

First Records of Two Wasp Species, *Diodontus major* Kohl, 1901 and *Parapiagetia tridentata* Tsuneki, 1972 (Hymenoptera: Crabronidae), in Turkey

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Abstract: Two species of the family Crabronidae (Hymenoptera), *Diodontus major* Kohl, 1901 and *Parapiagetia tridentata* Tsuneki, 1972, are recorded for the first time from Turkey. Specimens were collected from the upper section of the Kelkit River Basin, in the inland areas of the Black Sea region (northern Turkey). The study contributed to the knowledge of the distribution ranges of this species.

Key words: Crabronidae, *Diodontus major*, *Parapiagetia tridentata*, Turkey, new records

Introduction

The family Crabronidae is represented by 525 species in Turkey (STRAKA 2016, YILDIRIM et al. 2016). The family is one of the best-studied insect groups in the country in recent times. However, most of these studies do not cover the whole country and there are still unexplored regions. In fact the real number of species is estimated to be higher. (ÇUBUK & GÜLMEZ 2013, SCHMID-EGGER 2014, YILDIRIM et al. 2016, STRAKA 2016).

Diodontus major Kohl, 1901 (tribe Pemphredonini) is essentially known from Europe and also from Mongolia (the latter record is doubtful, see PULAWSKI 2018). *Parapiagetia tridentata* Tsuneki, 1972 (tribe Larrini) is distributed in a wide area in Asia, recorded from Iran and south Russia to the west of the Caspian Sea. Though both species have been recorded from the neighbouring countries, the present study reports the first records of *D. major* and *P. tridentata* from Turkey.

Materials and Methods

Adult wasps were collected from their natural habitats at the districts of Sivas located in the upper part of the

valley of the Kelkit River in 2015 by an insect net. The Kelkit Valley is located between the middle and east of the Black Sea Region of Turkey. It is surrounded by mountains and has an elevation ranging from 250 to 1700 m a.s.l.. Being under the influence of different climates, the region has very rich plant diversity and therefore has many habitats that are suitable for insects (KARAER & KILINÇ 2001). Identification of specimens was done using Leica S6E stereomicroscope following BOHART & MENKE (1976), PULAWSKI (1977), BITSCH et al. (2007), OLSZEWSKI et al. (2016). A total of 18 specimens were examined and deposited in the Entomology Research Laboratory, in the Gaziosmanpaşa University, Tokat, Turkey.

Results

Parapiagetia tridentata Tsuneki, 1972

Material Examined: Sivas, Gölova, Çobanlı Village (N40°00'54", E38°35'05"), 1285 m a.s.l., 18.07.2015, 1 male, 1 female; 17.09.2015, 15 females.

Distribution: China, Iran, Kazakhstan, Mongolia, Pakistan, Russia, Tajikistan, Turkmenistan, Uzbekistan (PULAWSKI 1977, 2018).

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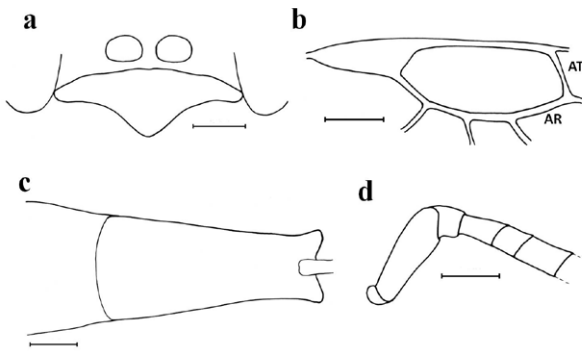


Fig. 1. *Parapiagetia tridentata* Tsuneki, 1972 male a) Male clypeus; b) Marginal cell of male (AR: apical abscissa of radial sector, AT: apical truncation of marginal cell); c) Tergum I of male; d) Basal flagellomeres (Scale bar= 0.2 mm).

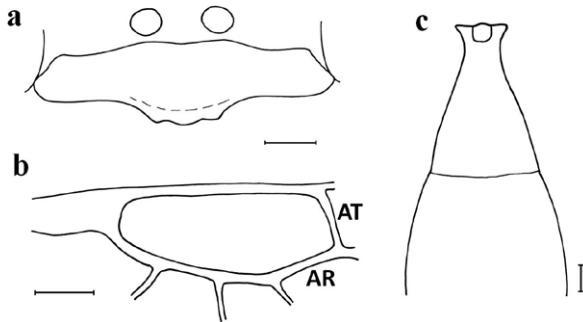


Fig. 2. *Parapiagetia tridentata* Tsuneki, 1972 female a) Female clypeus; b) Marginal cell of female (AR: apical abscissa of radial sector, AT: apical truncation of marginal cell); c) Tergum I of female (Scale bar= 0.2 mm).

Remarks: *Parapiagetia tridentata* belongs to the *odontosoma* species group (PULAWSKI 1977). The morphological characteristics of our specimens are consistent with those described by PULAWSKI (1977) except the first flagellomere of the male which is slightly shorter (1.4 x longer than the apical width). Two species of the genus, *Parapiagetia genicularis* (F. Morawitz, 1890) and *P. goeksuensis* Schmid-Egger, 2014 have been previously recorded from Turkey (PULAWSKI 2018). The male of the latter is unknown. Females of *P. tridentata* differs from those of *P. goeksuensis* by having three teeth on clypeus free margin (straight in *P. goeksuensis*) and shorter first tergum. *Parapiagetia tridentata* has a shorter marginal cell than *P. genicularis* and scutum crenulated before hind margin. The first abdominal tergum of the male of *P. tridentata* is 2.1 times longer than apical width; in *P. genicularis*, it is as long as its apical width.

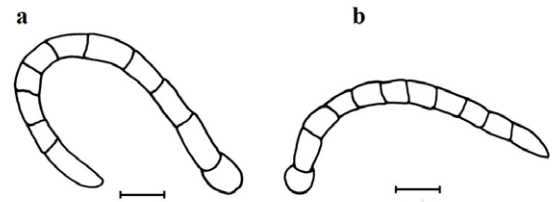


Fig. 3. Antennae of *Diodontus*, a) *D. major* female; b) *D. minutus* female (Scale bar= 0.2 mm)

***Diodontus major* Kohl, 1901**

Material examined: Sivas, Akıncılar, Şenbağlar Village (N40°03'34", E38°23'48"), 1095 m a.s.l., 18.07.2015, 1 female.

Distribution: Austria, Germany, Croatia, Ukraine, Slovakia, Hungary, Bulgaria, Mongolia, Russia, Czech Republic, Poland (PULAWSKI 2018).

Remarks: Six species belonging to the genus *Diodontus* are known from Turkey (YILDIRIM et al. 2014). *Diodontus major* is distinguished from other species, which have yellow mandibles (*minor* and *brevilabris*), by the larger body (7-7.5 mm) and longer 3rd antennal segment (BITSCH et al. 2007).

Discussion

Turkey harbours most of the Asian and European species due to its geographical position and climate diversity. New studies like the present one are likely to increase the number of wasp species recorded in Turkey and to support the idea that there are still undiscovered species in this country. The number of species belonging to the Crabronidae family in Turkey is reached to 527 with the present two records. *Diodontus major* Kohl, 1901 was first described in Austria and later recorded from most parts of Europe and South Russia. The only record from Mongolia (ssp. *gobiensis*) other than Europe is evaluated as suspicious (!) (PULAWSKI, 2018). The species was first time recorded from Turkey with the present study, which comprises the southernmost point of its distribution area for now.

Parapiagetia tridentata Tsuneki, 1972 is currently distributed through the Central Asia and Far East (PULAWSKI, 2018). It has been recorded only from Iran and South Russia in the Western Palearctic region. The present study determines the westernmost distribution point of the species in the Palearctic.

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Received: 11.11.2016

Accepted: 29.01.2017

