

New records of long-legged flies (Diptera: Dolichopodidae) for Iran

Новые указания мух-зеленушек (Diptera: Dolichopodidae)
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KEY WORDS: Dolichopodidae, Iran, Markazi province, Lorestan province, new records.

КЛЮЧЕВЫЕ СЛОВА: Dolichopodidae, Иран, Меркези, Лурестан, новые указания.

ABSTRACT. During a 2016 survey conducted in Markazi and Lorestan provinces located in the Central Iran, 1490 specimens of Dolichopodidae were collected and identified. Two genera (*Lamprochromus* sp. and *Micromorphus* sp.) and eight dolichopodid species [*Chrysotus pennatus* Lichtwardt, 1902, *Sybistroma impar* (Rondani, 1843), *Tachytrechus beckeri* Lichtwardt, 1917, *Medetera pallipes* (Zetterstedt, 1843), *Campsicnemus armatus* (Zetterstedt, 1849), *C. magius* (Loew, 1845), *C. tomkovichii* Grichanov, 2009, and *Syntormon fuscipes* (von Roser, 1840)] are recorded for the first time in Iran.

РЕЗЮМЕ. В 2016 году в останках Меркази и Лурестан, расположенных в Центральном Иране, были собраны и определены 1490 экземпляров Dolichopodidae. Два рода (*Lamprochromus* sp. и *Micromorphus* sp.) и восемь видов мух-зеленушек [*Chrysotus pennatus* Lichtwardt, 1902, *Sybistroma impar* (Rondani, 1843), *Tachytrechus beckeri* Lichtwardt, 1917, *Medetera pallipes* (Zetterstedt, 1843), *Campsicnemus armatus* (Zetterstedt, 1849), *C. magius* (Loew, 1845), *C. tomkovichii* Grichanov, 2009, и *Syntormon fuscipes* (von Roser, 1840)] оказались новыми для Ирана.

Introduction

Approximately 7600 described species and 250 genera of the long-legged flies (Dolichopodidae) are known in the world fauna [Grichanov, 2014]. The most recent Iranian list of these flies includes 114 species collected mainly from the north-west of Iran [Grichanov, 2016]. Available information about Dolichopodidae of the Central Iranian Markazi and Lorestan provinces has not been known before our investigations. Grichanov et al. [2010] and Ahmadi et al. [2016] published original data on 14 species collected in the Markazi province and seven species from the Lorestan province.

Material and methods

During 2016 season 1490 specimens have been sampled from 64 sites in the Markazi and Lorestan provinces mostly by standard sweep net. Some specimens have been collected by use of yellow pan traps and an exhaust-er mentioned at material listed below. All the identified species are included in the keys to more than 500 Dolichopodidae species of the Caucasus and Eastern Mediterranean [Grichanov, 2007]. The last author has checked in St. Petersburg (Russia) all the identifications made by the first author. The Caucasian and general species distribution is given after Negrobov et al. [2013] and Grichanov [2014]. Type localities are provided, and country lists (in Asia) are arranged alphabetically. Sampling data include: location, coordinates, altitude (m a.s.l.), and dominant plant community. The collector of all specimens is the first author of this paper; her name is omitted from the species list. Photos of some species newly recorded from Iran are provided. The specimens are deposited in ethyl alcohol in Shiraz Branch, Islamic Azad University, Shiraz, Iran.

Species list

Subfamily Diaphorinae Schiner, 1864

Argyra Macquart, 1834*Argyra leucocephala* (Meigen, 1824)MATERIAL. Lorestan province: Khaian, 13.V.16, 33°47.49' N, 48°54.44' E, 1676 m, on *Hordeum murinum* near wheat fields, 1♂.

DISTRIBUTION. Type locality: not given [Europe]. Caucasus: Azerbaijan, Russia (Adygea, Chechnya, Krasnodar Territory). Europe, North Africa, Asia (Iran, Israel, Turkey).

Chrysotus Meigen, 1824*Chrysotus obscuripes* Zetterstedt, 1838MATERIAL. Markazi province: Seyed Esmaeel road, 22.V.16, 34°14.24' N, 49°08.31' E, 2027 m, on Poaceae and *Juncus* sp., 1♂.

DISTRIBUTION. Type locality: Sweden: Lapponica Umensi, Fredrica. Caucasus: Armenia. Europe, Asia (Palaeartic China, Iran, Kyrgyzstan, Russian Far East, Siberia, Turkey).

REMARK. Khaghaninia et al. [2016] mentioned this species for Iran, not giving original material.

Chrysotus pennatus Lichtwardt, 1902

Fig. 4.

MATERIAL. Lorestan province: Dareh Mahee, 11.VII.16, 33° 01.44' N, 49°38.41' E, 1810 m, on *Juncus* sp. and *Typha* sp., 1♂.

DISTRIBUTION. Type locality: Bosnia and Herzegovina: Novi. Caucasus: Armenia, Russia (Adygea, Krasnodar Territory). Europe, Asia (Palaeartic China, Turkey). New record for Iran.

Chrysotus suavis Loew, 1857

MATERIAL. Lorestan province: Aligoudarz, 11.VII.16, 33° 22.59' N, 49°43.39' E, 2024 m, on *Typha* sp., 5♂, 3♀.

DISTRIBUTION. Type locality: Germany: "Coln"; Austria: "Neusiedler See in Ungarn". Caucasus: Armenia, Azerbaijan, Georgia, Russia (Adygea, Alania, Kabardino-Balkaria, Krasnodar Territory, Rostov Region). Europe, North Africa, Asia (Afghanistan, Palaeartic China, Iran, Iraq, Israel, Kyrgyzstan, Middle Asia, Mongolia, Russian Far East, Siberia, Turkey).

Subfamily Dolichopodinae Latreille, 1809

Dolichopus Latreille, 1796

Dolichopus griseipennis Stannius, 1831

MATERIAL. Lorestan province: Khaian, 13.V.16, 33°47.49' N, 48°54.44' E, 1676 m, on *Hordeum murinum* near wheat fields, 1♀.

DISTRIBUTION. Type locality: France: "Lyon". Caucasus: Armenia, Azerbaijan, Georgia, Russia (Adygea, Chechnya, Krasnodar Territory). Europe, North Africa, Asia (Cyprus, Iran, Israel, Kazakhstan, Turkey, "Middle Asia", "Siberia").

Dolichopus perversus Loew, 1871

MATERIAL. Markazi province: Hossein Abad, 19.V.16, 34° 01.43' N, 49°46.28' E, 1915 m, on *Juncus* sp. and *Equistum* sp., 1♂; Hasan Abad, 22.V.16, 34°01.48' N, 49°23.10' E, 1864 m, 1♀; Arak, 19.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 2♂, 1♀ (Yellow pan trap); Arak, 23.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 3♂, 1♀ (Yellow pan trap); Lorestan province: Jooshan, 11.VII.16, 33°21.43' N, 49°44.40' E, 2040 m, on *Typha* sp., 8♂, 11♀.

DISTRIBUTION. Type locality: Tajikistan: Zarawschan Thal, Turkestan [=Zeravshan valley]. Caucasus: Abkhazia, Armenia. Asia (Iran, Israel, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey).

Dolichopus siculus Loew, 1859

MATERIAL. Markazi province: Gezerdar, 22.V.16, 34°14.24' N, 49°08.31' E, 2027 m, 1♂; Eijan, 22.V.16, 34°16.89' N, 49°17.46' E, 1765 m, 1♂; Lorestan province: Khak Patieh, 3.VI.16, 33°07.83' N, 49°39.48' E, 2024 m, 2♂; Sarab Dooreh, 20.VI.16, 33°46.91' N, 48°46.87' E, 1123 m, 1♀; Sarab Naveh Kosh, 20.VI.16, 33°31.25' N, 48°67.04' E, 1132 m, 3♀; Hezaveh, 20.V.16, 34°10.45' N, 49°32.10' E, 1926 m, on Poaceae and *Equistum* sp., 1♂.

DISTRIBUTION. Type locality: Italy: Sidy. Europe (Bulgaria, France, Italy), Asia (Golan Heights, Iran, Israel).

REMARK. Grichanov's [2007] key has a misprinting in a couplet 84 (p. 108); in fact, the dorsal tooth is present on hypandrium of *D. siculus* and absent on hypandrium of *D. excises* (Pärvu, 1996). Therefore, records of the latter species in Iran [Grichanov et al., 2010] should be confirmed.

Dolichopus signifer Haliday, 1832

MATERIAL. Markazi province: Baghdadi, 19.V.16, 34°01.75' N, 49°45.21' E, 2017 m, on *Populus* sp. (Trees), 2♂, 1♀; Hezaveh, 20.V.16, 34°10.45' N, 49°32.10' E, 1926 m, on Poaceae and *Equistum* sp., 1♀; Chalab, 22.V.16, 34°15.58' N, 49°08.23' E, 2112 m, 1♀; Hosseini-eh, 22.V.16, 34°17.28' N, 49°05.91' E, 2023 m, 3♀; Baghdadi, 8.VI.16, 34°02.05' N, 49°45.11' E, 2000 m, on *Juncus* sp. and *Equistum* sp., 3♂, 1♀; Hossein Abad, 8.VI.16, 34°01.44' N, 49°46.34' E, 1908 m, on *Juncus* sp. under *Populus* sp. (Trees), 1♂; Lorestan province: Jooshan, 11.VII.16, 33°21.43' N, 49°44.40' E, 2040 m, on *Typha* sp., 2♀.

DISTRIBUTION. Type locality: Ireland: Roundstone Bay. Caucasus: Georgia, Russia (Chechnya, Kabardino-Balkaria, Krasnodar Territory, Rostov Region). Europe, North Africa, Asia (Afghanistan, Iran, Kazakhstan, Tajikistan, Turkey, Turkmenistan, Uzbekistan).

Gymnopternus Loew, 1857

Gymnopternus flavitibia

Pollet, Khaghaninia, Kazerani, 2017

MATERIAL. Markazi province: Gezerdar, 22.V.16, 34°12.50' N, 49°08.14' E, 2255 m, 1♂, 1♀.

DISTRIBUTION. Type locality: Iran: East Azerbaijan, Arasbaran, Keleybar. Asia (Iran).

Hercostomus Loew, 1857

Hercostomus sp.

MATERIAL. Markazi province: Noubaran, 28.V.14, 35°07.07' N, 49°41.38' E, 1645 m, on *Brassica napus*, 1♀; Gheitanieh, 22.V.14, 35°02.24' N, 50°02.04' E, 1346 m, on *Hordeum* sp., 1♀.

Poecilobothrus Mik, 1878

Poecilobothrus sp.

MATERIAL. Markazi province: Hak, 10.VII.15, 34°59.58' N, 55°22.06' E, 1900 m, on *Juncus* sp. and *Salix* sp. (Trees), 1♀.

Poecilobothrus regalis (Meigen, 1824)

MATERIAL. Markazi province: Gavgodar, 27.V.16, 34°06.45' N, 49°21.80' E, 1826 m, 2♀; Hak Olya, 15.VII.16, 33°46.91' N, 48°46.87' E, 1830 m, 6♂, 10♀; Lorestan province: Bisheh waterfall, 2.VI.16, 33°20.03' N, 48°52.79' E, 1212 m, on Poaceae and *Quercus* sp., 10♂, 7♀; Bisheh waterfall, 2.VI.16, 33°20.03' N, 48°52.79' E, 1212 m, on *Quercus* sp., 2♂, 1♀ (Yellow pan trap); Ab Sefid waterfall, 3.VI.16, 33°02.33' N, 49°36.05' E, 2044 m, on *Juncus* sp., 1♀; Khak Patieh, 3.VI.16, 33°07.83' N, 49°39.48' E, 2024 m, 55♂, 61♀; Khak Patieh, 3.VI.16, 33°07.83' N, 49°39.48' E, 2024 m, 10♂, 10♀; Shirvan, 20.VI.16, 32°59.93' N, 49°35.28' E, 1456 m, on *Beta vulgaris*, 43♂, 54♀; Khak Patieh, 11.VII.16, 33°07.83' N, 49°39.48' E, 2061 m, on Poaceae and *Typha* sp., 5♂, 12♀; Khak Patieh, 11.VII.16, 33°07.83' N, 49°39.48' E, 2061 m, 4♂, 1♀; Dareh Mahee, 11.VII.16, 33°01.44' N, 49°38.41' E, 1810 m, on *Juncus* sp. and *Typha* sp., 2♂, 3♀; Khan Abad, 11.VII.16, 33°01.44' N, 49°38.41' E, 1810 m, 2♂, 2♀; Khak Patieh, 11.VII.16, 33°07.83' N, 49°39.48' E, 2061 m, on *Juncus* sp., 18♂, 27♀; Mahee Chal, 11.VII.16, 33°08.33' N, 49°40.47' E, 1991 m, on *Juncus* sp. and *Typha* sp. under *Salix* sp. (Trees), 3♂, 1♀.

DISTRIBUTION. Type locality: not given. Caucasus: Azerbaijan, Georgia, Russia (Chechnya, Kabardino-Balkaria, Krasnodar Territory, Rostov Region, Stavropol Territory). Europe, Asia (Iran, Turkey, Uzbekistan).

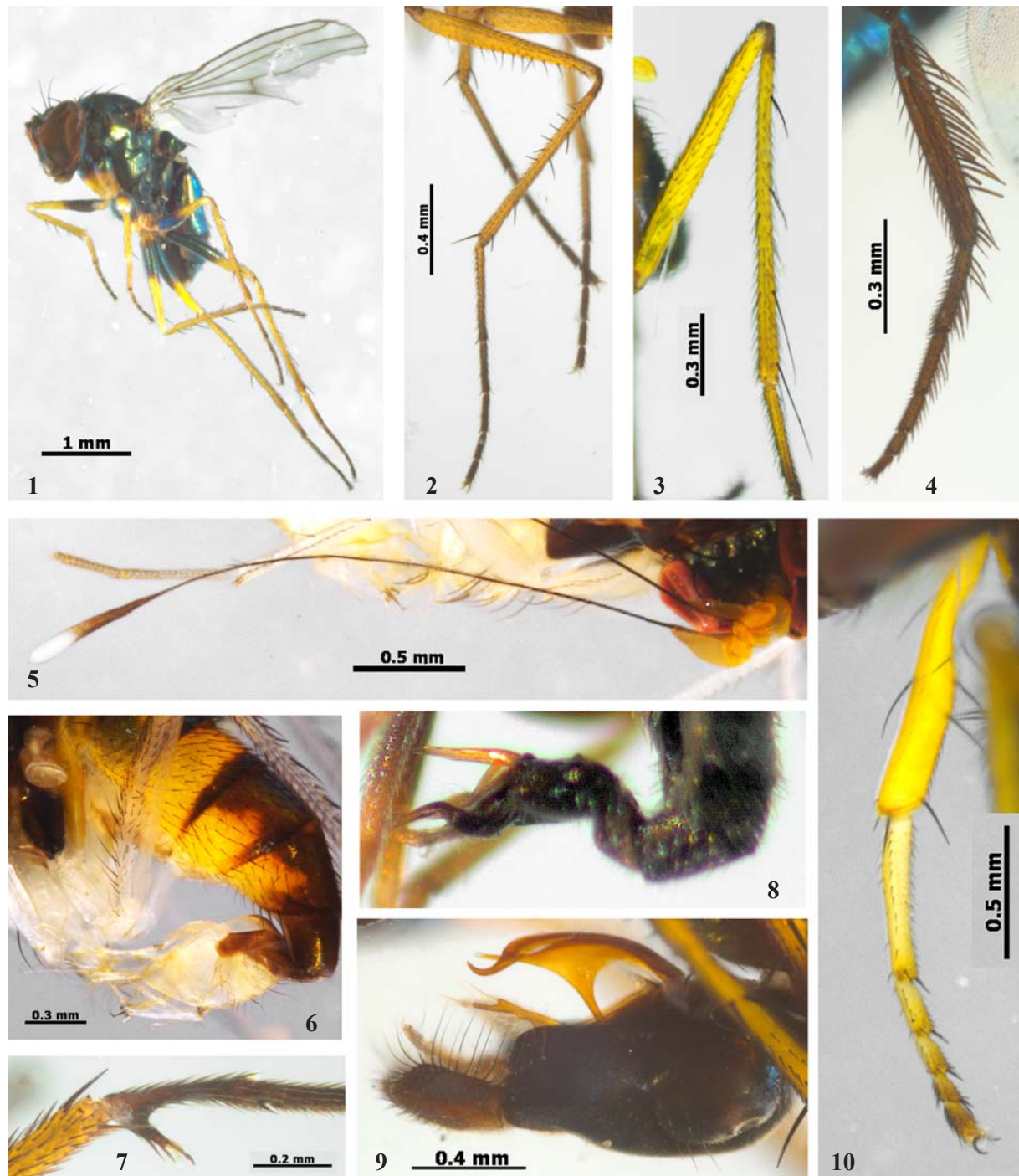
Sybistroma Meigen, 1824

Sybistroma impar (Rondani, 1843)

Figs 5–6.

MATERIAL. Markazi province: Arak, 8.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, on *Juncus* sp. and *Avena sativa*, 1♂.

DISTRIBUTION. Type locality: Italy. Caucasus: Russia (Chechnya, Krasnodar Territory). Europe, Asia (Israel, Turkey). New record for Iran.



Figs 1–9. Diagnostic characters of Dolichopodidae species firstly found in Iran: 1 — *Campsicnemus magius* (Loew, 1845), female habitus; 2 — *Campsicnemus armatus* (Zetterstedt, 1849), male mid leg; 3 — *Campsicnemus tomkovichi* Grichanov, 2009, male hind femur and tibia; 4 — *Chrysotus pennatus* Lichtwardt, 1902, male hind tibia and tarsus; 5 — *Sybistroma impar* (Rondani, 1843), male antenna; 6 — *S. impar*, male abdomen; 7 — *Syntormon fuscipes* (von Roser, 1840), male hind basitarsus; 8 — *Medetera pallipes* (Zetterstedt, 1843), hypopygium; 9 — *Tachytrechus beckeri* Lichtwardt, 1917, hypopygium; 10 — *T. beckeri*, male fore tibia and tarsus.

Рис. 1–9. Диагностические признаки новых для Ирана видов Dolichopodidae: 1 — *Campsicnemus magius* (Loew, 1845), внешний вид самки; 2 — *Campsicnemus armatus* (Zetterstedt, 1849), средняя нога самца; 3 — *Campsicnemus tomkovichi* Grichanov, 2009, заднее бедро и голень самца; 4 — *Chrysotus pennatus* Lichtwardt, 1902, задняя голень и лапка самца; 5 — *Sybistroma impar* (Rondani, 1843), усик самца; 6 — *S. impar*, брюшко самца; 7 — *Syntormon fuscipes* (von Roser, 1840), 1-й членик задней лапки самца; 8 — *Medetera pallipes* (Zetterstedt, 1843), гипопигий; 9 — *Tachytrechus beckeri* Lichtwardt, 1917, гипопигий; 10 — *T. beckeri*, передняя голень и лапка самца.

Sybistroma nodicornis Meigen, 1824

MATERIAL. Markazi province: Seyed Esmaeel road, 22.V.16, 34°13.68' N, 49°08.77' E, 2073 m, 6♂, 2♀; Chalab, 22.V.16, 34°15.58' N, 49°08.23' E, 2112 m, 1♀; Lorestan province: Ab Sefid waterfall, 3.VI.16, 32°59.80' N, 49°35.17' E, 2127 m, 1♀ (exhauster).

DISTRIBUTION. Type locality: "not given". Europe, North Africa, "South Russia", Asia (Iran, Iraq, Turkey).

Tachytrechus Haliday, 1851*Tachytrechus beckeri* Lichtwardt, 1917
Figs 9–10.

MATERIAL. Lorestan province: Bisheh waterfall, 2.VI.16, 33°20.03' N, 48°52.79' E, 1212 m, on *Quercus* sp., 2♂, 1♀ (Yellow pan trap).

DISTRIBUTION. Type locality: France: "Corsica". Palearctic China, France, Italy, Tajikistan, Turkey. New record for Iran.

Tachytrechus notatus (Stannius, 1831)

MATERIAL. Markazi province: Arak, 19.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 11♀ (Yellow pan trap); Arak, 22.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 24♂, 15♀ (Yellow pan trap); Arak, 8.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, on *Juncus* sp. and *Avena sativa*, 4♀; Arak, 23.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 18♂, 1♀ (Yellow pan trap); Lorestan province: Khak Patieh, 11.VII.16, 33°07.83' N, 49°39.48' E, 2061 m, on *Juncus* sp., 2♂, 2♀; Momen Abad, 11.VII.16, 33°34.21' N, 49°30.95' E, 1915 m, 3♂, (Yellow pan trap); Momen Abad, 11.VII.16, 33°34.21' N, 49°30.95' E, 1915 m, on *Juncus* sp., 1♀; Sarab Naveh Kosh, 20.VI.16, 33°31.25' N, 48°67.04' E, 1132 m, 1♂, 1♀; Bisheh waterfall, 2.VI.16, 33°20.03' N, 48°52.79' E, 1212 m, on *Quercus* sp., 3♂, (Yellow pan trap).

DISTRIBUTION. Type locality: Germany: "Hamburg". Caucasus: Abkhazia, Armenia, Russia (Adygea, Chechnya, Kabardino-Balkaria, Krasnodar Territory). Europe, North Africa, Asia (Iran, Israel, Syria, Turkey, Turkmenistan, Siberia).

Subfamily Hydrophorinae Lioy, 1864

Hydrophorus Fallén, 1823*Hydrophorus balticus* (Meigen, 1824)

MATERIAL. Markazi province: Hossein Abad, 19.V.16, 34°01.43' N, 49°46.28' E, 1915 m, on *Juncus* sp. and *Equistum* sp., 1♀; Baghdad, 19.V.16, 34°01.75' N, 49°45.21' E, 2017 m, on *Populus* sp. (Trees), 2♂, 2♀.

DISTRIBUTION. Type locality: Germany: Hamburg. Caucasus: Armenia, Azerbaijan, Georgia, Russia (Adygea, Alania, Chechnya, Kabardino-Balkaria, Karachai-Cherkessia, Krasnodar Territory). Europe, North Africa, Asia (Afghanistan, Algeria, Cyprus, Iran, Israel, Mongolia, Turkey, Siberia).

Subfamily Medeterinae Lioy, 1864

Medetera Fischer von Waldheim, 1819*Medetera jacula* (Fallén, 1823)

MATERIAL. Lorestan province: Khak Patieh, 3.VI.16, 33°07.83' N, 49°39.48' E, 2024 m, 2♂.

DISTRIBUTION. Type locality: Sweden: Scania. Caucasus: Armenia, Azerbaijan, Georgia, Russia (Alania, Chechnya, Kabardino-Balkaria, Krasnodar Territory, Rostov Region, Stavropol Territory). Europe, North Africa, Asia (Iran, Kazakhstan, Turkey, Siberia).

Medetera meridionalis Negrobov, 1967

MATERIAL. Markazi province: Ghaghan, 11.VII.16, 33°48.88' N, 49°29.88' E, 2070 m, on *Juncus* sp., 2♂, 1♀; Lorestan province: Jooshan, 11.VII.16, 33°21.43' N, 49°44.40' E, 2040 m, on *Typha* sp., 1♂, 1♀.

DISTRIBUTION. Type locality: Russia: Voronezh, near Novokhopersk river. Caucasus: Armenia, Azerbaijan, Georgia, Russia (Krasnodar Territory, Rostov Region). Europe, Asia (Iran, Kazakhstan, Siberia, Turkey).

Medetera pallipes (Zetterstedt, 1843)
Fig. 8.

MATERIAL. Markazi province: Arak, 22.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 7♂, 14♀ (Yellow pan trap).

DISTRIBUTION. Type locality: Scania, "in Ostrog ad Wadstena; Botnia orientali ad Johannis Ro prope Torneå" [Sweden; Denmark]. Caucasus: Georgia, Russia (Chechnya, Kabardino-Balkaria, Krasnodar Territory, Stavropol Territory). Europe, North Africa, Asia (Iran, Israel, Turkey). New record for Iran.

Thrypticus Gerstaecker, 1864*Thrypticus bellus* Loew, 1869

MATERIAL. Lorestan province: Aligoudarz, 11.VII.16, 33°22.59' N, 49°43.39' E, 2024 m, on *Typha* sp., 62♂, 38♀; Jooshan, 11.VII.16, 33°21.43' N, 49°44.40' E, 2040 m, on *Typha* sp., 4♂, 1♀.

DISTRIBUTION. Type locality: UK: "Kew". Caucasus: Abkhazia, Armenia, Azerbaijan, Russia (Krasnoyarsk, Leningrad, Rostov Region, Vladivostok, Voronezh). Europe, North and Tropical Africa, Asia (Palearctic China, Iran, Israel, Kazakhstan, Russian Far East, Siberia, Turkey).

Subfamily Rhapsiinae Bigot, 1852

Rhaphium Meigen, 1803*Rhaphium albifrons* Zetterstedt, 1843

MATERIAL. Lorestan province: Choghadoon, 1.VI.16, 33°28.77' N, 49°10.37' E, 1580 m, on Poaceae, 1♂.

DISTRIBUTION. Type locality: Norway: "Scandinavia boreali-Norvegia Garnaes Vaerdaliae". Caucasus: Azerbaijan, Georgia, Russia (Krasnodar Territory). Europe, Asia (Afghanistan, Iran, Russian Far East, Siberia, Turkey, Uzbekistan).

Rhaphium antennatum (Carlier, 1835)

MATERIAL. Lorestan province: Jooshan, 11.VII.16, 33°21.43' N, 49°44.40' E, 2040 m, on *Typha* sp., 1♂.

DISTRIBUTION. Type locality: Belgium: "Kimkempois pres de liege". Caucasus: Russia (Krasnodar Territory). Europe, Asia (Iran).

Rhaphium appendiculatum Zetterstedt, 1849

MATERIAL. Lorestan province: Khak Patieh, 3.VI.16, 33°07.83' N, 49°39.48' E, 2024 m, 1♂.

DISTRIBUTION. Type locality: Sweden: Scania ad Esperod. Caucasus: Abkhazia, Georgia, Russia (Adygea, Alania, Krasnodar Territory). Europe, North Africa, Asia (Afghanistan, Iran, Turkey, "Middle Asia").

Subfamily Sympycninae Aldrich, 1905

Campsicnemus Haliday, 1851*Campsicnemus armatus* (Zetterstedt, 1849)

Fig. 2.

MATERIAL. Lorestan province: Momen Abad, 11.VII.16, 33°34.21' N, 49°30.95' E, 1915 m, 1♂, (Yellow pan trap).

DISTRIBUTION. Type locality: Denmark: Rosenthal, Gryphium. Europe, North and Tropical Africa, Asia (Mongolia, Russian Far East, Siberia, Turkey). New record for Iran.

REMARK. The male trapped in Iran is remarkably similar to a subspecies *C. armatus caffer* Curran, 1926 (examined), known from southern Africa, and to *C. a. deserti* Vaillant, 1953 (unavailable name), described from Algeria.

Campsicnemus curvipes (Fallen, 1823)

MATERIAL. Markazi province: Panj Ali, 22.V.16, 34°02.27' N, 49°17.31' E, 1868 m, 3♂; Baneh, 24.V.16, 34°04.41' N, 49°24.75' E, 2021 m, on *Cannabis* sp., 1♀; Lorestan province: Khaian, 13.V.16, 33°47.49' N, 48°54.44' E, 1676 m, on *Hordeum murinum* near wheat fields, 2♂, 1♀; Khak Patieh, 11.VII.16, 33°07.83' N, 49°39.48' E, 2061 m, on Poaceae and *Typha* sp., 1♀.

DISTRIBUTION. Type locality: not given [Europe]. Caucasus: Abkhazia, Armenia, Azerbaijan, Russia (Adygea, Alania, Dagestan, Kabardino-Balkaria, Karachai-Cherkessia, Krasnodar Territory, Stavropol Territory). Europe, North Africa, Asia (Iran, Siberia, Turkey).

Campsicnemus magius (Loew, 1845)

Fig. 1.

MATERIAL. Lorestan province: Sarab Dooreh, 20.VI.16, 33°46.91' N, 48°46.87' E, 1123 m, 1♂.

DISTRIBUTION. Type locality: Italy: Sicily. Caucasus: Azerbaijan, Russia (Kabardino-Balkaria, Krasnodar Territory, Rostov Region). Europe, North Africa, Asia (Israel, Tajikistan, Turkey, Turkmenistan, Uzbekistan). New record for Iran.

Campsicnemus tomkovichii Grichanov, 2009

Fig. 3.

MATERIAL. Markazi province: Baghdadi, 19.V.16, 34°01.75' N, 49°45.21' E, 2017 m, on *Populus* sp. (Trees), 1♂.

DISTRIBUTION. Type locality: Azerbaijan: Yardimli [district], Kreki. Caucasus: Armenia, Azerbaijan. New record for Iran.

Campsicnemus umbripennis Loew

MATERIAL. Markazi province: Mohajeran, 24.V.16, 34°04.74' N, 49°25.69' E, 2017 m, 2♀; Adeshteh, 27.V.16, 34°05.10' N, 49°26.82' E, 2159 m, 1♂, 1♀; Baghdadi, 8.VI.16, 34°02.05' N, 49°45.11' E, 2000 m, on *Juncus* sp. and *Equistum* sp., 1♀; Baghdadi, 19.V.16, 34°01.75' N, 49°45.21' E, 2017 m, on *Populus* sp. (Trees); Hossein Abad, 19.V.16, 34°01.43' N, 49°46.28' E, 1915 m, on *Juncus* sp. and *Equistum* sp., 1♂, 9♀.

DISTRIBUTION. Type locality: Austria. Caucasus: Abkhazia, Armenia, Azerbaijan, Georgia, Russia (Adygea, Alania, Kabardino-Balkaria, Karachai-Cherkessia, Krasnodar Territory). Europe, North Africa, Asia (Afghanistan, Iran, Iraq, Israel, Tajikistan, Turkey, Turkmenistan).

Lamprochromus Mik, 1878*Lamprochromus* sp.

MATERIAL. Markazi province: Seyed Esmaeel road, 22.V.16, 34°13.68' N, 49°08.77' E, 2073 m, 1♂, 1♀. New record of the genus for Iran.

Micromorphus Mik, 1878*Micromorphus* sp.

MATERIAL. Markazi province: Arak, 23.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 1♀ (Yellow pan trap). New record of the genus for Iran.

Sympycnus Loew, 1857*Sympycnus pulicarius* (Fallén, 1823)

MATERIAL. Lorestan province: Darband, 1.VI.16, 33°26.45' N, 49°19.35' E, 1746 m, on *Juncus* sp. and *Typha* sp., 1♂, 1♀.

DISTRIBUTION. Type locality: not given [Sweden]. Caucasus: Azerbaijan, Russia (Alania, Kabardino-Balkaria, Karachai-Cherkessia, Stavropol Territory). Europe, Asia (Iran, Kazakhstan, Turkey, Siberia); Nearctic Region.

Sympycnus simplicipes Becker, 1908

MATERIAL. Lorestan province: Bisheh waterfall, 2.VI.16, 33°20.03' N, 48°52.79' E, 1212 m, on Poaceae and *Quercus* sp., 2♀.

DISTRIBUTION. Type locality: Spain: Canary Is., Teneriffe. Caucasus: Abkhazia, Azerbaijan, Russia (Adygea, Krasnodar Territory). Asia (Iran, Iraq, Israel, Kazakhstan, Korea, Tajikistan, Turkey, Uzbekistan), Afrotropical and Oriental Regions.

Syntormon Loew, 1857*Syntormon aulicus* (Meigen, 1824)

MATERIAL. Lorestan province: Khak Patieh, 11.VII.16, 33°07.83' N, 49°39.48' E, 2061 m, on Poaceae and *Typha* sp., 1♂.

DISTRIBUTION. Type locality: not given. Caucasus: Azerbaijan. Europe, North Africa, Asia (Iran, Turkey, "Middle Asia").

Syntormon denticulatus (Zetterstedt, 1843)

MATERIAL. Markazi province: Nahremian, 13.V.16, 33°54.26' N, 49°00.57' E, 2029 m, on *Juncus* sp., 1♂; Hossein Abad, 19.V.16, 34°01.43' N, 49°46.28' E, 1915 m, on *Juncus* sp. and *Equistum* sp., 1♀; Baghdadi, 19.V.16, 34°01.75' N, 49°45.21' E, 2017 m, on *Populus* sp. (Trees), 21♂, 11♀; Hezaveh, 20.V.16, 34°10.45' N, 49°32.10' E, 1926 m, on Poaceae and *Equistum* sp., 1♂; Eijan, 22.V.16, 34°16.89' N, 49°17.46' E, 1765 m, 2♂, 3♀; Arak, 08.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, on *Juncus* sp. and *Avena sativa*, 3♂, 1♀; Arak, 30.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 2♂, 4♀ (Yellow pan trap); Ghaghan, 11.VII.16, 33°48.88' N, 49°29.88' E, 2070 m, on *Juncus* sp., 2♀.

DISTRIBUTION. Type locality: Sweden: "Scania". Caucasus: Abkhazia, Armenia, Azerbaijan, Russia (Adygea, N Ossetia-Alania, Kabardino-Balkaria, Stavropol Territory). Europe, "North Africa", Asia (Afghanistan, Iran, Israel, Kyrgyzstan, Tajikistan, Turkey).

Syntormon fuscipes (von Roser, 1840)

Fig. 7.

MATERIAL. Markazi province: Seyed Esmaeel road, 22.V.16, 34°13.68' N, 49°08.77' E, 2073 m, 1♀; Lorestan province: Khak Patieh, 3.VI.16, 33°07.83' N, 49°39.48' E, 2024 m, 1♂; Ab Sefid waterfall, 03.VI.16, 33°02.33' N, 49°36.05' E, 2044 m, on *Juncus* sp., 1♂, 1♀; Choghadoon, 1.VI.16, 33°28.77' N, 49°10.37' E, 1580 m, on Poaceae, 4♀.

DISTRIBUTION. Type locality: "not given" (Germany: Württemberg). Caucasus: Abkhazia, Russia (Krasnodar Territory). Europe, Asia (Turkey), Afrotropics. New record for Iran.

Syntormon pallipes (Fabricius, 1794)

MATERIAL. Markazi province: Arak, 8.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, on *Juncus* sp. and *Avena sativa*, 1♂, 1♀; Baghdadi, 8.VI.16, 34°02.05' N, 49°45.11' E, 2000 m, on *Juncus* sp. and *Equistum* sp., 9♂, 19♀; Hossein Abad, 8.VI.16, 34°01.44' N, 49°46.34' E, 1908 m, on *Juncus* sp. under *Populus* sp. (Trees), 10♂, 27♀; Arak, 30.VI.16, 34°04.67' N, 49°43.36' E, 1643 m, 1♂, (Yellow pan trap); Ghaghan, 11.VII.16, 33°48.88' N, 49°29.88' E, 2070 m, on *Juncus* sp., 2♂, 2♀; Seyed Esmaeel road, 22.V.16, 34°13.68' N, 49°08.77' E, 2073 m, 2♂, 2♀; Hossein Abad, 19.V.16, 34°01.43' N, 49°46.28' E, 1915 m, on *Juncus* sp. and *Equistum* sp., 34♂, 68♀; Baghdadi, 19.V.16, 34°01.75' N, 49°45.21' E, 2017 m, on *Populus* sp. (Trees), 31♂, 31♀; Baghdadi, 19.V.16, 34°02.13' N, 49°45.35' E, 1917 m, 1♀; Ebrahim Abad, 19.V.16, 34°07.02' N, 50°02.38' E, 1712 m, on Poaceae, 2♂; Hezaveh, 20.V.16, 34°10.45' N, 49°32.10' E, 1926 m, on Poaceae and *Equistum* sp., 7♂, 5♀; Eijan, 22.V.16, 34°16.89' N, 49°17.46' E, 1765 m, 4♂, 3♀; Aghdash, 22.V.16, 34°15.34' N, 49°10.74' E, 1908 m, 2♂, 2♀; Gezerdar, 22.V.16, 34°14.24' N, 49°08.31' E, 2027 m, 4♂, 4♀; Seyed Esmaeel road, 22.V.16, 34°13.68' N, 49°08.77' E, 2073 m, 2♂, 2♀; Gezerdar, 22.V.16, 34°12.50' N, 49°08.14' E, 2255 m, 1♀; Hosseinieh, 22.V.16, 34°15.58' N, 49°08.23' E, 2010

m, 2♂, 2♀; Hosseinieh, 22.V.16, 34°17.28' N, 49°05.91' E, 2023 m, 2♂, 6♀; Hasan Abad, 22.V.16, 34°01.48' N, 49°23.10' E, 1864 m, 1♀; Mohajeran, 24.V.16, 34°04.74' N, 49°25.69' E, 2017 m, 2♂, 1♀; Gavgodar, 27.V.16, 34°06.45' N, 49°21.80' E, 1826 m, 3♂; Adesh-teh, 27.V.16, 34°05.10' N, 49°26.82' E, 2159 m, 3♂, 3♀; Adesh-teh, 27.V.16, 34°05.10' N, 49°26.82' E, 2159 m, 2♀; Lorestan province: Khaian, 13.V.16, 33°47.49' N, 48°54.44' E, 1676 m, on *Hordeum murinum* near wheat fields, 2♂; Gavmir Sofla, 13.V.16, 33°47.78' N, 48°55.63' E, 1774 m, on *Hordeum murinum*, 1♂, 1♀; Khak Patieh, 3.VI.16, 33°07.83' N, 49°39.48' E, 2024 m, 26♂, 42♀; Choghadoon, 1.VI.16, 33°28.77' N, 49°10.37' E, 1580 m, on Poaceae, 1♂, 1♀; Bisheh waterfall, 2.VI.16, 33°20.03' N, 48°52.79' E, 1212 m, on Poaceae and *Quercus* sp., 1♂, 1♀; Khak Patieh, 3.VI.16, 33°07.83' N, 49°39.48' E, 2024 m, 3♂; Momen Abad, 11.VII.16, 33°34.21' N, 49°30.95' E, 1915 m, on *Juncus* sp., 1♂; Jooshan, 11.VII.16, 33°21.43' N, 49°44.40' E, 2040 m, on *Typha* sp., 2♂, 1♀; Khak Patieh, 11.VII.16, 33°07.83' N, 49°39.48' E, 2061 m, on Poaceae and *Typha* sp., 34♂, 73♀; Dareh Mahee, 11.VII.16, 33°01.44' N, 49°38.41' E, 1810 m, on *Juncus* sp. and *Typha* sp., 1♂, 1♀.

DISTRIBUTION. Type locality: Germany. Caucasus: Abkhazia, Armenia, Azerbaijan, Georgia, Russia (Adygea, Alania, Kabardino-Balkaria, Karachai-Cherkessia, Krasnodar Territory, Rostov Region). Europe, North Africa, Asia (Afghanistan, Palaearctic China, Iran, Iraq, Israel, Jordan, Kyrgyzstan, Tajikistan, Turkey, Uzbekistan); Oriental China; Afrotropics.

Teuchophorus Loew, 1857

Teuchophorus sp.

MATERIAL. Gavgodar, 10-Sep-15, 34°06.45' N, 49°21.80' E, 1826 m, on *Typha* sp., *Salvia* sp., *Medicago sativa* and *Salix* sp., 1♀.

Discussion

As a result of 2016 survey conducted in the two provinces, a new material of Dolichopodidae was collected and identified, belonging to 18 genera and 38 (including 5 unnamed) species listed above. The present research gives new records from the Central Iran, including *Chrysotus pennatus*, *Sybstroma impar*, *Tachytrechus beckeri*, *Medetera pallipes*, *Campsicnemus armatus*, *C. magius*, *C. tomkovichi* and *Syntormon fuscipes* found for the first time in Iran.

The identified species of the family Dolichopodidae were sampled at the height of 1123–2255 m

above sea level. Most collected species are widespread across the Palaearctic Region. According to sampling data, three species (*S. pallipes*, *P. regalis* and *T. notatus*) have the highest total abundance. Two species (not listed) represent apparently new for science species to be described later. As a result of our investigation, the number of reported species from Iran has reached now to 131 species. We suggest that many more species will be revealed in Iran, if new districts and localities are investigated with the use of mass trapping methods.

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* For the complete Iranian reference list see Grichanov [2016].