1. ABOUT THE DATASET

------------

Title: Invertebrate data from malaise traps and sweep transects according to habitat type on farms in Caquetá, Colombia

Creator(s): Lois Kinneen [1] (https://orcid.org/0000-0001-5502-8113), Eric Córdoba Súarez [2] (https://orcid.org/0000-0002-2477-7581), Yardany Ramos-Pastrana [2] (https://orcid.org/0000-0002-3193-6659) , Michael Garratt [1] (https://orcid.org/0000-0002-0196-6013)

Organisation(s): 1. University of Reading. 2. Universidad de la Amazonia

Rights-holder(s): University of Reading, Universidad de la Amazonia

Publication Year: 2023

Description: These datasets include abundance data for invertebrates caught in three different habitat types on five farms in Caquetá, Colombia. Invertebrates were caught using two sampling methods, sweep net transects and malaise traps. Invertebrates were identified to order level at the Universidad de la Amazonia. These data were collected to investigate the impact of adopting silvopasture farming practices on biodiversity. As such, invertebrates were sampled in silvopasture plots, traditional intensive pasture plots and in forest remnants on each farm. Fieldwork was carried out over a three week period in August 2018.

Cite as: Kinneen, Lois, Córdoba Súarez, Eric, Ramos-Pastrana, Yardany and Garratt, Michael (2023) Invertebrate data from malaise traps and sweep transects according to habitat type on farms in Caquetá, Colombia. University of Reading. Dataset. https://doi.org/10.17864/1947.000494

Related publication: Kinneen, Lois, Escobar, María Paula, Hernandez, Luis Miguel, Thompson, Jill, Ramos-Pastrana, Yardany, Córdoba Súarez, Eric, Romero-Sanchez, Miguel, Barnes, Andrew, Quintero, Marcela, & Garratt, Michael P.D. (2024) Silvopastoral systems benefit invertebrate biodiversity on tropical livestock farms in Caquetá, Colombia. *Agricultural and Forest Entomology* 26(1). pp. 126-134. ISSN: 1461-9555 doi: <https://doi.org/10.1111/afe.12594>

Contact: Lois Kinneen: l.kinneen@reading.ac.uk

Acknowledgements: We wish to acknowledge and express appreciation to the farmers and landowners who allowed us to carry out fieldwork on their farms and helped us identify habitats and install insect traps. This invertebrate study was a component of the BioSmart multidisciplinary project that included a botanical study and social science.

2. TERMS OF USE

------------

Copyright (2023) University of Reading & Universidad de la Amazonia. This dataset is licensed under a Creative Commons Attribution 4.0 International Licence: https://creativecommons.org/licenses/by/4.0/.

3. PROJECT AND FUNDING INFORMATION

------------

Title: Towards BioSmart livestock farming in Colombia: cultural landscapes, silvopastoral systems and biodiversity

Dates: March 2018 – April 2023

Funding organisation: RCUK-CIAT Newton-Caldas Fund Sustainable Tropical Agriculture Systems Programme, BBSRC, and GCRF and Newton Consolidation Accounts University of Bristol.

Grant no.: This research was funded through the RCUK-CIAT Newton-Caldas Fund Sustainable Tropical Agricultural Systems Programme BBSRC project numbers BB/R022852/1 and BB/S018840/1, and through the GCRF and Newton Consolidation Accounts University of Bristol, EPSRC EP/X528158/1.

4. CONTENTS

------------

File listing

BioSmartPhaseIEnto\_SweepsData.csv– Invertebrate data collected using sweep transects in matrix form. Columns 1-4 give sampling information on where the data were collected [Farm, Habitat, Round and Transect]. The remaining columns represent the different orders of invertebrates collected using sweep transects.

BioSmartPhaseIEnto\_MalaiseData.csv – Invertebrate data collected using sweep transects in matrix form. Columns 1 & 2 give sampling information on where the data were collected [Farm, Habitat]. The remaining columns represent the different orders of invertebrates collected using malaise traps.

5. METHODS

-----------

For full details see: Kinneen, Lois, Escobar, María Paula, Hernandez, Luis Miguel, Thompson, Jill, Ramos-Pastrana, Yardany, Córdoba Súarez, Eric, Romero-Sanchez, Miguel, Barnes, Andrew, Quintero, Marcela, & Garratt, Michael P.D. (2023) Silvopastoral systems benefit invertebrate biodiversity on tropical livestock farms in Caquetá, Colombia, *Agricultural and Forest Entomology,* In Press

To investigate the impacts of adopting silvopasture practices on biodiversity, invertebrates were sampled using two sampling methods, sweep net transects and malaise traps on five farms in Caquetá, Colombia. Three sweep transects were carried out in three habitat types (traditional pasture, silvopasture and along forest remnant boundary), each transect was 50 m long and a sweep was taken of the vegetation every 1 m. Two rounds of sweep sampling were carried out on 33 of the 45 transects. Malaise traps were set in traditional pasture, silvopasture and towards the centre of forest remnant patches on each farm (at least 20 m from boundary) and left in place for 7 days. Invertebrate samples were identified at the Universidad de la Amazonia.

Data preparation and cleaning were carried out using the software R version 4.2.2 (R\_Core\_Team\_2022) using the packages tidyr and dplyr.