



Recognizing taxonomic units in the field—The case of the crickets *Oecanthus dulcisonans* Gorochov 1993, and *O. pellucens* (Scopoli, 1763) (Orthoptera: Gryllidae): implications for their distribution and conservation in Southern Europe

PEDRO J. CORDERO¹, VICENTA LLORENTE², PAU CORDERO³ & JOAQUÍN ORTEGO⁴

1, Grupo de Investigación de la Biodiversidad Genética y Cultural, Instituto de Investigación en Recursos Cinegéticos-IREC (UCLM-CSIC-JCCM), Ronda de Toledo s/n, E-13005 Ciudad Real, Spain. Author for correspondence: pedrojavier.cordero@uclm.es 2, Departamento de Biodiversidad y Biología Evolutiva, Museo Nacional de Ciencias Naturales (CSIC), José Gutiérrez Abascal 2, E-28006 Madrid, Spain. 3, Measuring All Sound Studio (MASS), C/Pujol 12, E-08301, Mataró (Barcelona), Spain. 4, Departamento de Ecología Evolutiva, Museo Nacional de Ciencias Naturales (CSIC), José Gutiérrez Abascal 2, E-28006 Madrid, Spain.

Abstract

Recognizing taxonomic units in the field complement classical museum taxonomy. It contributes to geographical distribution assessment making possible the recognition of conservation status of conflictive and similar species. In this paper, we provide unambiguous field characters distinguishing two similar species of *Oecanthus* in Southern Europe: *Oecanthus dulcisonans* Gorochov and *O. pellucens* (Scopoli) that are frequently misidentified. Whereas *O. dulcisonans* is a southern rare species with an uncertain status and distribution, *O. pellucens* is common and widely distributed in the Palearctic. Song is the easiest way to distinguish between the two species in the field being continuous in the former and with regular schemes in the latter. Further, *O. dulcisonans* is larger, with relatively longer inner wings protruding more apically from tegmen, and with a more slender sternum, morphological traits that are detected simply with a hand magnifier.

Key words: Species identification, taxonomy, Spain, Tunisia

Introduction

One important task of researchers on conservation and biodiversity of invertebrates is the attempt to put together taxonomy and field studies. Linking both expertises would provide us a better understanding and knowledge of the real list and distribution of species of difficult identification in a given geographical area. This can facilitate the establishment of the real status of the taxa involved in particular faunas which would enhance future decision making on conservation and management. In this respect, there are many invertebrate species described from museum specimens only based on internal features like genitalia structure while additional information on field identification characters, ecology and distribution is lacking or badly known. For this reason, these species are often misidentified or rarely found in fauna lists. One typical example on this respect is *Oecanthus dulcisonans*. The status of *O. dulcisonans* in Southern Europe is uncertain and it has been only identified in rare occasions and in very few localities (Gorochov 1993; Schmidh 1996; Gorochov and Llorente 2001). *O. dulcisonans* has a European sibling species, *O. pellucens* that, by contrast, is a common and well known species widely distributed all over the South Palearctic region. Both species are frequently misidentified in the literature, in museum collections and specialised internet forums. *O. dulcisonans* was described on the basis of museum specimens (Gorochov 1993) with holotype collected from Tenerife (Canary Islands, Spain) (Bland 2001). *O. dulcisonans* has been also cited in Arabian Peninsula,