

FIRST RECORD OF FORENSIC SPECIES *CONICERA SIMILIS* (Haliday, 1833) (DIPTERA: PHORIDAE) ON EXHUMED RABBIT CARCASSES IN TURKEY

Ersin Karapazarlioglu, PhD

Security Science Faculty, Turkish National Police Academy, Ankara, Turkey

R. Henry L. Disney, PhD

Department of Zoology, University of Cambridge, Cambridge, UK

Abstract

Scuttle fly is often observed in forensic cases especially on buried remains. Two genus of Phoridae is very important for buried remains in forensic cases. One of them is *Conicera sp.*, and its literature is very limited. The aim of this study is to find the *Conicera sp.* in buried carcasses. Two rabbit carcasses were used as bait in Ankara province of Turkey. The insects collected included *Conicera similis* (Haliday, 1833) (Diptera, Phoridae), which was recorded for the first time in Turkey after the carcasses were exhumed in 45 days.

Keywords: Forensic, Phoridae, *Conicera similis*, new record, Turkey

Introduction

Our knowledge of the scuttle fly (Phoridae) fauna of Turkey is very limited. However, only two (2) species have been recorded from Turkey (Disney, 1991), one of which was recorded from a forensic case (Disney, 2006). Furthermore, five (5) have been added, including *Megaselia scalaris* (Loew) (Özsisli and Disney, 2011), a species which has been widely reported from forensic cases elsewhere (Disney, 2008). Thus, our knowledge of western Palaearctic species reported from such cases has advanced (e.g. Boehme et al. (2010), Disney (2006), Disney et al. (2014), Disney and Manlove (2005, 2009), Garcia-Rojo et al. (2013), Manlove and Disney (2008)) since the review of the scuttle flies reported from forensic cases (Disney, 1994). In addition, the use of animal carcasses or carrion baits has added to our knowledge of species likely to feature in future forensic cases

(e.g. Cuttiford and Disney, 2011). In this paper, we report the use of rabbit carcasses for this purpose.

Materials and Methods

The experiment took place from 15th of April to 1st of July 2014 at the Campus Area of Turkish National Police Academy in Ankara, Turkey (39°48'36.24"N 32°50' 03.64"E; 1069 over sea level). Hence, the vegetation is pine (*Pinus brutia*).



Figure 1. Study site of rabbit carcass

Two rabbit carcasses weighting approximately 1 kg were used as bait for the study sample. The carcasses was buried in 30 cm deep soil with two plastic traps (30X50X30 cm) having four trapping holes. However, the carcasses were exhumed after 45 days, and then, insect samples on carcasses were collected.



Figure 2. Setting the rabbit carcass in trap



Figure 3. Burying the rabbit carcass

Results

On 14th and 15th of July 2014, we reared pupae, puparia, 4 females, 1 male and 1 male extracted from a pupa of *Conicera similis* (Haliday, 1833) from the rabbit carcasses. This was the first record for this species for

Turkey. However, this has been recorded from an unusual forensic case in Spain (Garcia-Rojo et al., 2013). Bourel et al. (2004) carried out a study on exhumed cadavers in France and found some phorids including *Conicera tibialis*. The commonest species reported from buried human carcasses is the closely related *C. tibialis* Schmitz (Disney (1994), Leclercq (1999), Gennard (2007)). In addition, some data on development times for *C. similis* on carrion baits were given by Disney (2006).

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