

New records of Aulacigastridae and Drosophilidae (Diptera) from Switzerland, Italy, and Greece

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Aulacigaster falcata L. PAPP is new to Switzerland, Italy and Greece, *A. neoleucopeza* MATHIS et FREIDBERG is new to Switzerland. This is the first record of Aulacigastridae from Greece. *Chymomyza amoena* (LOEW) is new for the fauna of Italy. Specimens of *Drosophila nitens* BUZZATI-TRAVERSO (now *Scaptodrosophila*) were collected in Italy in order to select a neotype.

Keywords: Aulacigastridae, Drosophilidae, new records, Switzerland, Italy, Greece

INTRODUCTION

Both the check lists of the dipterous fauna of Italy and Switzerland were published rather recently (e.g., BÄCHLI *et al.*, 1995; BÄCHLI, 1998). This kind of publications facilitates faunistical and taxonomical studies, and at least partly this is the reason, why we make our new records available in this short paper.

In a first report on Aulacigastridae from Switzerland (BÄCHLI, 1997), only *Aulacigaster leucopeza* was mentioned; this information was also included in the Swiss Diptera Checklist (BÄCHLI, 1998). When the new key for the European Aulacigastridae (PAPP, 1998) was available, the main Swiss collections were checked again and, as we show below, all three known European species were found. To give some data about their sympatric occurrence, also the records of *A. leucopeza* in Switzerland are listed.

MATERIAL

The following abbreviations for collections are used: ETHZ, Entomological collection of the Federal Institute of Technology, Zürich; HNHM, Hungarian Natural History Museum, Budapest; MHNG, Muséum d'histoire naturelle, Genève; CBM, private collection of Bernhard MERZ, Genève; CGB, private collection of Gerhard BÄCHLI, Zürich.

In the following list, the Swiss records are alphabetically arranged, and canton, locality, date, collector, specimens, and collection are mentioned. The Swiss cantons are abbreviated as follows: AG, Aargau; BE, Bern; GE, Genève; GL, Glarus; GR, Graubünden; JU, Jura; NE, Neuchâtel; SG, St. Gallen; TI, Ticino; UR, Uri; VD, Vaud; VS, Valais; ZH, Zürich.

For the determination, mainly color characters of external morphology were used, which sometimes proved to be variable and therefore ambiguous. An asterisk (*) indicates that the determination was confirmed by a preparation of male genitalia.

FAUNISTICS

Family Aulacigastridae

Specimens of *Aulacigaster* are usually collected at sap runs of deciduous trees (PAPP, 1998). All specimens collected by B. MERZ were found on bleeding elm and asp trees, where only one species was found at a time, except in a case where at a bleeding tree trunk *A. leucopeza* and *A. neoleucopeza* were found together (B. MERZ, pers. comm.). It is very interesting that the bulk of specimens is sampled by beer/wine traps (cf. ALLEMAND *et al.*, 1991), in which very often up to three species are included. This kind of trap is, therefore, not selective, but very effective. A small number only was found using fruit baits for collecting drosophilids.

Aulacigaster falcata L. PAPP, 1998

Switzerland: **GE:** Avully, VI.–VII.1995, BESUCHET, 4 ♀♀ (MHNG), VIII.–IX.1995, BESUCHET, 1 ♂ (CGB); Buchillon, VII.–IX.1997, BESUCHET, 2 ♀♀ (CGB); Charrot, V.–VI.1995, BESUCHET, 1 ♂ (CGB); Ecogia, VII.–VIII.1995, BESUCHET, 1 ♂ (*) (CGB); Gy, VI.–VII.1995, BESUCHET, 3 ♀♀ (MHNG, CBM, CGB); Merlinge, VIII.1995, BESUCHET, 1 ♀ (CGB); Présinge, VI.–VII.1996, BESUCHET, 2 ♂♂, 3 ♀♀ (MHNG, CGB); **TI:** Gordola, 16.–20.V.1995, MERZ & BÄCHLI, 3 ♂♂, 6 ♀♀ (CGB); Someo, 25.–29.7.1997, BÄCHLI, 1 ♀ (CGB); **VD:** Duillier, VI.–VII.1995, BESUCHET, 1 ♀ (MHNG); **VS:** Finges, VI.–VII.1995, Besuchet, 1 ♂ (*), 7 ♀♀ (MHNG, CBM, CGB); VII.–VIII.1995, BESUCHET, 1 ♂ (*), 4 ♀♀ (MHNG, CBM); Pfynwald, 19.7.–7.8.1993, BÄCHLI, 6 ♂♂ (1*), 4 ♀♀ (CGB); Sion, VI.–IX.1997, BESUCHET, 2 ♀♀ (CGB); Visp, 13.–15.VIII.1993, BÄCHLI, 1 ♀ (CGB); **ZH:** Dietikon, 12.VIII.–7.IX.1992, BÄCHLI, 2 ♂♂, 8 ♀♀ (CGB), 16.V.–3.VI.1995, BÄCHLI, 5 ♀♀ (CGB), 15.–29.VI.1996, BÄCHLI, 3 ♀♀ (CGB), 24.V.–12.VI.1997, BÄCHLI, 5 ♀♀ (CGB), 2.–22.VIII.1997, BÄCHLI, 3 ♀♀ (CGB), 23.V.–12.VI.1998, BÄCHLI, 2 ♀♀ (CGB), 13.VI.–4.VII.1998, BÄCHLI, 1 ♂, 3 ♀♀ (CGB), 6.–27.VII.1998, BÄCHLI, 7 ♂♂, 10 ♀♀ (ETHZ, CGB), 29.VII.–15.VIII.1998, BÄCHLI, 3 ♀♀ (CGB).

Italy: Veneto: Treviso, Villa Margherita, 21.V.1998, oak sap, VANIN, 1 ♀ (HNHM).

Greece: Korfu, Akharavi, nedves ny-rfacsonk [oozing knag of a poplar tree], 3.–10.VII.1998, SZAPANOS, 3 ♂♂, 1 ♀ (HNHM).

The species is new to Switzerland and Italy and this is the first record of the family Aulacigastridae from Greece (cf. PAPP, 1984). Nearly all Swiss specimens were collected by beer/wine traps. It is the rarest *Aulacigaster* species in this kind of traps.

Aulacigaster leucopeza MEIGEN, 1830

Switzerland: **AG:** Heitersberg, 20.–29.VII.1984, JÜNGEN, 1 ♂, 1 ♀ (CGB); Würenlingen, 6.–11.VI.1973, BÄCHLI, 1 ♀ (CGB); **BE:** Biel, 27.–31.VII.1973, BÄCHLI, 1 ♂, 3 ♀♀ (CGB); Brienz, VI.1996, BESUCHET, 6 ♂♂, 6 ♀♀ (CGB); **GE:** Avully, VI.–VII.1995, BESUCHET, 3 ♀♀ (MHNG); Ecogia, V.–VII.1995, BESUCHET, 1 ♀ (MHNG); La Louvière, V.–VI.1995, BESUCHET, 1 ♂, 1 ♀ (MHNG); Présinge, VI.–VII.1996, BESUCHET, 1 ♂, 7 ♀♀ (, CGB); Sézenove, VI.–VII.1995, BESUCHET, 1 ♂, 2 ♀♀ (MHNG, CGB); **GL:** Vorauen, 20.VII.–8.VIII.1995, BÄCHLI, 1 ♂, 2 ♀♀ (CGB); **GR:** Ramosch, V.–VI.1995, BESUCHET, 1 ♀ (MHNG); **JU:** Delémont, 2.–6.VIII.1974, BÄCHLI, 3 ♂♂, 5 ♀♀ (CGB); **NE:** Rochefort, 5.–8.VII.1982, BÄCHLI, 2 ♀♀ (CGB); **SG:** Rheineck, 14.–17.VIII.1973, BÄCHLI, 5 ♂♂, 3 ♀♀ (CGB); **TI:** Angone/Anzonico 21.–31.VIII.1981, BÄCHLI, 1 ♀ (CGB); Bellinzona 26.–30.VIII.1981,

BÄCHLI, 1 ♂ (CGB); Cevio 10.–11.IX.1991, BÄCHLI, 1 ♂ (CGB); Faido, 24.–31.VIII.1981, BÄCHLI, 3 ♂♂, 5 ♀♀ (CGB); Lodano, 10.–11.IX.1991, BÄCHLI, 2 ♂♂, 3 ♀♀ (CGB); Maggia, 10.–12.IX.1991, BÄCHLI, 2 ♂♂ (CGB); **UR**: Seelisberg, 4.–7.VIII.1973, BÄCHLI, 2 ♂♂ (CGB); **VD**: Duillier, VI.–VII.1995, BESUCHET, 1 ♀ (MHNG), VII.–VIII.1995, BESUCHET, 1 ♀ (MHNG); **VS**: Finges VI.–VII.1995, BESUCHET, 1 ♂, 2 ♀♀ (MHNG); VII.–VIII.1995, BESUCHET, 1 ♂, 1 ♀ (MHNG, CGB); Gampel, VI.–VII.1996, BESUCHET, 1 ♀ (MHNG), VII.–VIII.1996, BESUCHET, 1 ♀ (CGB); Pfynwald, 19.VI.–7.VIII.1993, BÄCHLI, 1 ♂, 6 ♀♀ (CGB); Sion, VI.–IX.1997, Besuchet, 2 ♀♀ (CGB); Visp, 9.–11.VIII.1993, Bächli, 3 ♂♂, 4 ♀♀ (CGB), 13.–15.VIII.1993, BÄCHLI, 2 ♂♂, 2 ♀♀ (CGB), VI.–VII.1996, BESUCHET, 1 ♂, 3 ♀♀ (MHNG, CGB); **ZH**: Dietikon, V.1974, BÄCHLI, 2 ♀♀ (CGB), 14.–19.VII.1988, BÄCHLI, 1 ♀ (CGB), 11.–21.VII.1992, BÄCHLI, 3 ♂♂, 3 ♀♀ (CGB), 12.VIII.–7.IX.1992, BÄCHLI, 13 ♂♂, 11 ♀♀ (CGB), 16.V.–3 VI.1995, BÄCHLI, 16 ♂♂, 22 ♀♀ (CGB), 15.–29.VI.1996, BÄCHLI, 6 ♀♀ (CGB), 25.VII.–12.VIII.1996, BÄCHLI, 1 ♂, 1 ♀ (CGB), 24.V.–12.VI.1997, BÄCHLI, 8 ♂♂, 18 ♀♀ (CGB), 26.VI.–21.VII.1997, BÄCHLI, 1 ♀ (CGB), 2.–22.VIII.1997, BÄCHLI, 9 ♂♂, 3 ♀♀ (CGB), 23.V.–12.VI.1998, BÄCHLI, 3 ♂♂, 7 ♀♀ (CGB), 13.VI.–4.VII.1998, BÄCHLI, 2 ♂♂, 2 ♀♀ (CGB), 6.–27.VII.1998, BÄCHLI, 5 ♂♂, 4 ♀♀ (CGB), 29.VII.–15.VIII.1998, BÄCHLI, 1 ♂ (CGB); Embrach-Haumühle, 10.VII.1997, MERZ, 1 ♂ (ETHZ); Flaach, 4.–22.VII.1996, BÄCHLI, 4 ♂♂, 5 ♀♀ (CGB); Sihlbrugg, 28.IV.1998, RÜEGG, 1 ♂ (ETHZ); Zürich-Albisgütli, 27.VI. 1996, MERZ, 1 ♂, 1 ♀ (ETHZ, CBM); Zürich-Allmend, 1.III.1995, MERZ, 1 ♂(*) (CBM), 11.VII.1995, MERZ, 1 ♂, 1 ♀ (CBM), 17.VI.1996, MERZ, 3 ♂♂ (ETHZ); Zürich-Hönggerberg, 19.–23.VII.1990, BÄCHLI, 1 ♂ (CGB), 22.–31.VIII.1991, BÄCHLI, 1 ♀ (CGB), 24.III.1996, MERZ, 1 ♂(*) (CBM); Zürich-Käferberg, 12.–15.VII.1987, GOSTELI, 1 ♀ (CGB); Zürich-Waldgarten, 9.VII.1997, MERZ, 2 ♂♂ (CBM); Zürich-Zürichberg, 5.VIII.1995, MERZ, 4 ♂♂ (CBM), 28.VI.1996, MERZ, 2 ♂♂ (ETHZ), 23.VII.1996, MERZ, 1 ♂ (ETHZ), 23.VII.1997, MERZ, 1 ♂, 1 ♀ (ETHZ), 12.V.1998, MERZ, 27 ♂♂ (1*), 2 ♀♀ (ETHZ, CBM).

This species was recorded by BÄCHLI (1987) in Switzerland for the first time; however, due to possible misidentifications, most of the specimens were checked again, and verified records are given here. Large numbers of flies were collected by beer/wine traps.

Aulacigaster neoleucopeza MATHIS et FREIDBERG, 1994

Switzerland: **BE**: Brienz, VI.1996, BESUCHET, 1 ♂ (CGB); **GE**: Charrot, VII.–VIII.1995, BESUCHET, 1 ♂ (CGB); Ecogia, V.–VII.1995, BESUCHET, 1 ♀ (MHNG); Gy, VI.–VII.1995, BESUCHET, 2 ♀♀ (MHNG); La Louvière, V.–VI.1995, BESUCHET, 1 ♀ (MHNG), VII.–VIII.1995, BESUCHET, 1 ♀ (CGB); Présinge, V.–VI.1996, BESUCHET, 1 ♂ (CGB), VI.–VII.1996, BESUCHET, 1 ♂ (CGB); Sézenove, VI.–VII.1995, BESUCHET, 1 ♀ (CBM); **VD**: Buchillon, VII.–IX.1997, BESUCHET, 3 ♂♂, 2 ♀♀ (CGB); Duillier, VI.–VII.1995, BESUCHET, 1 ♀ (MHNG), VII.–VIII.1995, BESUCHET, 2 ♂♂ (1*) (CBM, CGB); **VS**: Visp, VI.–VII.1996, BESUCHET, 2 ♂♂, 4 ♀♀ (MHNG, CBM, CGB); **ZH**: Dietikon, 4.–9.III.1990, BÄCHLI, 1 ♀ (HNHM) 19.–23.VII.1990, Bächli, 1 ♀ (CGB), 11.–21.VII.1992, BÄCHLI, 1 ♂ (CGB), 12.VIII.–7.IX.1992, BÄCHLI, 76 ♂♂, 65 ♀♀ (ETHZ, CBM, CGB), 16.V.–3.VI.1995, BÄCHLI, 6 ♂♂, 4 ♀♀ (CGB), 15.–29.VI.1996, BÄCHLI, 3 ♂♂, 8 ♀♀ (CGB), 25.VII.–12.VIII.1996, BÄCHLI, 4 ♂♂ (CGB), 24.V.–12.VI.1997, BÄCHLI, 6 ♂♂, 7 ♀♀ (CGB), 26.VI.–21.VII.1997, BÄCHLI, 5 ♂♂, 3 ♀♀ (CGB), 2.–22.VIII.1997, BÄCHLI, 9 ♂♂, 6 ♀♀ (CGB), 23.V.–12.VI.1998, BÄCHLI, 1 ♂, 4 ♀♀ (CGB), 13.VI.–4.VII. 1998, BÄCHLI, 5 ♂♂, 9 ♀♀ (CGB), 6.–27.VII.1998, BÄCHLI, 9 ♂♂, 10 ♀♀ (CGB), 29.VII.–15.VIII.1998, BÄCHLI, 1 ♂, 4 ♀♀ (CGB); Flaach, 4.–22.VII.1996, BÄCHLI, 2 ♂♂, 9 ♀♀ (CGB); Freienstein, 21.VII.–12.VIII.1982, WIEDEMEIER, 1 ♀ (CGB); Zürich, 1.V.1996, BÄCHLI, 1 ♀ (CGB); Zürich-Hönggerberg, 4.–8.IX.1988, BÄCHLI, 1 ♂(*), 3 ♀♀ (CGB), 19.–23.VII.1990, BÄCHLI, 1 ♂, 1 ♀ (CGB), 18.–22.VII.1991, BÄCHLI, 1 ♀ (CGB), 24.III.1996, MERZ, 1 ♂ (CBM)

New for the fauna of Switzerland (cf. BÄCHLI, 1998). It is a very important record, since in the Palaearctic region this species was formerly known from Hungary only, and there “found within a circle of c. 50 km radius” (PAPP, 1998). This species was, again, mainly collected by beer/wine traps. Widespread in the Nearctic region.

Family Drosophilidae

***Chymomyza amoena* (LOEW, 1863)**

Italy: Veneto: Cessalto (prov. Treviso), 17.V.1998, oak sap, VANIN, 1 ♂ (HNHM). New for the fauna of Italy (cf. BÄCHLI *et al.*, 1995).

***Scaptodrosophila deflexa* (DUDA, 1924)**

Italy: Veneto: Treviso, Villa Margherita, 21.V.1998, oak sap, VANIN, 2 ♂♂ (HNHM). Known already from Italy (BÄCHLI *et al.*, 1995) but rarely seizable.

***Scaptodrosophila nitens* (BUZZATI-TRAVERSO, 1943)**

Italy: Veneto: Treviso, Villa Margherita, 11.VI.1998, oak sap, VANIN, 3 ♂♂ (incl. neotype, see PAPP *et al.*, 1999) (HNHM); 21.VI.1998, oak sap, VANIN, 1 ♂ (HNHM).

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