DATA PAPER

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Traits data for the butterflies and macro-moths of Great Britain and Ireland

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Abstract

Butterflies and moths, collectively Lepidoptera, are integral components of ecosystems, providing key services such as pollination and a prey resource for vertebrate and invertebrate predators. Lepidoptera are a relatively well studied group of invertebrates. In Great Britain and Ireland numerous citizen science projects provide data on changes in distribution and abundance. The availability of high-quality monitoring and recording data, combined with the rapid response of Lepidoptera to environmental change, makes them ideal candidates for traits-based ecological studies. Recently, there has been an increase in the number of studies documenting traits-based responses of Lepidoptera, highlighting the demand for a standardized and referenced traits database. There is a wide range of primary and secondary literature sources available regarding the ecology of British and Irish Lepidoptera to support such studies. Currently these sources have not been collated into one central repository that would facilitate and enhance future research. Here, we present a comprehensive traits database for the butterflies and macro-moths of Great Britain and Ireland. The database covers 968 species in 21 families. Ecological traits fall into four main categories: life cycle ecology and phenology, host plant specificity and characteristics, breeding habitat, and morphological characteristics. The database also contains data regarding species distribution, conservation status, and temporal trends for abundance and occupancy. This database can be used for a wide array of purposes including further fundamental research on species and community responses to environmental change, conservation and management studies, and evolutionary biology. There are no copyright restrictions, and this paper must be cited if data are used in publications.

KEYWORDS
butterflies, database, ecology, Lepidoptera, moths, trait, trend

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data were collected from a range of existing resources as detailed in Metadata S1 within the Supporting Information to this publication. In addition to the data set archived as Supporting Information to this publication, the data are also available from the Environmental Information Data Centre (UK Centre for Ecology and Hydrology) at https://doi.org/10.5285/5b5a13b6-2304-47e3-9c9d-35237d1232c6.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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