

Diversity for Biodiversity: social inclusion and butterfly monitoring in a Citizen Science project

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Butterfly conservation

Urbanization represents a significant habitat loss for butterflies, urban green areas could not reduce the impact because:

- are mainly composed by non-native ornamental plants, often unsuitable for native butterflies (Fontaine et al. 2016);
- are immersed in a hardly permeable urban matrix (Lizée et al. 2012).



Butterfly Monitoring

Species monitoring is a basic approach to understand native population trends and to verify the efficiency of our conservation measures. We count butterflies through two standardized methods shared with the [European Butterfly Monitoring Scheme](#):

- Linear transect in urban parks
- Fixed counting point in small gardens

Butterfly monitoring is crucial also to follow the spread of alien species (*Cacyreus marshalli*) (Paradiso et al. 2019).



Born in 2014 in Turin (NW Italy), Farfalle in ToUr is a Citizen Science project that involves a peculiar group of volunteers: users of Mental Health Centers (MHC) followed by biologists, doctors and professional educators.

How can we reduce social isolation by restoring urban butterflies?

Social inclusion

"Mental disorder" often means isolation. Butterfly is a perfect metaphor for the transition from a sedentary and isolated life (like the caterpillar on its foodplant) to a dynamic dimension full of interactions (as the adult flies in other areas meeting other individuals). This innovative project is a significant opportunity for MHC users to overcome their barriers as isolation and lack of acceptance, acquiring new skills and redefining their social role.



Volunteer training

A first group of MHC users has been trained in butterfly species morphology, ecology and identification, to represent the "scientific committee" (20 disadvantages people already involved). The main task is to raise awareness about butterfly conservation issue in citizens, especially disadvantaged people and children.

Involving Stakeholders

An essential point of the project is the involvement of all stakeholders to guarantee social inclusion and raise awareness about the dramatic decline of butterflies. Thanks to this approach, the project has become part of [proGREG](#) (EU H2020 innovation action programme, grant agreement no. 776528) for the regeneration of urban green areas in the City of Turin.



200 pupils
 10 teachers involved



Click here!

Disseminating the project

We organize public events and we promote Farfalle in ToUr through the **web** site and social media.

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Creating Butterfly Oases

Thanks to an important co-design work with all the stakeholders, we convert urban green areas (starting from MHC's gardens) into oases attractive for butterflies, planting nectar sources species (i.e. native *Thymus* spp., *Origanum* spp., *Lavandula* spp.) as well as larval food plants (i.e. Brassicaceae, *Plantago* spp., *Urtica dioica*). 10 oases already created.

To connect these oases we encourage the use of native plants to adorn private gardens and balconies, creating road networks for butterflies.



plant distribution



seedbombs

