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Rediscovery of *Cryptocephalus* (*Heterichnus*) *loebli* (Coleoptera: Chrysomelidae: Crytocephalinae), A Poorly Known Species from Turkey

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ABSTRACT

Cryptocephalus (*Heterichnus*) *loebli* Sassi, 1997 is a poorly known species which was collected from north-western part of Turkey and described based on only two specimens. In the present study, the first additional descriptive information about this species is given since its description. Recently, two male specimens were collected from Amasya province which is far from the type locality. The species is redescribed on the basis of the collected male specimens. Habitus and genital features are illustrated. A map showing the previous and new distribution localities of the species is provided. The nomenclatural history and current status of the subgenus *Heterichnus* Warchałowski, 1991 are reviewed.

Key words: Coleoptera, Chrysomelidae, *Cryptocephalus loebli*, *Heterichnus*, redescription, taxonomy, Turkey.

INTRODUCTION

Cryptocephalus loebli Sassi, 1997 is a member of the subgenus *Heterichnus* Warchałowski, 1991. This subgenus is well distinguished from other subgenera of *Cryptocephalus* Geoffroy, 1762 by the combination of following characters: head black, generally with a small yellow spot along inner margins of each eye; pronotum usually black; male fore legs always elongate, tarsomeres more or less flattened, prolonged or asymmetrical; opening of aedeagus situated apically, apex of aedeagus prolonged into two well developed apical processes (Warchałowski, 2003). In the West Palaearctic Region, the subgenus *Heterichnus* is represented by 17 species and mostly distributed in southern Europe (i.e. Iberian Peninsula, France and Italy). Two species of this subgenus are also known from Turkey: *Cryptocephalus prusias* Suffrian, 1853 and *C. loebli* (Sassi & Kısmalı, 2000; Warchałowski, 2003).

Cryptocephalus loebli was described by Sassi (1997) based on only two specimens (one male holotype and one female paratype) that are deposited in the Museum of Natural History in Geneva. These specimens were collected by C. Besuchet and I. Löbl in Bolu (Abant) province of Turkey in 1976. Another two specimens were collected

subsequently, one at the type locality in 1991 and another near the type locality in Zonguldak (Safranbolu) in 1996 (Sassi & Kısmalı, 2000). However, these subsequent specimens were only faunistic records. As far as it is known, no further material of *C. loebli* has been collected. Consequently, it remains as a rare species.

During faunistic surveys on the Tenebrionidae of Turkey conducted by M. Nabozhenko (Murmansk Marine Biological Institute, Russian Academy of Sciences, Southern Scientific Centre RAS, Russia) and B. Keskin (Ege University, İzmir) in 2009, beetles were collected in large numbers which also included specimens of leaf beetles. Then, these leaf beetles were sent to us for examination. During the examination, we noticed a conspicuous *Cryptocephalus* species among them. The examination of the samples led us to the conclusion that this species is *C. loebli*. So, in the present study, we had the opportunity to re-examine this rare species. Herein, we provide new data about distribution of *C. loebli* which is an endemic species to Turkey. We also present photographs of its morphological and genital features.

MATERIAL AND METHODS

This study is based on two male specimens collected from Amasya province by M. Nabozhenko (Russia) and B. Keskin (Turkey). Habitus and genital features were photographed with Camedia C-5060 digital camera attached to an Olympus SZX-12 stereomicroscope. Specimens are deposited in the personal collection of Ali GÖK, located at the Department of Biology, Faculty of Art and Sciences, Süleyman Demirel University.

RESULTS

Cryptocephalus (*Heterichnus*) *loebli* Sassi, 1997

Material examined. NW Turkey: Amasya province: Ormanözü (40°46.24'N, 35°53.42'E) 1671 m, 2.vi.2009, 1 ♂, M. Nabozhenko leg.; the same locality (40°45.46'N, 35°50.82'E) 1198 m, 3.vi.2009, 1 ♂, B. Keskin leg.

Redescription of the male. Total body length 7.91mm.

Head. Black, with exception of a small yellow spot at upper margin of eyes; frons slightly depressed in middle, coarsely punctured, with two distinct tubercles above the antennal sockets; frons and clypeus covered with sparse, short and whitish hair; mandibles and maxillary palpi black, with short whitish hairs; the first three antennomeres partly yellow, other parts dark reddish brown, the remaining segments completely black; the first segment distinctly wider than the others, second segment 2.8 times shorter than third and subglobose at apex, antennal segment ratios: 54 : 17 : 48 : 54 : 67 : 67 : 67 : 67 : 51 : 51 : 11th antenomere in both specimens missing.

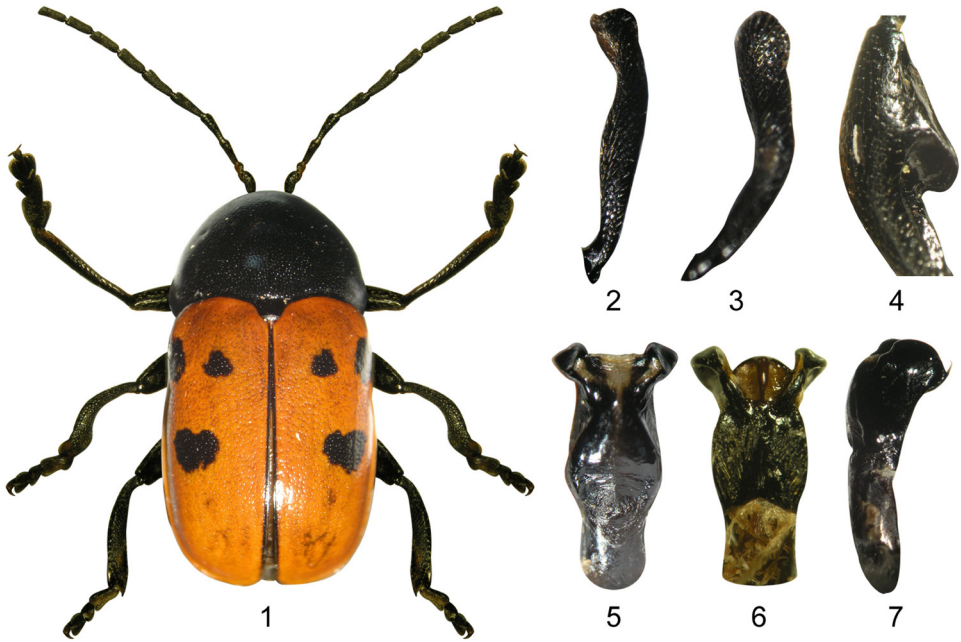
Pronotum. Completely black; strongly convex in dorsal view, at base 1.53 times wider than its length and gradually narrowing towards both anterior and basal margin; lateral margins strongly arcuate, fairly narrow, simultaneously visible in dorsal view (Fig. 1); surface glabrous, very densely and distinctly punctured; punctures subequal in size; background micropunctured.

Scutellum. Black; obtusely triangular, apically truncate, almost as long as its width; glabrous; finely and sparsely covered with small punctures.

Elytra. The surface of elytra reddish, basal margin and elytral suture with a black thin stripe, each elytron with three black spots: two post humeral and one transverse postmedian; nearly two times as long as width; almost parallel-sided, slightly broadened toward apex, widest in the middle; lateral margins widened, visible up to humera in dorsal view; humeral calli well developed (Fig. 1); elytral surface glabrous; covered with small, dense and irregular punctures.

Venter. Ventral parts completely black, covered with long and sparse hair, coxa of fore legs with dense hair; legs completely black, with short hair, protibia curved, bisinuated on inner side, with a shallow, smooth and glabrous depression on inner face of apex (Fig. 2); mesotibia strongly curved, barely broadened distally (Fig. 3), metafemora with large, obtuse, conspicuous denticle on outer rim, bordering an arcuate notch (Fig. 4); first tarsal segment of fore legs symmetrical and fairly broadened; anal sternite with a large, glabrous, distinctly lustrous depression.

Aedeagus with two characteristically well developed apical processes; distinctly swollen at median, surface barely smooth; ventral surface densely feathered (Fig. 5-7).



Figs. 1-7. *Cryptocephalus* (*Heterichnus*) *loebli* Sassi, 1997. 1- habitus; 2 - fore tibia of male; 3 - mesotibia of male; 4 - metafemur of male; 5-7 - aedeagus; dorsal, ventral and lateral view.

DISCUSSION

Cryptocephalus loebli was first described in the subgenus *Homalopus* Chevrolat, 1837 by Sassi (1997). Beforehand, Warchałowski (1991) re-established subgenus

Homalopus and included subgenera *Cryptodontus* Burlini, 1969 and *Heterodactylus* Medvedev, 1963. He also proposed to replace the subgeneric name *Heterodactylus* with *Heterichnus* since, *Heterodactylus* Medvedev, 1963 was homonym with reptilian genus *Heterodactylus* Spix, 1825. Thus, the name *Heterichnus* became a junior synonym of *Homalopus* Chevrolat, 1837. Later, Petitpierre (2000) figured out that *Homalopus* Chevrolat, 1837 was homonym with the Tenebrionid subgenus *Homalopus* Solier, 1837 which was a few months older. Also, *Cryptodontus* Burlini, 1969 was preoccupied by *Cryptodontus* Mulsant & Rey, 1865, which is a subgenus of *Psacasta* Germar, 1839 (Heteroptera: Scutelleridae). Consequently, the subgeneric name *Heterichnus* became obligatory as the unique valid name and in Warchałowski (2003), *C. loebli* and its congeners were placed in the subgenus *Heterichnus*.

Cryptocephalus loebli was described in detail by Sassi (1997). The external characters of our samples correspond with the original description which is given by Sassi (1997).

The distributional area of *C. loebli* was known from its type locality and Zonguldak (Safranbolu) province close to type locality. Recently, two male specimens are collected from Amasya province which is situated in Middle Black Sea Region of Turkey (Fig. 8). The specimens examined here present a new distribution record for *C. loebli*, which is approximately 400 km far east from the type locality. Rediscovery of the species in Amasya province considerably enlarges the distributional area and may be a signal of extension to the Middle and East Black Sea Region. However, additional distribution records from other provinces of Western Black Sea Region of Turkey are questionable.

Neither the samples in the original description nor those in this study are collected by authors. Therefore, nothing is known about the habitat and host plant preference of *C. loebli* so far. Further studies are needed to determine habitat and host plant associations of the species. Consequently, we strongly recommend surveying carefully to obtain the overall information about the ecology of this species.

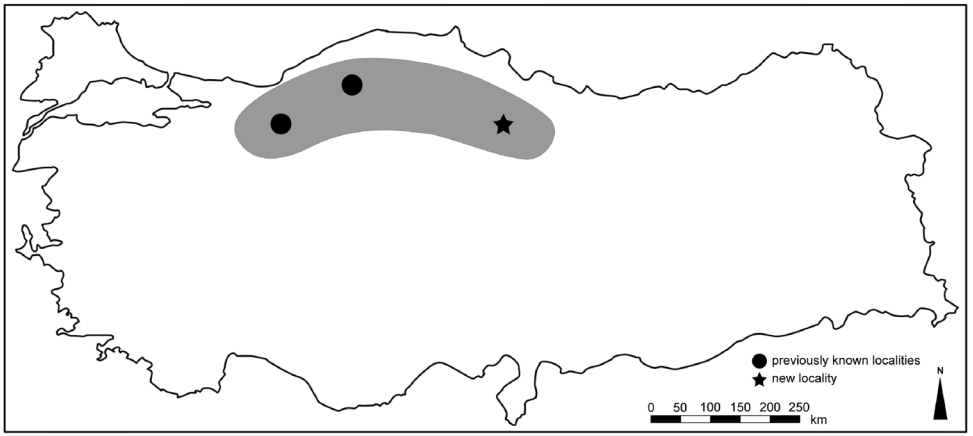


Fig. 8. Map showing the previous and new distribution localities of *Cryptocephalus* (*Heterichnus*) *loebli* Sassi, 1997.

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