

## OpenMICE: an open spatial and temporal data set of small mammals in south-central Italy based on owl pellet data

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**Abstract.** The use of database technologies as a tool for implementing data for quantitative ecological studies and biodiversity conservation planning has recently attracted the attention of the biological community. Despite the fact that the number of biodiversity data sets is quickly rising, online databases of small mammals are still scarce, especially for Mediterranean ecosystems. We implemented the first standardized and accessible georeferenced European database of small mammal occurrences, abundances, and functional traits. Data derived from owl pellets was obtained from different sources, including original field surveys, publications, gray literature, existing databases, and museum collections. The OpenMICE database covers the years 1972 to 2017 and includes nearly 50,000 individuals from 23 species (13 Rodentia and 10 Eulipotyphla) at 190 sites in south-central Italy. Our specific goals in compiling this data set were as follows: (1) to make data that is usually accessible to a restricted audience widely available; (2) to identify the gaps in knowledge about small mammal communities and guide future sampling and conservation efforts; and (3) to gain a first insight into small mammal diversity and abundance in the study area. The potential applications of our spatial relational database are many, from individual-based to community-based models as potential indicators of environmental changes at different geographical scales. Given the long-term support for data storage, the OpenMICE database could be further expanded to include other geographical contexts and implemented with new information and traits. We would appreciate that researchers cite this paper if using all or part of the data set. We also request that researchers and teachers inform us of how they are using the data. We intend to keep it up to date as novel studies become available (see *Data Availability*).

**Key words:** *community assemblages; community ecology; functional traits; open data; owl pellets; small mammals; species composition.*

The complete data sets corresponding to abstracts published in the Data Papers section in the journal are published electronically as Supporting Information in the online version of this article at <https://onlinelibrary.wiley.com/doi/10.1002/ecy.2506/supinfo>

### DATA AVAILABILITY

Associated data are available at a GitHub repository (<https://doi.org/10.5281/zenodo.1342403>) and at <http://therio.unimol.it:8080/therio/openmice/>

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