Dolichopodidae (Diptera) of Inner West Anatolia (Turkey) with a new species record

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Abstract
This study was carried out between 2009 and 2011 in the Inner West Anatolia region (Afyonkarahisar, Kütahya and Uşak). It was determined that the collected species belonged to eight subfamilies, 21 genera and 54 species. Neurigona suturalis is a new record for Turkey and the other 53 species are new records for the Inner West Anatolia.

Keywords
Dolichopodidae, fauna, new record, Inner West Anatolia

Introduction
Dolichopodidae is one of seven families within the superfamily Empidoidea and one of the biggest families in Diptera in terms of the number of species. It contains approximately 8000 species in the world. It is known that 200 species belonging to 35 genera are known from Turkey (Küçükberber et al., 2017; Kechev et al., 2020).

The body length of adult dolichopodids ranges from 0.8 to 9.0 mm. Adults is often identified by their metallic coloration, wings and males’ genitalia. The adult dolichopodids occur in semi-aquatic and aquatic fields, like marshlands, woodlands, grasslands, etc. Adults are predaceous and feeding primarily on small, soft-
bodied arthropods and annelids. Dolichopodids are important and ubiquitous natural enemies of pests in a variety of habitats (Grichanov, Brooks, 2017). The Inner West Anatolia is located in the east of the Aegean Region and it contains three provinces, 37 districts and 1145 villages. The research area with 31,446 square kilometers constitutes 4% of the territory of Turkey. Previous studies on the dolichopodid fauna of the Inner West Anatolia have reported 22 species from the research area (Tonguç, Barlas, 2011; Tonguç et al., 2013; Tonguç et al., 2016a). This work reports data about new records of dolichopodid fauna in the Inner West Anatolia in Turkey.

**Material and Methods**

Field surveys were carried out between 2009 and 2011 in the Inner West Anatolia, and namely the Afyonkarahısar, Kütahya and Uşak provinces (Fig. 1). Adult specimens were collected from habitats such as freshwater seepages, damp ground, tree trunks, river rocks and grass leaves using an entomological hand net.

*Figure 1.* Localities within the research area where dolichopodid specimens were collected
The collected specimens were preserved in jars containing ethyl acetate. Later, they were put in vials containing 70% ethyl alcohol or in insect envelopes. The collected specimens were identified using a binocular microscope. The faunistic list of the species and their distribution in Turkey are given according to Tonguç et al. (2016a). The Palearctic distribution is presented following Yang et al. (2006) and Grichanov (2007) and using the following country abbreviations: Afghanistan (AF), Albania (AL), Algeria (DZ), Andorra (AD), Armenia (AM), Azerbaijan (AZ), Austria (AT), Belarus (BY), Belgium (BE), Bosnia-Herzegovina? (BA), Bulgaria (BG), Croatia (HR), Czech Republic (CZ), Denmark (DK), Egypt (EG), England (EN), Estonia (EE), Finland (FI), France (FR), Georgia (GE), Greece (GR), Germany (DE), Holland (NL), Hungary (HU), Iceland (IS), Iraq (IQ), Iran (IR), Ireland (IE), Israel (IL), Italy (IT), Kazakhstan (KZ), Kyrgyzstan (KG), Lithuania (LT), Luxembourg (LU), Macedonia (MK), Moldova (MD), Morocco (MA), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Russia (RU), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), Switzerland (CH), Syria (SY), Tajikistan (TJ), Tunisia (TN), Turkmenistan (TM), Turkey (TR), Ukraine (UA), Uzbekistan (UZ).

Results

Faunistic list

As a result of the identification of the collected specimens, 54 species, 21 genera and eight subfamilies were determined.

Diaphorinae Schiner, 1864

*Argyra vestita* (Wiedemann, 1817)

**Material examined:** Afyonkarahisar: Başmakçı, Akçapınar Village (37º 50’ N / 29º 59’ E), 850 m a.s.l., 11.05.2010, 1 ♂, 5 ♀♀; Kütahya: Gediz, Gölcük Village (38º 53’ N / 29º 17’ E) 649 m a.s.l., 14.07.2010, 1 ♂, 1 ♀; Uşak: Esme, İsalar Reservoir (38º 29’ N / 29º 03’ E), 820 m a.s.l., 24.08.2009, 1 ♂.

**Palearctic Distribution:** TR, AT, BE, BG, BY, CH, CZ, DE, DK, EN, FI, HU, IE, FR, IL, IT, NO, NL, PL, RO, RU, SK.

**Distribution in Turkey:** Van.

*Chrysotus pennatus* Lichwardt, 1902

**Material examined:** Kütahya: Gediz, Fırdan, Değirmen Place (38º 57’ N / 29º 22’ E) 691 m a.s.l., 14.07.2010, 1 ♂; Uşak: Centrum, Halilefendi Village, Zahman Stream (38º 40’ N / 29º 05’ E), 655 m a.s.l., 22.04.2010, 1 ♂.

**Palearctic Distribution:** TR, AM, BG, DE, GE, GR, HU, IT, RO, RU, SI.

**Distribution in Turkey:** Antalya.

*Chrysotus pulchellus* Kowarz, 1874

**Material examined:** Afyonkarahisar: Çay, Çayıryazı Village, Genali Place (38º 22’ N / 30º 44’ E), 1016 m a.s.l., 11.05.2010, 1 ♂; Sandıklı, Sorgun Akdağ 15. km (38º 20’ N / 30º 01’ E), 1467 m a.s.l., 25.05.2010, 1 ♂.
Palearctic Distribution: TR, AT, BE, BG, BY, CZ, CH, DE, DK, EE, EN, ES, FI, FR, GE, GR, HU, IT, KG, LU, NL, NO, PL, RO, RU, SE, SK, UA.

Distribution in Turkey: Adapazarı.

*Chrysothos suavis* Loew, 1857

Material examined: Uşak: Sivash, Pınarbaşı, Yediahar Place (38° 28' N / 29° 42' E), 1176 m a.s.l., 09.06.2009, 1♂.

Palearctic Distribution: TR, AF, AM, AT, BE, BG, CH, CZ, DE, DZ EG, EN, ES, FI, FR, GE, GR, HU, IL, IQ, IT, NL, NO, PL, RO, SE, SI, SK?, RU, UA.

Distribution in Turkey: Adıyaman, Antalya, Antakya, Gaziantep, Şanlıurfa.

*Diaphorus hoffmannseggi* Meigen, 1830

Material examined: Kütahya: Gediz, Murat Mountain 22. km, (38° 57' N / 29° 36' E), 1323 m a.s.l., 29.05.2009, 1♂.

Palearctic Distribution: TR, AT, BE, CH, CZ, DE, DK, EN, FI, FR, HU, IL, IT, NL, PL, RO, RU, SE, SK.

Distribution in Turkey: Zonguldak.

*Dolichopus excisus* Loew, 1859

Material examined: Afyonkarahisar: Başmakçı, Akçapınar Village 6. km (37° 50' N / 29° 58' E), 853 m a.s.l., 28.05.2009, 2♂; Kütahya: Kütahya-Afyonkarahisar Road 60. km, Tatăhmet Bridge (39° 04' N / 30° 12' E), 1029 m a.s.l., 31.07.2009, 1♂; Uşak: Centrum, Sorkun Village (38° 45’ N / 29° 23’ E) 31 m a.s.l., 01.07.2010, 4♂♂, 2♀♀.

Palearctic Distribution: TR, AM, AT, BE, BG, BY, CZ, DE, ES, FR, HU, IL, IT, NL, PL, RO, RU, SK, TJ, TM, UA.

Distribution in Turkey: Antalya, Burdur, Muğla.

*Dolichopus latilimbatus* Macquart, 1827

Material examined: Afyonkarahisar: Dinar, Karakuyu Village (38° 04' N / 30° 15' E), 1021 m a.s.l., 28.05.2009, 1♂; Uşak: Centrum, Uşak-Gediz road 12. km Emirfaki Bridge (38° 56' N / 29°20' E), 690 m a.s.l., 29.05.2009, 2♂♂.

Palearctic Distribution: TR, AT, BE, BG, BY, CH, CZ, DE, DK, EE, EN, ES, FR, HU, IE, IT, KZ, NL, PL, RO, RU, SE, SK, UA, UZ.

Distribution in Turkey: İzmit, Kocaeli.

*Dolichopus nubilis* Meigen, 1824

Material examined: Afyonkarahisar: Başmakçı, Akçapınar Village 6. km (37° 50’ N / 29° 58’ E), 852 m a.s.l., 28.05.2009, 1♂.

Palearctic Distribution: TR, AM, AT, BA?, BE, BG, CH, CZ, DE, DK, EE, EN, ES, FI, FR, GR, HR?, HU?, IE, IT, KZ, MK, NL, NO, PL, RO, RU, SE, SK? SI?, TJ, UA, UZ.

Distribution in Turkey: Kırklareli.

*Dolichopus perversus* Loew, 1871

Material examined: Afyonkarahisar: Dinar, Haydarlı, Akpınarlı Village (38° 12’ N / 30° 20’ E), 1158 m a.s.l., 11.05.2010, 1♂. Emirdağ, Aşağıpireyli Village (38° 55’ N / 31° 35’ E), 949 m a.s.l., 12.05.2010, 1♂, 3♀♀.

Palearctic Distribution: TR, AM, IL, KZ, TJ.

Distribution in Turkey: Antalya.

*Dolichopus sabinus* Haliday, 1838

Material examined: Afyonkarahisar: Başmakçı, Akçapınar Village 3. km (37° 50’ N / 29° 59’ E), 848 m a.s.l., 28.05.2009, 1♂.
**Palearctic Distribution:** TR, AT, BE, BG, CZ, DE, DK, EE, EN, ES, FI, FR, GR, HU, IE, IL, IT, SE, NL, NO, PL, RO, RU, UA.

**Distribution in Turkey:** Antalya.

**Dolichopus signifer** Haliday, 1832

**Material examined:** Afyonkarahisar: Dinar, Donbayova Village (38º 09' N / 30º 12' E), 1041 m a.s.l., 28.05.2009, 5 ♂♂, 5 ♀; Kütahya: Altıntaş, Sarayak Village (39º 00' N / 29º 49' E), 1271 m a.s.l., 29.05.2009, 2 ♂♂; Uşak: Centrum, Karacaömerli Village (38º 33' N / 29º 05' E) 859 m a.s.l., 24.04.2011, 1 ♂.

**Palearctic Distribution:** TR, AM, AT, BE, BG, CH, CZ, DE, EN, ES, FR, GE, GR, HU, IE, IT, KZ, MA, NL, NO, PL, RO, RU, SE, SK, TJ, TM, UA, UZ.

**Distribution in Turkey:** Burdur, Edirne, Kırklareli, Manisa.

**Hercostomus apollo** (Loew, 1869)

**Material examined:** Kütahya: Altıntaş, Genişler Village (39º 01' N / 30º 07' E), 1036 m a.s.l., 23.07.2009, 1 ♂; Uşak: Banaz, Gürlek Village (38º 50' N / 29º 39' E), 1190 m a.s.l., 26.08.2009, 1 ♂, 1 ♀.

**Palearctic Distribution:** TR, AM, GR, IQ, TN UA.

**Distribution in Turkey:** Southwest Anatolia.

**Hercostomus chetifer** (Walker, 1849)

**Material examined:** Kütahya: Tavşanlı-Harmancık Road 10. km (39º 38' N / 29º 17' E), 902 m a.s.l., 24.07.2009, 1 ♂.

**Palearctic Distribution:** TR, AT, BA?, BE, CH, CZ, DE, DZ, EN, ES, FI, FR, GE, GR, HR?, IL, IT, LU, MK, NL, NO, RO, RU, SE, SI, SK?, UA.

**Distribution in Turkey:** Antalya, Manisa, Muğla.

**Hercostomus convergens** (Loew, 1857)

**Material examined:** Afyonkarahisar: Başmakçı, Akçapınar Village (38º 51' N / 29º 59' E), 847 m a.s.l., 26.05.2011, 3 ♂♂.

**Palearctic Distribution:** TR, AT, AZ, FR, DE, HU, IT, IL, PL, RO, RU, ES, UA.

**Distribution in Turkey:** Muğla.

**Hercostomus gracilis** (Stannius, 1831)

**Material examined:** Afyonkarahisar: Şuhut, Akyuva Village, Akyuva Stream (38º 33' N / 30º 26' E), 1258 m a.s.l., 26.06.2009, 1 ♂; Kütahya: Tavşanlı, Tavşanlı-Harmancık Road 10. km (39º 38' N / 29º 17' E), 902 m a.s.l., 24.07.2009, 10 ♂♂, 3 ♀; Uşak: Banaz, Ovacık Village (38º 48' N / 29º 37' E), 1290 m a.s.l., 25.08.2009, 5 ♂♂, 2 ♀.

**Palearctic Distribution:** TR, AT, BE, BG, CZ, DK, EN, ES, FR, DE, GR, HU, IT, NL, PL RU, SE, TJ, TM, UA.

**Distribution in Turkey:** Aydın, Burdur, Kırklareli.

**Hercostomus longiventris** (Loew, 1857)

**Material examined:** Kütahya: Domaniç, Kocayayla (39º 52' N / 29º 01' E), 1275 m a.s.l., 12.08.2011, 2 ♂♂; Uşak: Sivaslı, Gürlek Village (38º 50' N / 29º 40' E), 1127 m a.s.l., 26.08.2009, 1 ♂, 2 ♀♀.

**Palearctic Distribution:** TR, AT, BA?, BE, CH, CZ, DE, FR, GR, HR?, IT, NL, HU?, MA, MK, PL, RO, RU, SI?, TJ.

**Distribution in Turkey:** Artvin, Muğla.

**Hercostomus phoebus** Parent, 1927

**Material examined:** Afyonkarahisar: Centrum, Akören Village (38º 58' N / 30º 27' E), 1064 m a.s.l., 23.07.2009, 2 ♂♂, 1 ♀; Kütahya: Dumlupınar, Kızılca Village (38º 52' N / 30º 01' E), 1275 m a.s.l., 12.08.2011, 2 ♂♂; Uşak: Sivaslı, Gürlek Village (38º 50' N / 29º 40' E), 1127 m a.s.l., 26.08.2009, 1 ♂, 2 ♀♀.
Palearctic Distribution: TR, AM.
Distribution in Turkey: Antalya, Burdur, Muğla.

*Ortochile nigrocoerulea* Latreille, 1809

Material examined: **Uşak**: Eşme, Araplar – Kandemirler Road 1. km (38° 16’ N / 28° 58’ E), 781 m a.s.l., 23.04.2011, 1 ♂.

Palearctic Distribution: TR, AT, BE, SE, DK, DZ, EN, ES, FR, GR, HR, HU, IL, IT, ?MK, PL, TN.

Distribution in Turkey: Aydın, Kahramanmaraş.

*Poecilobothrus chrysozygos* (Wiedemann, 1817)

Material examined: **Afyonkarahisar**: Sultanmountain, Eber (38° 37’ N / 29° 32’ E), 987 m a.s.l., 25.05.2011, 1 ♂; **Kütahya**: Centrum, Türkmen mountain Türkmensu (39° 01’ N / 29° 13’ E), 900 m a.s.l., 14.07.2010, 1 ♂; **Uşak**: Centrum, Eğlence Bridge (38° 43’ N / 29° 33’ E), 914 m a.s.l., 10.06.2009, 1 ♂♂, 1 ♀.

Palearctic Distribution: TR, AM, AT, ?BA, BE, BG, BY, CH, CZ, DE, DK, EN, ES, FR, ?HR, HU, KZ, LT, MD, ?MK, NL, PL, RO, RU, SE, SK, ?SI, UA.

Distribution in Turkey: Kırklareli.

*Poecilobothrus regalis* (Meigen, 1824)

Material examined: **Afyonkarahisar**: Başmakçı, Akçapınar Village 3. km (37° 50’ N / 29° 59’ E), 849 m a.s.l., 28.05.2009, 5 ♂♂; **Kütahya**: Gediz, Gökler, Kalaycıoğlu Place (39° 00’ N / 29° 32’ E), 987 m a.s.l., 10.06.2009, 9 ♂♂, 10 ♀♀; **Uşak**: Uğurbey, Avşan Village, Avşan Canyon (38° 23’ N / 29° 21’ E), 571 m a.s.l., 09.06.2009, 5 ♂♂, 2 ♀♀.

Palearctic Distribution: TR, BG, GR, HU, IL, IT, RO.

Distribution in Turkey: Antalya.

*Sybistroma sphenoptera* (Loew, 1859)

Material examined: **Afyonkarahisar**: Domaniç, Domaniç-Bozüyük road, Sefavillage (39° 52’ N / 29° 38’ E), 1111 m a.s.l., 17.07.2011, 1 ♂.

Palearctic Distribution: TR, AT, CZ, DE, HU, IT, PL, RO.

Distribution in Turkey: Çanakkale, Kars, Kırklareli.

*Tachytrectus notatus* (Stannius, 1831)

Material examined: **Afyonkarahisar**: Bayat (38° 58’ N / 30° 53’ E) 1202 m a.s.l., 26.05.2010, 3 ♂♂; **Kütahya**: Gediz, Gediz-Altıntaş Road 17. km (38° 58’ N / 29° 33’ E), 864 m a.s.l., 29.05.2009, 1 ♂; **Uşak**: Centrum, Bozköy (38° 43’ N / 29° 33’ E), 914 m a.s.l., 10.06.2009, 1 ♂.

Palearctic Distribution: TR, AM, AT, ?BA, BE, BG, CH, CZ, DE, DK, EN, ES, FI, FR, ?HR, HU, IE, IL, IT, ?MK, NL, NO, PL, RO, SE, ?SI, SK, SY, RU, TM, UA.

Distribution in Turkey: Antalya, Aydın, Muğla.

Hydrophorinae Lioy, 1864

*Hydrophorus balticus* (Meigen, 1824)
Material examined: **Afyonkarahisar**: Başmakçı, Akçapınar Village 3 km (37º 50’ N / 29º 59’ E), 849 m a.s.l., 11.05.2010, 4 ♂♂, 4 ♀♀; **Kütahya**: Gediz, Değirmenönü Village (38º 57’ N / 29º 22’ E), 716 m a.s.l., 29.05.2009, 1 ♂; **Uşak**: Sivaslı, Pınarbaşı, Yediahpar Place (38º 28’ N / 29º 42’ E), 1176 m a.s.l., 09.06.2009, 6 ♂♂, 6 ♀♀.

**Paleartic Distribution**: TR, AF, AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, EN, ES, FI, FR, GE, GR, HU, IE, IL, IT, MA, NL, NO, PL, RO, RU, SE, UA.

**Distribution in Turkey**: Antalya, Aydın, Denizli, Isparta, Kırklareli, Manisa, Rize.

*Hydrophorus praecox* (Lehmann, 1822)

Material examined: **Afyonkarahisar**: Sandıklı, Balı Lake (38º 16’ N / 30º 13’ E), 1146 m a.s.l., 28.05.2009, 1 ♂; **Uşak**: Sivaslı, Pınarbaşı, Yediahpar Place (38º 28’ N / 29º 42’ E), 1176 m a.s.l., 09.06.2009, 1 ♀.

**Paleartic Distribution**: TR, AT, BE, BG, CH, CN, CY, CZ, DE, DK, EE, EG, EN, ES, FI, FR, GE, HE, IL, IQ, IR, KZ, NL, NO, PL, RO, RU, SK, TJ, TN, UA.

**Distribution in Turkey**: Antalya, Bolu, Burdur.

*Liancalus virens* (Scopoli, 1763)

Material examined: **Afyonkarahisar**: Sultanmountain, Kırca Village (38º 30’ N / 31º 13’ E), 1101 m a.s.l., 12.05.2010, 1 ♀; **Kütahya**: Gediz, Murat Mountain 22 km, (38º 57’ N / 29º 36’ E), 1323 m a.s.l., 29.05.2009, 1 ♂; **Uşak**: Banaz, Kuçukler-Murat Mountain Road 13 km (38º 56’ N / 29º 38’ E), 1755 m a.s.l., 10.06.2009, 1 ♂.

**Paleartic Distribution**: TR, AT, BE, BG, CH, CY, CZ, DE, DK, EN, ES, FI, FR, GE, GR, HU, IE, IL, IT, KG, KZ, LU, SE, MA, NL, NO, PL, RO, RU, SK, TJ, TN, UA.

**Distribution in Turkey**: Kırklareli, Manisa, Muğla.

*Thinophilus (Schoenophilus) versutus* Haliday, 1851

Material examined: **Afyonkarahisar**: İscehisar, Çatağıl Village, Ağzıkara Mahallesi (39º 00’ N / 30º 46’ E) 1358 m a.s.l., 26.05.2010, 2 ♂♂, 2 ♀♀.

**Paleartic Distribution**: TR, AT, BE, BY, CZ, DE, DK, EE, EN, FI, FR, GE, HR, IE, IL, IT, MA, NL, PL, RU, RO, SE, SK.

**Distribution in Turkey**: Antalya, Denizli.

*Neurigoninae Aldrich, 1905*

*Neurigona erichsoni* (Zetterstedt, 1843)

Material examined: **Kütahya**: Centrum, Üç kuyular Village (38º 47’ N / 29º 08’ E), 720 m a.s.l., 22.04.2010, 1 ♀.

**Paleartic Distribution**: TR, AT, BE, BY, CZ, DE, DK, EE, EN, FI, FR, HU, IE, IL, IT, NL, NO, PL, RO, RU, SE, SK.

**Distribution in Turkey**: Antalya, Denizli.

*Neurigona suturalis* (Fallén, 1823)

Material examined: **Afyonkarahisar**: Sultan Mount, Sorkun, Işıklı Road 3 km (37º 23’ N / 28º 58’ E) 1200 m a.s.l., 21.05.2011, 1 ♂, 1 ♀; Sultan Mountain, Deresinek – Sultan Mountain 2 km (38º 32’ N / 31º 09’ E) 1209 m a.s.l., 25.05.2011, 1 ♂.
Palearctic Distribution: TR, AT, BE, CH, CZ, DE, DK, EN, FI, FR, GE, HU, IT, NL, NO, PL, RO, RU, SE, SK.

Distribution in Turkey: New record for Turkey.

Raphininae Bigot, 1852

*Rhaphium appendiculatum* Zetterstedt, 1849

Material examined: Afyonkarahisar: Çay, Devestream Village, Acılı Place (38° 28' N / 30° 50' E), 1024 m a.s.l., 11.05.2010, 1 ♂; Kütahya: Gediz, Murat Mountain, Gediz Road 9. km (38° 57' N / 29° 29' E), 785 m a.s.l., 25.08.2009, 1 ♂; Uşak: Centrum, Çamyuva Village (38° 47' N / 29° 34' E), 1080 m a.s.l., 25.08.2009, 1 ♂.

Palearctic Distribution: TR, AT, BE, BG, CZ, DE, DK, EN, ES, FI, FR, GE, GR, HU, IE, IT, MA, NL, PL, RO, RU, SE, UA.

Distribution in Turkey: Antalya, İzmir, Kırklareli, Manisa.

*Rhaphium brevicorne* Curtis, 1835

Material examined: Afyonkarahisar: Dazkırı, Acı lake (37° 50' N / 29° 46' E), 844 m a.s.l., 28.05.2009, 3 ♂; Kütahya: Gediz, Gökler Beldesi, Kalaycıoğlu Place (39° 01' N / 29° 32' E), 987 m a.s.l., 10.06.2009, 2 ♂; Uşak: Banaz, Kocahisar, Küçükler Dam (38° 52' N / 29° 37' E), 1278 m a.s.l., 22.04.2010, 2 ♂; Sorkun Village 1. km (38° 43' N / 29° 24' E) 975 m, 01.07.2010, 2 ♂.

Palearctic Distribution: TR, AL, BE, DE, EN, ES, FR, GR, IE, IQ, IT, NL, RU, TJ.

Distribution in Turkey: Antalya, Manisa, Tekirdağ.

*Rhaphium caliginosum* Meigen, 1824

Material examined: Afyonkarahisar: Dinar, Ulubey Kasabası, Cumhuriyet Village (38° 11' N / 30° 14' E), 332 m a.s.l., 11.05.2010, 2 ♂; Kütahya: Gediz, Murat Mountain, Gediz Road 9. km (38° 57' N / 29° 29' E), 785 m a.s.l., 25.08.2009, 1 ♂; Uşak: Banaz, Kocahisar, Küçükler Dam (38° 52' N / 29° 37' E), 1278 m a.s.l., 25.08.2009, 1 ♂.

Palearctic Distribution: TR, AT, BE, BG, CH, CZ, DE, DK, EE, EN, ES, FI, FR, GR, HU, IE, IL, IT, MA, NL, NO, SK, PL, ?RO, RU, SE, SY, UA.

Distribution in Turkey: İzmir, Tekirdağ.

*Rhaphium fascipes* (Meigen, 1824)

Material examined: Kütahya: Dumlupınar, Kızılca Village (38° 52’ N / 30° 01’ E), 1220 m a.s.l., 20.04.2010, 3 ♂; Dumlupınar Place, (38° 51’ N / 29° 59’ E), 1245 m a.s.l., 19.04.2010, 3 ♂.

Palearctic Distribution: TR, AT, BE, CZ, DE, DK, EE, EN, ES, FI, FR, GR, HU, IE, IT, MA, NL, NO, PL, RO, RU, SE, SK, UA.

Distribution in Turkey: Antalya, Denizli.

*Rhaphium laticorne* (Fallén, 1823)

Material examined: Kütahya: Tavşanlı, Akçaşehir Village (39° 26’ N / 29° 37’ E), 875 m a.s.l., 21.04.2010, 3 ♂; Uşak: Sivaslı, Uşak kararoad 6. km, Banaz Bridge (38° 33’ N / 29° 37’ E) 796 m a.s.l., 30.06.2010, 1 ♂.

Palearctic Distribution: TR, AT, BE, BG, BY, CZ, DE, DK, EN, FI, FR, HU, IE, IT, LU, NL, NO, PL, RO, RU, SE, SK, UA.

Distribution in Turkey: Korucuk, Southwest Anatolia.

*Rhaphium micans* (Meigen, 1824)

Material examined: Kütahya: Gediz, Gölcük Village (38° 53’ N / 29° 17’ E) 649 m a.s.l., 14.07.2010, 5 ♂.

Palearctic Distribution: TR, AT, BE, BG, BY, CH, CN, CZ, DE, EN, ES, FI, FR, HU, IT, NL, NO, PLRO, RU, SE, SK, TJ.
Distribution in Turkey: Muğla.

*Sciapodinae* Becker, 1917  
*Sciapus flavicinctus* (Loew, 1857)  
**Material examined:** Afyonkarahisar: *Dazkırı*, Açı Lake (37° 50' N / 29° 46' E), 844 m a.s.l., 28.05.2009, 1 ♂; Kütahya: Gediz, Değirmenönü Village (38° 57' N / 29° 22' E), 716 m a.s.l., 29.05.2009, 1 ♂; Uşak: *Eşme*, Hacakdirili Village (38° 23' N / 29° 02' E), 850 m a.s.l., 24.08.2009, 1 ♂.

**Palearctic Distribution:** TR, AZ, BG, DE, FR, GR, HU, IL, IT, RO, RU, SK.

**Distribution in Turkey:** Adana.

*Sciapus heteropygus* Parent, 1926  
**Material examined:** Kütahya: Dumlupınar, Zafertepe Çalköy, Başkomutan National Park (38° 56' N / 30° 05' E), 1110 m a.s.l., 12.08.2011, 1 ♂.

**Palearctic Distribution:** TR, CH, CZ, DE, DK, EN, ES, FR, HU, IL, RO, SK.

**Distribution in Turkey:** Muğla.

*Sciapus maurus* Parent, 1930  
**Material examined:** Uşak: Banaz, Hatiplar Village (38° 46' N / 29° 46' E) 958 m a.s.l., 30.06.2010, 1 ♂.

**Palearctic Distribution:** TR, AL, AT, AM, AZ, BE, BG, CZ, DE, DK, EE, EN, ES, FI, FR, GR, HU, IE, IT, LU, MA, ?MK, NL, NO, PL, RO, RU, SE, ?SI, SK, UA.

**Distribution in Turkey:** Antalya, Bolu, Kırklareli, Manisa.

*Campsicnemus curvipes* (Fallén, 1823)  
**Material examined:** Afyonkarahisar: *Sandıklı*, Ballı Lake (38° 16' N / 30° 13' E), 1146 m a.s.l., 28.05.2009, 1 ♂; Kütahya: *Centrum*, Kıcıkler-Murat Mountain Road 22. km (38° 57' N / 29° 36' E), 1456 m a.s.l., 10.06.2009, 1 ♂; Uşak: Banaz, Ulupınar Village (38° 37' N / 29° 48' E) 1129 m a.s.l., 30.06.2010, 1 ♂, 6 ♀♀.

**Palearctic Distribution:** TR, AL, BE, BG, IL.

**Distribution in Turkey:** Muğla.

*Campsicnemus magius* (Loew, 1845)  
**Material examined:** Kütahya: *Altıntaş*, Genişler Village (39° 01' N / 30° 07' E), 1036 m a.s.l., 23.07.2009, 1 ♂.

**Palearctic Distribution:** TR, AT, BE, BG, CZ, DE, EN, ES, FR, HU, IL, IT, NL, RO, RU, ?SI, TJ, TM, UA.

**Distribution in Turkey:** Antalya, Konya.

*Campsicnemus simplicissimus* Strobl, 1906  
**Material examined:** Afyonkarahisar: *Başmakçı*, Akçapınar Village 6. km (37° 50' N / 29° 58' E), 852 m a.s.l., 28.05.2009, 1 ♂; Kütahya: *Tavşanlı*, Kayın Village, Koca çay (39° 30' N / 29° 32' E), 840 m a.s.l., 20.04.2010, 4 ♂♂, 2 ♀♀; Uşak: *Centrum*, Koyunbeyli Village (38° 34' N / 29° 29' E), 920 m a.s.l., 09.06.2009, 1 ♂.

**Palearctic Distribution:** TR, BG, CH, ES, FR, GR, HU, IL, IT, RU.

**Distribution in Turkey:** Antalya, Konya.

*Campsicnemus umbripennis* Loew, 1856  
**Material examined:** Afyonkarahisar: *Sandıklı*, Ballı Lake (38° 16' N / 30° 13' E), 1146 m a.s.l., 28.05.2009 1 ♂, 7 ♀♀; Kütahya: *Gediz*, Gökler- Cebrail Road 6. km (38° 03' N / 29° 33' E), 1389 m a.s.l., 10.06.2009, 6 ♂♂, 4 ♀♀; Uşak: *Sıvash*, Pınarbaşı, Yediah Place (38° 28' N / 29° 42' E), 1176 m a.s.l., 09.06.2009, 1 ♂, 5 ♀♀.
**Palearctic Distribution:** TR, AF, AM, AT, BE, BG, CH, CZ, DE, EN, ES, FR, HU, IL, IQ, IT, PT, PL, RO, RU, SK, TJ, TM.

**Distribution in Turkey:** Antalya, Erzurum, Hakkâri, Isparta, Kars, Manisa, Muğla.

**Sympleptus pulicarius** (Fallén, 1823)

Material examined: Afyonkarahisar: Bolvadin, Özbürun Alabalık Çiftliği (38º 51’ N / 31º 00’ E), 1227 m a.s.l., 24.05.2011, 4 ♂♂, 4 ♀; Kütahya: Gediz, Altıntaş Road 22. km (38º 59’ N / 29º 96’ E), 1004 m a.s.l., 29.05.2009, 1 ♂; Uşak: Sivaslı, Pınarbaşı, Yediahar Place (38º 28’ N / 29º 42’ E), 1176 m a.s.l., 09.06.2009, 1 ♂.

**Palearctic Distribution:** TR, AL, AT, BE, BG, CZ, DE, DK, EE, EN, ES, FI, FR, GR, HU, IE, IT, LU, NO, NL, PL, RU, RO, SE, SK, UA.

**Distribution in Turkey:** Aydın, Kırklareli, Muğla, Van.

**Syntormon aulicus** (Meigen, 1824)

Material examined: Afyonkarahisar: Evcilere, Tugaylı Village (38º 06’ N / 30º 06’ E), 856 m a.s.l., 25.05.2010, 3 ♂♂, 2 ♀; Kütahya: Domanıç, Sefaköy (39º 49’ N / 29º 38’ E), 903 m a.s.l., 29.05.2009; 3 ♂♂.

**Palearctic Distribution:** TR, AT, BE, BG, CH, CZ, DE, DK, EE, EN, ES, FI, FR, GR, HU, IE, IT, MA, PL, RU, SE, TN.

**Distribution in Turkey:** Adıyaman, Burdur.

**Syntormon denticulatum** (Zetterstedt, 1843)

Material examined: Afyonkarahisar: Dinar, Cumhuriyet Village (38º 11’ N / 30º 14’ E), 1089 m a.s.l., 28.05.2009, 1 ♂; Kütahya: Domanıç, Sefaköy (39º 49’ N / 29º 38’ E), 905 m a.s.l., 24.07.2009, 3 ♂♂; Uşak: Sivaslı, Erice Village (38º 35’ N / 29º 38’ E), 903 m a.s.l., 29.05.2009; 3 ♂♂.

**Palearctic Distribution:** TR, AF, AM, AT, BE, BG, CZ, DE, EN, ES, FR, GR, IE, IT, MA, NL, PL, RO, RU, UA.

**Syntormon fuscipes** (von Roser, 1840)

Material examined: Afyonkarahisar: Sandıklı, Sorgun, Tokalı Kanyon Girişi (38º 19’ N / 30º 01’ E), 1456 m a.s.l., 25.05.2010, 1 ♂; Kütahya: Gediz, Kucukler-Murat Mountain Road 19. km (38º 55’ N / 29º 36’ E), 1716 m a.s.l., 10.06.2009, 5 ♂♂.

**Palearctic Distribution:** TR, AD, AT, BE, BG, CZ, DE, EE, FI, ES, HU, SE, NL, PL, RO, RU, SK.

**Syntormon metathesis** (Loew, 1850)

Material examined: Afyonkarahisar: Dinar, Karakuyu Village (38º 05’ N / 30º 13’ E), 1020 m a.s.l., 28.05.2009, 1 ♂; Başmakçı, Akçapınar Village (37º 50’ N / 29º 58’ E), 852 m a.s.l., 11.05.2010, 4 ♂♂, 1 ♀.

**Palearctic Distribution:** TR, AT, BE, CH, CZ, DE, EE, FI, ES, HU, SE, NL, PL, RO, RU, SK.

**Distribution in Turkey:** Adıyaman.

**Syntormon monile** (Haliday, 1851)

Material examined: Afyonkarahisar: Sandıklı, Sorgun, Tokalı Kanyon Girişi (38º 19’ N / 30º 01’ E), 1456 m a.s.l., 25.05.2010, 1 ♂; Kütahya: Gediz, Kucukler-Murat Mountain Road 21. km (38º 56’ N / 29º 36’ E), 1466 m a.s.l., 10.06.2009, 1 ♂; Uşak: Banaz, Kucukler-Murat Mountain Road 19. km (38º 55’ N / 29º 36’ E), 1716 m a.s.l., 10.06.2009, 5 ♂♂.

**Palearctic Distribution:** TR, AL, AT, BE, BG, CH, CZ, DE, DK, EN, FR, HU, IE, IT, MA, NL, PL, SE, SK, RO, RU, TN.
Distribution in Turkey: Kars.

Syntormon pallipes (Fabricius, 1794)

Material examined: Afyonkarahisar: Afyonkarahisar Road 60. km, Tattahmet Bridge (39° 04' N / 30° 12' E), 1029 m a.s.l., 31.07.2009, 4 ♂♂, 2 ♀♀; Kütahya: Seyitömer, Köprüören Village, (39° 30' N / 29° 44' E), 1026 m a.s.l., 26.04.2009, 11 ♂♂; Uşak: Ulubey, Avgan Stream (38° 24' N / 29° 26' E), 650 m a.s.l., 19.04.2010, 11 ♂♂, 18 ♀♀.

Palearctic Distribution: TR, AL, AF, AT, BE, BG, CH, CN, CZ, DE, DK, EE, EG, EN, ES, FI, FR, GE, GR, HU, IE, IL, IQ, IR, IS, IT, MA, NL, NO, PL, PT, RO, RU, SE, ?SI, SK, TJ, UA, UZ.

Distribution in Turkey: Kars, Tekirdağ, Van.

Syntormon pumilis (Meigen, 1824)

Material examined: Afyonkarahisar: Çay, Çayıyr yazı Village, Genali Place (38° 22' N / 30° 44' E), 1016 m a.s.l., 11.05.2010, 1 ♂, 3 ♀♀; Uşak: Sivaslı, Erice Village (38° 35' N / 29° 38' E), 904 m a.s.l., 11.05.2010, 4 ♂♂, 4 ♀♀.

Palearctic Distribution: TR, AF, AM, AT, BE, BG, BY, CZ, DE, DK, EE, EG, EN, ES, FI, FR, GR, HU, IE, IL, IT, MA, Middle East, NO, PL, RO, RU, SE, SK, ?SI, TN, UA.

Distribution in Turkey: Erzurum, Kars, Korucuk.

Syntormon subinermis (Loew, 1869)

Material examined: Afyonkarahisar: Dinar, Ulubey Kasabası, Cumhuriyet Village (38° 11' N / 30° 14' E), 332 m a.s.l., 11.05.2010, 5 ♂♂; Uşak: Sivaslı, Erice Village (38° 35' N / 29° 38' E), 904 m a.s.l., 26.05.2009, 3 ♂♂, 2 ♀♀.

Palearctic Distribution: TR, AT, CZ, DE, FR, GE, HU, IL, KG, RO, RU, SE, SK, TJ.

Distribution in Turkey: Adıyaman, Erzurum.

Telmaturgus tumidulus (Raddatz, 1873)

Material examined: Afyonkarahisar: Bayat (38° 58' N / 30° 53' E) 1202 m a.s.l., 26.05.2010, 3 ♂♂, 6 ♀♀.

Palearctic Distribution: TR, AT, BE, CZ, DE, EN, FR, HU, SE, NL, NO, PL, RO, RU.

Distribution in Turkey: Kars.

Teuchophorus bisetus Loew, 1871

Material examined: Afyonkarahisar: Başmakçı, Akçapınar Village (38° 51' N / 29° 59' E), 847 m a.s.l., 26.05.2011, 17 ♂♂.

Palearctic Distribution: TR, IL, IQ, TJ, UZ.

Distribution in Turkey: Aydın.

Discussion

As a result of this study, 54 dolichopodid species were recorded as new for the Inner West Anatolia and with previous records, (Tonguç, Barlas, 2011; Tonguç et al., 2013; Tonguç et al., 2016a, 2016b) the total number of dolichopodids of the Inner West Anatolia increased to 77 species. Neurigona suturalis is a new record for the Turkish dolichopodid fauna. The full list of dolichopodid species divided by provinces is given in Table 1. Distributions of the number of species belong to ten identified subfamilies are given in Figure 2. Hercostomus anatoliensis was described in 2016 by Tonguç et al (2016b) and was known previously only from the Afyonkarahisar,
Kütahya and Uşak Provinces of Turkey. Forty-nine, 47 and 43 species were recorded from the Afyonkarahisar, Kütahya and Uşak Provinces, respectively. Here we enriched the fauna of the studied provinces by 38 new species records for Afyonkarahisar, 35 for Kütahya, 31 for Uşak. Twenty-nine species were distributed in all provinces. Thirty-nine out of 77 species identified from the Inner West Anatolia are known to have a West Palaearctic distribution, while the other 38 of them are distributed in the West and East Palearctic Regions.

In Table 1, new records for the studied region are marked with an asterisk (*) in faunistic remarks.

**Table 1.** Distribution by provinces of the species identified in the Inner West Anatolia

| Species                        | Distribution of identified species by provinces | Faunistic remarks |
|--------------------------------|------------------------------------------------|------------------|
| **AFYONKARAHİSAR** | **KÜTAHYA** | **UŞAK** |
| *Argyra argyria* (Meigen, 1824) | + | + | + | - |
| *A. vestita* (Wiedemann, 1817) | + | - | - | * |
| *Chrysotus pennatus* Lichwardt, 1902 | - | + | - | * |
| *C. pulchellus* Kowarz, 1874 | + | - | - | * |
| *C. suvais* Loew, 1857 | - | - | + | * |
| *Diaphorus hoffmannseggi* Meigen, 1830 | - | + | - | * |
| *Dolichopus austriacus* Parent, 1927 | + | - | - | - |
| *D. calinotus* Loew, 1871 | + | - | - | - |
| *D. excisus* Loew, 1859 | + | - | + | - |
| *D. latilimbatus* Macquart, 1827 | + | - | + | * |
| *D. nubilis* Meigen, 1824 | + | - | - | * |
| *D. perversus* Haliday, 1838 | + | - | - | * |
| *D. sabinus* Haliday, 1838 | + | - | - | * |
| *D. signifer* Haliday, 1832 | + | + | + | * |
| *Hercostomus anatoliensis* Tonguç et all., 2016 | + | + | + | - |
| *H. apollo* (Loew, 1869) | - | + | + | * |
| *H. chetifer* (Walker, 1849) | - | + | - | * |
| *H. convergens* (Loew, 1857) | + | - | - | * |
| *H. fulvicaudis* (Haliday, 1851) | + | + | - | - |
| *H. gracilis* (Stannius, 1831) | + | + | + | * |
| *H. griseifrons* Becker, 1910 | - | + | + | - |
| *H. longiventris* (Loew, 1857) | - | + | - | * |
| *H. phoebus* Parent, 1927 | + | + | + | * |
| *Ortochile nigrocoerulea* Latreille, 1809 | - | - | + | * |
| *Poecilobothrus chrysozygos* (Wiedemann, 1817) | + | + | + | * |
| Species                                      | Distribution of identified species by provinces | Faunistic remarks |
|----------------------------------------------|------------------------------------------------|-------------------|
|                                              | AFYONKARAHİSAR | KÜTAHY | UŞAK |                                          |
| **P. principalis** (Loew, 1861)              | -             | +      | -    | -                                          |
| **P. regalis** (Meigen, 1824)               | +             | +      | +    | *                                          |
| Sybistroma crinipes Staeger, 1842            | -             | -      | +    | -                                          |
| **S. impar** (Rondani, 1843)                | -             | +      | -    | *                                          |
| S. lorifer (Mik, 1878)                      | -             | -      | +    | -                                          |
| S. nodicornis Meigen, 1824                  | +             | -      | +    | -                                          |
| S. sphenoptera Loew, 1859                   | -             | +      | -    | *                                          |
| Tachytrectus notatus (Stannius, 1831)        | +             | +      | +    | *                                          |
| Hydrophorus balticus (Meigen, 1824)         | +             | +      | +    | *                                          |
| **H. praecox** (Lehmann, 1822)              | +             | -      | +    | *                                          |
| Liancalus virens (Scopoli, 1763)            | +             | +      | +    | *                                          |
| Orthoceratium lacustre (Scopoli, 1763)      | +             | +      | -    | -                                          |
| Scellus notatus (Fabricius, 1781)           | +             | -      | -    | -                                          |
| Thinophilus (Schoenophilus) versutus Haliday, 1851 | +             | -      | -    | *                                          |
| Medetera perfida Parent, 1932               | -             | -      | +    | -                                          |
| **M. muralis** Meigen, 1824                 | -             | -      | +    | *                                          |
| Neurigona abdominalis (Fallen, 1823)        | -             | +      | -    | -                                          |
| N. erichsoni (Zetterstedt, 1843)            | -             | +      | -    | *                                          |
| N. suturalis (Fallén, 1823)                 | +             | -      | -    | New record for Turkey                      |
| Peloropodes acuticornis (Oldenberg, 1916)   | -             | +      | -    | -                                          |
| Rhaphium albifrons Zetterstedt, 1843         | -             | +      | -    | -                                          |
| **R. appendiculatum** Zetterstedt, 1849      | +             | +      | +    | *                                          |
| R. brevicorne Curtis, 1835                  | +             | +      | +    | *                                          |
| R. caliginosum Meigen, 1824                 | +             | +      | -    | *                                          |
| R. fascipes (Meigen, 1824)                  | +             | +      | -    | *                                          |
| R. laticorne (Fallén, 1823)                 | -             | +      | +    | *                                          |
| R. micans (Meigen, 1824)                    | -             | +      | -    | *                                          |
| Sciapus flavicinctus (Loew, 1857)           | +             | +      | +    | *                                          |
| S. heteropygus Parent, 1926                 | -             | +      | -    | *                                          |
| S.maurus Parent, 1930                       | -             | -      | +    | *                                          |
| Campsicnemus barbitibia Stackelberg, 1947    | -             | -      | +    | -                                          |
| C. crinitarsis Strobl, 1906                 | -             | -      | +    | -                                          |
| C. curvipes (Fallén, 1823)                  | +             | +      | +    | *                                          |
| Species                                | Distribution of identified species by provinces | Faunistic remarks |
|---------------------------------------|-------------------------------------------------|-------------------|
|                                       | AFYONKARAHİSAR | KÜTAHYA | UŞAK |                        |
| C. filipes Loew, 1859                 | +               | -       | -     | -                       |
| C. magius (Loew, 1845)                | -               | +       | -     | *                       |
| C. simplicissimus Strobl, 1906        | +               | +       | +     | *                       |
| C. umbripennis Loew, 1856             | +               | +       | +     | *                       |
| Sympycnus pulicarius (Fallén, 1823)  | +               | +       | +     | *                       |
| S. simplicipes Becker, 1908           | +               | +       | +     | -                       |
| Syntormon aulicus (Meigen, 1824)      | +               | +       | -     | *                       |
| S. denticulatum (Zetterstedt, 1843)   | +               | +       | +     | *                       |
| S. fuscipes (von Roser, 1840)         | +               | +       | -     | *                       |
| S. metathesis (Loew, 1850)            | +               | -       | -     | *                       |
| S. monile (Haliday, 1851)             | +               | +       | +     | *                       |
| S. pallipes (Fabricius, 1794)         | +               | +       | +     | *                       |
| S. pumilis (Meigen, 1824)             | +               | -       | +     | *                       |
| S. subinermis (Loew, 1869)            | +               | -       | +     | *                       |
| S. zelleri (Loew, 1850)               | +               | -       | +     | -                       |
| Telmaturdus tumidulus (Raddatz, 1873) | +               | -       | -     | *                       |
| Teuchophorus bisetus Loew, 1871       | +               | -       | -     | *                       |
| T. chaetifemoratus Pollet & Kechev, 2007 | -             | +       | +     | -                       |
| Xanthochlorus tenellus (Wiedemann, 1817) | -             | +       | -     | -                       |
| TOTAL                                 | **49**          | **47**  | **43**| **54**                  |

**Figure 2.** Number of species belonging to the recorded subfamilies
The number of species belonging to the family Dolichopodidae identified in Turkey increases to 201 with this new record. It is estimated that the actual fauna of Dolichopodidae of Turkey is in the range of at least between 350 and 400 species. Turkey has very rich species diversity because of containing different biogeographic regions, ecosystems and habitats.

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