

Presence of the invasive *Cydalima perspectalis* (Walker, 1859) in the province of Barcelona (Lepidoptera: Crambidae)

Presència de l'espècie invasora *Cydalima perspectalis* (Walker, 1859) en la província de Barcelona (Lepidoptera: Crambidae)

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The box-tree moth *Cydalima perspectalis* (Walker, 1859) is an invasive species native to eastern Asia (e.g. India, China, Japan, Korea), where its larvae feed on various trees and shrubs, most notably *Buxus* species (Buxaceae) (ISC 2016). The species reached Europe in 2007 when it was first recorded in Germany (Krüger 2008), since when it has rapidly spread across large parts of the continent. It is currently known from 24 countries ranging from southern European Russia, Romania and European Turkey in the east, to the UK, France and Spain in the west (EPPO 2016). It is assumed that *C. perspectalis* was accidentally introduced into Europe on plants of the genus *Buxus* sold for ornamental purposes (e.g. Krüger 2008, Muus *et al.* 2009); nevertheless, this species is able to severely damage natural *Buxus sempervirens* L. forests (ISC 2016 and references therein).

The first records of *C. perspectalis* in Spain were published in 2014 from Cantabria (Pérez-Otero *et al.* 2014) and Galicia (Pino Pérez & Pino Pérez 2014). In Catalonia, *C. perspectalis* was reported in 2014 from Girona province (Bassols & Oliveras 2014) and then again in 2015 from the same province (Guzmán 2015) (Table 1). Additionally, in 2015 the species was found in the Basque Country (EPPO 2016).

Here we report the presence of *C. perspectalis* in the town of Cardedeu (Vallès Oriental) in Barcelona province, ca. 35 km south-west of the most southerly previous records from Girona (Santa Coloma de Farners) (Bassols & Oliveras 2014) (Figs 1, 2). Four adults of the species were observed at two separate locations ca. 500 m apart in the western part of Cardedeu on 25–28 September 2016.



Fig. 1 Records of *Cydalima perspectalis* from Catalonia. Grey dots represent data taken from the literature, while the black dot corresponds to the new record from Barcelona province (Cardedeu, Vallès Oriental).



Fig. 2 Adult of *Cydalima perspectalis* from Cardedeu (Vallès Oriental), photographed on 27.IX.2016 [Photo: V. Dincă].

Table 1 Summary of published records of *Cydalima perspectalis* from Catalonia. Entries are ordered alphabetically by province and locality. GPS coordinates (decimal degrees) are approximate.

Locality	Province	Lat	Lon	Published source
Cardedeu, Vallès Oriental	Barcelona	41.64	2.36	this study
Argelaguer, Garrotxa	Girona	42.22	2.64	Guzmán 2015
Besalú, Garrotxa	Girona	42.20	2.70	Bassols & Oliveras 2014
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Figueres, Alt Empordà	Girona	42.26	2.97	Bassols & Oliveras 2014
Montagut de Fluvià, Garrotxa	Girona	42.23	2.60	Guzmán 2015
Sant Jaume de Llierca, Garrotxa	Girona	42.21	2.61	Guzmán 2015
Santa Coloma de Farners, Selva	Girona	41.86	2.66	Bassols & Oliveras 2014
Tortellà, Garrotxa	Girona	42.24	2.63	Guzmán 2015

Material:

Cardedeu (Vallès Oriental), 196 m, lat. 41.6399°, lon. 2.3559°, 1 specimen, 25.IX.2016 (R. Vila)

Cardedeu (Vallès Oriental), 196 m, lat. 41.6399°, lon. 2.3559°, 1 specimen, 27.IX.2016 (V. Dincă & R. Vila) (Fig. 2)

Cardedeu (Vallès Oriental), 186 m, lat. 41.6354°, lon. 2.3538°, 2 specimens, 28.IX.2016 (V. Dincă & S. Viader).

Available records suggest that *C. perspectalis* is spreading southwards into the Iberian Peninsula (Fig. 1). A recent assessment of the expansion potential of this species (Nacambo *et al.* 2014) has shown that coastal regions of Iberia, including large parts of Catalonia and the Balearic Islands, are highly susceptible to invasion due to the suitable climate and presence of *Buxus* plants. Moreover, laboratory tests (Brua 2013) have shown that the larvae of *C. perspectalis* will readily consume not only the relatively widespread *B. sempervirens*, but also *B. balearica* Lam., a species of very limited distribution in Spain and listed in the Catalogue of Threatened Species of the Balearic Islands (Conselleria de Medi Ambient, Comunitat Autònoma Illes Balears 2005). Therefore, the expansion and abundance of *C. perspectalis* in Iberia should be carefully monitored and urgent action be taken to control it whilst it is still only a very localised species.

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