘British Wildlife’ simplifying existing publications on the restoration and management of grassland systems for a general audience.
- I have been involved in multiple workshops for the SAFFIE project communicating research findings to farmers involved in piloting management options that ultimately fed into DEFRA policy.
- I have been involved in several talks targeted at farmers, nature reserve managers and the general public involved with floodplain grassland management and restoration both in Oxford (2007) and at the Field Studies Council, Preston Montford, UK (2009).
- I have also given lectures entitled ‘Plants for beetles’ to the Plants Group of The Ashmolean Natural History Society of Oxfordshire, aimed at amateur natural historians (2010).

- Contributed to an e-based taxonomy workshop (Strategies in Taxonomy: Research in a Changing World, 2009) aimed at promoting a wider understanding of the role of taxonomy in ecological research.
- Contributed and tutored on an e-based course run by the Department of further Education, Oxford University aimed at undergraduates and the general public teaching sampling techniques for insects entitled 'FIELD TECHNIQUES FOR SURVEYING INVERTEBRATES' (2011).
- Presented to over 100 farmers at a LEAF (Linking Environment & Farming) technical field day workshop at Jeallot's Hill (2010) promoting wider understanding and uptake of results from the Widescale Enhancement of Biodiversity (WEB) Defra funded project. This led onto an article in the Farmers Club Journal reporting on these results.
- The paper Blake et al (2011) on Bumblebee declines was featured in an article in the Sunday Telegraph, as well as several other news papers.
- Invited speaker at the British Ecological Society Symposium 'Showcasing Resources for farmers, Agronomists and Ecologists to Increase Biodiversity on Farm' NIAB, Cambridge, 15 July 2010 aimed at farmers and consultants to promote understanding of grassland management.
- Invited speaker for the 'Oxfordshire Nature Conservation Forum' training sessions on grassland restoration 8/6/2011, aimed at practitioners of conservation.
- Invited joint guest editorial for special issue of Insect Conservation and Diversity (Littlewood et al, 2012) on grassland biodiversity.
- Invited speaker for ECCB 2012 conference symposium 'Applying conservation biology knowledge across the temperate agricultural grasslands of NW Europe'.
- Invited speaker for 'Grassland Biodiversity Day', for the Oxfordshire Nature conservation Forum aimed at conservation and site manager practitioners.
- Participant scientist in the 'Oxford BioBlitz 2012' run by Science Oxford, helping the general public identify insects during an inner-city biodiversity survey.
- Invited talker for the Greeing Partnership Day (16/10/2012), organizing together with the OPERA Research Centre, European Landowners Organization (ELO) and Syngenta and held in the European Parliament. Disseminating information on multi-functional land use in agriculture to politicians and land owners.
- Invited to write article with Richard Pywell on the role of native biodiversity in supporting crop production in the UK for Planet Earth Magazine. This article was picked up as a blog on the Global Food Security site (<http://www.foodsecurity.ac.uk/blog/>).
- Syngenta oilseed rape pollination paper (Agric.Ecosyst. Environ. (2013) 171:1-8) picked up by Alex Peel for a highlight article in NERCs 'Planet Earth' popular science journal (June 2013) as 'Lonely bees make better guests' [http://planetearth.nerc.ac.uk/news/story.aspx?id=1480&utm\\_source=twitterfeed&utm\\_medium=twitter&cookieConsent=A](http://planetearth.nerc.ac.uk/news/story.aspx?id=1480&utm_source=twitterfeed&utm_medium=twitter&cookieConsent=A).
- WEB's Biological conservation paper picked up by Alex Peel for a highlight article in NERCs 'Planet Earth Online' popular science journal (March 2014) 'http://planetearth.nerc.ac.uk/news/story.aspx?id=1646&cookieConsent=A'

## Grants:

- Evaluating the relative importance of site and landscape characteristics on invertebrate communities in grasslands restored through agri-environment schemes (ECM6418). 2014. Natural England. PI Ben Woodcock. (£118,406)

- Monitoring of EK21, OK21, HK21 and OHK21 Options: Legume and herb-rich swards (ECM6412). 2014. Natural England. PI Ben Woodcock. (£94,846)
- Contributed to tendered 'Indicators of Restoration Success' (BD5101) (2010, PI Simon Mortimer)
- Sub-contractor for the SusGraz II project, £198,000 over 5 years (Feb 2007 BD1460).
- Co-investigator on the Soil compaction project (DEFRA BD2304)
- Tendered review for English Nature entitled 'Grassland Plants for Fauna Review' (July 2005). Principle investigator Simon Mortimer. Total value £27000.
- DEFRA funded contract CSG7 'Wetting up Farmlands' three-year contract (July 2004). Principle investigator Richard Bradbury (RSPB) (DEFRA BD1323). Total value £600,000
- Salisbury plain project subcontract from CEH funded from the MOD (January 2003). Principle investigator Richard Pywell (CEH). Total value £30000.
- Nuffield Scholarship (August 2003) 'Resource quality and quantity as determinants of community structure in the invertebrate fauna of cattle dung'. Student Vicky Lane. Total value £1560 (Joint supervisor with S. Mortimer).
- Obtained funding for and lead an expedition to West Africa investigating the diversity of invertebrate natural enemies and pest species in agricultural fields. Total value £2000.

## Publications

I have over 90 publications, of which 4 are book chapters and 55 are in ISI rated journals (26 of these being first authorships). I currently have an H-index of 18.

## ISI rated Journals

- Otieno, M., Woodcock, B.A., Wilby, A., Mauchline, A.L., Potts, S.G. (submitted July 2015)** Spillover of Ecosystem Service Providers from Field Boundaries: Pollination and Pest Regulation in a Field Bean Crop. *Environmental Entomology*
- Otieno M., Sidhu, C.S., Woodcock B.A., Wilby A., Vogiatzakis I.N., Mauchline A.L., Gikungu M.W. & Potts S.G. (2015)** Local and landscape effects on bee functional guilds in pigeon pea crops in Kenya. *Journal of Insect Conservation* **19**:647-658.
- Oliver T.H., Heard M.S., Isaac N.J.B., Roy R.B., Procter D., Eigenbrod F., Freckleton R., Hector A., Orme D.L., Petchey O., Proença V., Raffaelli D., Suttle K.B., Mace G.M., Martín-López B., Woodcock B.A. & Bullock J.M. (2016)** A synthesis is emerging between biodiversity-ecosystem function and ecological resilience research - Reply to Mori. *Trends in Ecology & Evolution* **31**: 89-92
- Oliver T.H., Isaac N.J.B., August T.A., Woodcock B.A., Roy D.B. & Bullock J.M. (2015)** Declining resilience of ecosystem functions under biodiversity loss. *Nature Communications*, **6**: 10122
- Oliver T.H., Heard M.S., Isaac N.J.B., Roy R.B., Procter D., Eigenbrod F., Freckleton R., Hector A., Orme D.L., Petchey O., Proença V., Raffaelli D., Suttle K.B., Mace G.M., Martín-López B., Woodcock B.A. & Bullock J.M. (2015)** Biodiversity and resilience of ecosystem functions. *Trends in Ecology & Evolution* **30**: 673-684.
- Pywell R.B., Heard M.S., Woodcock B.A., Hinsley S., Ridding L., Nowakowski M. & Bullock J. (2015)** Wildlife-Friendly Farming Increases Crop Yield: Evidence for Ecological Intensification. *Proc. Roy. Soc. Ser. B.* **282**: 20151740

- Ball S.L., Woodcock B.A., Potts S.G. & Heard M.S. (In press).** Size matters: body size determines functional responses of ground beetle interactions. *Basic & Applied Ecology* 16:621-628
- McCracken M., Woodcock B.A., Lobley M., Pywell R.F., Saratsi E., Swetnam R., Mortimer S.R., Harris S., Winter M., Hinsley S. & Bullock J. (2015).** Social and ecological drivers of success in agri-environment schemes: the roles of farmers and environmental context. *Journal of Applied Ecology*, 52, 696-705.
- Hudson, L.N., ..... Woodcock, B.A., Yu, D.W., Zaitsev, A.S., Collen, B., Ewers, R.M., Mace, G.M., Purves, D.W., Scharlemann, J.P.W., Purvis, A., 2014.** The PREDICTS database: a global database of how local terrestrial biodiversity responds to human impacts. *Ecology and Evolution*, 4, 4701-4735..
- Woodcock, B.A., Savage, J., Bullock, J.M., Nowakowski, M., Orr, R., Tallowin, J.R.B. & Pywell, R.F. (2014)** Enhancing floral resources for pollinators in productive agricultural grasslands. *Biological Conservation* 171:44-51.
- Vanbergen, A.J., Woodcock, B.A., Gray, A., Grant, F., Telford, A., Lambdon, P., Chapman, D.S., Pywell, R.F., Heard, M.S. & Cavers, S. (2014)** Grazing alters insect visitation networks and plant mating systems. *Functional Ecology*, 28: 178-189.
- Woodcock, B.A., Harrower, C., Redhead, J., Edwards, M., Vanbergen, A.J., Heard, M.S., Roy, D.B., Pywell, R.F. (2014).** National patterns of functional diversity and redundancy in predatory ground beetles and bees associated with key UK arable crops. *Journal of Applied Ecology*, 51: 142-151.
- Woodcock, B.A., Edwards, M., Redhead, J., Meek, W.R., Nuttall, P., Falk, S., Nowakowski, M., & Pywell, R.F. (2013)** Crop flower visitation by honeybees, bumblebees and solitary bees: small scale behavioural differences linked to landscape scale responses. *Agriculture, Ecosystems & Environment*, 171:1-8.
- Woodcock, B.A., Savage, J., Bullock, J.M., Nowakowski, M., Orr, R., Tallowin, J.R., & Pywell, R. (2013)** Enhancing beetle and spider communities in agricultural grasslands: the roles of seed addition and habitat management. *Agriculture Ecosystems & Environment*, 167: 79-85.
- Blake, R.J., Woodcock, B.A., Westbury, D.B., Sutton, G.P., & Potts, S.G. (2013)** Novel Management to enhance spider biodiversity in existing buffer strips. *Agricultural and Forest Entomology*, 15:77-85
- Blake, R.J., Westbury, D.B., Woodcock, B.A., Sutton, P., & Potts, S.G. (2012)** Enhancement of buffer strips can improve provision of multiple ecosystem services. *Outlooks on Pest Management*, 23, 258-262.
- Woodcock, B.A., Bullock, J.M., Nowakowski, M., Orr, R., Tallowin, J.R.B., & Pywell, R.F. (2012)** Enhancing floral diversity to increase the robustness of grassland beetle assemblages to environmental change. *Conservation Letters*, 5:459-469.
- Entling, M.H., Schweiger, O., Bacher, S., Espadaler, X., Hickler, T., Kumschick, S., Woodcock, B.A., & Nentwig, W. (2012)** Species Richness-Environment Relationships of European Arthropods at Two Spatial Grains: Habitats and Countries. *PLoS ONE*, 7, e45875.
- Woodcock, B.A., Bullock, J.M., Mortimer, S.R., Brereton, T., Redhead, J.W., Thomas, J.A., & Pywell, R.F. (2012)** Identifying time lags in the restoration of grassland butterfly communities: a multi-site assessment. *Biological Conservation*, 155: 50-58.
- Blake, R.J., Westbury, D.B., Woodcock, B.A., Sutton, P., Potts, S.G. (2012).** Investigating the phytotoxicity of the graminicide fluazifop-P-butyl against native UK wildflower species. *Pest Management Science* 68: 412-421.

- Woodcock, B.A., Bullock, J.M., Mortimer, S.R., & Pywell, R.F. (2012)** Limiting factors in the restoration of UK grassland beetle assemblages. *Biological Conservation*, **146**: 136-143.
- Littlewood, N.A., Stewart, A.J.A., Woodcock, B.A. (2012).** Science into practice - how can fundamental science contribute to better management of grasslands for invertebrates? *Insect Conservation and Diversity*, **5**: 1-8.
- Woodcock, B.A., Westbury, D.B., Brook, A.J., Lawson, C.S., Edwards, A.R., Harris, S.J., Heard, M.S., Brown, V.K. & Mortimer, S.R. (2012)** Effects of seed addition on beetle assemblages during the re-creation of species-rich lowland hay meadows. *Insect Conservation and Diversity*, **5**: 19-26.
- Otieno, M., Woodcock, B.A., Wilby, A., Vogiatzakis, I.N., Mauchline, A.L., Gikungu, M.W., & Potts, S.G. (2011)** Local management and landscape drivers of pollination and biological control services in a Kenyan agro-ecosystem. *Biological Conservation*, **144**: 2424-2431.
- Woodcock, B.A., McDonald, A.W. & Pywell, R.F. (2011).** Can long-term floodplain meadow recreation replicate species composition and functional characteristics of target grasslands. *Journal of Applied Ecology*, **48**: 1070-1078.
- Blake, R.J., Westbury, D.B., Woodcock, B.A., Sutton, P. & Potts, S.G. (2011)** Enhancing habitat to help the plight of the bumblebee. *Pest Management Science*, **67**: 377-379.
- Pywell, R.F., Meek, W.R., Loxton, R.G., Nowakowski, M., Carvell, C., & Woodcock, B.A. (2011)** Ecological restoration on farmland can drive beneficial functional responses in plant and invertebrate communities. *Agriculture Ecosystems & Environment*, **140**, 62-67.
- Blake, R.J., Woodcock, B.A., Ramsay, A.J., Pilgrim, E.S., Brown, V.K., Tallwin, J.R., & Potts, S.G. (2011)** Novel margin management to enhance Auchenorrhyncha biodiversity in intensive grasslands. *Agriculture Ecosystems & Environment*, **140**: 506-513.
- Blake, R.J., Woodcock, B.A., Westbury, D.B., Sutton, P. & Potts, S.G. (2011)** New tools to boost butterfly habitat quality in existing grass buffer strips. *Journal of Insect Conservation*, **15**: 221-232.
- Woodcock, B.A. & Heard, M.S. (2011)** Disentangling the effects of predator hunting mode and habitat domain on the top-down control of insect herbivores. *Journal of Animal Ecology* **80**, 495–503.
- Woodcock, B.A., Redhead, J., Vanbergen, A.J., Hulmes, L., Hulmes, S., Peyton, J., Nowakowski, M., Pywell, R.F. & Heard, M.S. (2010)** Impact of habitat type and landscape structure on biomass, species richness and functional diversity of ground beetles. *Agriculture Ecosystems & Environment* **139**: 181-186.
- Woodcock, B. A., A. R. Edwards, C. S. Lawson, D. B. Westbury, A. J. Brook, S. J. Harris, G. Masters, R. Booth, V. K. Brown, and S. R. Mortimer (2010).** The restoration of phytophagous beetles in species-rich chalk grasslands. *Restoration Ecology* **18**: 638-644.
- Vanbergen, A.J., Woodcock, B.A., Koivula, M., Niemelä, J., Kotze, J., Bolger, T., Golden, V., Dubs, F., Boulanger, G., Serrano, J., Lencina, J.L., Serrano, A., Aguiar, C., Grandchamp, A.-C., Stofer, S., Szél, G., Ivits, E., Adler, P., Markus, J. & Watt, A.D. (2010)** Trophic level modulates carabid beetle responses to habitat and landscape structure: a pan-European study. *Ecological Entomology* **35**: 226-235.
- Vandewalle, M., de Bello, F., Berg, M.P., Bolger, T., Dolédec, S., Dubs, F., Feld, C.K., Harrington, R., Harrison, P.A., Lavorel, S., da Silva, P.M., Moretti, M., Niemelä, J., Santos, P., Sattler, T., Sousa, J.P., Sykes, M.T., Vanbergen, A.J. & Woodcock,**

- B.A. (2010)** Functional traits as indicators of biodiversity response to land use changes across ecosystems and organisms. *Biodiversity and Conservation*, *19*: 2921–2947.
- Woodcock, B.A., Vogiatzakis, I., Westbury, D.B., Lawson, C.S., Edwards, A.R., Brook, A.J., Harris, S.J., Lock, K.-A., Masters, G., Brown, V.K. & Mortimer, S.R. (2010)** The role of management and landscape context in the restoration of grassland phytophagous beetles. *Journal of Applied Ecology*, *47*: 366-376.
- Woodcock, B.A., Pywell, R.F. (2010)** Effects of vegetation structure and floristic diversity on detritivore, herbivore and predatory invertebrates within calcareous grasslands. *Biodiversity and Conservation*, *19*: 81-95.
- Woodcock, B.A., Potts, S.G., Tscheulin, T., Pilgrim, E.S., Ramsey, A.J., Harrison-Cripps, J., Brown, V.K. & Tallowin, J.R. (2009)** Responses of invertebrate trophic level, feeding guild and body size to the management of improved grassland field margins. *Journal of Applied Ecology*, *46*: 920-929.
- Smith, J., Potts, S.G., Woodcock, B.A. & Eggleton, P. (2009)** The impact of two arable field margin management schemes on litter decomposition. *Applied Soil Science*, *41*: 90-97.
- Potts, S.G., Woodcock, B.A., Roberts, S.P.M., Tscheulin, T., Pilgrim, E.S., Brown, V.K. & Tallowin, J.R. (2009)** Enhancing pollinator biodiversity in intensive grasslands. *Journal of Applied Ecology*, *46*, 369-379.
- Brook, A.J., Woodcock, B.A., Sinka, M. & Vanbergen, A.J. (2008)** Experimental verification of suction sampler capture efficiency in grasslands of differing vegetation height and structure. *Journal of Applied Ecology*, *45*, 1357-1363.
- Woodcock, B.A. & Vanbergen, A.J. (2008)**. Parasitism of the beech leaf-miner weevil in a spatially complex woodland: Patch size, edge effects and parasitoid species identity. *Insect Conservation and Diversity*, *1*, 180-188.
- Woodcock, B.A., Westbury, D.B., Harrison-Cripps, J., Tscheulin, T., Harris, S.J., Ramsay, A.J., Brown, V.K., & Potts, S.G. (2008)** Effects of seed mixture and management on beetle assemblages of arable field margins. *Agriculture, Ecosystems & Environment*, *125*: 246-254.
- Smith, J., Eggleton, P., Woodcock, B.A. & Potts, S.G. (2008)** Can arable field margins be managed to enhance their biodiversity, conservation and functional value for soil macrofauna? *Journal of Applied Ecology*, *45*, 269-278.
- Westbury, D.B., Woodcock, B.A., Harris, S.J., Brown, V.K. & Potts, S.G. (2008)** The effect of seed mix and management on the abundance of desirable and pernicious unsown species in field margin communities. *Weed Research*, *48*, 113-123.
- Woodcock, B.A., Edwards, A.R., Lawson, C.S., Westbury, D.B., Brook, A.J., Harris, S.J., Brown, V.K. & Mortimer, S.R. (2008)** Contrasting success in the restoration of plant and phytophagous beetle assemblages of species rich mesotrophic grasslands. *Oecologia*, *154*, 773–783.
- Woodcock, B.A., Potts, S.G., Westbury, D.B., Ramsay, A.J., Lambert, M., Harris, S.J., & Brown, V.K. (2007)** The importance of sward architectural complexity in structuring predatory and phytophagous invertebrate assemblages. *Ecological Entomology*, *32*, 302-311.
- Woodcock, B.A., Potts, S.G., Pilgrim, E., Ramsay, A., Tscheulin, T., Smith, R., Gundry, A., Brown, V.K. & Tallowin, J. (2007)** The potential for enhancing beetle diversity in intensive livestock farms with field margins. *Journal of Applied Ecology*, *40*, 60-69.
- Edwards, A., Mortimer, S.R., Lawson, C.S., Westbury, D.B., Harris, S.J., Woodcock, B.A., & Brown, V.K. (2007)** Hay strewing, brush harvesting of seed and soil



disturbance as tools for the enhancement of botanical diversity in grasslands.

*Biological Conservation*, **134**, 372-382.

- Woodcock, B.A., Lawson, C.S., Mann, D.J. & McDonald, A.W. (2006)** Effects of grazing management on beetle and plant assemblages during the re-creation of a flood-plain meadow. *Agriculture, Ecosystems and Environment* **116**, 225-234.
- Potts, S.G., Bradbury, R., Mortimer, S.R. & Woodcock, B.A. (2006)** Commentary on: Mixed biodiversity benefits of agri-environment schemes in five European countries by Klein et al. (2006). *Ecology Letters*, **9**, 354-256.
- Westbury, D.B., Davis, A., Woodcock, B.A. & Dunnett, N.P. (2006)** Seeds of change: the value of using *Rhinanthus minor* in grassland restoration. *Journal of Vegetation Science* **17**, 435-446.
- Tikkanen, O.-P., Woodcock, B., Watt, A.D. & Lock, K.A. (2006)** Are polyphagous geometrid moths with flightless females adapted to budburst phenology of local host species? *Oikos*, **112**, 83-90.
- Woodcock, B.A., Pywell, R., Roy, D.B., Rose, R. & Bell, D. (2005)** Grazing management of calcareous grasslands and its implications for the conservation of beetle communities. *Biological Conservation*, **125**, 192-202.
- Woodcock, B.A., Mann, D.J., Mirieless, C., McGavin, G.C. & McDonald, A. W. (2005)** Re-creation of a threatened lowland flood-plain meadow: management implications for invertebrate communities. *Journal of Insect Conservation*, **9**, 207-218.
- Woodcock, B.A., Westbury, D.B., Potts, S.G., Harris, S.J & Brown, V.K. (2005)** Establishing field margins to promote beetle conservation in arable farms. *Agriculture, Ecosystems & Environment*, **107**, 255-266.
- Vanbergen, A.J., Woodcock, B.A., Watt, A.D. & Niemelä, J. (2005)** Effect of land-use heterogeneity on carabid communities at the landscape scale. *Ecography*, **28**, 3-16.
- Woodcock, B.A., Leather, S.R., & Watt, A.D. (2003)** Changing management in Scottish birch woodlands: a potential threat to local invertebrate biodiversity. *Bulletin of Entomological Research*, **93**, 159-167.
- Woodcock, B.A., Watt, A.D., & Leather, S.R. (2003)** Influence of management type on Diptera communities of coniferous plantations and deciduous woodlands. *Agriculture, Ecosystems and Environment*, **95**, 443-452.
- Woodcock, B.A., Watt, A.D., & Leather, S.R. (2002)** Aggregation, habitat quality and coexistence: a case study on carrion fly communities in slug cadavers. *Journal of Animal Ecology*, **71**, 131-140.

## Datasets

- Woodcock, B.A., Edwards, M., Meek, W.R., Nuttall, P., Falk, S., Pywell, R.F. (2014).** Pollinator visitation data on oilseed rape varieties. NERC-Environmental Information Data Centre doi: 10.5285/d7b25308-3ec7-4cff-8eed-fe20b815f964

## Books / book chapters

- Bullock, J.M., Jefferson, R.G., Blackstock, T.H., Pakeman, R.J., Emmet, B.A., Pywell, R.F., Grime, P., Silvertown, J., Church, A., McMullan, M., Rimes, C., Smith, S., Hinton, G., Porter, K., Crowle, A., Alexander, R., Peel, S., Grice, P., MacKintosh, J., Holyoak, V., Keatinge, R., Middlebrook, I., Brereton, T., Crick, M., Woodcock, B.A., Heard, M.S., Carvell, C., Tallowin, J.R., Bardgett, R.D., & Cooper, N. (2011).** Semi-natural grassland. In *The UK National Ecosystem*

Assessment Technical Report, pp. 161-196. UK National Ecosystem Assessment. UNEP-WCMC, Cambridge.

- Woodcock, B.A., Mortimer, S.R., Edwards, A.R., Lawson, C.S., Westbury, D.B., Brook, A.J., Harris, S.J. & Brown, V.K. (2009).** Re-creating plant and beetle assemblages of species-rich chalk grasslands on ex-arable land. In *Grassland: Ecology, management and restoration* (ed Schröder, H.G.). Nova Science Publishers Inc., New York.
- Mortimer, S.R., Kessock-Philip, R., Potts, S.G., Ramsay, A., Roberts, S.P.M., Woodcock, B.A., Hopkins, A., Gundrey, A., Dunn, R., Tallowin, J., Vickery, J., & Gough, S. (2006)** *Review of the diet and micro-habitat values for wildlife and the agronomic potential of selected plant species.* English Nature, Peterborough, UK.
- Woodcock, B.A. (2004)** Pitfall trapping in ecological studies. In *Insect sampling in forest ecosystems, Methods in Ecology Series.* (ed S.R. Leather) pp. 37-57. Blackwell Science Ltd, Oxford.

### Non ISI rated papers / proceedings

- Shaw R.F., Pell J.K., Bullock J.M., Pywell R.F., Woodcock B.A. & Osborne J.O. (2014).** Biodiversity and ecosystem services: does the biodiversity of semi natural habitat influence the abundance and diversity of beneficial invertebrates in crops? In: *Entomological Society of America Annual Meeting.*
- Pywell, R.F. & Woodcock, B.A. (2013)** Natures Harvest. Planet Earth. Spring Edition pp13-14.
- Mortimer S.R., Edwards A.R., Lawson C.S., Westbury D.B., Woodcock B.A., Brook A., Harris S.J. & Brown V.K. (2011).** Efficacy of methods for using seed of local provenance to enhance grassland diversity. *Aspects of Applied Biology*, 82, 39-38.
- Woodcock, B.A. & McDonald, A.D. (2011)** What goes wrong? Why the restoration of beetle assemblages lags behind plants during the restoration of a species rich floodplain meadow. *Fritillary* 5, 25-36.
- Heard, M.S., Carvell, C., Pywell, R.F., & Woodcock, B.A. (2010)** Biodiversity enhancement on arable land: the effects of local management and landscape context. *Food & Fertiliser Technology Center Extension Bulletin*, 632, 1-9.
- Day, J. & Woodcock, B.A. (2009)** Restoration techniques for beetles and plants in neutral grasslands. *British Wildlife*, 20, 177-78.
- Day, J. & Woodcock, B.A. (2008)** Beetle assemblages in response to arable field margin seed mixes and management. *British Wildlife*, 19, 98.
- Woodcock, B.A. (2006)** Managing chalk grassland for beetles. *British Wildlife*, 17, 399.
- Woodcock, B.A., McCausland, K.A., Mann, D.J., & McGavin, G.C. (2004)** Management of Irish oceanic blanket bog and its effect on ground beetles: implications for the conservation of the threatened *Carabus clathratus* L. (Coleoptera: Carabidae). *Irish Journal of Biogeography*, 28, 63-84.
- Woodcock, B.A. & Mann, D.J. (2004)** The occurrence of the macropterous fly *Crumomyia pedestris* (Meigen) (Sphaeroceridae, Diptera) in conservation field margins, with comments on its collection and distribution in Britain. *Dipterists Digest*, 11, 103-106.
- Woodcock, B.A., Mann, D.J., Hogan, J.E., Brook, A., Harris, S., Mortimer, S.R., & Brown, V.K. (2003)** A recent record of *Diachromus germanus* (L.) (Carabidae) and a discussion of its occurrence in Britain. *The Coleopterist*, 12, 105-110.
- Woodcock, B.A. (2002)** The importance of taxonomy in ecology. *Antenna*, 26, 18-21.

**Woodcock, B.A. (2001)** Some uncommon Staphylinidae from South Aberdeenshire (VC92) including *Euryporus picipes* (Paykull). *Entomologist's Monthly Magazine*, **137**, 244

### Published conference proceedings

- Pywell R.F., Woodcock B.A., Tallowin J.R., Mortimer S.R., Bullock J.M. (2012)** Restoring species-rich grassland: principles and techniques. *Aspects of Applied Biology* (115): Restoring diverse grasslands: what can be achieved, where and what will it do for us?
- Woodcock B.A., Bullock J.M., Thomas J.A., Rispin W.E., Mortimer S.R., Pywell R.F. (2012)** Limiting factors in the restoration of grassland insects. *Aspects of Applied Biology* (115): Restoring diverse grasslands: what can be achieved, where and what will it do for us?
- Blake, R.J., Westbury, D.B., Woodcock, B.A., Sutton, P., & Potts, S.G. (2011)** Improving butterfly habitat in existing grass buffer strips, *Aspects of Applied Biology*, **108**: 67-72
- Westbury, D.B., Woodcock, B.A., Harris, S.J. & Griffith, B. (2011)** Sustainable grassland management benefits butterflies. *Aspects of Applied Biology*, **108**, 81-86.
- Pywell, R.F., Woodcock, B.A., Orr, R., Tallowin, J.R.B., McEwan, I., Nowakowski, M. & Bullock, J.M. (2010).** Options for wide scale enhancement of grassland biodiversity under the Entry Level Scheme. In AAB 100. Agri-environment schemes - what have they achieved and where do we go from here? *Aspects of Applied Biology 100*, pp. 125-32.
- Blake, R.J., Westbury, D.B., Woodcock, B.A. & Potts, S.G. (2010).** Enhancing biodiversity in existing grass buffer strips. In Agri-environment schemes - what have they achieved and where do we go from here? *Aspects of Applied Biology 100*, pp. 427-32.
- Vanbergen, A.J., Woodcock, B.A. & Griffiths, R. (2009).** Taxonomy and ecosystem function. . In *Strategies in Taxonomy: Research in a Changing World. Report of an e-conference*. (eds F. Grant, Y. de Jong, J. Kirschner, P. Petrik, H. Segers, M. Sharman, S. Tillier, A. Watt & J. Young), pp. 41-42.
- Pilgrim, E.S., Potts, S.G., Vickery, J., Parkinson, A.E., Woodcock, B.A., Holt, C., Gundry, A., Ramsay, A.J., Atkinson, P., Fuller, R. & Tallowin, J.R.B. (2007).** Enhancing wildlife in the margins of intensively managed grass 'High Value Grassland: providing biodiversity, a clean environment and premium products': In: *Proceedings BGS/BES/BSAS Conference, Keele University, April 2007. British Grassland Society Occasional Symposium*, **38**.
- Henderson, I., Morris, A. J., Westbury, D. B., Woodcock, B. A., Ramsay, A., Potts, S. G. & Coombes, R. (2007).** Effects of field margin management on bird distributions around cereal fields. *Aspects of Applied Biology 81 - Delivering arable biodiversity*, pp 53-60.
- Bailey, A., Aquilina, R., Bradbury, R., Kirby, W., Lawson, C.S., Mortimer, S.R., Stoate, C., Szczur, J., Williams, P., Woodcock, B.A. (2007).** Farm management implications of providing wet habitats to improve biodiversity. *Proceedings of the 16<sup>th</sup> International Farm Management Conference, Cork*, pp 665-675.
- Ramsay, A.J., Potts, S.G., Westbury, D.B., Woodcock, B.A., T.R. Tscheulin, Harris, S.J. & Brown, V.K. (In press)** Response of planthoppers to novel margin management in arable systems. *Aspects of Applied Biology 81, Delivering arable biodiversity*, 47-52

- Mortimer, S.R., Edwards, A.R., Lawson, C.S., Westbury, D.B., Woodcock, B.A., Brook, A.J., Harris, S.J., & Brown, V.K. (2007)** Efficacy of methods for using seed of local provenance to enhance grassland diversity. *Aspects of Applied Biology*, 82, 39-48
- Ogilvy, S.E., Clarke, J.H., Wiltshire, J.J.J., Harris, D., Morris, A., Jones, N., Smith, B., Henderson, I., Westbury, D.B., Potts, S.G., Woodcock, B.A. & Pywell, R.G. (2006)** SAFIE - research into research and practice. *HGCA Conference, Arable crop protection in the balance: Profit and the environment.*
- Ramsay, A.J., Potts, S.G., Woodcock, B.A., Tscheulin, T., Brown, V.K., & Tallwin, J.R.B. (2005)** Novel margin management to enhance biodiversity in intensive livestock farms. In *Proceedings of the British Society of Animal Science*, pp. 66. BSAS, York, UK.
- Woodcock, B.A., Potts, S.G., Mortimer, S.R., Lawson, C.S., Ramsay, A.J., Brown, V.K., & Tallwin, J.R. (2005)** The manipulation of field and field margin vegetation structure in intensively managed UK cattle grazed pasture systems: Implications for invertebrate biodiversity. In *Proceedings of the British Society of Animal Science*, pp. 231. BSAS, York, UK.

## Reports

- Clarke, M.A., Creamer, R.E., Deeks, L.K., Gowing, D.J.G., Holman, I.P., Jones, R.J.A., Palmer, R.C., Potts, S.G., Rickson, R.J., Ritz, K., Smith, J., Thompson, T.R.E., Truckell, I.G., Vickery, J., Whalley, W.R., Whelan, M.J., Woodcock, B.A. (2008)** Scoping study to assess soil compaction affecting upland and lowland grassland in England and Wales. Final project (BD2304) report to DEFRA
- Pywell, R., Roy, D.B., Rose, R., Bell, D., Rotherby, P., Ismay, J., Schalten, B., Woodcock, B.A., Walker, K., Warman, L., Carvell, C., & Edwards, M. (2004)** The response of calcareous grassland biodiversity to contrasting management regimes on Salisbury Plain (Report for MOD). Center for Ecology and Hydrology, Cambridge.
- Niemelä, J., Koivula, M., Kotze, D.J., Vanbergen, A.J., Watt, A.D., Woodcock, B.A., Bolger, T., Golden, V., Dubs, F., Serrano, J., Lencina, J.L., Serrano, A., Aguiar, C., Grandchamp, A.-C., Stofer, S., Szél, G., & Ivits, E. (2003)** Biodiversity assessment tools - Carabid beetles (Carabidae). In *Biodiversity assessment tools* (ed J. Niemelä).
- Clarke, J.H.; Cook, S.K.; Harris, D.; Wiltshire, J.J.J.; Henderson, I.G.; Jones, N.E.; Boatman, N.D.; Potts, S.G.; Westbury, D.B.; Woodcock, B.A.; Ramsay, A.J.; Pywell, R.F.; Goldsworthy, P.E.; Holland, J.M.; Smith, B.M.; Tipples, J.; Morris, A.J.; Chapman, P.; Edwards, P.. 2007** The SAFFIE Project Report. Boxworth, UK, ADAS, 671pp. (CEH Project Number: C02010, HGCA Project Report No.416)

## Selected Talks/Posters:

- **Invited speaker** ‘Greening Partnership Day (16/10/2012)’, European Parliament, Brussels.
- **Invited speaker** for ‘Grassland Biodiversity Day’, July 2012 Oxfordshire Nature conservation Forum, Little Wittenham, Oxfordshire. ‘Restoring grassland invertebrate communities’.

- **Invited speaker** for ECCB 2012 symposium ‘Applying conservation biology knowledge across the temperate agricultural grasslands of NW Europe’, title ‘Invertebrate ecology in the development of English agri-environment measures’.
- **Invited speaker** for the Oxfordshire Nature Conservation Forum training sessions on grassland restoration 8/6/2011.
- **Invited speaker** at Syngenta, Jeallots Hill ‘Restoring and enhancing agriculturally improved grasslands’ 17 March 2011.
- **Invited speaker** at the British Ecological Society Symposium ‘Showcasing Resources for farmers, Agronomists and Ecologists to Increase Biodiversity on Farm’ NIAB, Cambridge, 15 July 2010. ‘PEBIL project and Farm Reclamation’. Woodcock, B.A.
- **Invited speaker** at ‘Grassland management and biodiversity workshop’. Bern, 16-18 June 2010. ‘Restoration of plant and beetles in UK grasslands’. Woodcock, B.A.
- **Invited speaker** for Silwood Park, Imperial College seminar series. 23 Nov 2010. ‘Applied restoration management for invertebrate communities’. Woodcock, B.A.
- **Invited speaker** Floodplain grassland consortium workshop, FSC Preston Montford, UK (May 2009): Restoring floodplain meadows for insects. Woodcock, B.A.
- **Invited speaker** Floodplain grassland workshop, Oxford (June 2007): The restoration of floodplain grassland beetle and plant communities. Woodcock, B.A. & McDonald, A.
- **Symposia talk at the European Conference of Conservation Biology, Prague 2009:** ‘Contrasting success in the restoration of plant and phytophagous beetle assemblages of species rich mesotrophic grasslands’. Woodcock, B.A.
- **Entomology 2005 (Royal Entomological Society Conference):** Boosting bug diversity in an arable and pastoral landscape. Ramsay A.J., Potts S.G., Woodcock B.A., Tscheulin T., Westbury D., Harris S., Tallowin J.R. & Brown V.K.,
- **Entomology 2005 (Royal Entomological Society Conference):** Potential for enhancing biodiversity in intensive livestock farms (Talk). Woodcock et al.
- **British Ecological Society (BES) Annual Meeting 2005:** Potential for enhancing biodiversity in intensive livestock farms (Talk). Woodcock et al.
- **VI Latin-American Scarabaeoidological Meeting, Costa Rica:** Community and seasonal differences of coprophagic Scarabaeidae in three forest types in the Bolivian Andes. Hamel, C.A., Mann, D.J., Hertzog, S. & Woodcock, B.A.