Major new project maps out woodland biodiversity

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An innovative joint project between the University of Stirling, Forest Research and Natural England is using woodland creation and maps from 1840 to the present day to assess the impact of past land use change on current biodiversity.

Initial findings from the Woodland Creation and Ecological Networks (WrEN) project are published this week in the open access journal *Ecology and Evolution* and outline how British woodlands can be used as a study system to inform landscape-scale conservation.

Dr Kevin Watts from Forest Research, the research agency of the Forestry Commission and lead author of the study, explained: "Experimental studies to inform how best to restore landscapes for

wildlife conservation are really hard to do due to the large scales of time and distance required but the combination of a long history of woodland planting in the UK, coupled with comprehensive historical mapping, provides an excellent, possibly unique, opportunity to develop such experiments."

WrEN is a long-term, large-scale 'natural experiment' created by identifying woodlands which were planted over the past 160 years from historical maps which have only recently become available. This provides a means of testing how past actions have influenced populations of animals and plants we observe today.

Dr Elisa Fuentes-Montemayor, a researcher on the project from the University of Stirling, said: "So far we have surveyed over 100 woodlands in Scotland and England for a really wide variety of wildlife including plants, invertebrates, bats, birds and small mammals.

"Now we are in the process of identifying what features of the woodland or its surrounding environment are most important – we hope to use this information to guide policy and practice so that we can ensure that when we plant woodlands in the future we are doing so in a way most likely to benefit wildlife."

More information: Kevin Watts et al. Using historical woodland creation to construct a long-term, large-scale natural experiment: the WrEN project, *Ecology and Evolution* (2016). DOI: 10.1002/ece3.2066

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