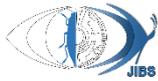


Original Article 

Global distribution of the genus *Diomus* Mulsant (Coleoptera: Coccinellidae), with new findings from the Middle East

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ABSTRACT. A comprehensive worldwide list of 425 species of the ladybird genus *Diomus* Mulsant, 1850, is provided, together with the number of countries occupied by each species in the major biogeographical regions. Thirteen of the species formally assigned to the genus must be confirmed. Also, records of *Diomus* species occurring in the Middle East are documented, and the genus *Diomus* is reported from Oman for the first time, based on a female specimen of an undetermined species. Findings exclude previous reports of *D. rubidus* (Motschulsky, 1837) from Turkey and *D. anemicus* Fürsch, 1960 from Palestine. We provide a distribution map of *Diomus* species in the Middle East and present morphological and morphometric characters based on light and electron microscopy. Finally, we propose the replacement name *Diomus stajerovae* González & Větrovec, **nom. nov.**, for *D. panamensis* González & Větrovec, 2021, which is a junior homonym of *D. panamensis* Gorham, 1897.

KEYWORDS: Checklist, Ladybird beetles, Biogeography, New record, Junior homonym, New name

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INTRODUCTION

The genus *Diomus* Mulsant, 1850, comprises small, pubescent predaceous beetles and has undergone several nomenclatural revisions since its original description. The type species is *Coccinella thoracica* Fabricius, 1801. Initially classified as a subgenus of *Scymnus* Kugelann, 1794 by Mulsant (1850), *Diomus* was first recognized as an independent genus by Weise (1895), followed by Chapin (1933), Pang & Gordon (1986), Gordon (1976, 1999), while some continued to consider it as a subgenus of *Scymnus* until well into the 20th century (Gorham 1897, Casey 1889, Korschefsky 1931), or as a synonym of *Nephus* Mulsant, 1846 (Iablokoff-Khnzorian 1976). In 1999, Gordon established the tribe Diomini to separate its members from Scymnini. The tribe currently comprises six genera: *Andrzej Ślipiński*, 2007; *Decadiomus* Chapin, 1933; *Dichaina* Weise, 1926; *Diomus* Mulsant, 1850; *Heterodiomus* Brèthes, 1924; and *Moiradiomus*

Vandenberg & Hanson, 2019 (Nedvěd 2020). Together, these genera include approximately 400 described species worldwide (Ramos et al. 2020).

The genus is comparatively species-poor in the Old World, recently estimated at seven species in the Afrotropical Region (Fürsch 1987), seven species in the Palaearctic Region (Kovář 2007), and four species in the Oriental Region (Wang & Chen 2022). The genus exhibits a remarkable species richness in the Neotropical Region, with more than 275 recorded species (González et al. 2024). In the Australian Region, it is rich with 78 recorded species from Australia (Ślipiński 2007; Pang & Ślipiński 2009, 2010) and about 30 species for New Guinea (Chazeau 1983, 1985, 1993). Until recently, 18 species had been recorded from the Nearctic Region (Gordon 1985), but many of them have been transferred to the genus *Decadiomus* (Vandenberg & Hanson 2019). The largest number of species, 230, was described from South America in a single monograph only 26 years ago (Gordon 1999), and the total number of known species continues to increase (Pang & Ślipiński 2009, 2010; González & Honour 2011; González 2016). Recent phylogenetic studies have confirmed the placement of the tribe within the broadly defined subfamily Coccinellinae, although no clear close relatives have yet been identified (Che et al. 2021). The biology of *Diomus* species remains poorly documented; however, available evidence indicates that they are predatory, feeding mainly on coccids, aphids, and whiteflies (Gordon 1999; Zhuang et al. 2023). They are typically associated with succulent or xerothermic shrubs, where they occur in small and scattered populations (Romanowski et al. 2024). Larvae of certain species, such as *Diomus thoracicus* (Fabricius, 1801), develop exclusively within nests of the little fire ant, *Wasmannia auropunctata* (Roger, 1863), a relationship mediated by chemical mimicry of the host's cuticular cues (Vantaux et al. 2010).

In this study, all valid names of *Diomus* from all continents are compiled, and the number of countries occupied by each species is provided, while some names remain in doubt. Additionally, available records from Middle Eastern countries are documented, including examined specimens from museum collections in this subregion, and two representative specimens are documented using both light and electron microscopy, complemented by morphometric measurements. Finally, *Diomus panamensis* Gorham, 1897 was found to be a junior homonym of *D. panamensis* González & Větrovec, 2021, and a replacement name is proposed.

MATERIAL AND METHODS

The available information on the distribution of valid *Diomus* species was compiled from the published literature, registering the countries occupied by each species, allowing the data to be tabulated within the major biogeographical regions. Some species were marked as doubtful, and have been marked with an asterisk next to their name in the tabulation, since species described in *Diomus* by its authors often belong to other genera, the type material has not been located, they cannot be identified from their descriptions, and in some cases their distribution is uncertain. For Kirsch's collections in Dresden, they were presumably destroyed during World War II (Gordon 1999). Also, these species were not considered in modern reviews of *Diomus* (i.e., Gordon 1976, 1985, 1999).

A simplified biogeographical division of the world was adopted that partly reflects differences in country size. The Neotropical Region, which is the most species-rich region for *Diomus*, was subdivided into several parts: (1) South America, comprising predominantly large countries; (2) Central America, consisting mainly of medium-sized countries; and (3) the Antilles, characterized by numerous small island countries. Mexico, which is transitional between the Neotropical and Nearctic regions, was entirely assigned to North America, including very large countries. The Afrotropical Region (syn. Ethiopian) comprises sub-Saharan continental Africa and the southern part of the Arabian Peninsula; Madagascar and adjacent Indian Ocean islands are not known to host any species of *Diomus* and are therefore excluded from this study. The Palaearctic Region excludes the three southernmost Chinese provinces, which were assigned to the Oriental Region. The Australasian Region, represented here by Australia and nearby islands, is grouped with Oceania, which includes only non-native *Diomus* species occurring in Hawaii. Additionally, the relevant regional and continental literature (Jordan 1894; Bielawski 1973; Gordon 1976; Leeper 1976; Gordon 1981; Chazeau 1983, 1985; Ali et al. 1990; Chazeau 1993; Gordon 1999; González & Honour 2011; González 2013; Serra et al. 2013; Miró-Agurto & González 2015;

González 2015a, 2015b; Nattier et al. 2015; González 2016; Webster et al. 2016; Bouchard 2017; Biranvand et al. 2019; Hesler et al. 2020; Biranvand et al. 2021; Nestor-Arriola et al. 2022; Bi et al. 2024; González et al. 2024) have also been reviewed.

The Middle East comprises 17 countries located primarily in southwestern Asia. This region includes countries bordering the Persian Gulf, the Arabian Peninsula, the Anatolian region of Turkey (Asia Minor), and the Sinai Peninsula of Egypt. Most of the area belongs to the Palearctic biogeographical region, whereas the southwestern part of the Arabian Peninsula falls within the Afrotropical region (Morrone 2015). Geographically, Middle Eastern countries are situated between 25°00' E and 63°00' E longitude, and between 12°36' N and 42°00' N latitude (Biranvand et al. 2019; Fig. 1). The study of *Diomus* in this subregion is based on both examined material and a review of reliable published sources. Specimens were studied from: (i) Palestine, for which photographs were kindly provided by Muhammad H. Najajrah; (ii) the private collection of Dr. Nadim Uygun (Turkey); (iii) recently collected material from Kermanshah City, Kermanshah Province, Iran; and (iv) a specimen from Wadi Rajma, Al Batinah, Oman, collected by Jaroslav Větrovec.



Figure 1. Map showing the currently known distribution of *Diomus* species in the Middle East. Red points indicate precise locality records of *D. rubidus*. The yellow point represents a record for which only the country name is known, without specific locality data. Green points indicate locality records of *D. anemicus*. Blue point indicate precise locality record of *Diomus* sp.

Specimens used for dissection were softened by boiling in a 10% KOH solution for up to 20 minutes, depending on the degree of body sclerotization, to facilitate dissection of the genitalia. Dissected parts were subsequently rinsed in water for 10 minutes and mounted in Canada balsam on microscope slides. Diagnostic morphological characters of the Iranian specimen were examined using an Olympus® SZ-ST stereomicroscope, while male genitalia were studied under an Olympus CX21 compound microscope. Images (Fig. 2B–F) were captured through the stereomicroscope using an iPhone 8 Plus and edited using Adobe Photoshop CS5.1. Detailed morphological structures were examined and illustrated using a field-emission scanning electron microscope (FESEM) (Fig. 3). The habitus drawing (Fig. 2A) was entirely hand-drawn by Mehdi Romasi using graphite and colored pencils. The specimen from Oman was photographed using an Olympus MVX10 macro zoom microscope equipped with a Sunflower multi-segment LED illuminator, and the images were post-processed in Adobe Photoshop v27.0. Morphological terminology follows Ślipiński (2007). Examined specimens from Iran are deposited in the private collection of Amir Biranvand (Iran), and the specimen from Oman is deposited in the private collection of Jaroslav Větrovec (Czech Republic).

RESULTS

Taxonomic hierarchy

Class Insecta Linnaeus, 1758

Order Coleoptera Linnaeus, 1758

Family Coccinellidae Latreille, 1807

Subfamily Coccinellinae Latreille, 1807

Tribe Diomini Gordon, 1999

Genus *Diomus* Mulsant, 1850

Type species. *Coccinella thoracica* Fabricius, 1801.

For the genus *Diomus*, 425 species were registered worldwide (Table 1), thirteen of which are marked as doubtful. The Neotropical Region is the most species-rich, with South America representing the most diverse subregion (268 species), whereas Australasia constitutes another independent center of species radiation (118 species). In contrast, the Oriental Region and Oceania are species-poor: only two species are endemic to the Oriental Region, and no native *Diomus* species are known from Oceania. As expected, Central and North America, the Antilles, Afrotropical, Palaearctic, and Oriental Regions have a reduced number of species (66 among all).

Diomus species in the Middle East

Three species of *Diomus* have been recorded in the Middle East: two species already described and recorded in the area, and one undetermined species, which is documented below, as the first record of a *Diomus* species for Oman.

Diomus anemicus Fürsch, 1960

Diomus anemicus Fürsch, 1960:300. Holotype ♂, Museum G. Frey, Tutzing, Germany. –“Ezbet Nahle, Ägypten”.

Diagnosis. Body length 1.2–1.4 mm. Head yellow, rather coarsely but sparsely punctate, with approximately 8–9 punctures on the frons between the eyes, slightly smaller than the ommatidia. Pronotum densely and somewhat more strongly punctate, yellow, with a reddish-brown transverse macula at the base and approximately at midlength. Pubescence obliquely erect, directed forward. Elytra yellow on the elytral dorsum, reddish on the humeral area and along the lateral and sutural margins (all very diffused). Punctuation slightly less dense than on the pronotum and somewhat shallower, especially on the central dorsum. Short white setae obliquely erect, directed backward (Fürsch 1960; Raimundo & van Harten 2000).

Distribution. Egypt (Fürsch 1960); Israel (Halperin et al. 1995), Yemen (Raimundo & van Harten 2000).

Remarks. It was first recorded from Egypt by Fürsch (1960), with subsequent records from Yemen (Raimundo & van Harten 2000) and Israel (Halperin et al. 1995). Labels on specimens deposited in Turkey indicate they were actually collected from Cyprus rather than mainland Turkey; thus, this species should be removed from the Turkish checklist (Uygun & Karabüyük 2013). Najajrah et al. (2019) reported *Diomus anemicus* from Palestine; however, according to the abdominal postcoxal line, these specimens belong to the genus *Scymnus*, rendering the record erroneous. Our study could not confirm the presence or absence of *D. anemicus* in Israel and Yemen, as previously reported by Halperin et al. (1995) and Raimundo et al. (2006), highlighting the need for further investigation.

***Diomus rubidus* (Motschulsky, 1837)**

Scymnus rubidus Motschulsky, 1837:418. Type material, repository uncertain; type locality: Derbent, Russia.

Figs 2–3

Material examined. 2 ♂♂. Iran, Kermanshah, Choqa Kabood, 34°24'54"N, 46°56'00"E, vi.2024, 2 ex Weeds on the edge of the alfalfa fields., F. Romasi leg., A. Biranvand det. and coll.

Diagnosis. Body length 1.3–1.6 mm, moderately convex, widely oval with subrectangular elytra shape (Fig. 2A). Hairs on elytra parallel to the suture. Postcoxal line incomplete, i.e., forming only a quarter of a circle, and joining the posterior margin (i.e., incomplete descending, subparallel to the posterior margin of ventrite 1). Prosternal process wide, with carinae. Tarsi trimerous, tarsal claw with a large blunt but not rectangular tooth in the middle. Pronotum and elytra orange, central part of pronotum, base of elytra around the scutellar shield and sometimes sutural region, darker. Male genitalia as in Figure 2B–E.

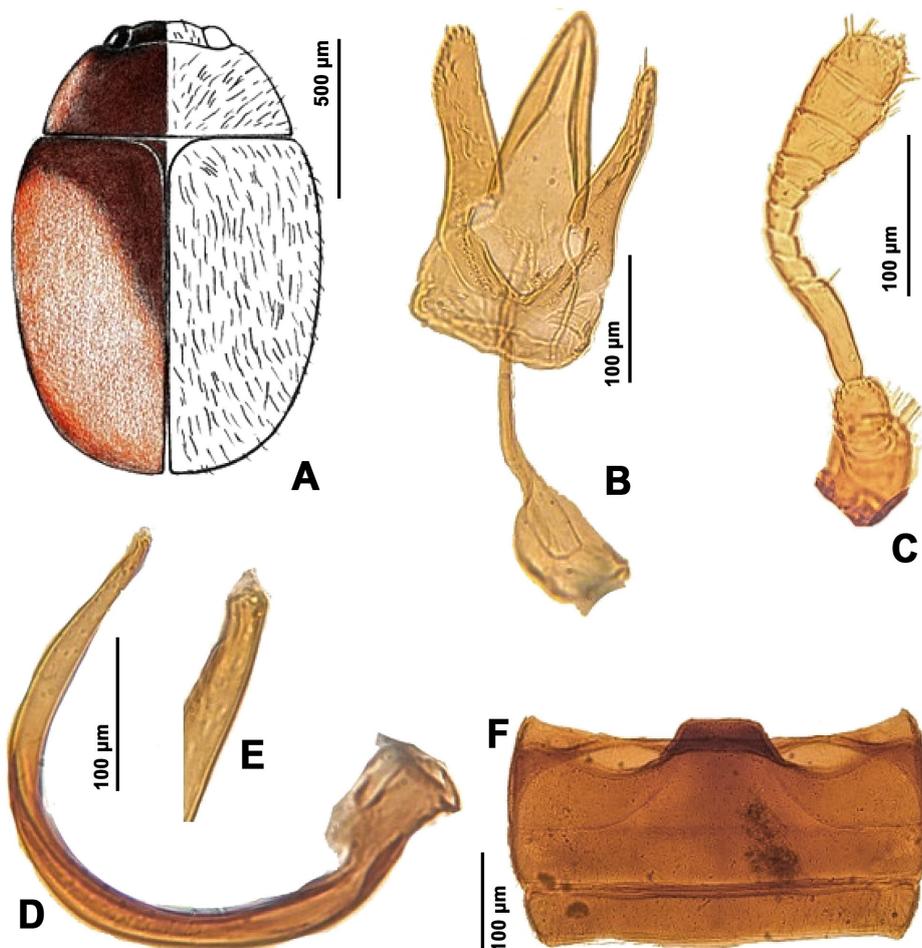


Figure 2. *Diomus rubidus*, Iran, Kermanshah. A. Dorsal view; B. Tegmen, ventral; C. Antenna; D. Penis; E. Apex of penis; F. Abdomen.

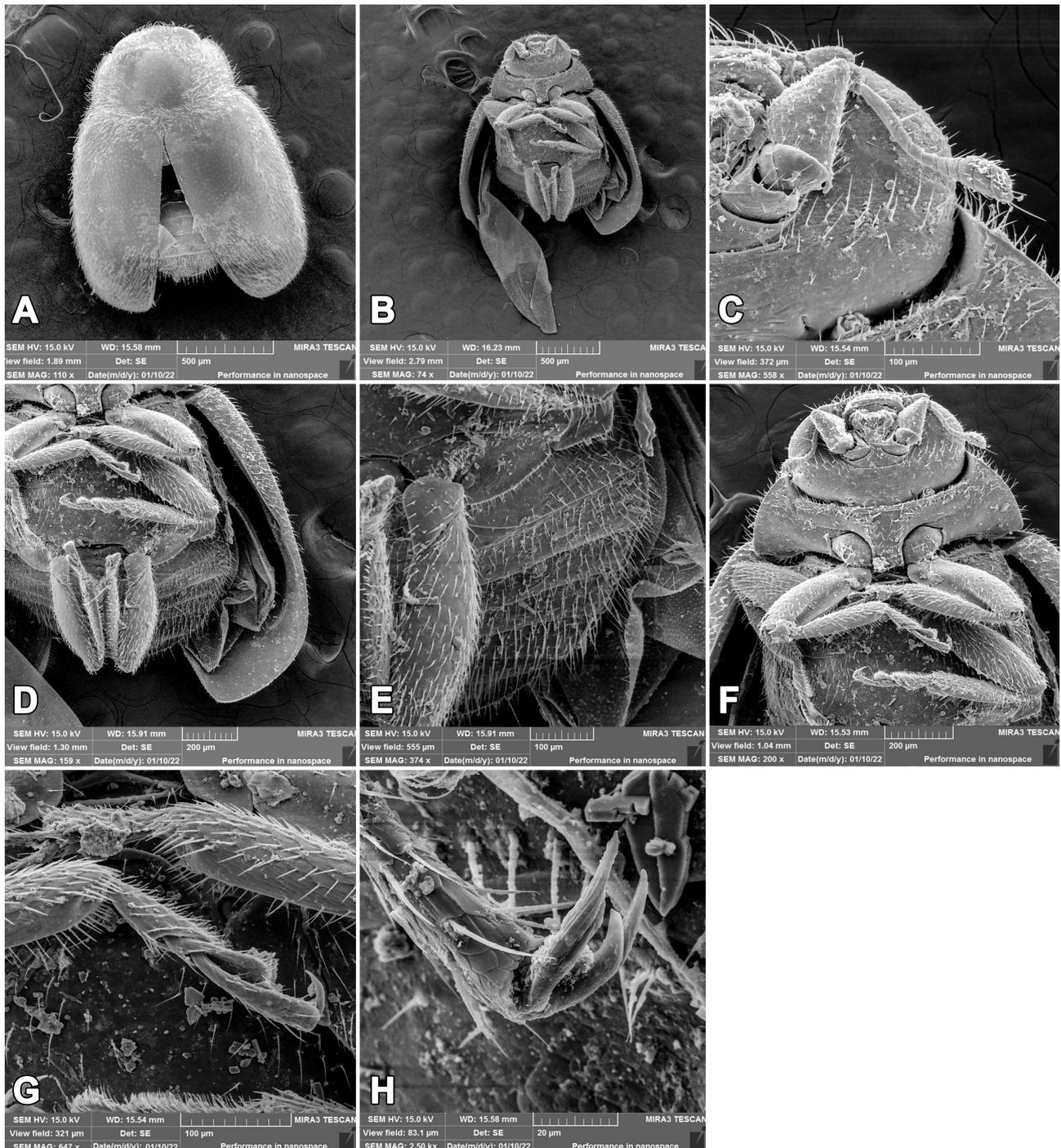


Figure 3. *Diomus rubidus*, Iran, Kermanshah. A. Dorsal view; B. Ventral view; C. Ventral view of head; D. Metasternum and abdomen; E. Postcoxal line; F. Maxillary palpi and prosternal process; G. Trimerous tarsus; H. Claw with tooth.

Measurements. Body length 1.40 mm, body width 0.88 mm, pronotum length 0.40 mm, pronotum width 0.71 mm, elytral hair length 0.029–0.047 mm, hair distance 0.023–0.031 mm, head width 0.53 mm, frons width 0.22 mm, antenna length 0.27 mm, last segment of maxillary palpus: outer edge 0.120 mm, inner edge 0.037 mm, transversal apical edge 0.097 mm, prosternum length 0.19 mm, width of prosternal process 0.088 mm, fore femur length 0.32 mm, middle femur length 0.44 mm, hind femur length 0.41 mm (Fig. 3).

Distribution. Cyprus (Özden et al. 2006), Iran (Biranvand et al. 2024; Safari et al. 2025), Israel (Halperin et al. 1995), Saudi Arabia (Al Ansi et al. 2020), Yemen (Halperin et al. 1995) and the Mediterranean Europe (Kovář 2007; Nedvěd & Djurić 2022), including E. Spain, S. France (var. *fleischeri*), Cyprus (GBIF 2025; iNaturalist 2025).

Diomus sp.

Material examined. 1 ♀, Oman, Al Batinah, Wadi Rajma, 24°38'03"N, 56°17'52"E, III.2023, 1eg., L. Bobot leg., J. Větrovec det. and coll.

Diagnosis. Body length 1.65 mm, moderately convex, widely oval with subrectangular elytra shape (Fig. 4A). Hairs on elytra near suture sub-parallel to the suture, but mostly lost; hairs on the lateral parts of elytra slightly directed outwards. Postcoxal line incomplete, i.e. forming only a quarter of a circle, and joining the posterior margin of ventrite 1 (Fig. 4B). Legs yellow, tarsi trimerous. Pronotum black, fore angles with faint rusty brown tint (Figs 4A, 4C, 4D). Posterior margin of pronotum with a distinct border, lateral margins with narrow borders. Elytra black, posterior third with faint brown tint, apical margin (5%) gradually fading to orange brown (Figs 4A, 4D). Head black, mouthparts yellow, labrum darker. Eyes moderately large, with about 17 ommatidia across the horizontal axis; frons more than 2× wider than an eye (Fig. 4C).

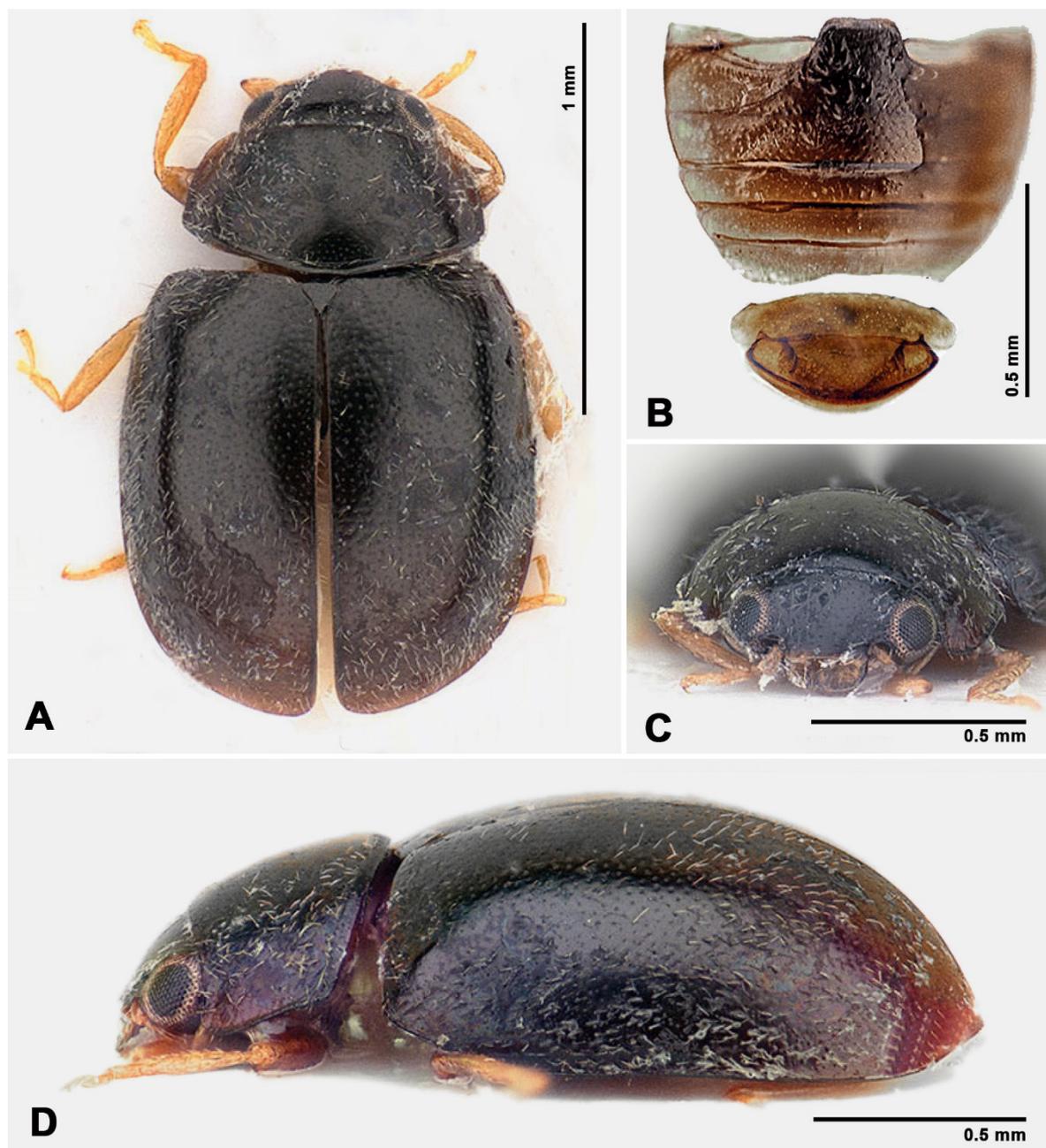


Figure 4. *Diomus* sp., Oman, Wadi Rajma: A. Dorsal view; B. Ventral view of abdomen with postcoxal line; C. Frontal view of head; D. Lateral view (left side).

Measurements. Body length 1.65 mm, body width 1.01 mm, pronotum length 0.39 mm, pronotum width 0.77 mm, elytral hair length 0.025 mm, hair distance 0.021 mm, head width 0.50 mm, frons width 0.22 mm.

Distribution. Oman.

Remarks. The single female specimen collected could not be identified to species level with absolute certainty. It differs from the females of *D. rubidus* in its slightly more rounded body shape, darker coloration, larger body size, and shorter, denser setae. It may represent a new species, but confirmation requires the collection of male specimens. Furthermore, a specimen of *D. rubidus* recorded from southern France in the iNaturalist database (iNaturalist – observations [304742507](#)) exhibits a brown-black coloration, intermediate between the lighter Iranian specimen and the darker Omani specimen.

Diomus stajerovae González & Větrovec, nom. nov.

In a recent publication, González & Větrovec (2021) described a new species of *Diomus* from Chiriquí Province, Panama, under the name *Diomus panamensis* González & Větrovec, 2021. This name was subsequently found to be preoccupied by *D. panamensis* Gorham, 1897, a species also described from Chiriquí, Panama (Gorham 1897). In accordance with Article 60 of the International Code of Zoological Nomenclature (ICZN 1999), the junior homonym is hereby replaced with the new name *Diomus stajerovae* González and Větrovec, **nom. nov.**

Etymology. The species epithet *stajerovae* is derived from the surname of Kateřina Štajerová, a Czech botanist and one of the two collectors of the type specimen.

Table 1. World species of the genus *Diomus*, with authors and year of description, and their distribution by the number of countries occupied in each region and in total. Abbreviations: SA: South America; CA: Central America; An: Antilles; NA: North America; AF: Afrotropical; PA: Palearctic; OR: Oriental; AO: Australian and Oceania.

Species	Geographical/Biogeographical Regions								Total
	SA	CA	An	NA	AF	PA	OR	AO	
<i>abacum</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>abdon</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>aberrans</i> Jordan, 1894	-	-	-	-	-	-	-	1	1
<i>achilleus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>adrian</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>agapitus</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>agatha</i> Gordon, 1999	1	-	-	1	-	-	-	-	2
<i>agnes</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>agricola</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>akonis</i> Ohta, 1929	-	-	-	-	-	1	1	-	2
<i>albert</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>albidicollis</i> Mulsant, 1850*	-	-	-	-	-	-	-	-	1
<i>alexander</i> Gordon, 1999	-	-	1	-	-	-	-	-	1
<i>alexis</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>aloysius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>ambrose</i> Gordon, 1999	-	-	1	-	-	-	-	-	1
<i>anastasia</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>anastasius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>ancorus</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>andrew</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>anemicus</i> Fürsch, 1960	-	-	-	-	-	3	-	-	3
<i>angela</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>anicetus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>anne</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>anselm</i> Gordon, 1999	3	-	1	-	-	-	-	-	4
<i>anthony</i> Gordon, 1999	3	-	-	-	-	-	-	-	3
<i>antoninus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>apollinaris</i> Gordon, 1999	1	-	-	-	-	-	-	-	1

Species	Geographical/Biogeographical Regions								Total
	SA	CA	An	NA	AF	PA	OR	AO	
<i>apollonia</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>arcayae</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>argentificus</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>arizonicus</i> Gordon, 1976	-	-	1	1	-	-	-	-	2
<i>athanasius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>athleticus</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>audax</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>augustine</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>aureolus</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>australasiae</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>australis</i> Blackburn, 1889	-	-	-	-	-	-	-	1	1
<i>bacchusi</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>barbara</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>barnabas</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>barrigai</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>bartholomew</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>basil</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>basilides</i> Gordon, 1999	-	-	1	-	-	-	-	-	1
<i>bede</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>benedict</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>bernard</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>bernardine</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>bertiae</i> Chazeau, 1985	-	-	-	-	-	-	-	1	1
<i>bibiana</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>bicolor</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>biimpressus</i> Jordan, 1894	-	-	-	-	-	-	-	1	1
<i>bimaculatus</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>blaise</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>bolivianus</i> Mader, 1958*	1	-	-	-	-	-	-	-	1
<i>bonaventure</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>boniface</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>bosco</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>bridget</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>brisbanensis</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>brookfieldi</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>bruno</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>bullatus</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>bunya</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>caius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>cajetan</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>calcaneum</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>caledoniensis</i> Bielawsky, 1973	-	-	-	-	-	-	-	1	1
<i>callistus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>camillus</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>cantius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>canute</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>capital</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>carbine</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>caseyi</i> Brèthes, 1925	1	-	-	-	-	-	-	-	1
<i>casimir</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>cassian</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>castilloi</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>casuarinae</i> Blackburn, 1889	-	-	-	-	-	-	-	1	1
<i>catherine</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>cecilia</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>chabooae</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>charles</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>chiriqui</i> González & Vetrovec, 2021	-	1	-	-	-	-	-	-	1
<i>christina</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>christopher</i> Gordon, 1999	3	-	-	-	-	-	-	-	3

Species	Geographical/Biogeographical Regions								Total
	SA	CA	An	NA	AF	PA	OR	AO	
<i>chrysanthus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>chrysogonus</i> Gordon, 1999	3	-	-	-	-	-	-	-	3
<i>chrysostom</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>circus</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>clare</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>clement</i> Gordon, 1999	-	-	1	-	-	-	-	-	1
<i>cletus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>competitor</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>confluens</i> Jordan, 1894	-	-	-	-	-	-	-	1	1
<i>constantini</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>cooptatus</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>cornelius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>corticalis</i> Lea, 1908	-	-	-	-	-	-	-	1	1
<i>cosmas</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>cowleyi</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>crescentia</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>cucullifer</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>curviger</i> Kirsch, 1876*	1	-	-	-	-	-	-	-	1
<i>cyanipennis</i> Mulsant, 1850*	-	-	1	-	-	-	-	-	1
<i>cyprian</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>cyriacus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>cyril</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>dafushanensis</i> Bi, Peng & Chen, 2023	-	-	-	-	-	-	1	-	1
<i>damasus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>damian</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>daria</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>debilis</i> LeConte, 1852	-	-	-	3	-	-	-	1	4
<i>denhamensis</i> Weise, 1929	-	-	-	-	-	-	-	1	1
<i>denis</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>derivatus</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>deuterius</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>dichrous</i> Mulsant, 1850*	-	-	-	1	-	-	-	-	1
<i>didacus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>diductus</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>disclusus</i> Chazeau, 1985	-	-	-	-	-	-	-	1	1
<i>discimacula</i> Kirsch, 1876*	1	-	-	-	-	-	-	-	1
<i>dispar</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>dohertyi</i> Jordan, 1894	-	-	-	-	-	-	-	1	1
<i>dominic</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>domitilla</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>donatus</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>dorothy</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>ecuadoricus</i> Sicard, 1910	1	-	-	-	-	-	-	-	1
<i>edward</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>effusus</i> Brèthes, 1925	1	-	-	-	-	-	-	-	1
<i>eleutherius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>elizabeth</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>elutus</i> Lea, 1902	-	-	-	-	-	-	-	1	1
<i>ementitor</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>emerentia</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>ephrem</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>equites</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>erasmus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>eudes</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>euphemia</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>eusebius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>eustace</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>evaristus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>eventius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>fabian</i> Gordon, 1999	1	-	-	-	-	-	-	-	1

Species	Geographical/Biogeographical Regions								Total
	SA	CA	An	NA	AF	PA	OR	AO	
<i>faustinus</i> Gordon, 1999	4	-	-	-	-	-	-	-	4
<i>felician</i> Gordon, 1999	3	-	-	-	-	-	-	-	3
<i>felicitas</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>felix</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>femineus</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>ferrugineus</i> Weise, 1895	-	-	-	-	-	-	-	1	1
<i>fidelis</i> Gordon, 1999	1	-	1	-	-	-	-	-	2
<i>flavolaterus</i> Lea, 1926	-	-	-	-	-	-	-	1	1
<i>fonscolombii</i> Mulsant, 1850	1	-	-	-	1	-	-	-	2
<i>frances</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>frater</i> Lea, 1902	-	-	-	-	-	-	-	1	1
<i>fructuosus</i> Brèthes, 1925	1	-	-	-	-	-	-	-	1
<i>gabriel</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>geminus</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>genialis</i> Brèthes, 1925	1	-	-	-	-	-	-	-	1
<i>george</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>gertrude</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>gervase</i> Gordon, 1999	1	-	-	1	-	-	-	-	2
<i>giles</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>gillerforsi</i> Fürsch, 1987	-	-	-	-	-	1	-	-	1
<i>gilvus</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>gingera</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>gordian</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>gordoni</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>gorgonius</i> Gordon, 1999	1	-	1	-	-	-	-	-	2
<i>gorhami</i> Weise, 1929	-	1	-	1	-	-	-	-	2
<i>gregory</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>grenadensis</i> Gorham, 1898	-	-	1	-	-	-	-	-	1
<i>grumus</i> Gorham, 1897	-	1	-	-	-	-	-	-	1
<i>guilavoguii</i> Duverger, 1994	-	-	-	-	1	-	-	-	1
<i>hamatus</i> Weise, 1895	-	-	-	-	-	-	-	1	1
<i>hebes</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>hedwig</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>hennesseyi</i> Fürsch, 1987	2	-	-	-	2	-	-	-	4
<i>henry</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>hermenegild</i> Gordon, 1999	1	-	1	-	-	-	-	-	2
<i>hermes</i> Gordon, 1999	-	-	1	-	-	-	-	-	1
<i>hilario</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>hilary</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>hippolytus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>hirtus</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>howdeni</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>hyacinth</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>hyacinthus</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>hyginus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>hypocritus</i> Weise, 1923	-	-	-	-	-	-	-	1	1
<i>ignatius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>imitabilis</i> Chazeau, 1985	-	-	-	-	-	-	-	1	1
<i>impictus</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>inaffectatus</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>indistinctus</i> Lea, 1902	-	-	-	-	-	-	-	1	1
<i>injunctus</i> Chazeau, 1985	-	-	-	-	-	-	-	1	1
<i>innocent</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>Innocentius</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>insidiosus</i> Blackburn, 1889	-	-	-	-	-	-	-	1	1
<i>inusitatus</i> Blackburn, 1889	-	-	-	-	-	-	-	1	1
<i>irenaeus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>isaac</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>isidore</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>james</i> Gordon, 1999	1	-	-	-	-	-	-	-	1

Species	Geographical/Biogeographical Regions								Total
	SA	CA	An	NA	AF	PA	OR	AO	
<i>jane</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>janeirensis</i> Brèthes, 1925	1	-	-	-	-	-	-	-	1
<i>januarius</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>jerome</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>joachim</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>jocosus</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>john</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>josaphat</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>joseph</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>jovita</i> Gordon, 1999	-	-	1	-	-	-	-	-	1
<i>jude</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>juliana</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>justin</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>justina</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>juvenal</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>kamerungensis</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>kioloa</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>kosciuszko</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>kuranda</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>lantauensis</i> Yu & Lau, 2001	-	-	-	-	-	1	1	-	2
<i>lawrence</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>leai</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>leo</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>leonard</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>leondai</i> González et al., 2020	1	-	-	-	-	-	-	-	1
<i>liborius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>linus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>longilobus</i> Yu, 1996	-	-	-	-	-	1	-	-	1
<i>lord</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>louis</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>lubricus</i> Blackburn, 1889	-	-	-	-	-	-	-	1	1
<i>lucius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>lucy</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>luke</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>lupusapudoves</i> Vandenberg, Iverson & Liere, 2018	-	-	-	1	-	-	-	-	1
<i>lydiae</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>macarius</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>machabees</i> Gordon, 1999	2	-	1	-	-	-	-	-	3
<i>macrops</i> Lea, 1929	-	-	-	-	-	-	-	1	1
<i>maestus</i> Lea, 1926	-	-	-	-	-	-	-	1	1
<i>magdalen</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>marcellinus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>marcellus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>mareebensis</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>margareth</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>margipallens</i> Mulsant, 1850*	1	-	-	1	-	-	-	-	2
<i>marius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>mark</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>marmorosus</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>martha</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>martin</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>martina</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>mary</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>masculus</i> Chazeau, 1985	-	-	-	-	-	-	-	1	1
<i>matthew</i> Gordon, 1999	1	-	1	-	-	-	-	-	2
<i>matthias</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>maur</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>maurice</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>melchiades</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>menna</i> Gordon, 1999	1	-	-	-	-	-	-	-	1

Species	Geographical/Biogeographical Regions								Total
	SA	CA	An	NA	AF	PA	OR	AO	
<i>mesomelas</i> Kirsch, 1876*	1	-	-	-	-	-	-	-	1
<i>messorius</i> Brèthes, 1925*	1	-	-	-	-	-	-	-	1
<i>methodius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>michael</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>micrus</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>millaamillaa</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>mimicus</i> Lea, 1902	-	-	-	-	-	-	-	1	1
<i>modestus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>monica</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>mordeo</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>nabor</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>nazarius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>nereus</i> Gordon, 1999	1	-	-	1	-	-	-	-	2
<i>nicholas</i> Gordon, 1999	3	-	-	-	-	-	-	-	3
<i>nicomedes</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>ningning</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>norbert</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>norfolcensis</i> Lea, 1929	-	-	-	-	-	-	-	1	1
<i>notatus</i> Kirsch, 1876 *	1	-	-	-	-	-	-	-	1
<i>notescens</i> Blackburn, 1889	-	-	-	-	-	-	-	2	1
<i>obumbratus</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>ochroderus</i> Mulsant, 1850	-	-	6	-	-	-	-	-	6
<i>operosus</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>ovalifulvus</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>pallidipennis</i> Mulsant, 1850	3	-	1	-	-	-	-	-	4
<i>panamensis</i> Gorham, 1897	-	1	-	-	-	-	-	-	1
<i>pancras</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>panghongae</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>paschal</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>patrick</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>paul</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>paulinus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>perpetua</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>peter</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>petronilla</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>philip</i> Gordon, 1999	2	-	-	-	-	-	-	1	2
<i>piger</i> Mulsant, 1850*	-	-	-	-	-	-	-	1	1
<i>pisinus</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>placid</i> Gordon, 1999	1	-	-	1	-	-	-	-	2
<i>planulatus</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>politus</i> Schaufuss, 1879	1	-	-	-	-	-	-	-	1
<i>polycarp</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>poonindiensis</i> Blackburn, 1889	-	-	-	-	-	-	-	1	1
<i>popei</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>posticatus</i> Brèthes, 1925	1	-	-	-	-	-	-	-	1
<i>primus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>prisca</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>processus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>prodigialis</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>protase</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>prothoracicus</i> Brèthes, 1925	1	-	-	-	-	-	-	-	1
<i>protus</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>pudentiana</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>pumilio</i> Weise, 1885	-	-	-	1	-	-	-	2	3
<i>pusillus</i> Berg, 1874	3	-	-	-	-	-	-	-	3
<i>quadrinaculatus</i> Kirsch, 1876*	1	-	-	-	-	-	-	-	1
<i>rabiosulus</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>raphael</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>reidi</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>remigius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1

Species	Geographical/Biogeographical Regions								Total
	SA	CA	An	NA	AF	PA	OR	AO	
<i>rhodesianus</i> Pope, 1957	-	-	-	-	3	-	-	-	3
<i>robert</i> Gordon, 1999	-	-	1	-	-	-	-	-	1
<i>robustus</i> Weise, 1895	-	-	-	-	-	-	-	1	1
<i>romanus</i> Gordon, 1999	-	-	9	2	-	-	-	-	11
<i>rose</i> Gordon, 1999	1	-	9	2	-	-	-	-	12
<i>roseicollis</i> Mulsant, 1853	4	-	18	2	-	-	-	-	24
<i>rubidus</i> Motschulsky, 1837	-	-	-	-	-	17	-	-	17
<i>rufina</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>sabba</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>sabina</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>saturninus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>scabiosus</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>scapularis</i> Weise, 1885	-	-	-	-	-	-	-	1	1
<i>scholastica</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>sebastian</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>secunda</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>sedani</i> Blackburn, 1889	-	-	-	-	-	-	-	1	1
<i>sekerkai</i> González & Vetrovec, 2021	-	1	-	-	-	-	-	-	1
<i>seminulus</i> Mulsant, 1850	12	2	1	1	-	-	-	-	16
<i>sennen</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>sexualis</i> Fauvel, 1903	-	-	-	-	-	-	-	1	1
<i>siccus</i> Chazeau, 1985	-	-	-	-	-	-	-	1	1
<i>silverius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>simon</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>simplex</i> Blackburn, 1889	-	-	-	-	-	-	-	1	1
<i>sixtus</i> Gordon, 1999	1	-	-	1	-	-	-	-	2
<i>slipinskii</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>smartii</i> Chazeau, 1993	-	-	-	-	-	-	-	1	1
<i>soter</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>specialis</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>sphragitis</i> Weise, 1885	-	-	-	-	-	-	-	1	1
<i>stajerovae</i> González & Vetrovec, 2026	-	1	-	-	-	-	-	-	1
<i>stephen</i> Gordon, 1999	-	-	1	-	-	-	-	-	1
<i>storeyi</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>striatus</i> Lea, 1902	-	-	-	-	-	-	-	1	1
<i>subclarus</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>subelongatulus</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>sublatus</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>susanna</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>suturalis</i> Kirsch, 1876*	1	-	-	-	-	-	-	-	1
<i>sydneyensis</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>sylvester</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>symphorosa</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>tantillus</i> Mulsant, 1850	1	-	-	-	-	-	-	-	1
<i>tasmanicus</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>tenebricosus</i> Boheman, 1859	-	-	-	-	-	-	-	1	1
<i>tenuis</i> Brèthes, 1925	3	-	-	1	-	-	-	-	4
<i>teresa</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>terminatus</i> Say, 1835	-	-	-	4	-	-	-	-	4
<i>tetricus</i> González, 2015	1	-	-	-	-	-	-	-	1
<i>texanus</i> Gordon, 1976	-	-	-	2	-	-	-	-	2
<i>thecla</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>theodore</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>theodulus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>thomas</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>thoracicus</i> Fabricius, 1801	8	-	5	2	-	-	-	-	15
<i>tiburtius</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>timidus</i> Chazeau, 1987	-	-	-	-	-	-	-	1	1
<i>timothy</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>tinaroo</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1

Species	Geographical/Biogeographical Regions								Total
	SA	CA	An	NA	AF	PA	OR	AO	
<i>titus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>torres</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>torresi</i> González, 2016	1	-	-	-	-	-	-	-	1
<i>toulgoeti</i> Chazeau, 1985	-	-	-	-	-	-	-	1	1
<i>triangularis</i> Lea, 1902	-	-	-	-	-	-	-	1	1
<i>trilobus</i> Lea, 1902	-	-	-	-	-	-	-	1	1
<i>tryphon</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>tucumanus</i> Weise, 1906	1-	-	-	-	-	-	-	-	1-
<i>tumefactus</i> Yu, 1996	-	-	-	-	-	-	1	-	1
<i>ubald</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>urban</i> Gordon, 1999	2	-	-	1	-	-	-	-	3
<i>ursula</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>valentine</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>valerianus</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>varians</i> Jordan, 1894	-	-	-	-	-	-	-	1	1
<i>variceps</i> Lea, 1929	-	-	-	-	-	-	-	1	1
<i>venantius</i> Gordon, 1999	2	-	-	-	-	-	-	-	2
<i>victor</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>victoriensis</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>villus</i> Pang & Slipinski, 2010	-	-	-	-	-	-	-	1	1
<i>vincent</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>vitalis</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>vitus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>vrydaghi</i> Fürsch, 1959	-	-	-	-	1	-	-	-	1
<i>vulneratus</i> Kirsch, 1876*	1	-	-	-	-	-	-	-	1
<i>weiri</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>wenceslas</i> Gordon, 1999	3	-	-	-	-	-	-	-	3
<i>westerduijni</i> González & Honour, 2011	1	-	-	1	-	-	-	-	2
<i>whittonensis</i> Blackburn, 1892	-	-	-	-	-	-	-	1	1
<i>william</i> Gordon, 1999	3	-	-	-	-	-	-	-	3
<i>xanthaspis</i> Mulsant, 1850	-	-	-	2	-	-	-	-	2
<i>Xantholeucus</i> Schawrs & Barber, 1921	2	-	-	-	-	-	-	-	2
<i>xavier</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
<i>yarrensis</i> Blackburn, 1895	-	-	-	-	-	-	-	1	1
<i>zborowskii</i> Pang & Slipinski, 2009	-	-	-	-	-	-	-	1	1
<i>Zenon</i> González & Honour, 2011	1	-	-	-	-	-	-	-	1
<i>zephyrynus</i> Gordon, 1999	1	-	-	-	-	-	-	-	1
Total number of species	268	7	23	21	5	6	4	118	425

* Species with a doubtful assignment.

DISCUSSION

Endemism at the country level is exceptionally high. The majority of species (361) are recorded from a single country, whereas 36 species are known from two countries and 13 species from three countries. The remaining 15 species are recorded from four or more countries, including three exceptionally widespread species. One of these, *Diomus roseicollis*, is distributed across northern South America and most of the smaller Antillean countries, resulting in a distribution pattern that is not directly comparable with that of other widely distributed species. The second exceptional species, *D. rubidus*, is a Palearctic species with a very large distributional range, but it is consistently rare and known from a limited number of records (iNaturalist 2025). This species is the subject of the following overview of distribution in the Middle East and a detailed morphological description. The third widely distributed species is *D. seminulus*, which occurs throughout the Neotropical Region.

However, this apparent high endemism has certain limitations. First, tropical wet regions are understudied, which is evident from the recent dates of description for many species. Second, the sizes of countries vary substantially. We attempted to mitigate this effect by separately reporting the number of countries occupied within three parts of the Neotropical Region (continental South America, Central

America, the Antilles). Several species inhabiting the Antillean islands formally occur in multiple countries, but the total area they occupy remains small. Among the largest American countries—Brazil, Mexico, the USA, and Canada—a division into states or provinces would provide a more comparable measure of distribution relative to other countries in the region; however, such detailed data are currently unavailable or very fragmented in multiple studies, except for Brazil (González 2011). A similar limitation applies to Australia (Ślipiński 2007). Only in China are provincial-level data accessible through the Palaeartic Catalogue (Kovář 2007).

Current knowledge of ladybirds in the Middle East remains fragmented and insufficient, particularly regarding the genus *Diomus*. This research gap largely reflects the widespread underestimation of the role ladybirds play in natural pest regulation and biological control within national pest management programs across Middle Eastern countries. Moreover, since the time of descriptions of new species by Helmut Fürsch and visits to Iran by Ivo Kovář in the 1970s, the region has experienced a notable shortage of dedicated coccinellid specialists. In recent years, the fourth and last author have contributed to knowledge of Middle Eastern ladybirds, but the results remain limited and sporadic (Biranvand et al. 2019; Szawaryn et al. 2021). The occurrence of *Diomus* in Oman highlights the potential for discovering undescribed species, especially if systematic and sustained entomological surveys are conducted. Nonetheless, the collection of a single female specimen indicates that *Diomus* is rare in this region.

Species diversity and abundance of *Diomus* are low in the western Palaeartic, where *D. rubidus* and *D. anemicus* are occasionally recorded (Kovář 2007). Another species, *D. gillerforsi* Fürsch, 1987, occurs in the Canary Islands (Romanowski et al. 2024). Additional species, including *D. akonis* (Ohta, 1929) (= *D. brunsuturalis* Pang & Gordon, 1986), *D. lantauensis* Yu & Lau, 2001, *D. dafushanensis* Bi, Peng & Chen, 2023, *D. tumefactus* Yu, 1996, and *D. longilobus* Yu, 1996, are distributed in the eastern Palaeartic (Bi et al. 2024). The distribution map (Fig. 1) indicates that *Diomus* species are rare in the Middle East, with only a few localities recorded, consistent with low abundance elsewhere (Romanowski et al. 2024; GBIF 2025; iNaturalist 2025).

The Afrotropical region may serve as a source of *Diomus* species, potentially extending into the Middle East. However, Africa remains severely under-sampled, and many species are likely unrecorded or insufficiently described. For example, *Diomus guilavoguii* Duverger, 1994 is endemic to Guinea, West Africa (JAT Consulting, 2025), but was recently introduced to China (Zhuang et al. 2023). The species inhabit wet forested habitats, which differ markedly from the arid environments of the Middle East. No specific distributional information is available for *D. rhodesianus* Pope, 1957, or *D. vrydaghi* Fürsch, 1959. Therefore, it appears unlikely that African species would naturally spread to the Middle East; it is more probable that undescribed local species have evolved adaptations to the dry regional climate.

Precise measurements of various body parts of *D. rubidus* represent a small component of a broader project aimed at compiling such data for multiple coccinellid genera and species that are difficult to identify (e.g., *Hyperaspis pseudopustulata*, Biranvand et al. 2021). Calculated body indices from these measurements will be useful in combined datasets for phylogenetic reconstructions.

AUTHOR'S CONTRIBUTION

The authors confirm their contribution to the paper as follows: F. Romasi: field sampling, microscopy; N. Moeini Naghadeh: field sampling, and microscopy; F. Jalilian: field sampling, microscopy; A. Biranvand: conceptualisation, coordination, and writing; R. Nattier: revision of writing; J. Větrovec: sampling, determination; G. González: database maintenance, assembly table; O. Nedvěd: writing, microscopy, measurements. The authors read and approved the final version of the manuscript.

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AVAILABILITY OF DATA AND MATERIAL

The specimens listed in this study are deposited in private collections of Amir Biranvand (Iran) and Jaroslav Větrovec (Czech Republic) and are available from them upon request.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study only included arthropod material, and all required ethical guidelines for the treatment and use of animals were strictly adhered to in accordance with international, national, and institutional regulations. No human participants were involved in any studies conducted by the authors for this article.

CONSENT FOR PUBLICATION

Not applicable.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this paper.

GENERATIVE AI STATEMENT

No generative AI tools were used in the preparation of this paper.

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پراکنش جهانی کفشدوزک‌های جنس *Diomus* Mulsant (Coleoptera: Coccinellidae)، همراه با یافته‌های جدید در منطقه خاورمیانه

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چکیده: در این مطالعه، فهرستی جامع در مقیاس جهانی شامل ۴۲۵ گونه از کفشدوزک‌های متعلق به جنس *Diomus* Mulsant, 1850 ارائه شده و تعداد کشورهایی که هر گونه در مناطق عمده زیست‌جغرافیایی در آن‌ها گزارش شده، مشخص گردید. سیزده گونه از گونه‌هایی که رسماً به این جنس اختصاص داده شده‌اند، باید مجدداً بررسی و تأیید شوند. همچنین، سوابق مربوط به گونه‌های *Diomus* در کشورهای منطقه خاورمیانه مستندسازی شده و حضور این جنس برای نخستین بار از عمان گزارش شد. این گزارش بر اساس یک نمونه ماده از گونه‌ای تعیین نشده صورت گرفته است. نتایج حاصل، گزارش‌های پیشین مربوط به حضور *D. rubidus* (Motschulsky, 1837) در ترکیه و *D. anemicus* Fürsch, 1960 در فلسطین را رد می‌کند. نقشه‌ای از پراکنش گونه‌های جنس *Diomus* در منطقه خاورمیانه ارایه و ویژگی‌های ریخت‌شناسی و ریخت‌سنجی بر پایه مطالعات میکروسکوپ نوری و الکترونی ارایه شد. نام جایگزین *Diomus stajerovae* González & Větrovec, 2021 برای نام اشغال شده *D. panamensis* González & Větrovec, 2021 پیشنهاد شد، زیرا مشخص شد این نام، یک هم‌نام کم‌سابقه برای *D. panamensis* Gorham, 1897 محسوب می‌شود.

واژگان کلیدی: فهرست، کفشدوزک، زیست‌جغرافیا، گزارش جدید، هم‌نام کم‌سابقه، نام جدید