Title: Dataset associated with "Artefactual depiction of predator–prey trophic linkages in global soils"

Abstract: Soil invertebrates contribute to multiple ecosystem services, including pest control, nutrient cycling, and soil structural regulation, yet trophic interactions that determine their diversity and activity in soils remain critically understudied. Here, we systematically review literature (1966–2020) on feeding habits of soil arthropods and macrofauna and summarize empirically studied predator–prey linkages across ecosystem types, geographies and taxa. Out of 522 unique predators and 372 prey organisms (constituting 1947 predator–prey linkages), the vast majority (> 75%) are only covered in a single study. We report a mean of just 3.0 ± 4.7 documented linkages per organism, with pronounced taxonomic biases. In general, model organisms and crop pests (generally Insecta) are well-studied, while important soil-dwelling predators, fungivores and detritivores (e.g., Collembola, Chilopoda and Malacostraca) remain largely ignored. We argue that broader food-web based research approaches, considering multiple linkages per organism and targeting neglected taxa, are needed to inform science-driven management of soil communities and associated ecosystem services.

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Format of data files – .csv, .xlsx

Location where data were collected – Global literature predator-prey linkages in soils

File Information –

File 1: Wyckhuys et al (2022) Database.xlsx includes three sheets, "Full dataset," "Realized," and "Inferred." Each sheet has been saved as a .csv file (listed below) for long-term preservation and accessibility purposes.

File 2: Wyckhuys.Global literature database on predator-prey linkages in soils.csv

File 3: Wyckhuys.Global literature database on predator-prey linkages in soils.Realized.csv

File 4: Wyckhuys.Global literature database on predator-prey linkages in soils.Inferred.csv

This database comes from systematic review of available literature (1966-2020) on predator prey linkages in soils from around the globe. The literature included was based on feeding habits of soil arthropods and macrofauna and summarizes empirically studied predator-prey linkages across multiple ecosystem types, geographies and taxa. The data are organized by taxa with key information extracted from research papers on each taxon, including: organisms involved (as predators and/or prey), type of study (laboratory or field), ecosystem type, country of origin, research focus of article.

Variable information - Description of the parameters/variables are explained in the methods section of the associated research article