

## First record of *Cervus elaphus* at eastern Sierra Nevada

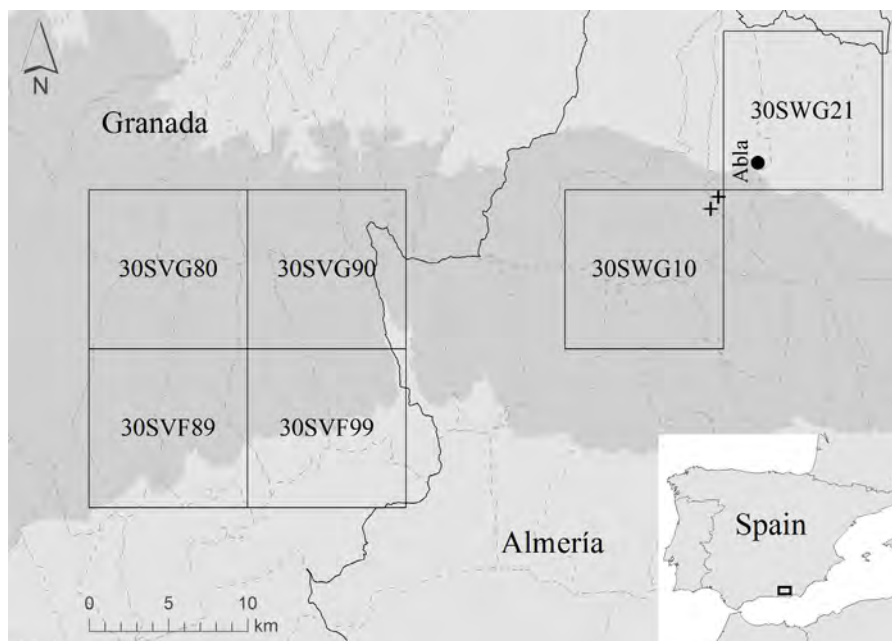
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During routes walked on December 27th 2013 and July 6th 2014 along two areas of the foothills of Sierra Nevada mountain known as Barranco Carretero and Peñón de Carroquero, both in the municipality of Abia (Almería), we observed a group of 6 individuals first ( $37^{\circ} 7' 49''$  N,  $2^{\circ} 46' 47''$  W) and one isolated specimen later ( $37^{\circ} 7' 24''$  N,  $2^{\circ} 47' 6''$  W), of red deer (*Cervus elaphus* Linnaeus, 1758; Fig. 1). Red deer were at a height above sea level of 1,022 and 1,231 m, respectively. Numerous deer latrines and tracks were also found on the areas. Both observations were within the 10 km UTM grid 30SWG10 (Fig. 1), where the species had not been previously recorded (Carranza, 2007). These deer must have naturally reached Sierra Nevada, after an introduction that occurred in the 1980s by the hunting society “La Perdiz” of Baza, in the mountain with the same name (Ruíz *et al.* 1988), and subsequent expansion by the Baza and Filabres mountains (Granados *et al.* 2001). These authors had cited the species in the 10 km UTM grids located just northern of the one reported in this note.

The area presents abandoned almond crops, pine plantations (*Pinus pinaster*), and scattered well developed and numerous regenerations of oaks (*Quercus ilex*). The authors frequently visit the area, so presence of deer there is not old, probably not more than one or two years ago. In fact, on April 23th 2011 one of the authors saw and photographed two adult female deer in the area known as Las Juntas ( $37^{\circ} 8' 59''$  N,  $2^{\circ} 45' 6''$  W), in the municipality of Abia as well (Fig. 1), at the confluence of Nacimiento and Los Santos rivers. This area belongs to the 10 km UTM grid 30SWG21, and is located just 2.8 km from the northeast corner of the 30SWG10. This area could be the natural way for deer from Filabres mountain colonizing Sierra Nevada, since it is a point where the foothills of the two mountain ranges get close together, with natural vegetation in the edges of both mentioned riverbanks, and these rivers also provide a natural understep on the A-92 highway that might be a barrier between Filabres and Sierra Nevada mountains.



**Figure 1.** Sites where red deer were observed (crosses) and photographed (black point), and 10 km UTM grids including areas where interviewed goatherds used to feed their sheep flocks (left side of graph). Shadow area includes the National and Natural Parks of Sierra Nevada, and the limit of the Granada and Almería provinces is also indicated with the black line.

At present, red deer might be restricted to the most Eastern part of Sierra Nevada. This statement is supported by two inquiries undertaken to goatherds on August 18th and 23th 2014, who ranged on the south and north faces of Sierra Nevada Mountain, respectively, including part of the 10 km UTM grids 30SVG80, 30SVG89, 30SVG90, 30SVG99 (Fig. 1). In no case goatherds had any information about red deer in their respective areas.

## References

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