Mapping plant-pollinator interactions across Europe

Abstract

Pollinators play a crucial role in maintaining Earth's terrestrial biodiversity and human food production by mediating sexual reproduction for most flowering plants. However, their diversity and role as pollinators are increasingly compromised by rapid human-induced environmental changes. One of the major challenges for pollinator conservation, is the lack of robust generalisable data across space and time. Here, we present a dataset of plant-pollinator interactions at European level that consists of 50 studies that cover 17 countries and comprised over a million of plant-pollinator interactions.

Here, we have tried to generate a comprehensive dataset of plant-pollination interactions to build the first European metaweb of plant and pollinators and explore their general patterns.

we have done a strong collaborative effort in unifying plant-pollinator studies at continent level to elucidate general patterns of plant-pollinator interactions and set a baseline for future ecological research. Thus, we explore the first time an European metaweb of plant-pollinator interactions

and explore the first European metaweb of plant-pollinator interactions. This is a continent-level metaweb that comprised of xxx plants xxx pollinators and xxxx interactions which covers xxxx different countries. We show that plant and pollinator species are xxxxx and have xxxxxxx. For instance, we cover xxx% of European bee species and xxx% of flowering plants that rely on pollinators.

Introduction

1st paragraph

General introduction of how global change impacts plant-pollinator interactions

Maybe expand on some drivers? Climate change, habitat fragmentation, agricultural intensification, urbanization, pollution, pesticides and species' invasions

Highlight the relevance of large scale datasets

2nd paragraph

3rd paragraph

4paragraph

Introduce research questions

LIST THEM HERE (Main ideas so far)

Questions that we would like to answer:

1) What are the most common plant a pollinator species? Are those shared across networks? Most common interactions across Europe? Interaction fidelity

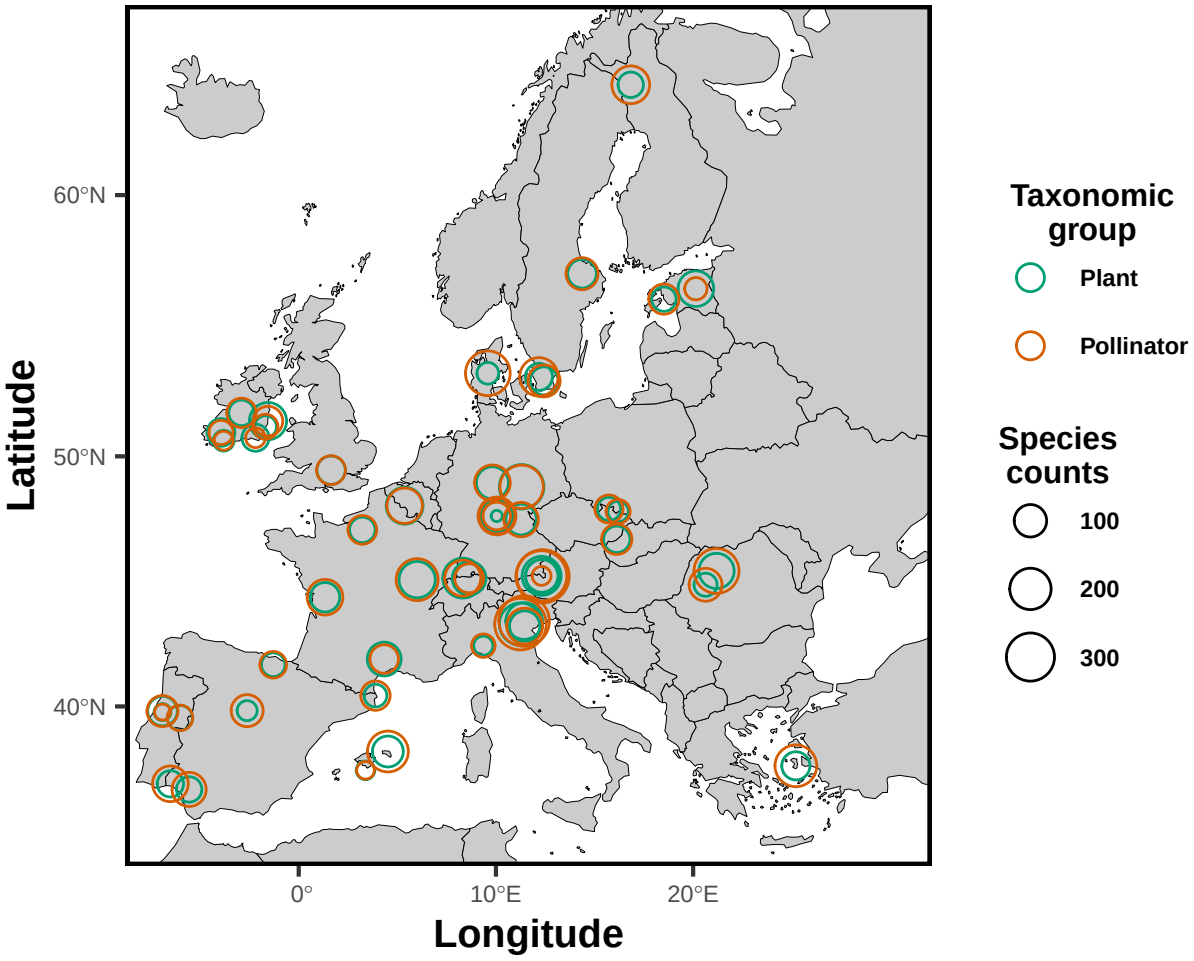
2) Is generalization the rule? Or specialization? How this impacts indirect interactions? Go in the direction of pollinator importance?

Methods

Dataset description

This European metaweb consist of datasets of plant-pollinator interactions compiled initially by a wide number of researchers and institutions within the European continent. This dataset covers 17 countries and consist of 50 independent published and unpublished studies conducted during the time period 2004 - 2021, and accounts for a total of 1,151,801 interactions from 1,928 pollinator and 1,249 plant species.

Species coverage



Results

Discussion