



The genus *Maiestas* Distant, 1917 (Hemiptera, Cicadellidae, Deltocephalinae, Deltocephalini) in Iran, with a new record for the Palaearctic region

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Abstract. The present study is focused on the species belonging to the genus *Maiestas* Distant, 1917 (Hemiptera: Cicadellidae: Deltocephalinae, Deltocephalini) in Iran, based on some specimens collected during 2016 to 2019 from Southeast Iran and species that have been previously reported: *M. horvathi* (Then, 1896), *M. pruthii* (Metcalfe, 1967), *M. schmidtgeni* (Wagner, 1939), and *M. trifasciata* (Lindberg, 1954). *M. pruthii*, previously known from the Oriental region (India and Pakistan), is recorded for the first time in the Palaearctic region from Southeast Iran and *M. horvathi* is a new record for the fauna of Sistan and Baluchestan Province. An identification key and distribution maps for the Iranian *Maiestas* species are provided.

Keywords: Auchenorrhyncha, fauna, taxonomy, diversity, leafhopper, Sistan and Baluchestan

Article History

Received:

13 June 2023

Accepted:

20 February 2024

Subject Editor:

Mehdi Esfandiari

Citation: Khosravi, M., Ravan, S., Mozaffarian, F. & Wilson, M. R. (2024) The genus *Maiestas* Distant, 1917 (Hemiptera, Cicadellidae, Deltocephalinae, Deltocephalini) in Iran, with a new record for the Palaearctic region. *J. Entomol. Soc. Iran* 44 (2), 153-161.

Introduction

Deltocephalinae is the largest and the most economically important of the 40 known subfamilies of the family Cicadellidae (Ramya *et al.*, 2017). It consists of 38 Tribes, 923 genera, and 6683 known species (Zahniser & Dietrich, 2013). These leafhoppers inhabit the grasslands and are abundant and widely distributed in tropical, subtropical, and temperate forest ecosystems (Webb & Viraktamath, 2009). Nielson (1968) listed 151 cicadellid vector species, of which 117 vector species belong to the subfamily Deltocephalinae. Members of this subfamily are also important vectors of plant diseases (Weintraub & Beanland, 2006). Mozaffarian & Wilson (2016) mentioned 232 species within the Deltocephalinae in Iran, categorized into 20 distinct tribes.

The genus *Maiestas* Distant, 1917 together with the genera *Recilia* Edwards, 1922 and *Deltocephalus* Burmeister, 1838 belong to *Deltocephalus* group of the tribe Deltocephalini Dallas, 1870. These taxa are distinguished by the following combination of male genital characters: pygofer without both processes or a posterior comb-like row of spines; subgenital plates separate with macrosetae arising laterally; apical process of style from short to moderately long, hook-like to digitate; connective and aedeagal shaft short to moderately long, the shaft less than 1½ times length of connective, cylindrical or trough-like, without lateral processes or if lateral processes present (subapically) then shorter than adjacent shaft apex, with or without a spine-like apical extension but if present not shelf-like (Webb & Viraktamath, 2009). The genus *Maiestas* was initially established by Distant (1917), with the type

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species *Maiestas illustris* Distant, 1917 originating from the Seychelles. Webb & Viraktamath (2009) re-assessed the identities of the *Deltocephalus* group taxa, resulting in most species of *Recilia* being transferred to *Maiestas*. Subsequently, Zhang and Duan (2011) revised this group of taxa in China, and currently, the genus comprises 98 species (Duan *et al.*, 2017). *Maiestas* can be distinguished from *Deltocephalus* [and *Recilia* also] by a) the aedeagal shaft, which is minimally dorsally curved; and b) aedeagus lacks a notch at the apex. In some cases, it may have a thin process or spine with the gonopore situated apically on the dorsal surface (Duan, 2017). Some leafhoppers of the genus *Maiestas* are major pests, as both adults and nymphs feed on plants sap and may transmit some diseases. (Mathur & Chaturvedi, 1980).

The study conducted by Mozaffarian & Wilson (2016) has provided findings regarding a total of three *Maiestas* species *M. horvathi* (Then, 1896), *M. schmidtgeni* (Wagner, 1939), *M. trifasciata* (Lindberg, 1954) in Iran. In the present study, *M. pruthii* (Metcalf, 1967) is added to the existing list of the *Maiestas* species. An identification key to species and distribution maps are provided.

Materials and methods

The *Maiestas* specimens examined have been collected in Southeast Iran during 2016 to 2019. The specimens were generally collected by D- VAC, sweeping net, light traps, and only a few by malaise traps. Morphological terminology follows Dietrich (2005). Digital photographs were taken with a Canon® EOS Kiss X2 digital camera connected to an Olympus® BH2-UMA stereo microscope. Subsequently, the images were post-processed using Adobe Photoshop® CS software. Distribution maps were made using ArcMap 910.2.0.3348, based on the specimens examined and previously published data. The specimens will be deposited in Hayk Mirzayans Insect Museum, Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection, Tehran, Iran (HMIM).

Results

Taxonomic hierarchy

Family Cicadellidae Latreille, 1825

Subfamily Deltocephalinae Dallas, 1870

Tribe Deltocephalini Dallas, 1870

Genus *Maiestas* Distant, 1917

Maiestas Distant, 1917: 312.

Type species: *Maiestas illustris* Distant, 1917

Distribution. Old World (Duan *et al.*, 2017).

Remarks. This genus, comprising 98 species, differs from *Deltocephalus* Burmeister and *Recilia* Edwards by the aedeagal shaft being at most only slightly curved dorsally with apex entire and sometimes produced into a thin process or spine with the gonopore apical on the dorsal surface (Duan *et al.*, 2017).

Maiestas horvathi (Then, 1896) (Fig. 1A- F)

Thamnotettix horváthi Then, 1896a:193; *Deltocephalus horváthi* Horváth, 1897c:49; *Deltocephalus horvathi* Wagner, 1939a:164; *Recilia horvathi* Dlabola, 1967a; *Maiestas horvathi* Webb & Viraktamath, 2009a:16.

Material examined. Iran, Sistan and Baluchestan province, Chabahar; Dashtiari, Bahu Kalat; (25°42'05"N, 61°25'24"E), 4. iii.2016, D-VAC in the orchard, M. Khosravi leg., 1 male (HMIM).; Sistan and Baluchestan province, Chabahar; Zarabad; (25°41'12"N, 59°19'27"E), 16. iv.2016, D-VAC in the orchard, M. Khosravi leg., 1 male (HMIM).

Diagnosis. Forewing without zig-zag marking and without brown spot on clavus (Fig. 1A, F). Aedeagal shaft broad, not hooked apically in lateral view, subapical ventral margin smooth (Fig. 1C, D); style apophysis not swollen in middle, moderately long, digitate (Fig. 1B); subgenital plate lateral margin slightly convex, with macrosetae, subtriangular (Fig. 1B); connective nearly equal in length to aedeagus (Fig. 1C, D); pygofer lobe with rounded hind margin (Fig. 1E); inner antepical cell open basally (Fig. 1F).

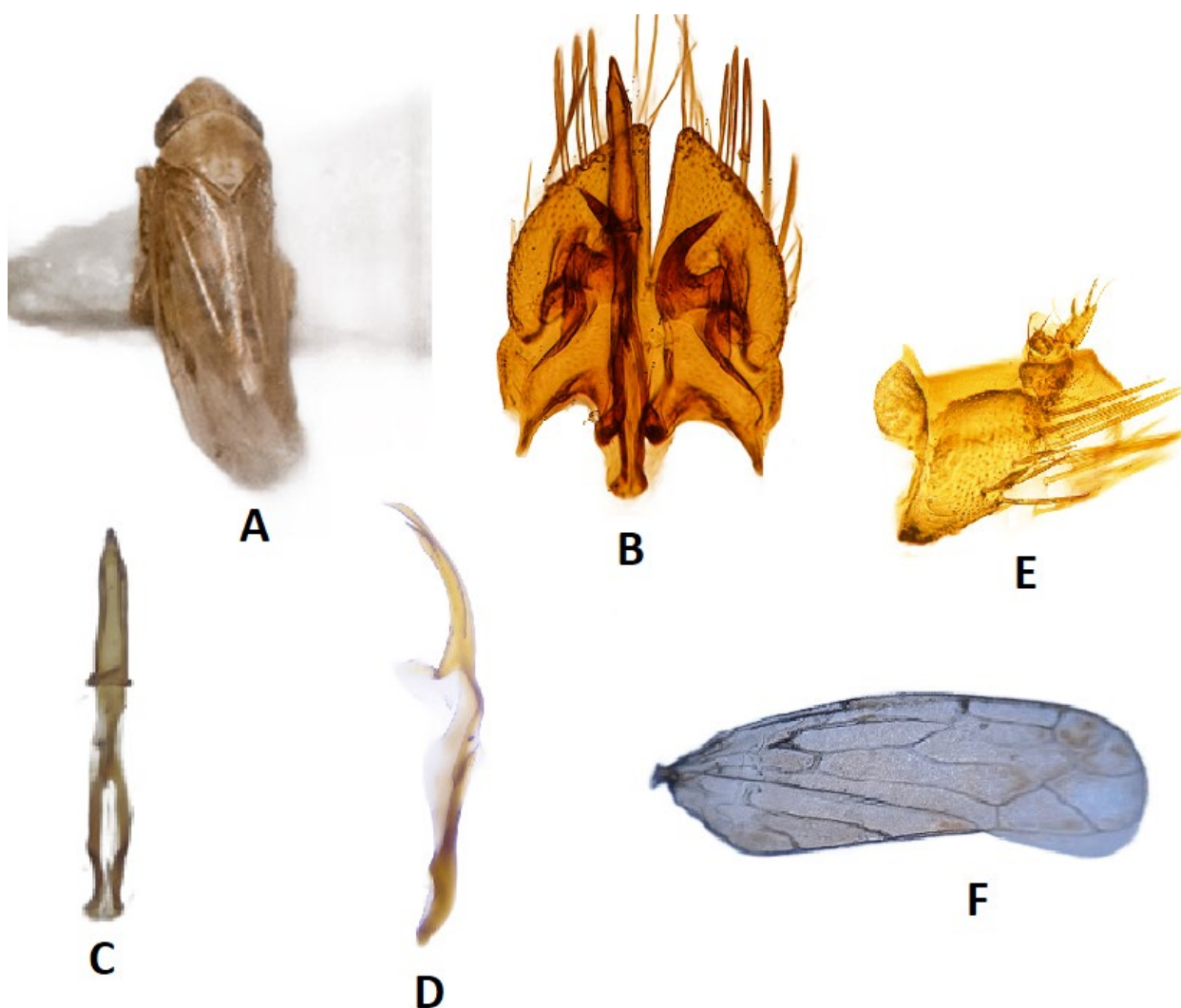


Fig. 1. *Maiestas horvathi* (Then, 1896). **A.** habitus, dorsal view; **B.** style, subgenital plates ventral view; **C.** connective and aedeagus, ventral view; **D.** connective and aedeagus, lateral view, **E.** male pygofer lobe, lateral view; **F.** Forewing.

Distribution in Iran (Fig. 3A). South, southwest, southeast [**new record**], east and north

(Dlabola, 1981, Mirzayans, 1995; Pakarpour *et al*, 2015; Mozaffarian & Wilson, 2016).

World distribution. **Oriental** (China); **Palearctic** (Austria, Bulgaria, China, Czech Republic, Germany, Hungary, Iran, Italy, Kazakhstan, Korea, Mongolia, Romania, Russia, Serbia, Slovakia, Slovenia, Switzerland, Tunisia, Turkey, Ukraine, Uzbekistan) (Metcalf, 1967; Nast, 1972).

Remarks. This species' range extends from Mongolia to central Europe, where it occurs in rather isolated populations in xerothermic sites (Nickel, 2003). The documented habitat of *M. horvathi* is situated within sunlit or partially shaded areas, characterized by dry and sparsely vegetated inland dunes. These habitats often exhibit patches of disturbance and support a mixture of annual and perennial vegetation. (Nickel & Bückle, 2014).

***Maiestas pruthii* (Metcalf, 1967) (Fig. 2A-E)**

Deltocephalus notatus Singh-Pruthi, 1936a:128; *Deltocephalus pruthii* Metcalf, 1967b:1173; *Deltocephalus (Recilia) pruthii* Dash & Viraktamath, 1998a:31; *Maiestas pruthii* Webb & Viraktamath, 2009a:20.

Material examined. Iran, Sistan and Baluchestan province, Chabahar, Tiskupan (25°21'36"N, 60°37'21"E), 22.v.2016, D-VAC in the natural ecosystem, M. Khosravi leg., 3 males (HMIM).; Sistan and Baluchestan

province, Chabahar, Kambel-e Soleyman 25°24'17"N, 60°36'17"E, 10. iv.2016, D-VAC in the natural ecosystem, M. Khosravi leg, 2 males (HMIM).

Diagnosis. Adults are brownish, with variation in head markings. *M. pruthii* can be easily recognized by their reticulate wing pattern, forewings with variation and dark brown pigment thickly deposited near veins (Fig 2A), pygofer oval shape, longer than broader (Fig 2E). Connective linear and fused with aedeagus; aedeagal shaft broad at the base and tapering towards apex upturned dorsal view of aedeagus with the spine-like process. (Fig 2C, D); style base broader, apophysis small stout process without crenulate margin (Fig 2B); subgenital plate triangular with few long setae on outer margin (Fig 2B)

Distribution in Iran (Fig. 3B). Southeast. This species is recorded from Iran for the first time.

World distribution. Oriental (India, Pakistan) (Webb & Viraktamath, 2009). Palearctic (Iran [new record])

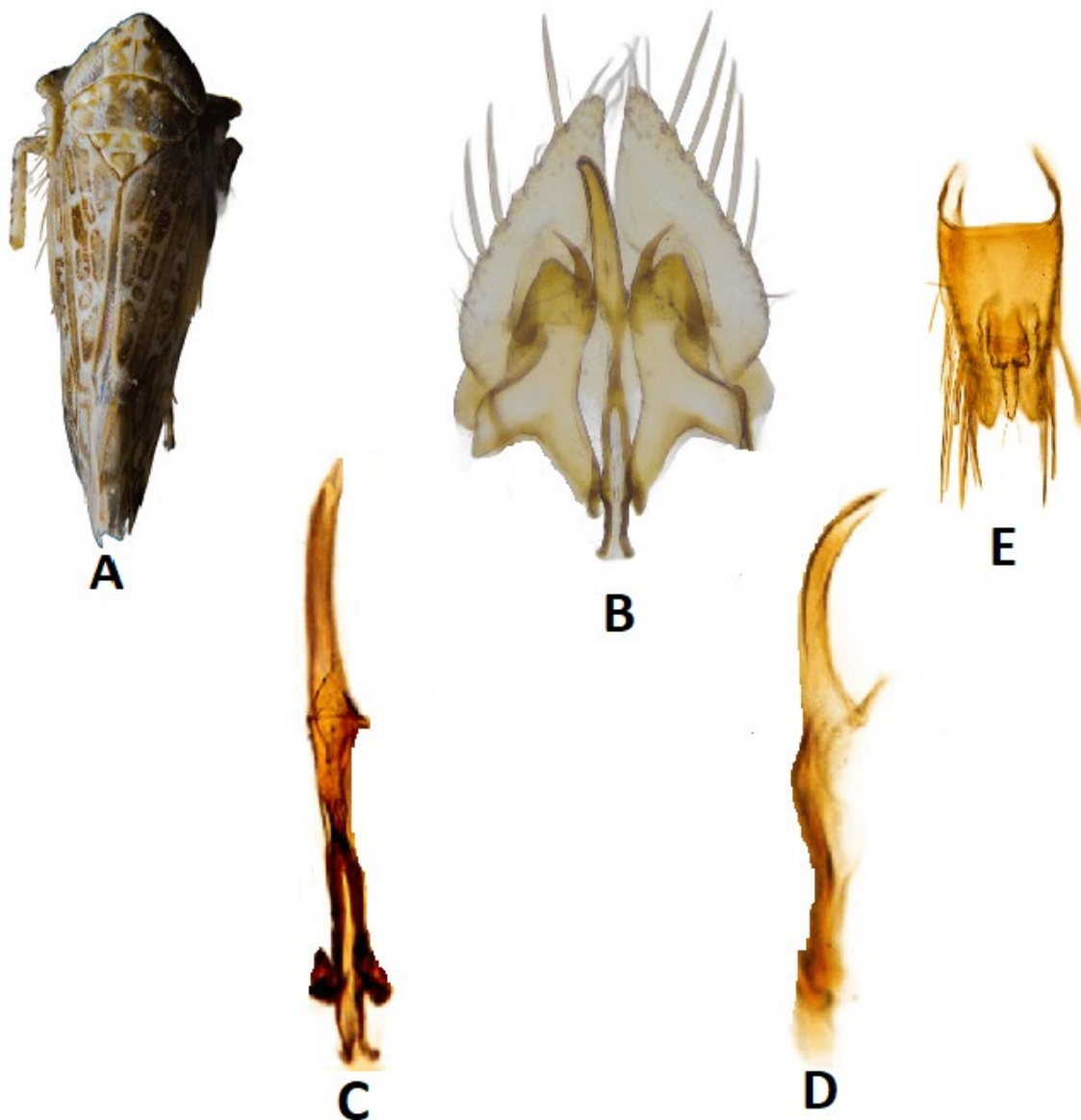


Fig. 2. *Maiestas pruthii* (Metcalf, 1967). **A.** habitus, dorsal view; **B.** style, subgenital plates ventral view; **C.** connective and aedeagus, ventral view; **D.** connective and aedeagus, lateral view, **E.** male pygofer lobe, dorsal view

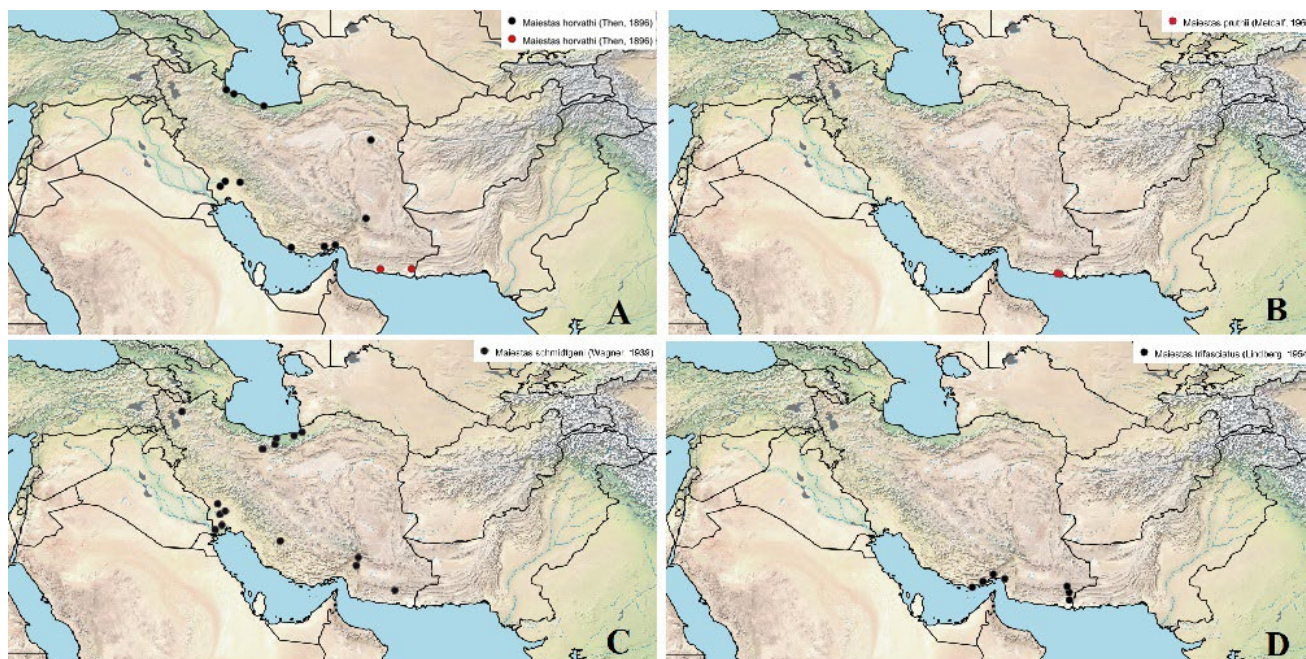


Fig. 3. Distribution maps of *Maistas* sp. In Iran (black dots: published record, red dots: examined specimens in this study): A. *Maistas horvathi* (Then, 1896); B. *Maistas pruthii* (Metcalf, 1967); C. *Maistas schmidtgeni* (Wagner, 1939); D. *Maistas trifasciata* (Lindberg, 1954).

Remarks. *M. pruthii* can be easily recognized by reticulate wing pattern, pygofer longer than broad, broader aedeagal shaft than connective and lateral expansion at the base (Ramya *et al*, 2017).

Maistas schmidtgeni (Wagner, 1939)

Thamnotettix coronifer Fieber, 1872a:11; *Deltocephalus schmidtgeni* Wagner, 1939a:164; *Recilia schmidtgeni* Dlabola, 1948a:5; *Deltocephalus (Recilia) schmidtgeni* Ribaut, 1952a:250; *Maistas schmidtgeni* Webb & Viraktamath, 2009a:16.

Diagnosis. Aedeagal shaft with ventral margin extending beyond gonopore process-like, without triangular membranous area apically in lateral view; aedeagus without heel at the base of shaft; inner antepical cell closed basally; pygofer lobe with rounded hind margin; subgenital plate with lateral macrosetae (Zhang & Duan, 2011).

Distribution in Iran (Fig. 3C). North, northwest, center, southwest, south, and southeast. (Dlabola, 1960; 1981; Mirzayans, 1995; Pakarpour *et al*, 2015; Mozaffarian and Wilson, 2016).

World distribution. **Palearctic** (Afghanistan, Albania, Austria, Azerbaijan, Bulgaria, China, Czech Republic, France, Georgia, Germany, Greece, Hungary, Iran, Israel, Italy, Jordan, Kazakhstan, Kyrgyzstan, Malta, Moldova, Morocco, Romania, Russia, Saudi Arabia, Slovakia, Slovenia, Switzerland, Tajikistan, Turkey, Turkmenistan, Ukraine, United Kingdom, Uzbekistan) (Metcalf, 1967; Nast, 1972; Dlabola, 1979)

Maistas trifasciata (Lindberg, 1954)

Deltocephalus trifasciatus Lindberg, 1954a:212; *Recilia trifasciata* Dlabola, 1994:41; *Maistas trifasciata* Webb & Viraktamath, 2009a:17.

Diagnosis. It exhibits distinct characteristics, notably a distinctive coloration consisting of a black body adorned with three white bands prominently displayed on the forewings (Zhang & Duan, 2011).

Distribution in Iran (Fig. 3D). South and southeast (Dlabola, 1994; Mozaffarian & Wilson, 2016).

World distribution. **Afrotropical** (Burkina Faso); **Palearctic** (Canary Islands, Iran, United Arab Emirates) (Metcalf, 1967; Dlabola, 1994; Gnezdilov, 2022).

Key to species of *Maiestas* Distant from Iran (males)

- 1- Forewing with three white bands..... *Maiestas trifasciata* (Lindberg, 1954)
 -Forewing without three white bands..... 2
- 2- Aedeagal shaft tubular and dorsal apex with spine like process (Fig. 2C, D)..... *M. pruthii* (Metcalf, 1967)
 - Aedeagal shaft broad at base and tapering towards apex upturned (Fig. 1 D)..... 3
- 3- Inner anteapical cell closed basally..... *M. schmidtgeni* (Wagner, 1939)
 - Inner anteapical cell open basally (Fig. 1G)..... *M. horvathi* (Then, 1896)

Discussion

Despite the wide diversity of *Maiestas* (98 species) in the world, the number of species reported in Iran is limited. According to the checklist presented by Mozaffarian & Wilson (2016), three species belonging to the genus *Maiestas*, are reported from Iran. In this study *Maiestas pruthii* is recorded from the Palaearctic region and from the southeast Iran for the first time. However, by comparing the number of known species in Iran and in the world and the climatic diversity of Iran, it is expected that through future comprehensive sampling endeavors, a more precise evaluation of the leafhopper fauna especially the *Deltocephalus* group in Iran can be attained.

An overall look at the distribution map of *Maiestas* species (Fig 3A-D) in Iran indicates that although they have been distributed in the whole country, their richness is much higher in the southeast and even two of them (*M. pruthii* and *M. trifasciata*) are limited to that area.

Emeljanov (1974) included Iran in the Palaearctic region and treated this territory in frame of the Sethian desert region. This biogeographical scheme was followed also by Gnezdilov *et al.* (2014) for Issidae distribution. The region of Baluchestan in southeast of Iran is shared by the three countries Iran, Pakistan and Afghanistan, and connects the Iranian Plateau with the countries of Southeast and Central Asia. This area is arid and hot during summer (Parchami Araghi *et al.*, 2017). The southeast of Iran is a crossroads for three biogeographic regions, the Palaearctic, Oriental and Afrotropical regions, and its fauna is spectacularly diverse and different from that of the rest of the country (Mirzayans, 1995, Parchami Araghi *et al.*, 2017).

The species *M. pruthii* (Metcalf, 1967) is newly recorded from the Palaearctic region and from Iran. The report of *M. pruthii*, from the Oriental territories such as India and Pakistan (Webb & Viraktamath, 2009) implies a potential linkage between the Iranian fauna (in the southeast) and these particular areas. The occurrence of *M. trifasciata* in both the Afrotropical and Palaearctic regions (Metcalf, 1967; Dlabola, 1994) presents a noteworthy subject of investigation and confirms the presence of Afrotropical elements in the southeast of Iran. Because few of the known localities' distribution of *Maiestas* species are in the northeast and eastern of the country, it may indicate the preference of the species to tropical and subtropical and temperate areas.

The distribution patterns of species can be affected by various ecological or historical factors (Morrone, 2015). However, today some events affect natural distribution of many species that are mostly due to human activities such as importing agricultural products or inputs related to them, which causes the transfer of insect species. In particular, there are extensive agricultural exchanges on the common border between Iran and Pakistan.

Acknowledgments

The authors gratefully acknowledge Dr. C. A. Viraktamath, Department of Entomology, University of Agricultural Sciences, GKVK, Bengaluru, India. for his guidance and Dr. Imran Khatri, Department of Entomology, Sindh Agriculture University Tandojam Pakistan for correcting and confirming identifications.

Funding

This research was financially supported by Zabol University, Sistan and Baluchestan, Iran.

REFERENCES

- Dietrich, C. H.** (2005). Keys to the families of Cicadomorpha and subfamilies and tribes of Cicadellidae (Hemiptera: Auchenorrhyncha). *Florida Entomologist* 88: 502–517. [https://doi.org/10.1653/0015-4040\(2005\)88\[502:KTTFOC\]2.0.CO;2](https://doi.org/10.1653/0015-4040(2005)88[502:KTTFOC]2.0.CO;2).
- Distant, W. L.** (1917). The Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of Mr J. Stanley Gardiner, M.A. Vol. VI, No. VII-Rhynchota, Part II: Suborder Homoptera. *Transactions of the Linnean Society of London*. 17: 273–322. <https://doi.org/10.1111/j.1096-3642.1917.tb00469.x>.
- Dlabola, J.** (1960) Iranische Zikaden (Homoptera: Auchenorrhyncha). (Ergebnisse der entomologischen Reisen Willy Richter, Stuttgart, in Iran, 1954 und 1956, N: 31). *Stuttgarter Beiträge zur Naturkunde*, 41, 1–24.
- Dlabola, J.** (1979) Neue Zikaden aus Anatolien, Iran und aus südeuropäischen Ländern (Homoptera: Auchenorrhyncha). *Acta Zoologica Academiae Scientiarum Hungaricae*, 21 (3–4), 235–257.
- Dlabola, J.** (1981) Ergebnisse der tschechoslovakisch-iranischen entomologischen Expeditionen nach dem Iran (Mit Angaben über einige Sammelresultate in Anatolien) (1970 und 1973) (Homoptera, Auchenorrhyncha). II Teil. *Acta Musei Nationalis Pragae*, 40, 127–311.
- Dlabola, J.** (1994). Ergänzungen zur iranischen, israelischen und benachbarten Zikadenfaunen mit Beschreibungen 30 neuer Taxone (Homoptera, Auchenorrhyncha). *Acta Musei Nationalis Pragae*, 49 (1–4): 41–110.
- Duan, Y., Dietrich, C. H. & Zhang, Y.** (2017). A new species of the leafhopper genus *Maiestas* Distant from Australia (Hemiptera, Cicadellidae, Deltocephalinae, Deltocephalini). *Zookeys*. Jan 17;(646):73-78. <https://doi.org/10.3897/zookeys.646.10912>
- Duan, Y. N. & Dietrich, C. H.** (2017) A new leafhopper species of *Maiestas* Distant (Hemiptera, Cicadellidae, Deltocephalinae, Deltocephalini) from Thailand. *Zootaxa*, 4247 (1), 61–64. <https://doi.org/10.11646/zootaxa.4247.1.7>
- Emeljanov, A. F.** (1974) Proposals on the classification and nomenclature of Ranges. *Entomologicheskoe Obozrenie*, 53 (3), 497–522. [English translation was published in *Entomological Review*, 53 (3), 11–26].
- Gnezdilov, V. M., Holzinger, W. E. & Wilson, M. R.** (2014). The Western Palearctic Issidae (Hemiptera, Fulgoroidea): an illustrated checklist and key to genera and subgenera. *Proceedings of the Zoological Institute RAS*, 318, Supplement 1, 1–124. [http://www.zin.ru/journals/trudyzin/doc/vol_318_s1/TZ_318_1_Supplement_Gnezdilov.pdf].
- Gnezdilov, V. M.** (2022) Leafhoppers (Hemiptera: Auchenorrhyncha: Cicadellidae) of the United Arab Emirates: checklist, new records, and a new species. *Proceedings of the Entomological Society of Washington*, 123(4), 745–758. <https://doi.org/10.4289/0013-8797.123.4.745>
- Mathur, K. C. & Chaturvedi, D. P.** (1980). Biology of leaf and planthoppers, the vectors of Rice virus diseases in India. *Proceedings of Indian National Science Academy; B*:46: 797-812.
- Metcalf, Z. P.** (1967). *General Catalogue of the Homoptera. Fasc. VI, Cicadelloidea. Pt 10, Euscelidae*. U.S.D.A., Washington, D.C. 2695 pp.
- Mirzayans, H.** (1995). Insects of Iran, the list of Homoptera: Auchenorrhyncha in the insect collection of Plant Pests and Diseases Research Institute. 59 pp.
- Morrone, J. J.** (2015). Biogeographical regionalisation of the world: a reappraisal. *Australian Systematic Botany* 28: 81–90. <http://doi.org/10.1071/SB14042>. S2CID 83401946.
- Mozaffarian, F. & Wilson, A. M.** (2016). A checklist of the leafhoppers of Iran (Hemiptera: Auchenorrhyncha: Cicadellidae). *Zootaxa*, 4062, 152–165. <https://doi.org/10.11646/zootaxa.4062.1.1>
- Nast, J.** (1972). *Palearctic Auchenorrhyncha (Homoptera) An annotated checklist*. Polish Scientific Publishers, Warsaw, Poland, PP: 1-550.
- Nickel, H.** (2003). *The Leafhoppers and Planthoppers of Germany (Hemiptera Auchenorrhyncha): Patterns and strategies in a highly diverse group of phytophagous insects*. Copublished by Pensoft Publishers, Sofia-Moscow (ISBN 954-642-169-3) and Goecke & Evers, Keltorn (ISBN 3-931374-09-2), 460 pp. <https://doi.org/10.1002/mmnd.20030500216>.
- Nickel, H. & Bückle, C.** (2014). Baden-Württembergs besondere Verantwortung zum Schutz von Zikaden. *Naturschutz und Landschaftspflege*, 77, 207–263.
- Nielson, M. W.** (1968) The leafhopper Vectors of Phytopathogenic Viruses (Homoptera, Cicadellidae). Taxonomy, Biology, and Virus Transmission. US Department of Agriculture Technical Bulletin No. 1-1382 pp.

- Pakarpour Rayeni, F., Nozari, J. & Seraj, A. A.** (2015) A checklist of Iranian Deltocephalinae (Hemiptera: Cicadellidae). *Iranian Journal of Animal Biosystematics*, 11 (2), 121–148. [10.22067/ijab.v11i2.44211](https://doi.org/10.22067/ijab.v11i2.44211).
- Parchami Araghi, M., Pont, A., Gilasian, E., Basavand, F. & Mousavi, H.** (2017). First Palaearctic record of the genus *Pygophora* Schiner, 1868 (Diptera: Muscidae) from Iranian Baluchestan. *Zoology in the Middle East*. Vol. 63, No. 3, 280–282, <http://dx.doi.org/10.1080/09397140.2017.1331589>.
- Ramya, N., Srinivasa, N. & Naresh, M.** (2017). Note on genus *Maiestas* (Hemiptera: Cicadellidae) with diagnosis of important species. *Journal of Entomology and Zoology Studies*, 5(5): 1626-163
- Webb, M. D. & Viraktamath, C. A.** (2009). Annotated check-list, generic key and new species of Old World Deltocephalini leafhoppers with nomenclatorial changes in the *Deltocephalus* group and other Deltocephalinae (Hemiptera: Auchenorrhyncha: Cicadellidae). *Zootaxa* 2163: 1–64. <https://doi.org/10.3956/2012-34.1>
- Weintraub, P. G. & Beanland, L.** (2006) Insect vectors of phytoplasmas. *Annual Review of Entomology* 51:91-111. doi: [10.1146/annurev.ento.51.110104.151039](https://doi.org/10.1146/annurev.ento.51.110104.151039)
- Zahniser, J. N. & Dietrich, C. H.** (2013): A review of the tribes of Deltocephalinae (Hemiptera: Auchenorrhyncha: Cicadellidae). *European Journal of Taxonomy* 45: 1–211. DOI: <https://doi.org/10.5852/ejt.2013.45>
- Zhang, Y. L. & Duan, Y. N.** (2011) Review of the *Deltocephalus* group of leafhoppers (Hemiptera: Cicadellidae: Deltocephalinae) in China. *Zootaxa*, 2870, 1–47. <https://doi.org/10.11646/zootaxa.2870.1.1>

معرفی جنس (*Maiestas* Distant, 1917 (Cicadellidae, Deltocephalinae, Deltocephalini) در ایران با

گزارش جدید برای منطقه پالئارکتیک

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تاریخچه مقاله

دریافت: ۱۴۰۲/۰۳/۲۳ | پذیرش: ۱۴۰۲/۱۲/۰۹ | دبیر تخصصی: مهدی اسفندیاری

چکیده

مطالعه حاضر به بررسی گونه‌های متعلق به جنس *Maiestas* Distant, 1917 (Cicadellidae: Deltocephalinae, Deltocephalini) در ایران می‌پردازد. بر اساس گزارش‌های موجود و نمونه‌برداری طی سال‌های ۹۷-۱۳۹۴ از جنوب شرق ایران گونه‌های *M. horvathi* (Then, 1896), *M. pruthii* (Metcalf, 1967), *M. schmidtgeni* (Wagner, 1939) و *M. trifasciata* (Lindberg, 1954) گزارش می‌شود. گونه *M. pruthii* که قبلاً از منطقه اورینتال (هند و پاکستان) ثبت شده است، برای اولین بار در منطقه پالئارکتیک از جنوب شرق ایران گزارش می‌شود و گونه‌ی *M. horvathi* یک گزارش جدید برای سیستان و بلوچستان است. کلید شناسایی و نقشه پراکنش گونه‌های *Maiestas* در ایران ارائه شده است.

کلمات کلیدی: Auchenorrhyncha، فون، رده‌بندی، زنجرک، تنوع، سیستان و بلوچستان

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Citation: Khosravi, M., Ravan, S., Mozaffarian, F. & Wilson, M. R. (2024) The genus *Maiestas* Distant, 1917 (Hemiptera, Cicadellidae, Deltocephalinae, Deltocephalini) in Iran, with a new record for the Palearctic region. *J. Entomol. Soc. Iran* 44 (2), 153-161. <https://doi.org/10.61186/jesi.44.2.4>