FOLIA ENTOMOLOGICA HUNGARICA
ROVARTANI KÖZLEMÉNYEK
Volume 80 2019 pp. 9–12

Philhammus in Iran (Coleoptera: Tenebrionidae: Pimeliinae)

Hiva NASSERZADEH[1], Ottó MERKL[2]* & Samira KHODAYARI[3]

[1] *Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection, Evin/Tabnak St., 19395-1454, Tehran, Iran. E-mail: h_naserzadeh@yahoo.com*
[2] *Hungarian Natural History Museum, Department of Zoology, H-1088 Budapest, Baross utca 13, Hungary. E-mail: merkl.otto@nhmus.hu*
[3] *Faculty of Agriculture, University of Maragheh, 83111-55181, Maragheh, Azarbaijan-e Sharghi, Iran. E-mail: khodayari@maragheh.ac.ir*

Abstract – *Philhammus aharonii* (Reitter, 1910) is recorded from Iran for the first time. Photographs of habitus and aedeagus are provided. A key to the two *Philhammus* Fairmaire, 1871 species of Iran is given. With 3 figures.

Keywords – *Philhammus aharonii, Philhammus myrmecophilus*, new record, identification key

INTRODUCTION

The Tenebrionidae fauna of Iran is estimated to contain approximately 145 genera and 540 described species and subspecies (GRIMM 2015). The genus *Philhammus* Fairmaire, 1871 (Pimeliinae, Cnemeplatiini; syn. *Psilachnopus* Reitter, 1901; see LÖBL & SMETANA 2010, p. 30) is a small genus consisting of two subgenera (*Philhammus* s. str. and *Philhamellus* Kaszab, 1962) and eleven known species of the Old World (LÖBL *et al*. 2008, SCHAWALLER *et al*. 2014, SCHAWALLER & STEINER 2018). Until now, only one species, *Ph. myrmecophilus* Kaszab, 1960 was mentioned from Iran (LÖBL *et al*. 2008, SCHAWALLER *et al*. 2014).

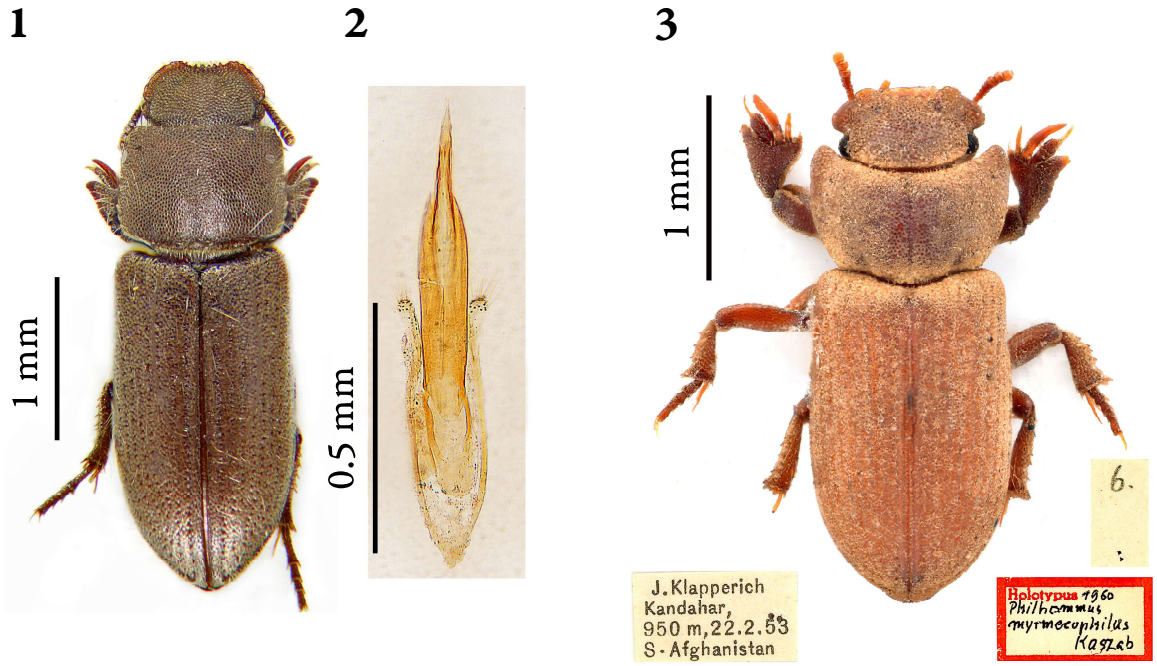
Philhammus contains four strictly Afrotropical species (*Ph. ambouli* Schawaller et Steiner, 2018, *Ph. brincki* Ferrer, 1995, *Ph. ferenczi* Kaszab, 1967, and *Ph. tschadensis* Kaszab, 1967) distributed from Chad and Djibouti to South Africa (FERRER 1995, KASZAB 1967, SCHAWALLER & STEINER 2018). Four species occur in the inner parts of Asia (*Ph. leei* Kaszab, 1962, *Ph. myrmecophilus*, *Ph. tadshikistanicus* Medvedev, 1991, and *Ph. zaitzevi* Medvedev, 1979),

*Corresponding author.

from Iran and Turkmenistan to China (Xinjiang) (Kaszab 1967, Schawaller *et al.* 2014). One species, *Ph. cribratellus* (Reitter, 1901) is a Transcaucasian endemism known from southernmost Armenia (Meghri Municipality) and southernmost Nakchivan Autonomous Republic (Ordubad, the type locality) (Abdurakhmanov & Nabozhenko 2011). The remaining two species, *Ph. aharonii* (Reitter, 1910) and *Ph. sericans* Fairmaire, 1871, are distributed from the Canary Islands through Spain and North Africa to the Middle East (Ferrer *et al.* 2009, Schawaller *et al.* 2014). *Ph. aharonii* is here recorded from Iran for the first time.

MATERIAL EXAMINED

The first record of *Philhammus aharonii* (Fig. 1) from Iran is based on 31 specimens collected from bean farms near Maragheh (37.39°N, 46.24°E). It is a city with more than 1400-meter elevation in the southern slope of Sahand mountain in Azarbaijan-e Sharghi (East Azarbaijan) province, northwestern Iran. The specimens are labelled as follows: "IRAN, Azarbaijan-e Sharghi province, Maragheh, 23.VI.2014, leg. S. Khodayari". They are stored in the Hayk Mirzayans Insect Museum, Iranian Research Institute of Plant Protection, Tehran, Iran (HMIM), and in the Hungarian Natural History Museum, Budapest, Hungary (HNHM). A figure of the aedeagus of *Ph. aharonii* is presented for the first time here (Fig. 2).



Figs 1–3. *Philhammus* species: 1 = *Ph. aharonii* (Reitter, 1910), habitus, dorsal view, 2 = same, aedeagus (photos by Hiva Nasserzadeh), 3 = *Ph. myrmecophilus* Kaszab, 1960, holotype, habitus and labels (photo by Tamás Németh), from Merkl *et al.* (2015), modified (© HNHM)

DISCUSSION

Philhammus aharonii was recorded from the Canary Islands, Morocco, Egypt, Israel, Jordan, Syria, Saudi Arabia, and Sudan (Darfur, Khartoum) (Löbl *et al.* 2008, Schawaller *et al.* 2014). The exact occurrence of the other species, *Ph. myrmecophilus* Kaszab, 1962 in Iran is unclear. The species was described on the basis of a single specimen (Fig. 3) from Afghanistan (Kandahar), deposited in the HNHM. The country code IN (= Iran) is given for this species in the Catalogue of Palaearctic Coleoptera (Löbl *et al.* 2008), and Iran is mentioned by Schawaller *et al.* (2014), also without closer locality. The source of this information is unknown for the authors. No published details were found about the Iranian record(s) of the species. It is possible that the Iranian occurrence was included in these works on the basis of unpublished collection specimens. According to Wolfgang Schawaller (e-mail letter, 22 July 2019) and Jiří Hájek (e-mail letter, 13 August 2019), the State Museum of Natural History Stuttgart, Germany and the National Museum, Natural History Museum, Prague, Czechia, respectively, have no Iranian specimens of *Ph. myrmecophilus*.

The two Iranian species can be identified with the help of the following key.

1(2) Pronotum parallel-sided, ca 1.3× as wide as long in middle, with anterior corners widely rounded, not projecting. Head without transverse occipital carina in front of anterior edge of pronotum. Genae not extending beyond outer margin of eyes. Elytra ca 2× as long as their combined width. Body length 2.5–3.3 mm ..... *Philhammus (Philhammus) aharonii* (Reitter, 1910) (Fig. 1)

2(1) Pronotum considerably widening anteriorly, ca 1.9× as wide as long in middle, with anterior corners obtusely acute-angled, strongly projecting. Head with transverse occipital carina in front of anterior edge of pronotum. Genae extending far beyond outer margin of eyes. Elytra ca 1.6× as long as their combined width. Body length 2.8 mm ..... *Philhammus (Philhamellus) myrmecophilus* Kaszab, 1962 (Fig. 3)

*

Acknowledgements – Our thanks go to the HNHM for granting permission to use the picture of holotype of *Philhammus myrmecophilus* Kaszab, 1960 for this paper.

REFERENCES

Abdurakhmanov G. M. & Nabozhenko M. B. 2011: *Opredelitel' i katalog Zhukov-chernotelok (Coleoptera: Tenebrionidae s. str.) Kavkaza i yuga evropeyskoy chasty Rossii. [Keys and catalogue of darkling beetles (Coleoptera: Tenebrionidae s. str.) of the Caucasus and South of European part of Russia.].* – KMK Scientific Press Ltd, Moscow, 361 pp.

Ferrer J. 1995: Philhammus (s. str.) brincki, n. sp. from South Africa (Coleoptera, Tenebrionidae). – *Nouvelle Revue d'Entomologie (N.S.)* **12**: 145–148.

Ferrer J., Castro Tovar A. & Lencina Gutiérrez J. L. 2009: Comentarios sobre Cnemeplatiini Jacquelin du Val, 1861 (Coleoptera, Tenebrionidae) de la Península Ibérica e Islas Canarias. – *Graellsia* **65**: 133–144. https://doi.org/10.3989/graellsia.2009.v65.i2.146

Grimm R. 2015: Tenebrionidae (Insecta: Coleoptera) from Iran. – *VERNATE* **34**: 299–318.

Kaszab Z. 1967: Die Arten der Gattung Philhammus Fairm. (Coleoptera, Tenebrionidae). – *Annales historico-naturales Musei nationalis hungarici* **59**: 291–296.

Löbl I., Merkl O., Ando K., Bouchard P., Lillig M., Masumoto K., Schawaller W. & Soldati F. 2008: Tenebrionidae. – In: Löbl I. & Smetana A. (eds): *Catalogue of Palaearctic Coleoptera, Vol. 5. Tenebrionoidea.* Apollo Books, Stenstrup, pp. 105–352. https://doi.org/10.1163/9789004260900_011

Löbl I. & Smetana A. (eds) 2010: Errata for Volume 5. – In: Löbl I. & Smetana A. (eds): *Catalogue of Palaearctic Coleoptera, Vol. 10. Chrysomeloidea.* Apollo Books, Stenstrup, pp. 29–36. https://doi.org/10.1163/9789004260917_002

Merkl O., Grabant A. & Soltész Z. 2015: *A Magyar Természettudományi Múzeum gyászbogártípusainak (Tenebrionidae) katalógusa. [Type catalogue of darkling beetles (Tenebrionidae) preserved in the Hungarian Natural History Museum.].* – Magyar Természettudományi Múzeum, Budapest, 735 pp.

Schawaller W., Al Dhafer H. M. & Elgharbawy A. A. 2014: The genera Philhammus and Cnemeplatia (Coleoptera: Tenebrionidae: Cnemeplatiini) in the Arabian Peninsula, with taxonomic and faunistic remarks on additional species. – *Zoology in the Middle East* **60**: 246–250. https://doi.org/10.1080/09397140.2014.943463

Schawaller W. & Steiner W. E. Jr. 2018: Philhammus ambouli Schawaller and Steiner (Coleoptera: Tenebrionidae: Cnemeplatiini), new species from Djibouti. – *The Coleopterists Bulletin* **72**(1): 129–133. https://doi.org/10.1649/0010-065X-72.1.129