



Contributions to the Alysiini (Hymenoptera: Braconidae: Alysiinae) of Switzerland

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ABSTRACT. In the present study, the Alysiini (Hymenoptera: Braconidae: Alysiinae) material from Switzerland deposited in the Entomological collection of Natural History Museum London (UK) and Biologiezentrum Linz (Austria) was identified. A total of 56 Alysiini species are catalogued. Thirty-eight species are recorded for the first time for the Swiss fauna. A faunistic list with distribution data is provided.

Key words: Parasitoids, Alysiinae, faunistic list, entomological collections, Switzerland.

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Introduction

Alysiinae is a conspicuously diverse subfamily within the Braconidae (Dolphin and Quicke 2001) with 2,300 described species (Yu *et al.* 2012) separated in two large, polymorphic tribes Alysiini and Dacnusiini (Shenefelt 1974). Species of Alysiini are parasitoids of a wide range of cyclorrhaphous Diptera, mainly in humid habitats and ephemeral strata (Wharton 2002) and species of the genera *Aphaereta* Foerster, 1863 and *Alysia* Latreille, 1804 have been used in biological control programs including Calliphoridae and Muscidae (Wharton *et al.* 1997). On its behalf, Dacnusiini are almost exclusively specialized on leaf- and stem-mining hosts, predominantly of the dipterous families Agromyzidae, Ephydriidae and Chloropidae (Griffiths 1964, Wharton 2002).

Several investigations on the Alysiinae fauna have been conducted for the territories of Central Europe mainly carried out by M. Fischer (1962, 1970, 1972, 1973a-d, 1974a, b, 1975, 1976, 1985, 1994, among others). However, only two studies focused on Switzerland has been published until now by van Achterberg (2014) and Peris-Felipo (2016a) who established the number of known Alysiinae in 169 species. However, this number is still lower compared with Germany and Austria with 393 and 278 known species, respectively (Yu *et al.* 2012; Peris-Felipo 2016b).

The current work provides a faunistic list of the Alysiini collection from Switzerland deposited in the Natural History Museum London (UK) and

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Biologiezentrum Linz (Austria), unidentified before this study.

Materials and Methods

Specimens were identified using the keys by Tobias *et al.* (1986) for the genera and those of Tobias *et al.* (1986), Fischer (1995), and Peris-Felipo *et al.* (2014). For species classification, nomenclature and distributional data Yu *et al.* (2012) and Peris-Felipo *et al.* (2014) were followed. The specimens are conserved in the collection of the Natural History Museum London, UK (BMNH) and Biologiezentrum Linz, Austria (OLML). New records of species are marked by an asterisk (*).

Results

A total of 56 species belonging to nine genera, *Alysia* Latreille, 1804; *Aspilota* Foerster, 1863; *Chasmodon* Haliday, 1838; *Dapsilarthra* Foerster, 1863; *Dinotrema* Foerster, 1863; *Idiasta* Foerster, 1863; *Orthostigma* Ratzeburg, 1844; *Phaenocarpa* Foerster, 1863 and *Synaldis* Foerster, 1863 are listed for the collection of BMNH. The list of species with its geographical distribution is provided below.

Subfamily Alysiinae Leach, 1815

Tribe Alysiini Leach, 1815

1. *Alysia (Alysia) lucia* Haliday, 1838

Material examined. Switzerland: 1 ♀, Col du Pillon, 4500 ft, 15.ix.1946 (N.D. Riley leg.) [B.M. 1946–368] (BMNH).

General distribution. Nearctic and Palaearctic regions.

2. *Alysia (Alysia) lucicola* Haliday, 1838

Material examined. Switzerland: 1 ♂, Grindelwald, 7–13.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution: Nearctic and Palaearctic regions.

3. *Alysia (Anarcha) rufidens* Nees, 1834

Material examined. Switzerland: 1 ♀, Valais, Nr. Verbier, 8000–8500 ft, 27.vi.1959 (J.E. & R.B. Benson leg.) [B.M. 1959–294] (BMNH).

General distribution. Nearctic and Palaearctic regions.

4. **Aspilota efeveolata* (Thomson, 1895)

Material examined. Switzerland: 1 ♀, Basel, 20.viii.1949 (H. Hamann leg.) (OLML).

General distribution. Palaearctic region. Switzerland (**first record**).

5. **Aspilota flagellaris* Fischer, 1973

Material examined. Switzerland: 1 ♂, Basel, 20.viii.1949 (H. Hamann leg.) (OLML).

General distribution. Palaearctic region. Switzerland (**first record**).

6. **Aspilota furtnerana* Fischer, 1973

Material examined. Switzerland: 1 ♀, Grindelwald, 7–13.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

7. **Aspilota hirticornis* (Thomson, 1895)

Material examined. Switzerland: 1 ♂, Basel, 20.viii.1949 (H. Hamann leg.) (OLML).

General distribution. Western Palaearctic region. Switzerland (**first record**).

8. **Aspilota latitemporata* Fischer, 1976

Material examined. Switzerland: 2 ♂♂, Basel, 20 & 22.viii.1949 (H. Hamann leg.) (OLML).

General distribution. Western Palaearctic region. Switzerland (**first record**).

9. *Chasmodon apterus* (Nees, 1812)

Material examined. Switzerland: 1 ♀, Basel, 21.viii.1949 (H. Hamann leg.) (OLML); 1 ♂, Thurnersee, Gunten, 1–6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Western Palaearctic region (Yu *et al.* 2012).

10. *Dapsilarthra (Heterolexis) balteata* (Thomson, 1895)

Material examined. Switzerland: 1 ♀, Grindelwald, 1–6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Palaearctic Region.

11. **Dapsilarthra (Dapsilarthra) isabella* (Haliday, 1838)

Material examined. Switzerland: 1 ♂, Grindelwald, 7–14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Oriental and Palaearctic regions. Switzerland (**first record**).

12. *Dapsilarthra (Dapsilarthra) rufiventris* (Nees, 1812)

Material examined. Switzerland: 5 ♀♀, 3 ♂♂, Grindelwald, 7–14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Oceanic, Oriental and Palaearctic regions.

13. *Dapsilarthra (Dapsilarthra) sylvia* (Haliday, 1839)

Material examined. Switzerland: 1 ♂, Grindelwald, 7–14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Palaearctic region.

14. **Dinotrema aureliae* (Fischer, 1973)

Material examined. Switzerland: 1 ♀, St. Gallen, Schmerikon Dist., ix.1951 (E.D. Wiggins leg.) (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

15. **Dinotrema brevissimicorne* (Stelfox & Graham, 1948)

Material examined. Switzerland: 1 ♀, Grindelwald, 7–14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

16. **Dinotrema broadi* Peris-Felipo, 2013

Material examined. Switzerland: 1 ♀, Grindelwald, 7–13.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH); 1 ♀, 1 ♂, Thunersee, Gunten, 1–6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

17. *Dinotrema concinnum* (Haliday, 1838)

Material examined. Switzerland: 1 ♀, Basel, 20.viii.1949 (H. Hamann leg.) (OLML).

General distribution. Palaearctic region.

18. **Dinotrema cratocera* (Thomson, 1895)

Material examined. Switzerland: 2 ♀♀, Bernese, Oberland, Oeschinensee, 4.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH); 1 ♀, Engadine, Natural Park, 1800 m, 4.vi.1960 (J.E. & R.B. Benson leg.) [B.M. 1960–389] (BMNH); 3 ♀♀, Grindelwald, 7–14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH); 1 ♀, 1 ♂, Thunersee, Gunten, 1–6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH); 1 ♂, Valais, Nr. Verbier, 5000–6000 ft, 25–28.vi.1959 (J.E. & R.B. Benson leg.) [B.M. 1959–294] (BMNH); 1 ♂, Vaud, Les Pleiades, 3–4.vi.1959 (J.E. & R.B. Benson leg.) [B.M. 1959–294] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

19. **Dinotrema cruciatum* (Fischer, 1973)

Material examined. Switzerland: 1 ♀, Grindelwald, 7–14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938–341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

20. **Dinotrema cruciforme* (Fischer, 1973)

Material examined. Switzerland: 2 ♂♂, Valais, Les Handères, 4800 ft, 19.vi.1935 (J.E. & R.B. Benson leg.) [B.M. 1935–581] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

21. **Dinotrema dimorpha* (Fischer, 1976)

Material examined. Switzerland: 1 ♂, Grindelwald, 7-13.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

22. **Dinotrema divisum* (Stelfox & Graham, 1950)

Material examined. Switzerland: 1 ♀, Bernese, Oberland, Oeschinensee, 4.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

23. **Dinotrema erythropum* Foerster, 1863

Material examined. Switzerland: 1 ♀, Müstairtal, Santa Maria, 27.vi.1960, 1400 m (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

24. **Dinotrema eumandibulatum* (Fischer, 1976)

Material examined. Switzerland: 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

25. **Dinotrema flagellifome* (Fischer, 1973)

Material examined. Switzerland: 1 ♂, Engadine, Natural Park, 1800 m, 13-15.vi.1960 (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

26. **Dinotrema florens* (Fischer, 1974)

Material examined. Switzerland: 1 ♀, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

27. **Dinotrema incarinatum* (Fischer, 1973)

Material examined. Switzerland: 3 ♀♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

28. **Dinotrema incongruens* (Fischer, 1973)

Material examined. Switzerland: 1 ♂, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

29. **Dinotrema leptocauda* (Fischer, 1976)

Material examined. Switzerland: 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 1 ♀, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

30. **Dinotrema macrocera* (Thomson, 1895)

Material examined. Switzerland: 1 ♂, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

31. **Dinotrema matridignum* (Fischer, 1974)

Material examined. Switzerland: 1 ♀, Bernese, Oberland, Oeschinensee, 4.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

32. **Dinotrema mediocorne* (Fischer, 1973)

Material examined. Switzerland: 1 ♂, Engadine, Natural Park, 1800 m, 13-

15.vi.1960 (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH); 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 1 ♂, Valais, Nr. Verbier, 8000-8500 ft, 25-28.vi.1959 (J.E. & R.B. Benson leg.) [B.M. 1959-294] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

33.Dinotrema parapunctatum*** (Fischer, 1976)

Material examined. Switzerland: 1 ♀, Leuk, 46°19.10'N 7°38.40'E, 950 m, 3.ix.2013, swept on grassland above satellite station (N. Dale-Skey. leg.) [B.M. 2013-148] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

34.Dinotrema paucicrene*** (Fischer, 1973)

Material examined. Switzerland: 1 ♀, Basel, 20.viii.1949 (H. Hamann leg.) (OLML); 1 ♀, Engadine, Natural Park, 1600 m, 2.viii.1960 (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH); 1 ♀, Valais, Nr. Verbier, 5000-6000 ft, 25-28.vi.1959 (J.E. & R.B. Benson leg.) [B.M. 1959-294] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

35.Dinotrema perlustrandum*** (Fischer, 1973)

Material examined. Switzerland: 1 ♀, Valais, Nr. Verbier, 5000-6000 ft, 25-28.vi.1959 (J.E. & R.B. Benson leg.) [B.M. 1959-294] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

36.Dinotrema propodeale*** (Tobias, 1962)

Material examined. Switzerland: 2 ♀♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 1 ♂, Valais, Ferpècie, 5000-7000 ft, 21-27.vi.1935 (J.E. & R.B. Benson leg.) [B.M. 1935-581] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

37.Dinotrema robertoi*** Peris-Felipo, 2013

Material examined. Switzerland: 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

38.Dinotrema setaceum*** Munk et Peris-Felipo, 2013

Material examined. Switzerland: 2 ♀♀, 1 ♂, Engadine, Natural Park, 1800 m, 4.vi & 13-15.vi.1960 (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

39.Dinotrema significarium*** (Fischer, 1973)

Material examined. Switzerland: 2 ♀♀, 1 ♂, Engadine, 13.viii.1938 (G.E.J. Nixon leg.) (BMNH); 3 ♀♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 1 ♀, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 1 ♂, Valais, Les Handères, 4800 ft, 19.vi.1935 (J.E. & R.B. Benson leg.) [B.M. 1935-581] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

40.Dinotrema suprapuncte*** (Fischer, 1973)

Material examined. Switzerland: 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Western Palaearctic region. Switzerland (**first record**).

41.Dinotrema toleratum*** (Fischer, 1974)

Material examined. Switzerland: 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Western Palaearctic region.

42. **Dinotrema tuberculatum* van Achterberg, 1988

Material examined. Switzerland: 1 ♂, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Oriental and Palaearctic regions. Switzerland (**first record**).

43. **Dinotrema varipes* (Tobias, 1962)

Material examined. Switzerland: 1 ♀, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

44. **Idiasta (Idiasta) dichrocera* Königsmann, 1960

Material examined. Switzerland: 1 ♂, Valais, Les Handères, 4800 ft, 19.vi.1935 (J.E. & R.B. Benson leg.) [B.M. 1935-581] (BMNH).

General distribution. Oriental and Palaearctic regions. Switzerland (**first record**).

45. **Orthostigma beyarslani* Fischer, 1995

Material examined. Switzerland: 1 ♀, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

46. *Orthostigma laticeps* (Thomson, 1895)

Material examined. Switzerland: 1 ♂, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 2 ♂♂, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Oriental and Palaearctic regions.

47. *Orthostigma longicorne* Königsmann, 1969

Material examined. Switzerland: 6 ♀♀, 2 ♂♂, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 1 ♂, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Oriental and Palaearctic regions.

48. *Orthostigma maculipes* (Haliday, 1838)

Material examined. Switzerland: 1 ♀, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region.

49. *Orthostigma mandibulare* (Tobias, 1862)

Material examined. Switzerland: 4 ♀♀, 2 ♂♂, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 1 ♂, Müstairtal, Funt da S-charc, 29.vi.1960, 2400 m (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH); 6 ♀♀, 3 ♂♂, Thunersee, Gunten, 1-6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Oriental and Palaearctic regions.

50. *Orthostigma pumilum* (Nees, 1834)

Material examined. Switzerland: 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Oriental and Palaearctic regions.

51. **Orthostigma pusillum* (Zetterstedt, 1838)

Material examined. Switzerland: 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Oriental and Palaearctic regions. Switzerland (**first record**).

52. *Phaenocarpa (Phaenocarpa) livida*
(Haliday, 1838)

Material examined. Switzerland: 1 ♀, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Western Palaearctic region.

53. *Phaenocarpa (Homophyla) pullata*
(Haliday, 1838)

Material examined. Switzerland: 1 ♀, Müstairtal, Funt da S-charc, 29.vi.1960, 2400 m (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH); 1 ♀, Valais, Bettmeralp, 6000-7000 ft, 5-16.vi.1959 (J.E. & R.B. Benson leg.) [B.M. 1959-294] (BMNH); 1♀, 1♂, Valais, Mattmark, 7000-8000 ft, 23.vi.1962 (J.E. & R.B. Benson leg.) [B.M. 1962-404] (BMNH).

General distribution. Palaearctic region.

54. *Phaenocarpa ruficeps* (Nees, 1812)

Material examined. Switzerland: 2 ♀♀, 1 ♂, Grindelwald, 7-14.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Afrotropical, Nearctic, Oriental and Palaearctic regions.

55. **Phaenocarpa subruficeps* Gurasahvili, 1983

Material examined. Switzerland: 1 ♂, Engadine, Natural Park, 2380 m, 28.vi.1960 (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH).

General distribution. Palaearctic region. Switzerland (**first record**).

56. *Synaldis concolor* (Nees, 1812)

Material examined. Switzerland: 1 ♀, Engadine, Natural Park, 1850-2390 m, 13.viii.1938 (G.E.J. Nixon leg.) and 2-3.vi & 21.vi.1960 (J.E. & R.B. Benson leg.) [B.M. 1960-389] (BMNH); 1 ♀, Grindelwald, 7-13.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH); 4 ♀♀, Thunersee, Gunten, 1-

6.viii.1937 (G.E.J. Nixon leg.) [B.M. 1938-341] (BMNH).

General distribution. Palaearctic region.

Discussion

The revision of the material deposited in the entomological collections in Natural History Museums is very important because of the specimens deposited represent the huge biological diversity of the World. Recent revisions done from Alysinae collections show the big loss of diversity and distribution information. For example, the revision of Naturkundemuseum Erfurt (Germany) provided 29 species recorded for the first time for Germany and one for Georgia, Nepal and Switzerland (Peris-Felipo 2016b); eight Swiss species were recorded for the first time with the revision of the Naturhistorisches Museum Basel collection (Peris-Felipo 2016a), and 41 Danish species with the revision of the Natural History Museum of Denmark (Peris-Felipo *et al.* 2016).

In the present study, a total of 56 alysiine species have been identified for the fauna of Switzerland from the material deposited in the Natural History Museum London (51 species) and Biologiezentrum Linz (7 species). Thirty-eight species are recorded from Switzerland for the first time: *Aspilota efeveolata* (Thomson, 1895); *A. flagellaris* Fischer, 1973; *A. furtnerana* Fischer, 1973; *A. hirticornis* (Thomson, 1895); *A. latitemporata* Fischer, 1976; *Dapsilarthra (Dapsilarthra) isabella* (Haliday, 1838); *Dinotrema aureliae* (Fischer, 1973); *D. brevissimicorne* (Stelfox & Graham, 1948); *D. broadi* Peris-Felipo, 2013; *D. cratocera* (Thomson, 1895); *D. cruciatum* (Fischer, 1973); *D. cruciforme* (Fischer, 1973); *D. dimorpha* (Fischer, 1976); *D. divisum* (Stelfox & Graham, 1950); *D. erythropum* Foerster, 1862; *D. eumandibulatum* (Fischer, 1976); *D. flagellifome* (Fischer, 1973); *D. florens*

(Fischer, 1974); *D. incarinatum* (Fischer, 1973); *D. incongruens* (Fischer, 1973); *D. leptocauda* (Fischer, 1976); *D. macrocera* (Thomson, 1895); *D. matridignum* (Fischer, 1974); *D. mediocorne* (Fischer, 1973); *D. parapunctatum* (Fischer, 1976); *D. paucicrene* (Fischer, 1973); *D. perlustrandum* (Fischer, 1973); *D. propodeale* (Tobias, 1962); *D. robertoi* Peris-Felipo, 2013; *D. setaceum* Munk et Peris-Felipo, 2014; *D. significarium* (Fischer, 1973); *D. suprapuncte* (Fischer, 1973); *D. tuberculatum* van Achterberg, 1988; *D. varipes* (Tobias, 1962); *Idiasta* (*Idiasta*) *dichrocera* Königsmann, 1960; *Orthostigma beyarslani* Fischer, 1995; *O. pusillum* (Zetterstedt, 1838) and *Phaenocarpa subruficeps* Gurasahvili, 1983. With these results, the number of known Alysiinae from Switzerland is increased to 207 species. However, this number is still far from 393 and 278 species from Germany and Austria, respectively.

In general, the limited number of known Alysiinae from Switzerland reflects the paucity of research on this group. Further revisions of the material deposited in entomological collections and investigations both on the faunal composition are necessary to increase the knowledge of this Braconidae subfamily.

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مطالعه زنبورهای قبیله Alysiini (Hymenoptera: Braconidae: Alysiinae) سوییس

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چکیده: در تحقیق حاضر، نمونه‌های قبیله Alysiini (Hymenoptera: Braconidae: Alysiinae) جمع‌آوری شده از کشور سوییس که در موزه‌های تاریخ طبیعی لندن (انگلستان) و موزه لینز (اتریش) نگهداری می‌شدند بررسی و شناسایی شدند. در مجموع ۵۶ گونه از قبیله Alysiini شناسایی و لیست شدند. ۳۸ گونه برای اولین بار از کشور سوییس گزارش می‌شود. اطلاعات مربوط به اسامی گونه‌ها و انتشار جغرافیایی آنها ارایه شده است.

واژگان کلیدی: پارازیتوئید، Alysiinae، فون، کلکسیون حشره‌شناسی، سوییس