




Additions to the fauna of gall midges (Diptera, Cecidomyiidae) in Iran

Younes Karimpour

Department of Plant Protection, Faculty of Agriculture, Urmia University, Urmia, Iran.

✉ y.karimpour@urmia.ac.ir

 <https://orcid.org/0000-0003-2468-8367>

Marcela Skuhrová

Blatná 1227/9, CZ-140 00 Praha 4, Czech Republic.

✉ marcela.skuhrova@gmail.com

 <https://orcid.org/0000-0002-8640-4879>

ABSTRACT. The gall midges, *Janetiella convolvuli* Mirumyan & Skuhrová, 2017 and *Orseolia cynodontis* Kieffer & Massalongo, 1902 are discovered in Iran for the first time based on adult specimens reared from galls on *Convolvulus arvensis* L. (Convolvulaceae) and *Cynodon dactylon* (L.) Persoon (Poaceae), respectively. The galls of *J. convolvuli* and *O. cynodontis* were previously recorded only in Armenia and European/African sections of the western part of the Palearctic region, respectively. Some relevant diagnostic characters, photographs, ecological and biological notes, and distributional data for the newly recorded species are provided.

Key words: Bermudagrass, bindweed, gall midge, New record, distribution.

Received:

10 February, 2022

Accepted:

25 August, 2022

Published:

08 October, 2022

Subject Editor:

Ebrahim Gilasian

Citation: Karimpour, Y. & Skuhrová, M. (2022) Additions to the fauna of gall midges (Diptera, Cecidomyiidae) in Iran. *Journal of Insect Biodiversity and Systematics*, 8 (4), 571–579.

INTRODUCTION

Field bindweed, *Convolvulus arvensis* L. (Convolvulaceae) is a prostrate or climbing, deep-rooted perennial weed which is one of the most problematic weeds distributed worldwide. It is reported as a noxious weed in thirty-two different crops in fifty-four countries (Holm et al., 1977). *Convolvulus arvensis* is native to Europe and Asia and can be found in countries with temperate, tropical and Mediterranean climates (Gubanov et al., 2004). Infestations of farmlands by *C. arvensis* can severely reduce crop yield (Schweizer et al., 1978). Bermudagrass, *Cynodon dactylon* (L.) Persoon is a rhizomatous, cosmopolitan and perennial weed species which is considered as one of the most damaging weeds of the Poaceae family (Mitich, 1989; Harlan & de Wet, 1969). It is reported as one of the world's most troublesome weeds and categorized as the second most important weed in the world (Holm et al., 1977). It has been included in the Global Invasive Species Database (GISD, 2022). It is also known as a valuable medicinal plant as Antidiabetic, Antiulcer Immunomodulatory, anti convulsions, Antidiarrheal, CNS depressant, Hepatoprotective and Cardioprotective (Nagori & Solanki, 2011; Shendye & Gurav, 2014). According to Gagné and Jaschhof (2021), four species of gall midges are associated with the plants of the genus *Convolvulus* Linnaeus. Among them *Asphondylia convolvuli* Möhn, 1960 and *Lasioptera convolvuli* Felt, 1907 are distributed in Central and North America, respectively. Although two species of *Contarinia* Rondani, 1860 have also been reported from Kazakhstan.

Corresponding author: Karimpour, Y., E-mail: y.karimpour@urmia.ac.ir

Copyright © 2022, Karimpour & Skuhrová. This is an open access article distributed under the terms of the Creative Commons NonCommercial Attribution License (CC BY NC 4.0), which permits Share - copy and redistribute the material in any medium or format, and Adapt - remix, transform, and build upon the material, under the Attribution-NonCommercial terms.

None of these gall midge species are associated with the *C. arvensis*. Three species of gall midges are known to be associated with *C. dactylon* viz., *Orseolia difficilis* Gagné, 1973 (India, Uttar Pradesh, Allahabad), *Orseolia graminicola* (Kieffer & van Leeuwen-Reijnvaan, 1910), (Indonesia, Java, Salatiga) and *O. cynodontis* (Gagné & Jaschhof, 2021). *Orseolia cynodontis* is the only species of this genus that occurs in Europe and northern Africa (Gagné & Jaschhof, 2021).

The information on the gall midge species of Iran is rare and fragmentary. According to Skuhrová et al. (2014), the known gall midge fauna of Iran is composed of 61 species belonging to 33 genera. After this finding, the gall midges, *Xerephedromyia bipartita* Mamaev, 1972; *X. mitroshinae* Fedotova, 1992 and *Ephedromyia debilopalpis* Marikovskij, 1953 as a stem gall inducer on *Ephedra major* Host, 1831 (Ephedraceae) were recorded for the first time from Iran (Moeinadini et al., 2017; Hadi et al., 2018). Later, the new genus and species, *Cephalaromyia capituli* Skuhrová, 2017 were described from Iran (Skuhrová & Karimpour, 2017). In the course of faunistic studies on gall midges' fauna associated with herbaceous weeds in west Azarbaijan province, herewith we present the new findings on the gall-inducing cecidomyiid flies associated with Bermudagrass and field bindweed. Both species are common and important weeds in Iranian farmlands (Zand et al., 2009).

MATERIAL AND METHODS

Galled plant materials of field bindweed and Bermudagrass were collected on 10th June 2020 and 29th September 2020 in the environs of the town Urmia in the West Azerbaijan province in Iran. Infected plant materials were collected and put in the polyethylene bag and transferred to the laboratory. Samples were kept in rearing glass boxes (30×40×80 cm) under laboratory conditions (26±2 °C; 70±5% relative humidity and a photoperiod of 12:12 L:D) until the end of adults emergence. Emergence of adults was checked every day for about one month. Larvae and emerged adults obtained from galls were put into 75% ethanol and later a part of them was mounted on microscope slides using Hoyer's mounting and Canada balsam as a medium. Galls on host plants were photographed by Samsung S10 mobile phone camera and taking of photos from larvae and adult gall midges were done using the same camera and an Olympus SZH stereomicroscope. Identification of adults is based on keys written by Skuhrová (1997). Observations related to damage and life history of fieldbind weed gall midge on the host plant were made in field conditions. The voucher specimens are deposited in the collection of Marcela Skuhrová, Prague, Czech Republic.

RESULTS

A few days after transferring the galled plant materials to the laboratory, adults of gall midge were appeared in rearing cages. Adult specimens were collected and emerging dates of them were recorded. Identified gall midge species which were responsible for gall-inducing are as follows:

Taxonomic hierarchy

Class Insecta Linnaeus, 1785

Order Diptera Linnaeus, 1758

Suborder Nematocera Duméril, 1805

Superfamily Sciaroidea Billberg, 1820

Family Cecidomyiidae Newman, 1835

Genus *Janetiella* Kieffer, 1898

***Janetiella convolvuli* Mirumyan & Skuhrová, 2017 (Figs 1, 2)**

Materials examined. 6♀♀, 11♂♂; IRAN, West Azarbaijan (Azarbaijan-e Gharbi) province, Urmia environs, situated at the 21st km of Urmia - Mahabad road, vicinity of Arablü village, 10 years old vineyard, 37°24'40"N, 45°14'53"E, Elev. 1278 m a.s.l., ex. *Convolvulus arvensis*, 15–23, vi. 2020, leg.: Y. Karimpour.

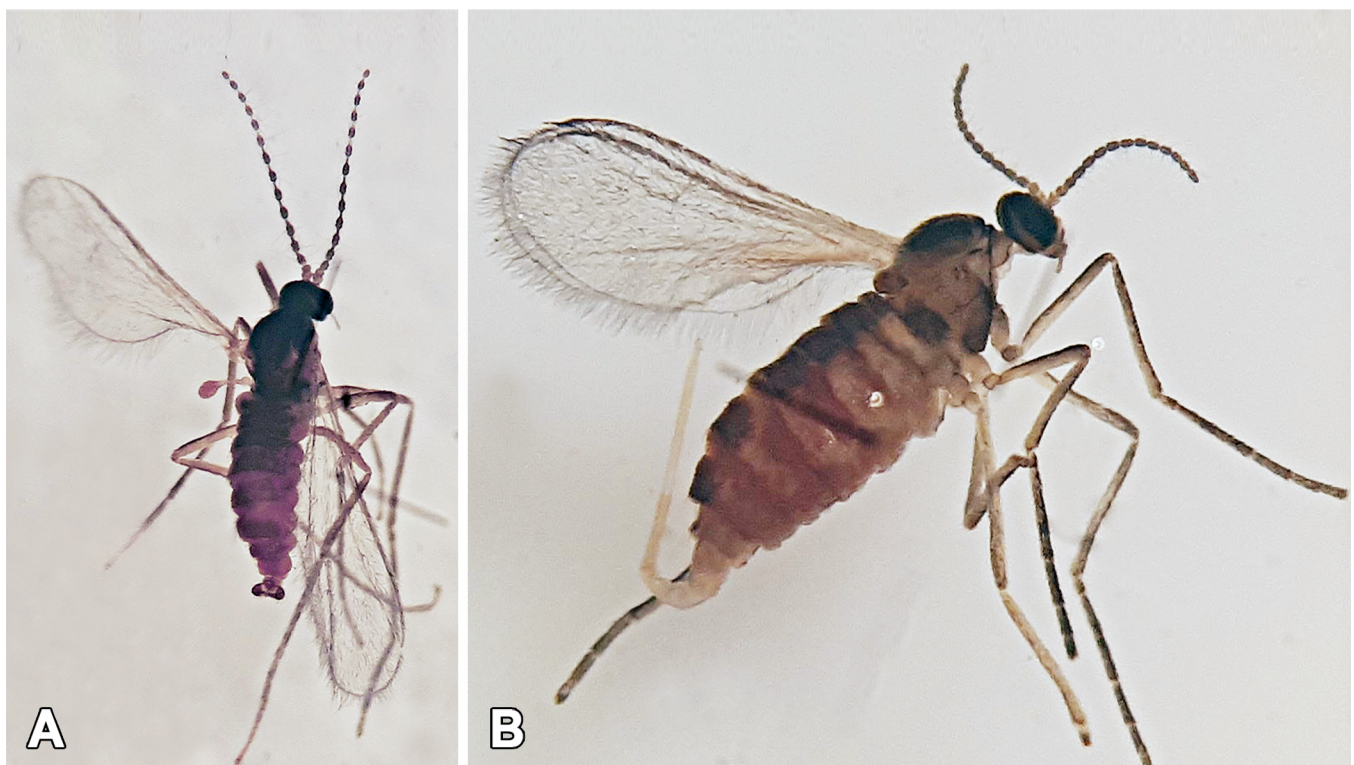


Figure 1. Adults of *Janetiella convolvuli* Mirumyan & Skuhrová, 2017. **A.** male; **B.** female .

Diagnostic characters — Male. Body size 1.3–1.5 mm; wing length 1.6 mm, wing width 0.48 mm. Head black, thorax dark brown, abdomen brown. Antennae composed of two basal segments and twelve flagellomeres. Scape obconical, pedicel globular, flagellomeres composed of basal node and neck; necks as long as nodes; first flagellomere with shortened neck, 12th flagellomere at the end with egg-shaped pointed part, or this part separated by a shortened neck. Palpi 3-segmented, covered with long setae; first segment short and thick, second and third segments slender, with same length, wing vein R1 joining vein Costa before its middle, vein R5 joining costa before wing apex, Costa broken at this point, Cu poorly visible, forked. Terminalia composed of cylindrical gonocoxites, slightly swollen at inner side near the tip, sparsely covered with long setae which are more abundant in the apical part, with sclerotised rounded apodeme basally. Gonostyli short, about half as long as gonocoxites, with parallel sides, covered with microtrichia, apically with black claw; cerci broad, lobes triangle-shaped, deeply separated, broadened laterally in basal third; hypoproct narrow, with rounded excision, as long as cerci. Aedeagus tubular with rounded tip, as long as gonocoxites. Mediobasal lobes of gonocoxites have small excision apically, shorter than aedeagus.

Female (Fig. 1B). Body size 1.3–1.5 mm; wing length 1.5 mm, wing width 0.60 mm, body similarly colored as in male. Antennae with two basal segments and twelve flagellomeres. Scape obconical, pedicel globular, flagellomeres cylindrical, without necks, a little broader in basal part; the 12th flagellomere 1.5 times longer than the 11th flagellomere. Palpi as in male. Wing vein R1 joining vein Costa before its middle, vein R5 joining vein Costa before wing apex, Costa broken at this point, vein Cu poorly visible, forked. Abdominal segment 2–6 relatively large, sclerotized dorsally, covered with short setae, ventral side without setae; seventh segment small, eighth segment about two times longer than high, in retracted position transversally striated, with two separate, narrow longitudinal sclerites. The ovipositor far protrusible, lower part before cerci slightly broadened. Cerci fused at the end forming one lengthened lamella, hypoproct small and narrow. Ovipositor and hypoproct densely setose.



Figure 2. Galls of *Janetiella convolvuli* Mirumyan & Skuhrová, 2017 on *Convolvulus arvensis*. **A.** Infested flower buds; **B.** Infested terminal buds; **C.** Uninfested flower bud; **D.** Larvae on terminal buds.

Larva (the third larval instar, so-called mature larva). 3.1 mm long, 0.75 mm broad, pink-orange coloured. Integument of larval body covered with small oval plates. Head small, conical, with a pair of small short antennae, cephalic apodemes shorter than head capsule. Black oval spot inside posterior part of head capsule are larval eyes (stemmata), visible only in freshly mounted larvae. They consist of many small oval black particles. Spatula sternalis on ventral side of prothoracic segment brown, 137–140 μm long, with bilobed anterior blade and slender stem which is broadened expand at the bottom. All papillae bear relatively long setae. Terminal segment bears eight papillae; six of them with long setae, two papillae with shorter setae.

Biology. Larvae of *J. convolvuli* develop in the flower and leaf buds of field bindweed (Fig. 2A–B) and pupate in the soil. Three up six larvae of *J. convolvuli* develop in the flower buds (Fig. 2D). The infested buds do not open, they are enlarged and swollen and covered with whitish pubescence (Fig. 2D). Larvae may develop in the leaf buds which form small rosettes of small leaves on the tips of shoots. Fully grown larvae leave galls and fall in the soil where they pupate. Pupation lasts from 8 up to 11 days. Larvae occur in the galls from May to September. Three or more generations develop per year.

Genus *Orseolia* Kieffer & Massalongo, 1902

Orseolia cynodontis Kieffer & Massalongo, 1902 (Fig. 3)

Materials examined. 4♂, 5♀, IRAN, West Azarbaijan (Azarbaijan-e Gharbi) province, Urmia environs, situated at the 21st km of Urmia – Mahabad road, vicinity of Arablü village, 10 years old vineyard, 37°24'40"N, 45°14'53"E, Elev. 1278 m a.s.l., ex *Cynodon dactylon* (L.) Persoon (Poaceae), 05–11.x.2020, leg.: Y. Karimpour.

Diagnostic characters — Male. (Fig. 3A) body size 5–7 mm long, head with large holoptic eyes, palpi with four segments; antennae with 2+12 (scape and pedicel + flagellomeres), binodose, nodes unequal, basal node bearing one set of short, looped circumfila, distal node bearing two sets of circumfila, genitalia with relatively short aedeagus, not extending beyond the interior lamella. Tarsal claws simple on all legs.

Female (Fig. 3B). similar to male in body size, large holoptic eyes and number of palpi and antenna segments except for following characters, flagellomeres long, cylindrical, with moderately long necks, with simple circumfila and numerous tubercle-based setae.

Biology. Larvae of *O. cynodontis* cause galls on Bermudagrass. The galls are oval and consist of several malformed leaves massed together at the extremity of the shoot forming a tube. Only a single larva develops in each gall where it also pupates. During the year only one generation develops (Kieffer & Massalongo, 1902).



Figure 3. Adults of *Orseolia cynodontis* Kieffer & Massalongo, 1902. **A.** Mal; **B.** Female

DISCUSSION

Genus *Janetiella* Kieffer, is distributed in the Holarctic region, with twenty-three species (Gagné & Jaschhof 2021). Of these, fourteen species are found in Europe, three in Asia and five in North America (Skuhrová, 2006). This is the first record of this genus from Iran. In 2009, Y. Karimpour discovered an undescribed species of gall midges in small galls on flower heads of *Cephalaria microcephala* Boiss. (Caprifoliaceae). Although this undescribed species was considered as *Janetiella* sp. among the gall midge fauna of Iran (Skuhrová et al., 2014), more examination of the materials were led to the description of a new species which belongs to a new genus (Skuhrová & Karimpour, 2017). *Janetiella convolvuli* has recently been introduced to the world of science (Mirumyan & Skuhrová, 2017). Finding of this species in Iran represents the first generic record of *Janetiella* for the Iranian gall midge fauna and the second finding of the species in the world. Also, the finding of galls of *O. cynodontis* in Urmia environs represents the first record of this genus in Iran and extends our knowledge on the geographical distribution of this species. The genus *Orseolia* (Kieffer & Massalongo, 1902) (subfamily Cecidomyiinae) includes twenty-eight species which are distributed in the Palaearctic, Afrotropical and Oriental regions. Larvae develop on plants of the family Poaceae, where they cause damage of various forms (Gagné & Jaschhof, 2021). So far, no species of *Orseolia* has been reported from Iran and adjacent countries, but *O. miscanthi* Shinji, 1938 is known from Eastern Palaearctic region/Korean peninsula and Japan, as gall inducer on *Miscanthus sinensis* Andersson, 1855 (Poaceae) (Gagné & Jaschhof, 2021). Till this time, *O. cynodontis* was found in several countries of Europe, viz. in southern France (Skuhrová et al., 2005), Italy (Skuhrová & Skuhrový, 1994; Skuhrová, 1995), Hungary (Skuhrová & Skuhrový, 1999), Romania (Skuhrová et al., 1972) and in two countries of Africa – in Morocco (Skuhrová et al., 2017) and in Algeria (Skuhrová et al., 2020). *Orseolia cynodontis* is given as the member of the European gall midge fauna in the publication of Skuhrová and Skuhrový (2020). Although the origin of its host plant, *C. dactylon*, is not quite known, however this plant is widely distributed in the Oriental region, extends up to southern Europe and North Africa. Therefore, the gall midge *O. cynodontis* is evaluated as alien species in Europe (Skuhrová & Skuhrový, 2009; Skuhrová et al., 2010). By introducing these genus and species, the number of known gall midge fauna of Iran reaches 38 genera and 67 species.

Iran is a vast country with a great variety of climate, topography and vegetation. All of these are influential factors in increasing species diversity. Therefore, it is expected that the number of gall midge species in Iran is much higher than the introduced species. So far, the highest number – 15 species of gall midges – was recorded in the north-western part of Iran, at Urmia and its surroundings (at altitudes of 1330 m a.s.l., in West Azerbaijan province), nine species at Aliabad Katol near the Caspian Sea (98–140 m a.s.l., in Golestan province) and seven species at Joghatay (1340–1362 m a.s.l., in Khorasan province). Undoubtedly, further studies in different regions of Iran will lead to the identification of more genera and species of these dipterous creatures.

AUTHOR'S CONTRIBUTION

The authors confirm their contribution in the paper as follows: Y.Karimpour: Collection of the specimens recording the biological data in Iran, preparation of the draft, corrections on the the final contents of the manuscript and proofreading; M. Skuhrová: Identification the specimens, sorting and deposition in the collection, preparing the diagnostic characters, approving the final contents of the manuscript; All authors read and approved the final version of the manuscript.

FUNDING

This research received no specific grant from any funding agencies.

AVAILABILITY OF DATA AND MATERIAL

Not applicable.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

CONSENT FOR PUBLICATION

Not applicable.

CONFLICT OF INTERESTS

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

ACKNOWLEDGMENTS

The authors are grateful to the Editor-in-Chief, the subject Editor and for their valuable comments on the manuscript resulted in many improvements to the paper. We also thank two anonymous reviewers for their careful reading and corrections.

REFERENCES

- Gagné, R.J. & Jaschhof, M. (2021) *A Catalog of the Cecidomyiidae (Diptera) of the World*. 5th edition. Systematic Entomology Laboratory, Agricultural Research Service, U.S. Department of Agriculture U.S. National Museum NHB, Washington, D.C., USA. 813 p.
- GISD (2022) Global Invasive Species Database. Available online at: <http://www.iucngisd.org/gisd> [Accessed 01 January 2022].
- Gubanov, I.A., Kiseleva, K.V., Novikov, V.S. & Tihomirov V.N. (2004) *An Illustrated Identification Book of the Plants of Middle Russia. Vol. 3. Angiosperms (Dicots: Archichlamydeans)*. Institute of Technological Researches, Moscow. 66 pp.
- Hadi, O. Lotfalizadeh, H. Kazemi, M.H. & Skuhrová, M. (2018) Presence of ephedra gall midge, *Ephedromyia debilopalpis* Marikovskij (Diptera: Cecidomyiidae) in Iran. *Journal of Insect Biodiversity and Systematic*, 4 (2), 135–139.
- Harlan, J. & de Wet, J. (1969) Sources of variation in *Cynodon dactylon*. *Crop Science*, 9, 774–778. <https://doi.org/10.2135/cropsci1969.0011183X000900060031x>
- Holm, L.G. Plucknett, D.L. Pancho, J.V. & Herberger, J.P. (1977) *The World's Worst Weeds. Distribution and Biology*. Hawaii University Press. Honolulu, Hawaii, USA. 610 p.
- Kieffer, J.J. & Massalongo, C. (1902) Di un nuovo genere di Ditteri galligeni. *Marcellia*, 1, 54–59. <https://doi.org/10.5962/bhl.part.17300>
- Mirumyan, L. & Skuhrová, M. (2017) A new gall midge species *Janetiella convolvuli* sp. nov. (Diptera: Cecidomyiidae) causing galls on *Convolvulus arvensis* (Convolvulaceae) in Armenia. *Acta Societatis Zoologicae Bohemica*, 81, 49–54.
- Mitich, L.W. (1989) Bermudagrass. *Weed Technology*, 3 (2), 433–435. <https://doi.org/10.1017/S0890037X00032103>
- Moeinadini, A. Madjzadeh, S.M. & Skuhrová, M. (2017) First record of two species of gall midges (Diptera: Cecidomyiidae) from Iran. *Journal of Insect Biodiversity and Systematics*, 3 (4), 309–318.
- Nagori, B.P. & Solanki, R. (2011) *Cynodon dactylon* L. Pers: A valuable medicinal plant. *Research Journal of Medicinal Plants*, 5 (5), 508–14. <https://doi.org/10.3923/rjmp.2011.508.514>
- Schweizer, E.E., Swink, J.F. & Heikes, P. E. (1978) Field bindweed (*Convolvulus arvensis*) control in corn (*Zea mays*) and sorghum (*Sorghum bicolor*) with dicamba and 2,4-D. *Weed Science*, 26, 665–668. <https://doi.org/10.1017/S004317450006478X>
- Shendye, N.V. & Gurav, S.S. (2014) *Cynodon dactylon*: A systemic review of pharmacognosy, phytochemistry and pharmacology. *International Journal of Pharmacy and Pharmaceutical Sciences*, 6 (8), 7–12.
- Skuhrová, M. (1995) Cecidomyiidae. In: Minelli, A. Ruffo, S. & La Posta, S. (eds.) *Checklist delle species della fauna Italiana*. Fasc. 64. Calderini, Bologna, pp. 23–32.

- Skuhrová, M. (1997) Family Cecidomyiidae. In: Papp, L. & Darvas, B. (eds.) *Contributions to a Manual of Palaearctic Diptera (with Special Reference to Flies of Economic Importance)*. Vol. 2. Nematocera and Lower Brachycera. Science Herald, Budapest, pp. 71–204.
- Skuhrová, M., Skuhrový, V. & Neacsu, P. (1972) Verbreitung der Gallmücken in Rumänien (Diptera, Cecidomyiidae). *Deutsche Entomologische Zeitschrift*, 19, 375–392.
- Skuhrová, M. (2006) Species richness of gall midges (Diptera: Cecidomyiidae) in the main biogeographical regions of the world. *Acta Societatis Zoologicae Bohemicae*, 69, 327–372.
- Skuhrová, M. & Karimpour, Y. (2017) *Cephalaromyia capituli* gen. nov. et sp. nov. (Diptera: Cecidomyiidae) causing galls in flower heads of *Cephalaria microcephala* (Caprifoliaceae) in Iran. *Acta Societatis Zoologicae Bohemicae*, 81, 55–60.
- Skuhrová, M. & Skuhrový, V. (1994) Gall midges (Cecidomyiidae, Diptera) of Italy. *Entomologica Bari*, 28, 45–76.
- Skuhrová, M. & Skuhrový, V. (1999) Gall midges (Diptera: Cecidomyiidae) of Hungary. *Annales Historico-Naturales Musei Nationalis Hungarici*, 91, 105–139.
- Skuhrová, M. & Skuhrový, V. (2009) Species richness of gall midges (Diptera, Cecidomyiidae) in Europe (West Palaearctic): biogeography and coevolution with host plants. *Acta Societatis Zoologicae Bohemicae*, 73, 87–156.
- Skuhrová, M. & Skuhrový, V. (2020) *The Gall Midges of Europe*. Prague, Maxdorf Jesenius, 420 pp. + 26 pl. + 167 fig.
- Skuhrová, M., Skuhrový, V., Dauphin, P. & Coutin, R. (2005) Gall midges (Diptera: Cecidomyiidae) of France. *Mémoires de la Société Linnéenne de Bordeaux*, 5, 1–212.
- Skuhrová, M., Martinez, M. & Roques, A. (2010) Diptera. In: Roques, A., Kenis, M., Lees, D., Lopez-Vaamonde, C., Rabitsch, W., Rasplus, J.Y. & Roy, B. (eds.) *Alien Terrestrial Arthropods of Europe*. *BioRisk*, 4 (Special Issue), 553–602. <https://doi.org/10.3897/biorisk.4.53>
- Skuhrová, M., Karimpour, Y., Sadeghi, H., Gol, A. & Joghataie M. (2014) Gall midges (Diptera: Cecidomyiidae) of Iran – annotated list and zoogeographical analysis. *Acta Societatis Zoologicae Bohemicae*, 78, 269–301.
- Skuhrová, M., Skuhrový, V. & Kettani, K. (2017) Gall midges (Diptera: Cecidomyiidae) of Morocco. *Acta Societatis Zoologicae Bohemicae*, 81, 61–87.
- Skuhrová, M., Skuhrový, V., Salemkour, N. & Tahar Chauche, S. (2020) Gall midges (Diptera: Cecidomyiidae) of Algeria. *Acta Societatis Zoologicae Bohemicae*, 84, 67–92.
- Zand, E., Baghestani, M.A., Nezamabadi, N., Minbashi, M. & Hadizadeh, M.H. (2009) A review on the last list of herbicides and the most important weeds of Iran. *Weed Research Journal*, 1 (2), 83–100. [in Persian]

اطلاعات جدید از فون پشه‌های گالزا (Diptera, Cecidomyiidae) در ایران

یونس کریم‌پور^{۱*}، مارسلا اسکوراوا^۲

۱ گروه گیاهپزشکی، دانشکده کشاورزی، دانشگاه ارومیه، ایران.

۲ بیتووسکا، پراگ، جمهوری چک.

* پست الکترونیک نویسنده مسئول مکاتبه: y.karimpour@urmia.ac.ir

| تاریخ دریافت: ۲۱ بهمن ۱۴۰۰ | تاریخ پذیرش: ۰۳ شهریور ۱۴۰۱ | تاریخ انتشار: ۱۶ مهر ۱۴۰۱ |

چکیده: دو گونه پشه گالزا *Janetiella convovuli* Mirumyan & Skuhrová, 2017 و *Orseolia cynodontis* Kieffer & Massalongo, 1902 بر مبنای نمونه‌های حشرات کامل بدست‌آمده از پرورش لارو داخل گال‌های ایجاد شده به ترتیب روی گیاهان پیچک صحرائی، *Convolvulus arvensis* L. (Convovulaceae) و مرغ، *Cynodon dactylon* (L.) Persoon (Poaceae) برای اولین بار ایران گزارش شدند. گال‌های این دو گونه پشه گالزا، قبلاً به ترتیب از کشور ارمنستان و بخش‌های اروپایی/آفریقایی نواحی غربی منطقه پالئارکتیک گزارش شده‌اند. برخی از ویژگی‌های تشخیصی مرتبط با هر گونه، تصاویر، بوم‌شناسی، زیست‌شناسی و نواحی انتشار آنها ارایه شد.

واژگان کلیدی: مرغ، پیچک صحرائی، پشه گالزا، گزارش جدید، انتشار