
Citizen science and identification keys to study the perception of natural organisms

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Abstract

”Spipoll” is a citizen science program created and managed by the Muséum national d’Histoire naturelle, the Office pour les Insectes et leur Environnement and the French Ministry of Ecology. On the field, volunteers are invited to take pictures of flowers visitors to improve the knowledge about pollinators diversity.

To assist the participants, a digital identification service is available on the Spipoll website. It is a multi-access key, without a fixed sequence of questions: the user chooses himself the appropriated characters and the order to describe each one. A database stores the pictures, their identification and the sequence of characters followed by the participants.

These data allow to study the mistakes and the behavior of the citizens when they observe an insect. Indeed, periodically, Spipoll experts validate the participants’ identifications allowing to deduce the taxonomic confusion and the misunderstanding of character states. The identification paths are also a resource on how the entomofauna diversity is perceived. Which morphological traits are chosen most frequently or at the first steps? Are the most noticeable characters selected to the detriment of those which need specialized vocabulary or advanced entomological skills? Are the most iconic groups of insects more easily identified because they are part of the collective imagination?

Here we will present the results of this study and will relate them to the profile of each user: age, level of expertise in naturalism, lifestyle (urban or rural)... Finally, we will discuss their potential consequences on the perception of biodiversity for environmental public policies.

Keywords: biodiversity, Spipoll, citizen science, identification key

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