

# Domestic gardens as place pollinators go through and where they meet inhabitants

## **Abstract**

More than half of the French population is nowadays living inside cities and this figure is still increasing. The urbanization process changes the opportunities of encounters between inhabitants and nature, even if biodiversity knowledge is quite high. It also impacts other living beings, such as pollinators, often with negative consequences. The domestic garden stands as a meeting place for inhabitants and nature in peri-urban areas. Studies focusing on domestic gardens in urban ecology are still scarce, even if their number are now increasing. This work aimed at showing that domestic gardens are integrated in a wider landscape and social context, which allow them to play a role in biodiversity conservation, especially pollinators conservation. In order to do this and characterize several aspects of this domestic garden socio-ecosystem, I chose several spatial scales of study and referred to several frameworks from different fields : ecology, geography and conservation psychology. I first studied the Île-de-France scale and showed that gardens and areas with high proportion of domestic gardens were favorable habitats for pollinators within the urban matrix. Then, I precised the nature of insects floral resources determinants (diversity, origine, rarity, type of growing) in gardens : I confirmed the urbanisation negative effect, I showed that garden structure had variable effects and I did not identify effects of inhabitants connexion with nature. Floral resources changed from spontaneous and common flowers at the beginning of the season to more cultivated and rarer flowers along the season. I also focused on two pollinator protection behaviors (participation to a citizen science program and growing of pollinator friendly flowers) at the garden scale and showed the importance of experiential aspects in the behavior motivations. Finally, a last chapter took into account inhabitants' life in the garden and showed that inhabiting a garden meant being part of a network of relations with variable density and variable incorporation of nature elements. Gardens are places of flowering but also of attention for living beings and sometimes are starting places from which other people or places are integrated in a conservation perspective. This work gave thoughts for taking into account local experiences and contexts in pollinators biodiversity conservation. One of the possible recommendations dealt with the necessity of a renewed discussion between stated experts of conservation in urban areas and inhabitants.