

MONITORING THE BIODIVERSITY OF A REGIONAL PARK THROUGH CITIZEN SCIENCE: THE PROJECT OF THE OGLIO SUD PARK

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Citizen Science platforms for collecting wildlife records are spreading in the last years, also due to the diffusion and the upgrade of smart phones and internet connection systems and are allowing scientists to access to distributional data banks built with the help of citizens. Among the principal platforms, the most used in Italy are Ornitho and iNaturalist.

The Oglio Sud Regional Park (about 13,000 ha.) is located along the downstream part of the Oglio river (Provinces of Cremona and Mantova, Lombardy, Northern Italy). This park built up a project on biodiversity assessment through the iNaturalist platform (www.inaturalist.org) since Autumn 2015 that cover the area of the park and of the neighboring municipalities. This platform shows a number of advantages with respect to other ones, such as: a total covering of the life forms; the possibility to select and create the area of the Park and to upload photos in different formats and sizes; the availability of smart phone applications for the operative systems Android and iOS and its software totally open source and open access. The whole dataset is available for registered and unregistered users, and records with photos, date, location and the agreement of users in the identification, will automatically be uploaded on GBIF (www.gbif.org). Records of vulnerable/protected species are displayed with an error of 10 km on the accuracy of the location. The social network structure of the platform, where observations are confirmed by the global community, allows citizen to be integrated within the data collection and identification processes. So data collected through this project might be also shared with other projects on iNat, thus expanding the utility of each observation.

In its first five months, 8 users participated to the project, with a total of 2,168 observations and 268 species. Mammals represent the 5% of the observations, with 17 species of the 35 reported for the area: Western Roe Deer *Capreolus capreolus*, Common Hedgehog *Erinaceus europaeus*, Lesser White-toothed Shrew *Crocidura suaveolens*, Savi's pipistrelle *Hypsugo savii*, Gray big-eared bat *Plecotus austriacus*, Natterer's bat *Myotis nattereri*, Northern Raccoon *Procyon lotor*, Stone Marten *Martes foina*, Least Weasel *Mustela nivalis*, Eurasian Badger *Meles meles*, Red Fox *Vulpes vulpes*, European Brown Hare *Lepus europaeus*, Crested Porcupine *Hystrix cristata*, Black Rat *Rattus rattus*, House Mouse *Mus musculus*, Eurasian Red Squirrel *Sciurus vulgaris*, Coypu *Myocastor coypus*. The number of contributions to the project is growing thanks to the Volunteer Ecological Guards of the Park.

Given that the park is surrounded by highly anthropized areas with intensive agriculture and breeding farms, as well as by a dense net of highways, mapping the distribution of recently arrived species (*C. capreolus*, *P. lotor*, *H. cristata*) may provide further suggestions to the management of species and habitats. Knowledge on species distribution is a fundamental requirement for a protected area and an important goal to be achieved also with the involvement of citizens. Thus, the use a platform like iNaturalist which allow specialists to involve citizens in adding relevant data on species distribution, by teaching them how to distinguish taxa and their ecosystemic roles.