

The First Description of Male and Female Genital Organs of *Lanelater Persicus* (Candèze, 1874) (Coleoptera: Elateridae)

Lanelater Persicus (Candèze, 1874) (Coleoptera: Elateridae) Türünün Erkek ve Dişi Üreme Organlarının İlk Kez Tanımlanması

Research Article

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ABSTRACT

In this study, male and female genital organs of *L. persicus* are examined for the first time. Stereo-microscope photographs of male and female genitalia were taken. Male genital organ was drawn in detail. Male genital organ and bursa copulatrix part of female genital organ were described in detail and compared with closely related species.

Key Words

Lanelater persicus, male and female genital organs, bursa copulatrix

ÖZET

Bu çalışmada, *L. persicus* türünün erkek ve dişi üreme organları ilk defa incelenmiştir. Erkek ve dişi üreme organlarının stereo-mikroskop ile fotoğrafları çekilmiştir. Erkek üreme organının ayrıntılı çizimi yapılmıştır. Erkek üreme organı ve dişi üreme organının bursa copulatrix kısmı ayrıntılı biçimde betimlenmiş ve yakın türlerle karşılaştırılmıştır.

Anahtar Kelimeler

Lanelater persicus, erkek ve dişi üreme organı, bursa copulatrix

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INTRODUCTION

The genus *Lanelater* is one of the well-known genus of the family Elateridae (Insecta: Coleoptera). It has 32 species [1-3] in Palaearctic region and *L. judaicus* (Reiche & Saulcy 1856) and *L. persicus* (Candèze 1874) distribute in Turkey [4]. *L. persicus* was previously described species by Candèze as *Agrypnus persicus* (1874). It is relatively large-scaled and well known species. According to Cate [2], it distributes in Iran and Turkey. Platia and Akrawi [5] just reported *L. persicus* from Iraq. In spite of its large-scaled body and well-known species its male and female genital organs are not described until now.

MATERIAL AND METHOD

Male and female genital organs of *L. persicus* were pulled out by using standard methods and put in 10-15% KOH solution for clearing, are given. Photographs of *Lanelater persicus* were taken by using Leica MZ-16A stereoscopic microscope system. Specimens are deposited in Hacettepe University Zoological Museum.

RESULTS

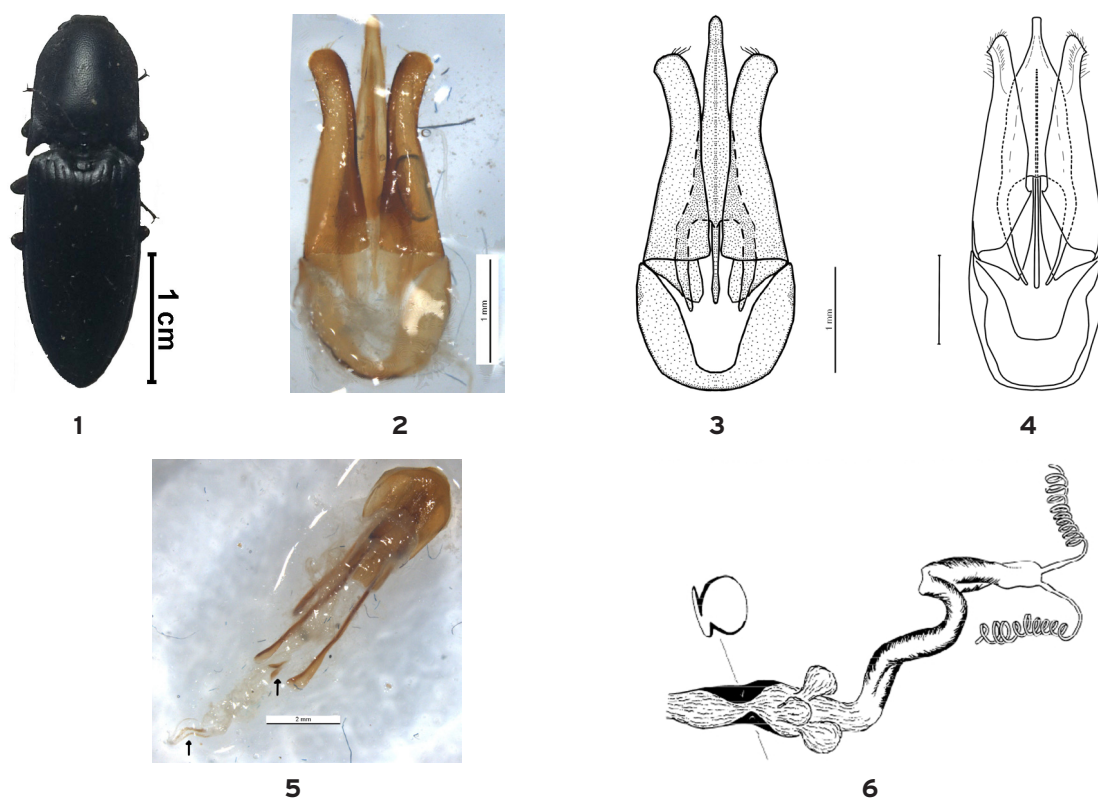
Subfamily: Agrypninae Leach, 1815

Lanelater persicus (Candèze 1874) (Figure 1)

Male genital organ description (Figure 3): Basal piece semi-circular, almost 'V' shapely notched; outer lateral margins of parameres concave, without distalteeth and apex of parameres clearly rounded; median lobe clearly longer than parameres, arms of median lobe short, and horn shaped, median lobe gradually narrowing from arms to proximal, feebly narrowing from proximal to apical, its apex finger shapely rounded, median lobe with thin sclerotized longitudinal line.

Bursa Copulatrix Description (Figure 5): Bursa copulatrix with two small leaf-shaped plates in large part and two rows nail-like spines in thin flagellum-like part.

Locality Records: Erzincan Kemaliye 1 specimen 6.VI.1971 leg. A. Demirsoy; Erzincan Kemaliye 3 specimens 6.VII.2005, Erzincan Kemaliye 3 specimens 10.VII.2005 leg. M. Kabalak; Gaziantep



Figures. 1 - 6. 1. Habitus (*Lanelater persicus*), 2. Habitus of aedeagus (*Lanelater persicus*) (scale = 1 mm), 3. Drawing of aedeagus (*L. persicus*) (scale = 1 mm), 4. Aedeagus drawing of *L. notodonta* (Redrawn from Platia (6)) (scale=0.2 mm), 5. Bursa copulatrix of *L. persicus* (plates and spins are shown with arrows) (scale = 2 mm), 6. Bursa copulatrix (*L. sallei* (Le Conte, 1853))(taken from Spilman (7)).

Şehitkamil Türkyurdu 37°00'33"N 37°37'42"E 703 m 1 specimen 20.I.2008, Hatay Hassa 36°43'20"N 36°30'58"E 304 m 1 specimen 11.VII.2011, Hatay Hassa Ardıçlı 1 specimen 11.VII.11 leg. S. Anlaş; Siirt 1 specimen 13.VII.2009, Diyarbakır Eğil 11 specimens 16.VII.2011, Mardin Mazıdağı 37°30'02,1"N 40°37'13,1"E 948 m 2 specimens 13.IV.2011, Şırnak İdil 37°18'57,8"N 41°42'48,1"E 828 m 1 specimen 13.IV.2011 leg. İ. Özgen.

DISCUSSION

According to comparisons aedeagus of *L. persicus* with *L. notodonta* (Latreille, 1827) (From Europe), *L. punjabensis* Platia et al., 2006 (From Pakistan) and *L. hayekae* Spilman, 1985, *L. sallei* (Le Conte, 1853) and *L. schottii* (LeConte, 1853) (From Nearctic region), aedeagus morphology of *L. persicus* is compatible with morphological characteristics of aedeagus of the genus *Lanelater*. Male genital organ of *L. persicus* is compared with male genital organ of *L. notodonta*, which is not present in Turkey. General morphologies of male genital organs of two species are similar to each other however those are clearly separated by various characters, which are shape of median lobe and apical parts of parameres (Figures 2, 3 and 4).

Bursa copulatrix morphology of *Lanelater persicus* is compared with *L. sallei*'s. Plates and spines of bursa copulatrix of *L. persicus* are smaller and less distributed with respect to bursa copulatrix of *L. sallei* (Figures 5 and 6).

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