



Amorphocephala Excantator Damoiseau, 1964, a New Weevil Record from Pakistan (Coleoptera: Curculionoidea: Brentidae)

Zahid Hussain Dahar¹, Zubair Ahmed²(Corresponding Author), Zarina Ali³

¹ Scholar, Department of Zoology, Federal Urdu University of Arts, Sciences & Technology Karachi, Email: zbrahmed36@gmail.com

² Associate Professor, Zoology, Federal Urdu University of Arts, Sciences & Technology Karachi Pakistan. Email: zbrahmed36@gmail.com

³ Professor, Department of Botany, Federal Urdu University of Arts, Sciences & Technology Karachi, Email: zarinaali2006@gmail.com

Abstract

This study documents the first recorded instance of an *Amorphocephala excantator* in Pakistan. The paper provides an illustrated description of the species habitus and discusses its distribution within the region. Previously unreported in Pakistan, this discovery marks the country's second known species of the Brentidae family, specifically from the village of Noor Muhammad Dahar in District Ghotki, Sindh Province. The habitat is noted to overlap with the Punjab region, suggesting potential for additional species within this transitional zone. This research contributes to the growing catalogue of weevil species in Pakistan and enhances understanding of Brentidae distribution in South Asia. Four species of the genus *Amorphocephala* extend Middle East to Central Europe and some states of Russia. These are *A. coronata* (Germar), *A. excantator* (Damoiseau), *A. piochardi* (Bedel) and *A. sulcata* (Calabresi). The association of present species with crops will make status as a pest in future because that area with remote conditions therefore due to this reason no one takes information for such species as well as other insect diversity. The discovery of this species becomes as first in the Oriental region.

Keywords: Coleoptera, Curculionoidea, Brentidae, new record, distribution

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Inroduction

The family Brentidae is a small group of straight-snouted weevils, comprising about 1800 species (sforzi & Bartolozzi 2004; sforzi et al. 2014). These are found in tropical and subtropical regions. Orbach (2020) described Brentidae of Israel where he keyed out six species of Brentidae and four species of *Amorphocephala* listed with illustrations, including *A. excantator*. Orbach and Belbas (2023) reported two species of *Amorphocephala* from Iraq for the first time with distribution and key to the species with an illustration of habitus. In Pakistan, no species of this genus exist (Hashmi & Tashfeen, 1992). Ahmed and Legalov (2015) listed 331 species of weevils from the territory of Pakistan and listed one species of Brentidae *Aplemonus arabicus* from Sindh Province, as a new record. They also listed *Amorphocephala delicata* Kleine from Pakistan but it was based on literature. Zarazaga et al., (2017) listed ten species of *Amorphocephala*, with present species from Jordan and one species *A. delicata* listed from Pakistan. Orbach (2020) compared the *A. excantator* to other sibling species from the surroundings of Israel and he reached the result that the *A. excantator* is not only found in Jordan but also in Israel. We used the key of the species of *Amorphocephala* by Orbach (2020) and followed the characters of *A. excantator* as mesorostral plate wider than long; antennomeres 4-8 subquadrate, is identified.

The members of the present species with three more from Israel exhibit distinct sexual dimorphism having males with rostrum broad and well-developed mandibles while slender and pince-like mandibles in females. Most species feed on fungi and xylem sap from dead plants. Sautiere et al., (2012) studied the distribution of *A. coronata* in two different localities of Ardech (Rhone-Alpes) and despite unknown biology due to the great rarity of

that species, however, observed that this species is myrmecophilia and reciprocal exchange of food between ants and Brentids.

The status of Brentidae changes as characters develop phylogenetically and reach some subfamilies within it in the sense of long trochanter and short trochanter (Alonso-Zarazaga et al. 2017; Bouchard et al. 2011; Oberprieler et al. 2007; Oberprieler 2014), supported to molecular study (Gunter et al. 2015; McKenna et al. 2009; Winter et al. 2017).

Results and Discussion

The species was deposited in the Zoological Museum FUUAST, Karachi Pakistan. The specimen from village Noor Mohammad, Ubauro confined to small bushes surrounding crops during daytime searching by hand picking method. Photographs were made with a Nikon camera model D-7000 and an AF-S Micro Lens 60mm f/2.8. The area of confined species contains not only cultivated fields but also some distantly away desert so a mixture of these habitats grows the population of this species.

The present species is the second species of Brentidae from the village Noor Muhammad Dahar, Ubauro, District Ghotki, Sindh Province, Pakistan. Most of the members of this genus are associated with ants (Schedll, KE, 1961). The insect fauna of Pakistan is entirely neglected therefore unexpected species could be present after precisely searching for insects. The habitat overlapped with the Punjab belt and there could be more possible species in Brentidae from this transition belt. This species was recorded in Jordan (Zarazaga et al., 2017). New record.

Conclusion

The unique geographic and climatic conditions in Pakistan have driven speciation within the *Amorphocephala* genus, resulting in species that share visual

similarities yet remain distinct. The arid desert regions of Sindh Province, along with its cultivated fields, create a suitable habitat for *Amorphocephala* species. The region's geographical factors—particularly the altitudinal and latitudinal differences—drive diversity in species morphology, contributing to the observable differences in their physical appearance. These environmental gradients have likely influenced variations in body structure, size, and colouration among the species in Oriental and Palaearctic regions. This study underscores the need for ongoing exploration and documentation within this genus.

This study is the part of BS project of the first author.

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Figure 1: *Amorphocephala excavator* female A) habitus B) head and antenna

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