

Call per Assegni di Ricerca 2024

Nuovo assegno

Title of the project:

Citizen Science and Pollination Research: what data collected within the Life 4 Pollinators project reveal?

Name of the proposer:

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Project

The status of pollinators worldwide is currently a topic of conservation concern (Potts et al., 2010), as diverse wild pollinator communities have unarguable importance in maintaining ecosystem functioning (e.g. Fontaine et al., 2006) and enhancing crop production (e.g. Garibaldi et al., 2013; Hoehn et al., 2008).

The project Life 4 Pollinators (LIFE18/GIE/IT755), which counts seven partners spread between Italy, Greece, Slovenia, and Spain, aims at involving citizens and key stakeholders in the promotion of wild pollinator conservation in the Mediterranean. To activate virtuous circles, different target audiences have been addressed through a general citizen science approach, which implies engagement of the public in scientific research as part of a collaborative project with professional scientists (<https://eu-citizen.science/>). Among the initiatives run within the project, both the educational “Students 4 Pollinators” project and the launch of a web-platform have been among the most successful actions. The former addresses students at secondary schools through their active engagement in data gathering, while the latter encourages citizens to upload their pictures of flower-insect interactions. To date, almost two thousand photos have been uploaded to the platform: of these, half refer to Natura 2000 sites and were mainly taken during public BioBlitz events, while the work done with the students contributed to the substantial increase of the number of pictures referring to urbanized areas.

Altogether, the whole collection of pictures constitutes a relevant dataset offering the opportunity to address multiple research questions, potentially amplifiable with further data from the body of literature (e.g. floral rewards, urbanization, soil use, climate, etc...). As an example, as managed bees have become an integral component of agriculture due to the rising demand for pollinator-dependent crops (Aizen & Harder, 2009), their increasingly widespread use raised concern on the possible negative effects on wild pollinators (e.g. Herrera, 2020 and therein references). The research fellow will be encouraged to use the dataset to investigate uncovered areas in the field of plant-pollinator interactions, with particular attention to invasive plant and/or insect species, and species of conservation priority. In addition, data analysis will most likely reveal trends, therefore stimulating new research questions. The research fellow will be therefore encouraged to devote time to extensive bibliographic research with the aim to address such questions, implement existing protocols, and potentially develop a further project to give continuation to the achievement of the Life 4 pollinators project.

The activities to be conducted by the research fellow include:

-analysis of the data collected during the activities of the initiative “Students 4 Pollinators”,

- analysis of the dataset obtained through the web-platform after taxonomic identification of the insect and plant taxa represented in the photos,
- taxonomic identification of plants and pollinators in newly submitted photos
- KPI analysis,
- pollination networks analysis,
- dataset implementation through bibliographic research
- investigation to answer specific research questions – with focus on invasive and/or priority species

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