

Capture traps as a method to minimize damage by red deer (*Cervus elaphus*) in golf courses

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Abstract

We tested the effectiveness of capture traps to control red deer populations in golf courses. We found that capture traps are useful to reduce populations of red deer and, therefore, to manage its presence and damage in urban areas. Nevertheless, we used capture traps with manual closing but this system is time consuming and ineffective. It is advisable to change this method to an automatic locking system.

Keywords: *Cervus elaphus*, golf course, red deer, urban environment, wildlife management

Introduction

The land use changes happening in Spain in the second half of last century have had a substantial impact on landscape and as consequence have involved important modifications in species distribution. In Andalusia (southern Spain) the land abandonment and the agricultural intensification have given rise to the disappearance of mosaics of pastures or agricultural lands with a high proportion of natural vegetation that existed several decades ago. This resulted in a homogenization of the landscape since the most productive areas were devoted to the intensive agriculture and the less fertile were abandoned followed by the regeneration of scrubland and woodland (Fernández-Alés et al., 1992; de Andrés et al., 2002). The effect of changes and transformations of landscape caused by human activity for the distribution of wild species is in some cases detrimental for some species (Smith et al., 2005; Delibes-Mateos et al., 2010) but positive for others (Acevedo et al., 2006; Falcucci et al., 2007; Acevedo et al., 2011). In the case of red deer, the distribution range has increased considerably in Andalusia affecting urban areas as golf courses where they are causing damage.

Materials and methods

We installed a capture trap in a golf course located in the Costa del Sol (Andalusia-southern Spain), with 10x10x2.10m dimensions. The door was closed manually with a pulleys and ropes system. The person in charge of this task was hidden 25 m from the capture trap. During three consecutive months we visited the capture trap every three days, baited the capture trap with broad beans periodically and used an attractive substance for red deer. We controlled the visits of red deer to the capture trap using two camera traps. After three months we started with captures in the morning and at night during six consecutive days.

Results

Red deer groups visited the capture trap on 15 different occasions. The first visit occurred two months after finishing the installation of capture trap. All visits were by adult females and juveniles and occurred mainly at night and early morning. There were no visits by deer to the trap after a person was placed close to the trap to operate the closing mechanism.

Discussion

The results have shown that a capture trap can be a useful method to control populations of red deer in urban areas. This is in accordance with the results obtained by others authors in different regions. In fact, red deer groups have not feared the presence of a capture trap and they entered the trap to forage. However, manual closing of the capture trap is not effective because it needs many waiting hours and the presence of people around capture trap can scare away red deer. Therefore, it is advisable to change this method to an automatic locking system.

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