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Civitella Alfedena (AQ), 7-10 Maggio 2014

edited by

S. Imperio, S. Mazzaracca, D.G. Preatoni

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If the eligible leading researcher is not the corresponding author, the latter should express interest on the leading researcher's behalf. Criteria are innovation, excellence and impact on the scientific community (e.g., number of citations).

The award will be assigned yearly, in the second semester of the year following that of reference (i.e., Best Paper Award for 2013 will be assigned in the second semester of 2014). The Editorial Committee is responsible to assign the award. A written motivation will be made public on the journal website.

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Riassunti: Comunicazioni e Poster

edited by
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To feed or not to feed? The effectiveness of supplemental feeding sites for roe deer (*Capreolus capreolus*), with reference to box trapping success rate and winter space use

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Supplemental feeding is a diffused hunted ungulate management practice in several countries, especially where winter conditions are particularly harsh and diminish the probability of survival of animals. Thus, the management of supplemental feeding sites is primarily aimed to help ungulates' overwinter survival. Feeding sites are generally set in overwinter spots and continuously replenished throughout winter time with high energetic value food. Therefore supplemental feeding stations represent an important attractive resource that can bias animals' spatial use. This particularly applies to those species that need to continuously feed to satisfy their energetic requirements because they have limited ability to store fat reserves. These physiological traits are typical of the European roe deer (*Capreolus capreolus*), a small cervid distributed from Mediterranean to Scandinavia, across a variety of landscapes and climates. Roe deer are known to be "income breeder", i.e. they continuously use their energy during the reproductive period in summer, and do not store much fat in winter. Moreover, they are not particularly adapted to harsh winter conditions, especially deep snow cover and low temperatures (which increase the basal metabolic rate). Therefore, northern latitudes and alpine areas are considered suboptimal habitats, i.e. two extremes of roe deer distribution range. Not surprisingly, supplemental feeding practice has been

substantially used in these two areas, but not many studies assess the effectiveness of this practice, in terms of affecting animals' space use and resource selection.

Because of their attractive role for roe deer, supplemental feeding sites have been often chosen as locations to deploy box traps to capture and individually mark this ungulate for research purposes. The access to food in proper feeding sites is periodically limited, so that animals are pushed to get into box traps, that are instead refurnished with food.

In this work we focus on an alpine population of roe deer, in Trentino (North-Eastern Italian Alps; Val Rendena, Valli Giudicarie), where supplemental feeding practice has been carried out in the medium term (from 20 to few years). We performed roe deer captures with box trapping technique over two winter seasons (2012-2013 and 2013-2014), and then monitored the use of feeding sites by means of GPS collars fit to captured animals. We present the capture success rate, with hypothesis of variation linked to a variety of factors, such as weather conditions and topographic distribution of traps. Moreover, we show the importance of these punctual resources on roe deer space use, showing how it deviated from random according to distribution of supplemental feeding sites.