

NEW RECORDS AND LIST OF KNOWN SPECIES OF THE FAMILY DOLICHOPODIDAE (DIPTERA, EMPIDOIDEA) FROM CROATIA

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Two dolichopodid species (*Rhaphium caliginosum* Meigen and *Medetera jacula* (Fallén)) are recorded for the first time in Croatia. With these new data the total number of dolichopodid flies in Croatia is 38, which are listed here.

Key words: Croatia, Dolichopodidae, *Rhaphium caliginosum*, *Medetera jacula*, biodiversity

Kechev, M. & Ivanova, M.: Novi nalazi i popis vrsta porodice Dolichopodidae (Diptera, Empidoidea) za Hrvatsku. Nat. Croat., Vol. 24, No. 2, 323–330, 2015, Zagreb

Dvije vrste dugonogih muha (*Rhaphium caliginosum* Meigen i *Medetera jacula* (Fallén)) zabilježene su po prvi puta za Hrvatsku. S tim nalazima ukupni broj vrsta dugonogih muha za Hrvatsku iznosi 38 te rad donosi popis tih vrsta.

Ključne riječi: Hrvatska, Dolichopodidae, *Rhaphium caliginosum*, *Medetera jacula*, bioraznolikost

INTRODUCTION

The family Dolichopodidae is one of the largest families of the suborder Brachycera (order Diptera) with more than 7400 representatives from all over the world (PAPE *et al.* 2009; GRICHANOV *et al.*, 2011).

The dolichopodid fauna of Croatia is poorly investigated and majority of records are from the second half of the 19th and in the first half of the 20th century. STROBL (1900) published a book for the territory of Bosnia, Herzegovina and Dalmatia and listed 20 dolichopodid flies from Croatia (Dalmatia). Some new dolichopodids were described from Croatia as well. MIK (1889) described *Sciapus* [*Psilopus*] *lesinensis* Mik, 1889 from Lesina Island, Dalmatia (now Hvar Island). PARENT (1927) described *Lamprochromus dalmaticus* Parent, 1927 from Dubrovnik (Ragusa) and afterwards in 1932 the same author described *Sciapus oldenbergi* Parent, 1932 from Učka Mountain (Istria). PARENT (1938) mentioned eight dolichopodids distributed in Croatia (Dalmatia).

More recently, POLLET (2011) in the Fauna Europaea database listed several dolichopodids and the total number of species for Croatia raised to 36.

MATERIAL AND METHODS

The additional material was collected by sweep net from two different sites in Croatia (Fig. 1) – an irrigation canal in the town of Križevci (46° 00' 14" N 16° 32' 16" E, 121

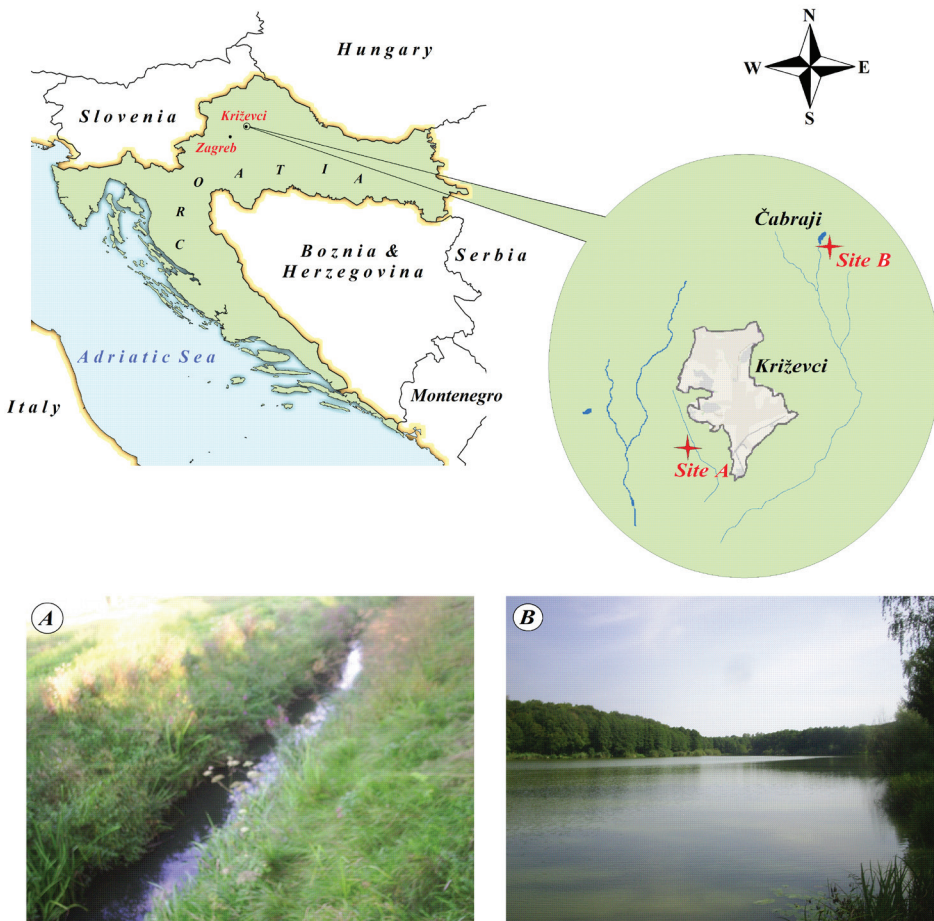


Fig. 1. Map of Croatia with collecting sites – Site A. Irrigation canal in the town of Križevci, Site B. Reservoir Čabraji (drawing and photos M. Kechev).

m a.s.l.) and the Reservoir Čabraji (46° 05' 46'' N 16° 35' 07'' E, 165 m a.s.l.) near the village of Čabraji.

Diptera collected in the field were placed in 70% ethanol. Specimens were sorted in the laboratory using a Konus 5420 Diamond microscope. Identification keys by PARENT (1938), NEGROBOV & STACKELBERG (1969), GRICHANOV (2007) were used for the identification of the species new to Croatia.

RESULTS

The following format is used for the literature records given below: name of the site (citation of reference); and for new records: Croatian province, name of the site, the sampling date, number of sampled specimens per sex, collector.

Subfamily DIAPHORINAE**Genus *Argyra* Macquart, 1834**

1. *Argyra argyria* (Meigen, 1824)

Croatia (POLLET, 2011);

Genus *Chrysotus* Meigen, 1824

2. *Chrysotus cupreus* (Macquart, 1827)

Croatia (POLLET, 2011);

3. *Chrysotus palustris* Verrall, 1876

Croatia (POLLET, 2011);

4. *Chrysotus suavis* Loew, 1857

Dubrovnik (Ragusa) and Split (Spalato) (STROBL, 1900);

Subfamily DOLICHOPODINAE**Genus *Dolichopus* Latreille, 1796**

5. *Dolichopus plumipes* (Scopoli, 1763)

Croatia (POLLET, 2011);

6. *Dolichopus signifer* Haliday, 1832

Dubrovnik (Ragusa) (STROBL, 1900);

7. *Dolichopus strigipes* Verrall, 1875

Ston (Italian: Stagno; near Dubrovnik) (BECKER, 1889) (as *D. aratriformis*); Dalmatia (Croatia) (PARENT, 1938);

Genus *Hercostomus* Loew, 1857

8. *Hercostomus chetifer* (Walker, 1849)

Island Hvar (Lesina, Dalmatia) (STROBL, 1900);

9. *Hercostomus fuscipennis* (Meigen, 1824)

Istria (Croatia) (PARENT, 1938);

10. *Hercostomus longiventris* (Loew, 1857)

Dalmatia (Croatia) (PARENT, 1938);

11. *Hercostomus lorifer* Mik, 1878

Croatia (Dalmatia) (PARENT, 1938), (POLLET, 2011);

12. *Hercostomus vivax* (Loew, 1857)

Croatia (Dalmatia) (PARENT, 1938), (POLLET, 2011);

Genus *Ortochile* Latreille, 1809

13. *Ortochile nigrocoerulea* Latreille, 1809

Dubrovnik (Ragusa), Zadar (Zara) and Split (Spalato) (STROBL, 1900) Dubrovnik, Dalmatia (Croatia) (PARENT, 1938), Croatia (POLLET, 2011);

Genus *Sybistroma* Meigen, 1824

14. *Sybistroma inornata* (Loew, 1857)

Dubrovnik (Ragusa) (STROBL, 1900); Croatia (Dalmatia) (PARENT, 1938; POLLET, 2011);

Subfamily HYDROPHORINAE

Genus *Aphrosylus* Haliday, 1851

15. *Aphrosylus piscator* Lichtwardt, 1902

Croatia (POLLET, 2011);

16. *Aphrosylus venator* Loew, 1857

Dubrovnik (Ragusa) (STROBL, 1900);

Genus *Hydrophorus* Fallén, 1823

17. *Hydrophorus praecox* (Lehmann, 1822)

Croatia (Dalmatia) (STROBL, 1900);

Genus *Machaerium* Haliday, 1832

18. *Machaerium thinophilum* (Loew, 1857)

Croatia (POLLET, 2011);

Genus *Thinophilus* Wahlberg, 1844

19. *Thinophilus flavipalpis* (Zetterstedt, 1843)

Zadar (Zara), on the sea shore (STROBL, 1900);

20. *Thinophilus ruficornis* (Haliday, 1838)

Croatia (Dalmatia) (STROBL, 1900);

Subfamily MEDETERINAE

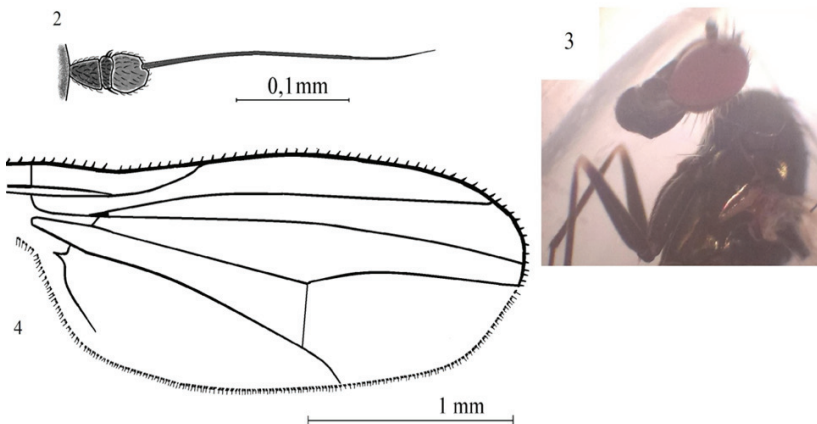
Genus *Medetera* Fischer von Waldheim, 1819

21. *Medetera diadema* (Linnaeus, 1767)

Zadar (Zara) (STROBL, 1900);

22. *Medetera flavipes* Meigen, 1824

Zadar (Zara) (STROBL, 1900);



Figs 2-4. *Medetera jacula* (Fall.), male: 2. antenna; 3. head, thorax and fore legs; 4. wing; (photo and drawings M. Kechev).

23. *Medetera glauccella* Kowarz, 1877

Dubrovnik (Ragusa), on the sea rocks (STROBL, 1900), Croatia (Dalmatia) (PARENT, 1938), Croatia (POLLET, 2011);

24. *Medetera jacula* (Fallen, 1823) New to Croatia. Figs. 2-4.

Material examined: Koprivnica-Križevci County, on the banks of the Reservoir Čabradi, 31.VIII.2014, 1♂, 1♀, leg. M. Kechev.

25. *Medetera micacea* Loew, 1857

Croatia (Dalmatia) (STROBL, 1900);

26. *Medetera truncorum* Meigen, 1824

Šibenik (Sebenico) (STROBL, 1900), Croatia (POLLET, 2011);

Genus *Systemus* Loew, 1857**27. *Systemus bipartitus* (Loew, 1850)**

Croatia (POLLET, 2011);

Genus *Thrypticus* Gerstaecker, 1864**28. *Thrypticus bellus* Loew, 1869**

Dubrovnik (Ragusa) (STROBL, 1900);

29. *Thrypticus smaragdinus* Gerstaecker, 1864

Croatia (POLLET, 2011);

Subfamily NEURIGONINAE**Genus *Neurigona* Rondani, 1856****30. *Neurigona nubifera* (Loew, 1869)**

Dubrovnik (Ragusa) (STROBL, 1900);

Subfamily PELOROPEODINAE**Genus *Micromorphus* Mik, 1878****31. *Micromorphus albipes* (Zetterstedt, 1843)**

Šibenik (Sebenico) (STROBL, 1900);

Subfamily RHAPHIINAE**Genus *Rhaphium* Meigen, 1803****32. *Rhaphium caliginosum* Meigen, 1824 New to Croatia. Figs. 5-7.
= *Rhaphium zetterstedti* (Parent, 1925)**

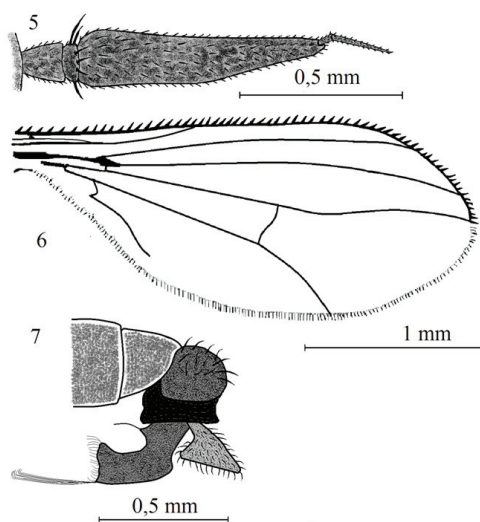
Material examined: Koprivnica-Križevci County, Križevci, irrigation canal, 30.VIII.2014, 1♂, leg. M. Kechev.

Subfamily SCIAPODINAE**Genus *Sciapus* Zeller, 1842****33. *Sciapus contristans* (Wiedemann, 1817)**

Dubrovnik (Ragusa) (STROBL, 1900);

34. *Sciapus lesinensis* (Mik, 1889)

Island Hvar, Croatia (Lesina, Dalmatia) (MIK, 1889);



Figs 5-7. *Rhaphium caliginosum* Meig., male: 5. antenna, 6. wing, 7. hypopygium; (drawings M. Kechev).

35. *Sciapus oldenbergi* Parent, 1932

Učka Mountain (Istria) (PARENT, 1932);

36. *Sciapus pallens* (Wiedemann, 1830)

Island Hvar, Croatia (Isl. Lesina, Dalmatia) (STROBL, 1900); Croatia (POLLET, 2011);

Subfamily SYMPYCNINAE

Genus *Lamprochromus* Mik, 1878

37. *Lamprochromus dalmaticus* Parent 1927

Dubrovnik (Ragusa) (PARENT, 1927); Croatia (POLLET, 2011);

Genus *Syntormon* Loew, 1857

38. *Syntormon pallipes* (Fabricius, 1794)

Dubrovnik (Ragusa), Island Hvar (Island Lesina) and Zadar (Zara) (STROBL, 1900).

DISCUSSION AND CONCLUSION

In 1889 BECKER published a new species from Dalmatia – *Dolichopus aratrisformis*, synonym of *Dolichopus strigipes* Verrall 1875. Checking the current literature about the distribution of Dolichopodidae (POLLET, 2011; GRICHANOV, 2014), the authors gave *D. strigipes* as doubtful for Croatia. Having in mind that BECKER gave clear description of the species and drawing of the hypopygium of *D. strigipes* (described as *D. aratrisformis*), we consider this species is present in the fauna of Croatia and we added it to the list of known species.

These new data increase the number of known dolichopodid species for the fauna of Croatia to 38.

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SUMMARY

New records and list of known species of the family Dolichopodidae (Diptera, Empidoidea) from Croatia

M. Kechev & M. Ivanova

In the present paper we give information about two new dolichopodid flies (*Rhaphium caliginosum* Meig. and *Medetera jacula* Fall.) in the fauna of Croatia. A list of 36 species belonging to 18 genera were known for Croatia until now (*Argyra argyria*, *Chrysotus cupreus*, *Ch. palustris*, *Ch. suavis*, *Dolichopus plumipes*, *D. signifer*, *D. strigipes*, *Hercostomus chetifer*, *H. fuscipennis*, *H. longiventris*, *H. lorifer*, *H. vivax*, *Ortochile nigrocoerulea*, *Sybistroma inornata*, *Aphrosylus piscator*, *A. venator*, *Hydrophorus praecox*, *Machaerium thinophilum*, *Thinophilus flavipalpis*, *Th. ruficornis*, *Medetera diadema*, *M. flavipes*, *M. glauca*, *M. micacea*, *M. truncorum*, *Systemus bipartitus*, *Thrypticus bellus*, *Th. smaragdinus*, *Neurigona nubifera*, *Sciapus contristans*, *S. lesinensis*, *S. oldenbergi*, *Sciapus pallens*, *Lamprochromus dalmaticus*, *Micromorphus albipes*, *Syntormon pallipes*). With these new data the total number of known Dolichopodidae species for Croatia increases to 38.

