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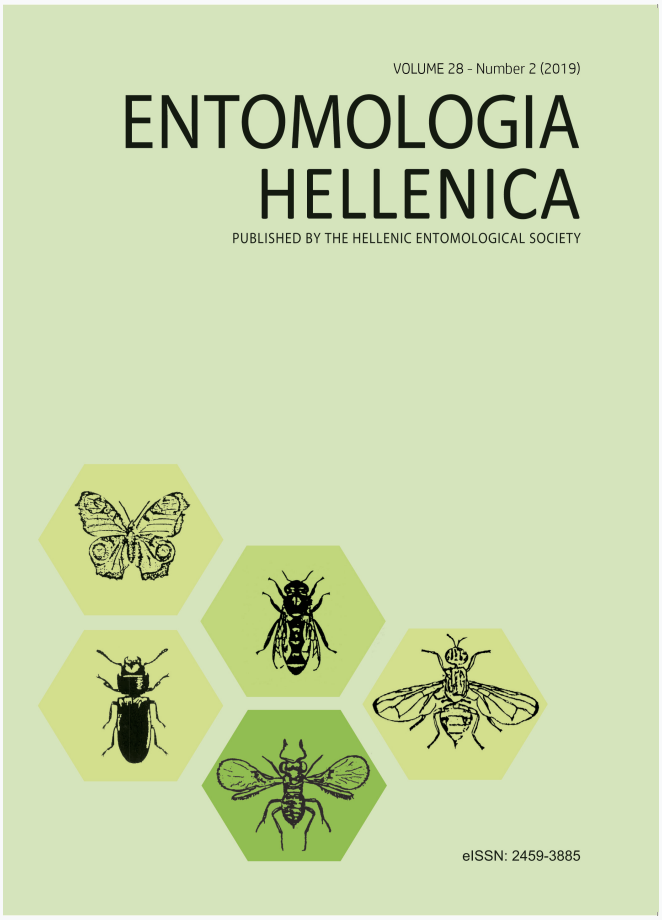

Lampyris pseudozenkeri (Coleoptera, Lampyridae) new species to Greece and Europe

Fabrizio Fanti, Francesco Vitali

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SHORT COMMUNICATION

Lampyris pseudozenkeri (Coleoptera: Lampyridae): a new species to Greece and Europe

F. FANTI[1,*] AND F. VITALI[2]

[1]Via del Tamburino 69, I-53040 Piazze (SI), Italy

[2]7a, rue Jean-Pierre Huberty, L-1742, Luxembourg, Luxembourg

ABSTRACT

Lampyris (*s. str.*) *pseudozenkeri* Geisthardt, 1999, a species closely related to *Lampyris* (*s. str.*) *zenkeri* Germar, 1817 and previously known from the south-western Turkey (Kuşadası, Aydın Province), is newly recorded from Kos Island (Dodecanese, Greece). This is the first record for Greece and Europe.

KEY WORDS: Lampyridae, faunistic, new record, Greece, Kos Island.

Introduction

The family Lampyridae is little studied in Europe, the Near East and North Africa. Only in recent decades, new species have been added for Greece, Turkey and the Caucasus (Geisthardt 1982a, 1982b, 1983a, 1983b, 1985, 1988, 1990, 1999, 2000, Kazantsev 2010). The number of genera and species in this part of Palaearctic is not very high, although some endemic species and / or subspecies inhabit small islands or archipelagos.

The discovery of *Lampyris* (*s. str.*) *pseudozenkeri* Geisthardt, 1999 on Kos Island, which is biogeographically Anatolian but administratively Greek (Heiser and Schmitt 2010, Vitali and Schmitt 2016), allows adding this species to the European fauna for the first time.

Materials and Methods

Greece, Kos Island, Marmari, 14.VII.2012, at the light on a beach, 3 ♂♂, F. Turchetti *leg*., F. Fanti *det*. and coll. (Fig. 1).

FIG. 1. Dorsal view of *Lampyris pseudozenkeri* Geisthardt, 1999 from Kos.

The three specimens are dry preserved in standard 20 x 8 mm labels, the male genitalia and the last urites of a specimen have been extracted, dissected to better see median lobe and parameres (Fig. 2) and glued in the label near to the specimen.

Photographs were taken by the author with a CMOS Camera mounted on a Keyence VHX 6000 digital microscope equipped with a VHX-S660E free-angle observation system, a VH-ZST 20-2000x double zoom objective, 2D/3D image stitching system and stacking system taking 200 images at 2 mil-

**Corresponding author: fantifab@alice.it*

lion pixels of resolution, owned by the National Museum of Natural History of Luxembourg.

FIG. 2. Aedeagus (sectioned) of *Lampyris pseudozenkeri* Geisthardt, 1999. Median lobe (ml), left paramere (lp), right paramere (rp).

Results and Discussion

Lampyris pseudozenkeri Geisthardt, 1999 is probably related to *L. zenkeri* Germar, 1817, from which it differs in the aedeagical shape (both parameres and median lobe) and some important morphological characters, *i.e.*, the opaque pronotum without transparent spots (with two transparent windows in *L. zenkeri*) and with dense punctation, the antennomere II wider and shorter (not always) and the slender scutellum with rounded apex. The female is still unknown (Geisthardt 1999). As other females of the genus, they are apterous or brachypterous and rarer than males, living on the litter, where they recall males with luminous messages. They are neither attracted to light nor collected by traps; therefore, they are more difficult to find.

Geisthardt (1999) described *L. pseudozenkeri* from a single male collected near Kuşadası (Aydın Province, south-western Turkey). Geisthardt (2000) did not record this species from Greece; thus, the specimens from Kos are a new record for Greece. They also increase the number of known specimens, being the first ones after the original description.

While De Cock (2009) and Koçak and Kemal (2015) quoted *L. pseudozenkeri* only for Asian Turkey, Geisthardt and Satô (2007) and Geisthardt (2013) recorded it from the European Turkey. These last records are evidently erroneous since the original description also refers the coordinates (ca. 37°51'N, 27°15'E); consequently, *L. pseudozenkeri* is new for Europe as well.

Actually, the three specimens from Chios that Geisthardt (1985) described (except for the aedeagus) but did not illustrate have characters typical of *L. pseudozenkeri*, such as the prothorax lacking transparent windows and the short antennomere II. Although, Geisthardt (1999) persists in indicating them as "*Lampyris* aff. *zenkeri*", the morphological characters and the extreme proximity of Chios to the Turkish coasts (Fig. 3), especially to the Aydın Province, makes attribute them to *L. pseudozenkeri*. Therefore, this species has been already known, even misidentified, from Greece and Europe, and it shows a distribution wider that it was recorded until today.

The numerous Greek islands of the Aegean Sea and, in particular, those close to the Turkish coasts (Samothrace, Lemnos, Lesbos, Chios, Samos, Kos, Rhodes and the Dodecanese) are little studied both as regards Lampyridae and the "sister group" Cantharidae. Besides various citations of common species (*e.g.*, Wittmer 1935, Kazantsev and Brancucci 2007), some interesting endemic taxa of Cantharidae colonise the Aegean Sea (Pic 1901, Wittmer 1935, Švihla 2002, 2009): *Malthinus schoeni* Švihla, 2002, *Malthinus dimorphus dimorphus* Wittmer, 1935, *Malthodes schatzmayri* Wittmer, 1935

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(Rhodes), *Malthinus gratiosus* Pic, 1901 (Samos), *Malthodes denizlianus lesvosensis* Švihla, 2009 (Lesbos), *Malthodes megesticus* Wittmer, 1935 (Megísti). In addition, the Turkish *Rhagonycha bythinica* Marseul, 1864 was recently found on Lesbos (Geiser 2017).

In contrast, concerning Lampyridae, we can only find *L. pseudozenkeri* (previously cited as *Lampyris* aff. *zenkeri*), *Lampyroidea quadrinotata* Wittmer, 1935, endemic to Megísti (Wittmer 1935), and a record of the Caucasian *Lampyris orientalis* Faldermann, 1835 for Megísti (Wittmer 1935), which Geisthardt (1999) considered evidently incorrect. These records highlight that the Aegean Islands must be better investigated and that they will hold surprises in the future.

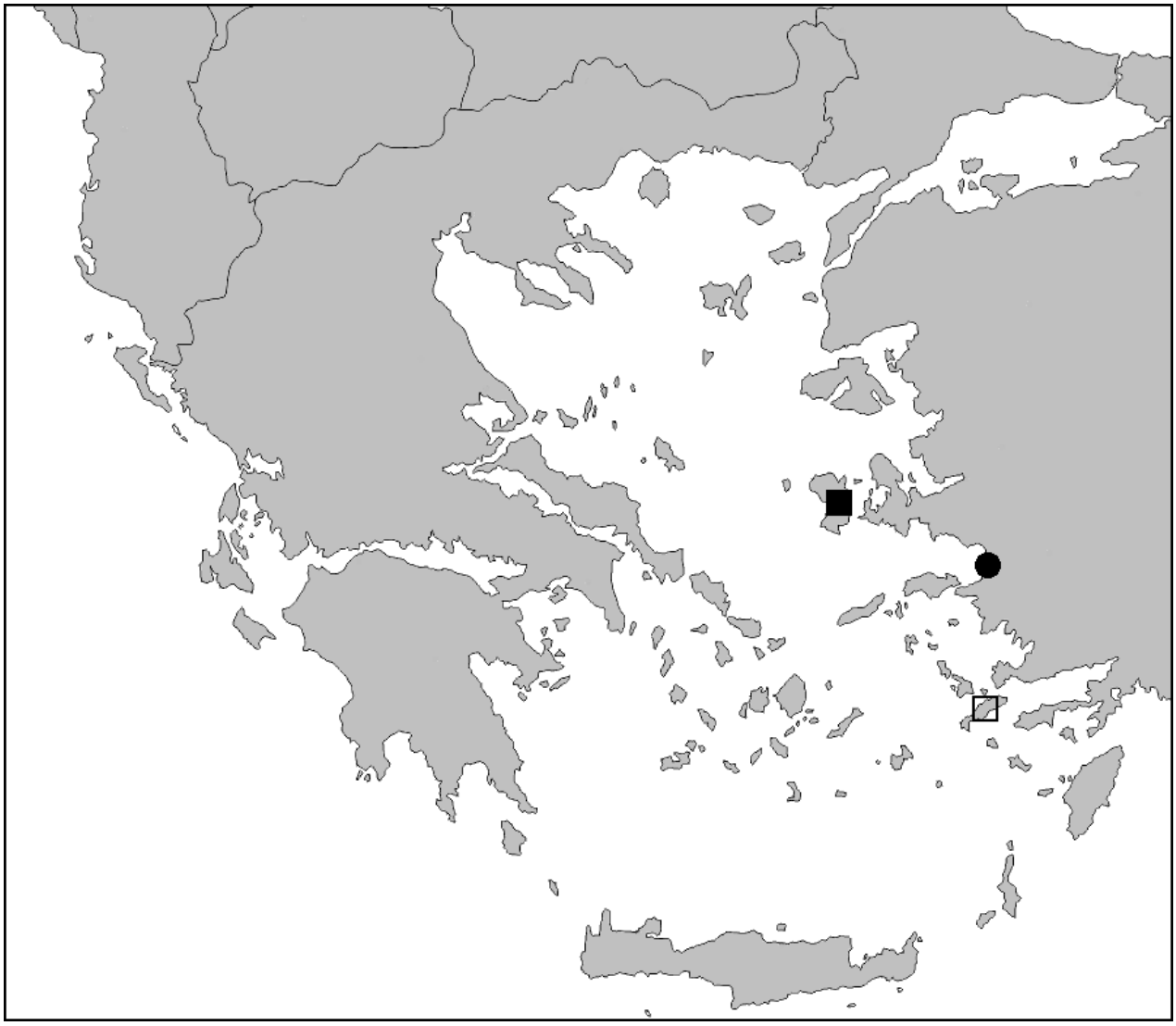

FIG. 3. Map of Greece and West Turkish coasts. Kos Island (transparent square), Chios Island (black square) and Kuşadası (black circle).

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Lampyris pseudozenkeri (Coleoptera: Lampyridae): ένα νέο είδος στην Ελλάδα και την Ευρώπη

F. FANTI[1,*] ΚΑΙ F. VITALI[2]

[1]Via del Tamburino 69, I-53040 Piazze (SI), Italy
[2]7a, rue Jean-Pierre Huberty, L-1742, Luxembourg, Luxembourg

ΠΕΡΙΛΗΨΗ

Το έντομο *Lampyris* (*s. str.*) *pseudozenkeri* Geisthardt, 1999, είναι είδος συγγενές με το *Lampyris* (*s. str.*) *zenkeri* Germar, 1817. Ήταν γνωστή η παρουσία του κατά το παρελθόν στη νοτιοδυτική Τουρκία (Κουσάντασι, επαρχία Αϊδινίου). Πρόσφατα βρέθηκε στη νήσο Κω (Δωδεκάνησα) και αποτελεί την πρώτη καταγραφή του στην Ελλάδα και την Ευρώπη.

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