

First datapresence of common (*Sciurus vulgaris*) in the Mantua province

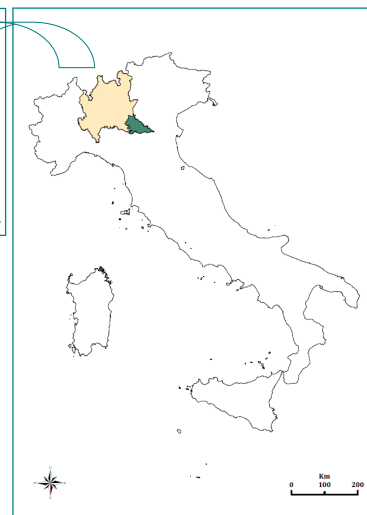
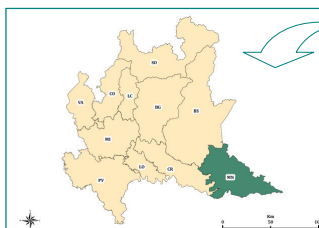
Braghiroli S.*, Ghirardi M. °

*via Germiniasi, 16 Porto Mantovano MN, e-mail: s.braghiroli@mclink.it

°via San Leonardo, 3 - Beinasco TO, e-mail: marco.ghirardi@libero.it

Introduction

This contribution reports the first results concerning the presence of the red squirrel in the province of Mantua. In the study area the red squirrel had not yet been reported, even in historical documents considered. However, in recent years, sightings of the rodent have increased, in areas with high natural characteristics, in accordance with the latest environmental suitability analysis carried out for the Mantua territory (Vigorita *et al.*, 2008). This paper aims to focus on the current expansion of the red squirrel, even in areas where there had been no reports of presence.

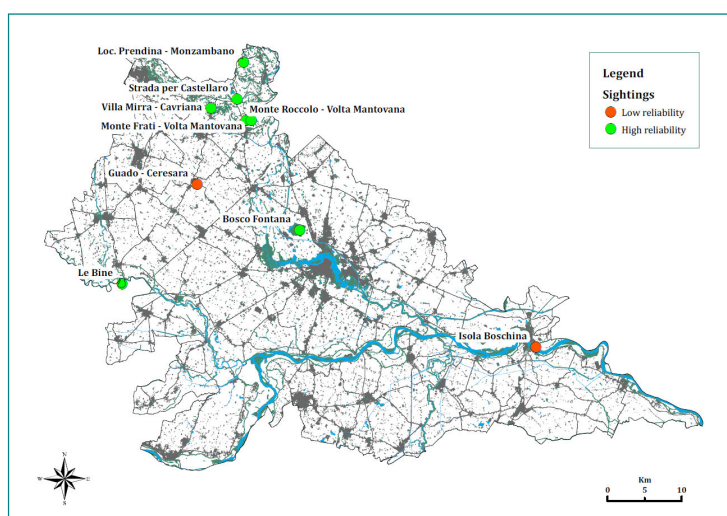


Materials and Methods

The data were collected from direct sightings of the species. The observations collected were classified as "reliable", if it has been possible to verify their trustworthiness (if there are photographic records, repetitions of the observations in the same site and on the basis of the reliability of the observer), and "unreliable" if it was not possible to check the veracity of the data. Analysis were carried out only on the observations considered reliable. The reliable data were converted into points and georeferenced with GIS technology.

Using GIS platform, we analyzed the main characteristics of the habitat in an area of about 4 hectares around each point of sight and we evaluated the relative position of each point from the primary elements of the Lombardy Regional Environment Network (R.E.R.).

This analysis was complemented by a detailed historical research (books, documents, maps, from the century XIX at the present time), to understand the evolution of the population of the species in the province of Mantua.



Results and discussion

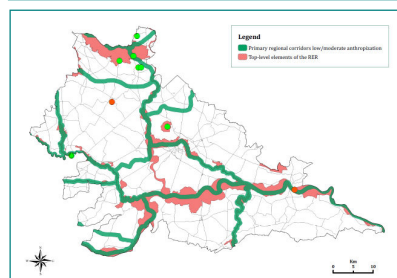
The first reports are dated back to 2008, the latest in 2012; most of reports are dated back to the latest years. The observations involve 5 municipalities (i.e. Monzambano, Volta Mantovana, Cavriana, Acquanegra sul Chiese, Marmirolo), with a prevalence of observations in the northern part of the province, the area characterized by morainic hills.

We observed that red squirrel is present mainly in wooded areas or in agricultural areas where there are limited wood portions; furthermore the reports are included in primary elements of R.E.R., to underline their importance for the conservation of this species and its habitat.

Distribution data of red squirrel in the province of Mantua, presented in this paper, are particularly important because on the basis of the documents analyzed, the presence of the squirrel was never reported since early 1800 (Lanfossi, 1825; D'Arco, 1873; Cecere, 2001, Cerretti, 2004), although other elusive rodents with arboreal habits have been reported.

The data collection and their critical assessment allow to study and predict the future diffusion of *S. vulgaris* in the province of Mantova, in according to other monitoring activities.

Sciurus vulgaris photographed near Monte Frati, in Volta Mantovana by Giorgio Mazzi in 2011.



The image above shows the point locations of the observations of red squirrel in Mantua province (locality and municipality are defined).

The image on the left shows the point locations of the observations of red squirrels refer to the main elements of the R.E.R. in the Mantua province.

Literature cited

- Cecere F., 2001 - *Consulenza in materia faunistica* - <http://www.ogliosud.net/assets/0000/0152/Relazioneaspettifaunistici2001.pdf>;
- Cerretti P., Hardersen S., Mason F., Nardi G., Tisato M., Zapparoli M., 2004 - *Ricerche Naturalistiche a Bosco Fontana - Quaderni Conservazione Habitat*, 3. Cierre Grafica Editore, Verona, 123 pp.;
- D'Arco C., 1873 - *Storia di Mantova* - vol. V, Ed. Guastalla, Mantova;
- Lanfossi P., 1825 - *Saggio di Storia Naturale nei contorni di Mantova* - Giornale di Fisica, Chimica, Storia Naturale, Medicina ed Arti;
- Vigorita V., Cucè L. (a cura di), 2008 - *La fauna selvatica in Lombardia. Rapporto 2008 su distribuzione, abbondanza e stato di conservazione di uccelli e mammiferi* - Regione Lombardia, 364 pp.

Acknowledgments

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