






Documenting pollinators, floral hosts, and plant–pollinator interactions in U.S. Pacific Northwest agroecosystems

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Abstract

The abundance and diversity of pollinator populations are in global decline. Managed pollinator species, like honey bees, and wild species are key ecosystem service providers in both natural and managed agroecosystems. However, relatively few studies have exhaustively characterized pollinator populations in diverse agroecosystems over multiple years, while also thoroughly documenting plant–pollinator interactions. Yet, such studies are needed to fulfill the national pollinator protection plans that have been released by the United States and other nations. Our research is among the first studies to respond to these directives by systematically documenting bee and plant biodiversity, bee–plant interactions, and bee-mediated pollen movement in farming systems of the Pacific Northwest, USA. Our data provides insight into the processes mediating pollinator and plant community assembly, persistence, and resilience across landscapes with variable crop and landscape diversity and agroecosystem management practices. These data will also contribute to the development of a United States pollinator database, supporting the United States' plan to promote pollinators. With few publicly available data sets that systematically take account of agroecosystem practices, plant populations, and pollinators, our research will provide future users the means to conduct synesthetic studies of pollinators and ecosystem function in a period of rapid and global pollinator declines. There are no copyright or proprietary restrictions for research or teaching purposes. Usage of the data set must be cited.

KEYWORDS

agroecosystems, biodiversity, honey bees, insect declines, plant–pollinator interactions, pollinator policy, species interactions, wild bees

DATA AVAILABILITY STATEMENT

Data are available in Figshare: <https://doi.org/10.6084/m9.figshare.14179640.v4>.

SUPPORTING INFORMATION

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

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