Does agonistic behaviour of Lesser Short-toed Larks Calandrella rufescens against Houbara Bustard Chlamydotis undulata in Fuerteventura Island reflect nest predation?

RODRÍGUEZ, B. & M. CABRERA (2010). ¿Revela el comportamiento agresivo de la terrera marismeña *Calandrella rufescens* hacia la avutarda hubara *Chlamydotis undulata* la predación de nidos en la isla de Fuerteventura? *VIERAEA* 38: 155-157.

Diet of Houbara Bustard *Chlamydotis undulata* is omnivorous, including fruit, seeds, shoots, leaves, flowers, locust grasshoppers, mole-crickets, beetles and small vertebrates, such as lizards and snakes (Del Hoyo *et al.*, 1996 [*Handbook of the Bird of the World Vol. 3*]). According to the available published information for the Canarian endemic *C. u. fuer-taventurae*, it feeds mainly upon plants and insects, but also on fruits, flowers and snails (Collins, 1993 [*Bol. Mus. Mun. Funchal Sup. N*°2: 57-67]; Medina, 1999 [*Bird Conserv. Intern.* 9: 373-386]; Martín & Lorenzo, 2001 [*Aves del archipiélago canario*]). However, although some vertebrates such as lizards or ground nesting birds (eggs or chicks) are potential preys, any of these items have ever been recording in the Canaries according to the literature.

During the afternoon of 2 April 2009 we were birding in the Triquivijate plains (Fuerteventura) using binoculars (10x) and a spotting scope (60x). This area holds important steppe bird populations within Fuerteventura Island, especially of Houbara Bustard and Lesser Short-toed Lark *Calandrella rufescens* (Lorenzo, 2007 [*Atlas de las aves reproductoras en el Archipiélago Canario*]; pers. obs.). At 19:45 p.m. we detected an adult male Houbara Bustard foraging, that suddenly was furiously attacked by a pair of Lesser Short-toed Lark when it crossed a particular site (Fig. 1). The Houbara stood a moment and after a few steps he picked something presenting pale colour in the floor that held in its bill an instance before swallowed it very fast. During this, the pair of larks did not stop of making aggressive displays and flights upon the male, and in some occasions they directly perched on the Houbara back (Fig. 1). The Houbara started to forage again and after some minutes, it was harassed again by another pair of larks 100 m away from the first site.

We did not identify this item with certainty, but it was relatively pale and small. Although we do not discard a snail, it is possible that it was an egg. Anyway, eggs or chicks of ground-nesting birds must be consumed regularly by Houbaras, since in many areas they coexist (Del Hoyo *et al.*, 1996 [Handbook of the Bird of the World Vol. 3]). Although to this, only anecdotic information has been published on the predation on ground-nesting birds by Houbaras (Tourenq *et al.*, 2003 [J. Arid Environ. 55: 581-582]). Semi-captive Houbaras of the subspecies C. u. macqueenii released in a fence area of Saudi Arabia regularly predate upon chicks of Chesnut-bellied Sandgrouse Pterocles exus-





Figure 1.- Lesser short-toed Lark Calandrella rufescens defending nest site against Houbara Bustard Chlamydotis undulata fuertaventurae, Triquivijate plains, Fuerteventura, Canary Islands, April 2009.

tus nesting there, but they do not show interest in motionless eggs (Toureng et al., 2003 [J. Arid Environ. 55: 581-582]). Two successful predation attempts upon lark chicks (Eremophila alpestris and Calandrella brachydactyla) by Houbara have been documented in Xinjiang Province of China (Tourenq et al., 2003 [J. Arid Environ. 55: 581-582]).

Especially during chick rearing, high nest predation rates occurs in nesting ground passerines, and particularly in larks (Yanes, 1999 [La depredación en nido de aláudidos almerienses]). In this framework, it is possible that Lesser Short-toed Larks have developed this interspecific agonistic behaviour to defend their nests against potential predators such as for examples Hoopoe *Upupa epops* or Southern Grey Shrike *Lanius meridionalis*, both of them relatively common and widespread on Fuerteventura. Finally, it would be interesting to study the role of the other nesting ground species present in the Canaries, such as Stone Curlew Burhinus oedicnemus, Cream-coloured Courser Cursorius cursor, Black-bellied Sandgrouse Pterocles orientalis or Berthelot's Pipit Anthus berthelotii, since some of them could be predators of Lesser Short-toed Lark nests or could be nest predated by Houbara Bustard.

We wish to thank Juan Antonio Lorenzo and Rubén Barone for a critical reading of the initial manuscript.

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Fecha de recepción: 19 febrero 2010 Fecha de aceptación: 8 marzo 2010