

***Callidiellum rufipenne* (Motschulsky, 1860) new longhorn beetle to the fauna of Bosnia and Herzegovina and Slovenia (Coleoptera Cerambycidae)**

Aleksandar Đukić¹ & Pierpaolo Rapuzzi²

¹Scientific Research Society of Biology and Ecology Students “Josif Pančić”, Trg Dositeja Obradovića 2, 21000 Novi Sad, Serbia; e-mail: aleksandar.djukic042@gmail.com

²Via Cialla 48, 33040 Prepotto, Udine, Italy; e-mail: pierpaolo.rapuzzi@icloud.com

ABSTRACT In this paper the authors record for the first time the invasive species *Callidiellum rufipenne* (Motschulsky, 1860) (Coleoptera Cerambycidae) for the fauna of the republics of Bosnia and Herzegovina and Slovenia.

KEY WORDS Cerambycidae; *Callidiellum*; new record; Bosnia and Herzegovina; Slovenia.

Received 14.07.2020; accepted 16.08.2020; published online 30.09.2020

INTRODUCTION

Invasive longhorn beetles (Coleoptera Cerambycidae) have been present in Europe for a relatively long time. However, in the last two to three decades the number of these invasive insects in Europe has risen exponentially due to increased international trade of goods which created new and rapid transport pathway opportunities (Cocquempot & Mifsud, 2013). To this effect, in these last twenty years, 19 species of alien longhorn beetles have been introduced and established in Europe, and some 20 other species have been intercepted or recorded, but so far not naturalized (Cocquempot, 2007; Cocquempot & Lindelöw, 2010).

Recent increases in commercial traffic from Asia (especially China) to Europe has accounted for the introduction of a number of new species of cerambycids as *Callidiellum rufipenne* (Motschulsky, 1860).

In this paper we present first record of *Callidiellum rufipenne* for Bosnia and Herzegovina and Slovenia.

RESULTS

Systematics

Ordo COLEOPTERA Linnaeus, 1750
Superfamilia CHRYSOMELOIDEA Latreille, 1802
Familia CERAMBYCIDAE Latreille, 1802
Tribus CALLIDIINI Mulsant, 1839
Genus *Callidiellum* Linsley, 1940

***Callidiellum rufipenne* (Motschulsky, 1860)**

EXAMINED MATERIAL. BOSNIA and HERZEGOVINA: Bijeljina, 44.760168°N 19.211951°E, 1 female, 24.04.2017, A. Đukić legit, det. P. Rapuzzi; SLOVENIA: 1 male, Obrov, Poljane env. (KP), X.2002, ex ovo *Thuja* sp., emerged VI.2006, J. Vávra legit (coll. P. Rapuzzi).

DESCRIPTION. The adults look (Fig. 1) like small *Callidium* Fabricius, 1775 ranging from 7 to 13 mm. The head, thorax and all appendages are

black, abdomen is red and the elytra are generally dark red more or less iridescent. However, the color of the elytra males is quite variable. The color varies from red to blue-purple or green. Medial black coloring of the large part of elytra is also common, especially pronounced in males. (Maier & Lemmon, 2000).

DISTRIBUTION. *Callidiellum rufipenne* is native to Asia, occurring in China, Japan, Korea, the Russian Far East, and Taiwan (Duffy, 1968; Danilevsky 2015; EPPO 2015). Its introduction was detected for the first time in Italy, in the port of Ravenna in March 1988 (Campadelli & Sama, 1988). Other established populations of *C. rufipenne* in Europe populations were recorded in Spain (Bahillo de la Puebla & Iturrondobeitia-Bilbao, 1995), Belgium (Verbeelen, 2007), Croatia on the island of Krk (Los & Plewa, 2011), France (Van Meer & Cocquempot, 2013). Besides Europe, this beetle was accidentally introduced to Argentina (Turienzo, 2006), Canada (Vancouver), New Zealand and Puerto Rico. In the United States, the beetle has been detected in Washington in 1954 and more recently in the Northeast (Connecticut, Massachusetts, New Jersey, New

York, North Carolina and Rhode Island) (Aphis, 1999; Pasek, 2000).

BIOLOGY. Larvae bore into coniferous trees of the cypress family, Cupressaceae. Major hosts include arborvitae (*Thuja*), juniper (*Juniperus*) and cedar (*Chamaecyparis*). Beetles normally colonize weakened or freshly felled trees. However, in Connecticut, the beetle has been observed completing development in apparently healthy arborvitae (Maier, 2007). *Callidiellum rufipenne* is a univoltine species in native and large part of alien distribution. Nevertheless, bivoltine behavior was recorded by Van Meer & Coquempot (2013) who stated that *C. rufipenne* has some plasticity over the course of its development probably according to climatic criteria. Adults emerge in spring, mate on the bark surface of host trees, and soon begin to oviposit in bark cracks and crevices. Adults apparently do not feed, and typically live for two to three weeks. Eggs hatch in about two weeks and larvae immediately tunnel through the bark and feed in the cambial region. Mature larvae enter the wood in late summer and construct a cell at the end of their galleries in which they pupate. Pupation occurs in autumn, with adults overwintering within the hosts and emerging through oval-shaped exit holes the following spring (Haack, 2017).

REMARKS. Unlike introduction of *C. rufipenne* in France that could be due to expansion from the Spanish populations (Van Meer & Cocquempot, 2013), record of *C. rufipenne* in Bosnia and Herzegovina and Slovenia are probably new cases of introduction caused by import of industrial wood or products manufactured from the Asian continent.

Callidiellum rufipenne generally is considered a secondary pest, primarily infesting weakened or recently dead trees (Shibata, 1994). However, in the eastern United States, *C. rufipenne* occasionally has infested living *Chamaecyparis*, *Juniperus*, and *Thuja* trees and shrubs (Maier & Lemmon, 2000; Maier, 2007) and it was found attacking apparently healthy *Thuja* nursery stock in Connecticut (Maier & Lemmon, 2000). This species has been added to the alert lists of EPPO (European Organization for Plant Protection) in 1999, following the Italian introductions, but it was removed after 5 years due to the absence of damage and its secondary pest character (Van Meer & Cocquempot, 2013).



Figure 1. Female of *Callidiellum rufipenne* from Bosnia and Herzegovina.

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