



New records of Encyrtidae (Hymenoptera: Chalcidoidea) from the Netherlands, with a description of new species

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Abstract

As a result of our survey of parasitoid wasps, the number of encyrtid species known from the Netherlands increased from 106 to 123. *Microterys nederlandicus* Japoshvili **sp. n.** is described as new for science. Figures for all species identified during our survey are provided.

Key words: Encyrtids, *Microterys nederlandicus*, parasitoids, Holland

Introduction

One of the most important groups in biological control of insects harmful to plants is the chalcidoid family Encyrtidae. They are, together with the family Aphelinidae, successfully used against many pests, especially scale insects (Hemiptera, Coccoidea) (Noyes, 1985; Nikolskaya & Yasnosh, 1966). Furthermore, parasitic Hymenoptera are a major component of many terrestrial ecosystems and may constitute up to 20% of all insect species (LaSalle & Gauld, 1991; Godfray, 1994; Memmot *et al.*, 1994).

Material and methods

Material was collected between 2017 and 2021 using sweep netting, pitfall and yellow pan traps. Identification of species was performed by the first author using identification keys found in Guerrieri & Noyes (2000, 2005), Trjapitzin (1989), Hayat (2006), and original descriptions of the species. Terminology for the new species description follows Noyes (2010) and Noyes & Hanson (1996). Collection locations are given under each species with coordinates given in decimal degrees. All material is deposited in the Naturalis Biodiversity Center Museum in Leiden, the Netherlands.

Photos of specimens in ethanol or pinned were taken using a Sony A7RIII camera body, Canon 65mm MPE lens at 5x magnification and F2.8, and Yongnuo–YN14EX ring flash. Photo stacking was performed with Helicon Focus 7. Photos of slide-mounted specimens were taken using a Sony NEX-3 camera mounted on a Leica DM1000 microscope. Focus stacking was done using Combine ZM software (Hadley, 2008). Photo adjustments and plates were assembled using a combination of Microsoft PowerPoint, Adobe Photoshop and Microsoft Paint. The measurements were taken from the photos and calibrated using the scale bars.

Abbreviations: AOL—minimum distance between posterior ocellus and anterior ocellus; EL—eye length; F1, F2, etc.—funicle segments one, two, etc.; FV—minimum width of frontoververtex; FWL—fore wing length; FWW—forewing width; GL—gonostylus length; HW—head width; HWL—hind wing length; HWW—hind wing width; OCL—minimum distance between posterior ocellus and occipital margin; MT—midtibia length; MS—malar space; MV—marginal vein; OD—longest diameter of an posterior ocellus; OL—ovipositor length; OOL—minimum distance between eye margin and adjacent posterior ocellus; P—pedicel length; POL—minimum distance between posterior ocelli; PV—postmarginal vein; SL—scape length; SV—stigmal vein; SW—scape width.

Results

List of species newly recorded from the Netherlands

Genus *Adelencyrtus* Ashmead, 1900

1. *Adelencyrtus aulacaspis* (Brethes, 1914) (Fig. 1a–c)

Material examined: Zandvoort-Duinpoort, Coordinates: 52.379, 4.572, 1 female, Collected by pitfall, 27.10.2017, Leg. Boeken *et al.*



FIGURE 1. a–c: *Adelencyrtus aulacaspis*, female. a, dorsal habitus; b, ventral habitus; c, lateral habitus. d–f: *Blastothrix hungarica*, female. d, dorsal habitus; e, ventral habitus; f, lateral habitus.

Genus *Blastothrix* Mayr, 1876

2. *Blastothrix hungarica* Erdos, 1959 (Fig. 1d–f)

Material examined: Zevenaar-Ooij, Coordinates: 51.914, 6.051, 1 female, sweeping net, 13.10.2020, Leg. Rudy Soethof.

Genus *Bothriothorax* Ratzeburg, 1844

3. *Bothriothorax intermedius* Claridge, 1964 (Figs. 2a–c)

Material examined: Zevenaar-Ooij, Coordinates: 51.914, 6.051, 1 female, sweeping net, 18.08.2021, Leg. Rudy Soethof.

Genus *Ixodiphagus* Howard, 1907

4. *Ixodiphagus hookeri* (Howard, 1908) (Figs. 2d–f)

Material examined: Montferland-Beek-De Bijvanck, Coordinates: 51.910, 6.161, 1 female, sweeping net, 30.07.2021, Leg. Rudy Soethof. The sample is lost.

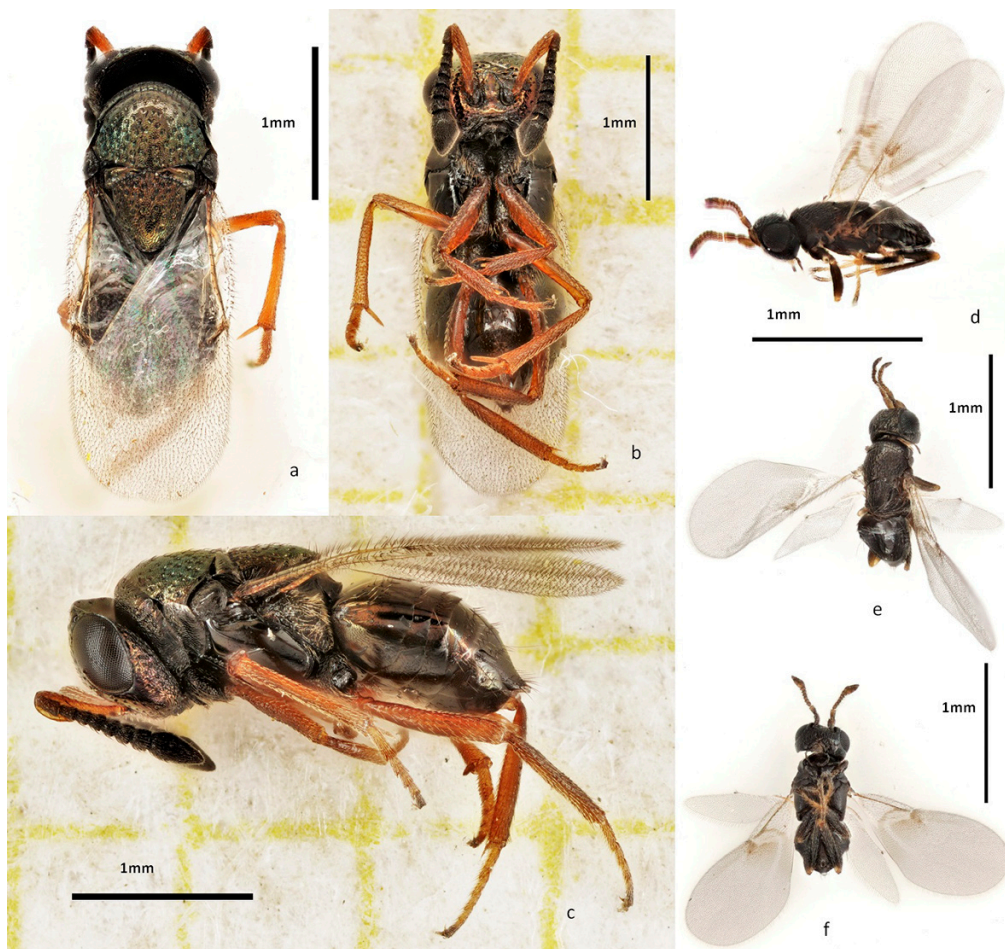


FIGURE 2. a–c: *Bothrio thorax intermedius*, female. a, dorsal habitus; b, ventral habitus; c, lateral habitus; d–f: *Ixodiphagus hookeri*, female. d, lateral habitus; e, dorsal habitus; f, ventral habitus.

Genus *Lamennaisia* Girault, 1922

5. *Lamennaisia nobilis* (Nees, 1834) (Figs. 3a–c)

Material examined: Almere-Verzetswijk, Coordinates: 52.380, 5.239, 2 females, yellow pan trap, 15.09.2019, Leg. P.H. Hoekstra.

Genus *Metaphycus* Mercet, 1917

6. *Metaphycus dispar* (Mercet, 1925) (Figs. 3d–f)

Material examined: Doetinchem-De Zumpe, Coordinates: 51.958, 6.315, 1 female, sweeping net, 02.06.2021, Leg. Rudy Soethof. The sample is lost.

7. *M. insidiosus* (Mercet, 1921) (Figs. 3g–i)

Material examined: Almere-Verzetswijk, Coordinates: 52.380, 5.239, 1 female, 1 male, yellow pan trap, 29.05.2019, Leg. P.H. Hoekstra.

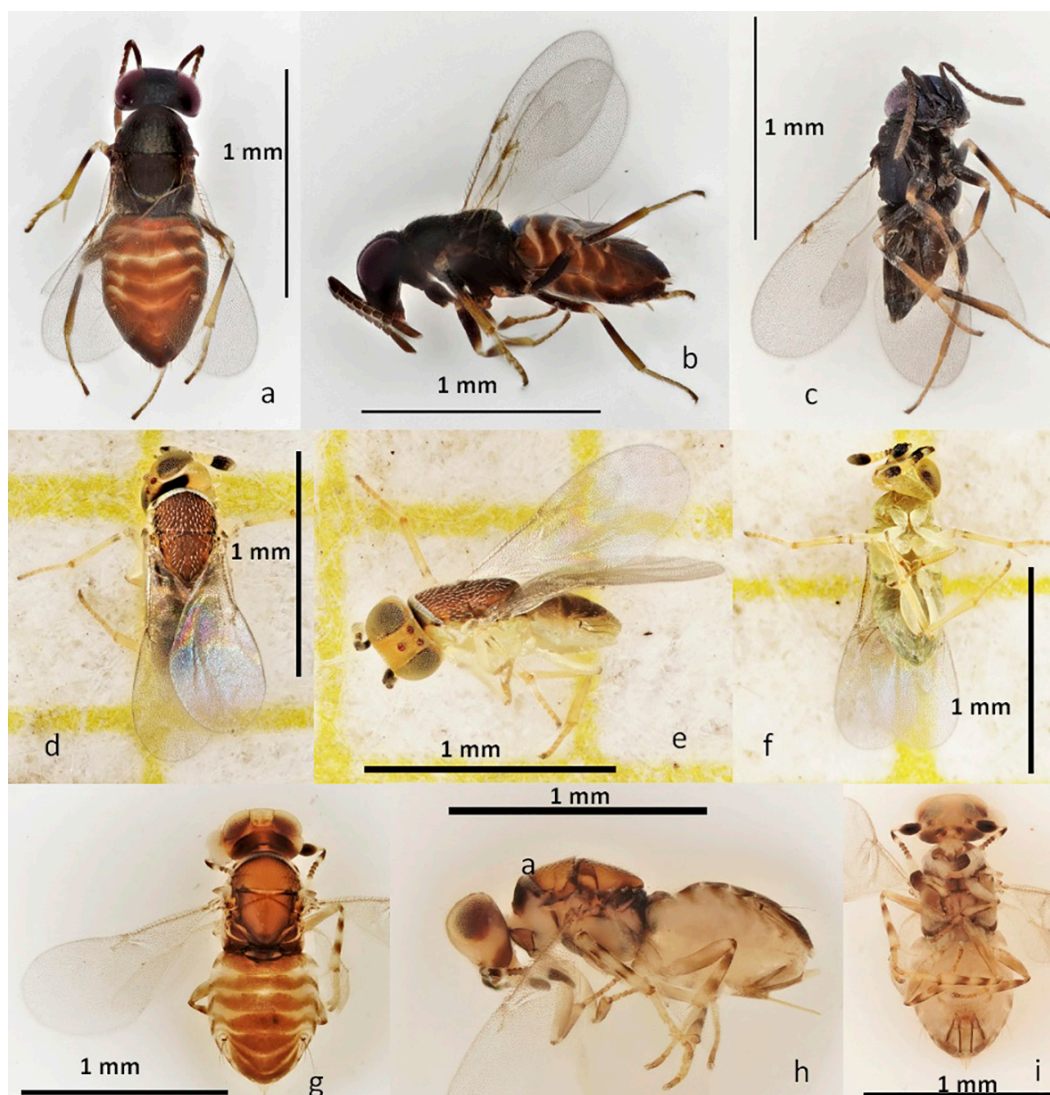


FIGURE 3. a–c: *Lamennaisia nobilis*, female. a, dorsal habitus; b, lateral habitus; c, ventral habitus; d–f: *Metaphycus dispar*, female. d, dorsal habitus; e, lateral habitus; f, ventral habitus; g–i: *M. insidiosus*, female. g, dorsal habitus; h, lateral habitus; i, ventral habitus.

Genus *Microterys* Thomson, 1876

8. *Microterys nederlandicus* Japoshvili sp. n.

(Figs. 4a–h)

Diagnosis. Female (length about 1.3mm): Body generally black, with metallic sheen; scape dark brown; funicle with first 2 segments more or less brown, rest of segments mostly yellow, with outer aspect of F3 light brown, and outer aspects of F4 and F6 infuscated; clava dark brown; fore coxa with dark spot on the base of dorsal side; mid and hind coxa dark brown; scape a little less than twice as long as broad; pedicel a little less than twice as long as broad, F1 a little shorter than pedicel; frontovertex $0.4\times$ as wide as head width; fore wing about $2.3\times$ as long as broad; fore wing hyaline, with 1 paler band, which is in very slight contrast with densely setose parts; ovipositor slightly exerted, about $0.9\times$ as long as mid tibia; gonostylus about $0.8\times$ as long as mid tibial spur.

Male. unknown.

Female (holotype): length, including ovipositor, 1.33mm; excluding ovipositor, 1.27mm (CPD). (Figs. 4a–c)

Head black, Frontovertex in the area of ocelli with green-golden metallic lustre, head anterior of ocelli and genae with violet-silver metallic lustre; cuticle immediately adjacent to compound eye smooth with green-golden

reflection; radicle and scape dark brown; basal half of pedicel dark brown, apical half lighter; first two funicular segments light brown; F3-6 dusky yellow, with outer aspect of F3 light brown, and outer aspects of F4 and F6 infuscated. (Fig. 4a–c); mesosoma dark brown to black with green, gold and violet metallic reflections; pronotum, mesoscutellum and tegulae with violet metallic reflection; mesoscutum, and axilla with mostly greenish metallic reflection; first tergite of gaster, with greenish-violet sheen laterally; midpart of gaster dorsally smoother and shinier than first tergite; fore coxa yellow, slightly darker at the base; midcoxa dark brown with yellow apex; hind coxa completely dark brown; midfemur with faint dark spot laterally near the joint with the coxa; hind femur brown with yellow near joints with coxa and tibia; hind tibia yellow near joint with femur and with a dark brown region sub-basally, shading to yellow in its apical half; forewing hyaline, densely setose and therefore appearing darker in distal half, and with distinct curved hyaline band just beyond the stigmal vein formed by smaller, lighter-colored setae; stigmal vein 0.7× as long as forewing; hind wing hyaline.

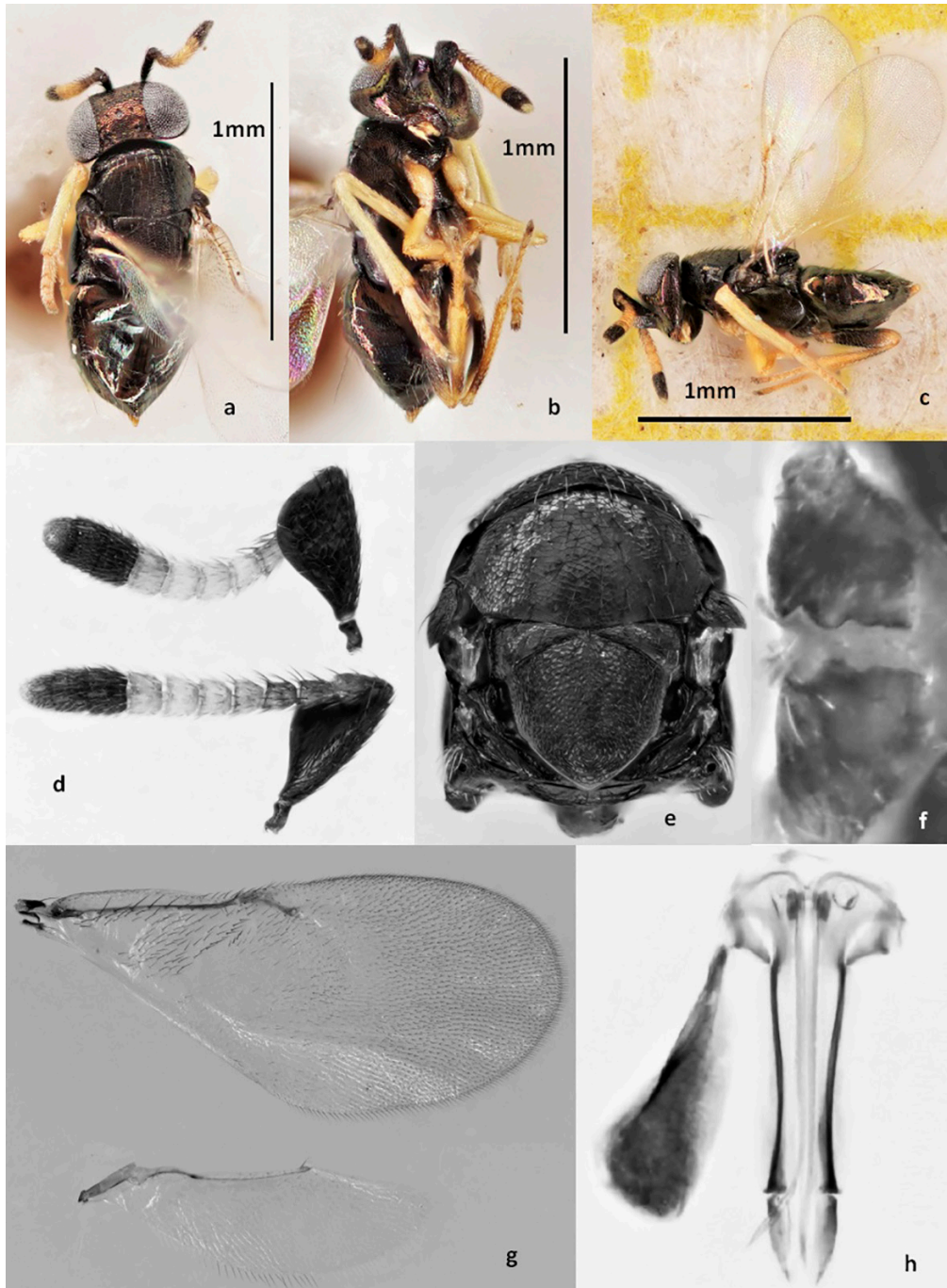


FIGURE 4. a–h: *Microterys nederlandicus* sp. n., female. a, dorsal habitus; b, ventral habitus; c, lateral habitus; d, antennae; e, mesosoma; f, mandible; g, wings; h, ovipositor.

Frontovertex above scrobes with regular, reticulate sculpture of mesh size clearly not less than eye facet size, ocellar area and face with similar, but more irregular sculpture; ; genae and temple with more irregular, reticulate to imbricate-reticulate sculpture; ocellar angle about 100°; occipital margin sharp, more or less carinate; eye reaching occipital margin, and without setae; frontovertex with numerous setae which are at least 2× as long as eye facet; scrobes shallow, ^-shaped, almost meeting dorsally; antenna as in Fig. 4d, malar suture distinct; mandible (Fig. 4f) with 2 distinct teeth, followed by a slightly wavy truncation, first tooth acutely pointed, second tooth blunt and rounded; Relative measurements: HW 76, FV 31, FVL 34, OD 5, POL 15, OOL 4, OCL 5, AOL 9, EL 40, MS 25, SL 35, SW 16, FWL 230, FWW 90; HWL135, HWW 40. Thorax with fine, raised, fairly regular, polygonally reticulate to imbricate-reticulate sculpture on mesoscutum and mesoscutellum of slightly larger mesh size than that on frontovertex; mesoscutellum evenly, slightly convex in profile and with more prominent sculpture than the mesoscutum; setae on mesoscutum about 2× as long as those on frontovertex and distinctly stouter; posterior pair of setae on mesoscutellum about 2.5× as long as those on mesoscutum; mesopleuron not quite touching base of gaster; mid tibia with setae uniform throughout, without a patch of conspicuously denser setae laterally; fore wing with venation and setation as in Fig. 4g; propodeum with 11 or 12 setae adjacent to spiracle. Hypopygium reaching about 0.8× along gaster; ovipositor about 0.9× as long as mid tibia; ovipositor slightly exerted, the exerted part about 0.08× as long as gaster; gonostylus about 0.8× as long as mid tibial spur; outer plates about 2.8× as long as width. Relative measurements: OL 68, GL 15 [MT 75].

Male. Unknown.

Variation. Only holotype examined.

TABLE 1. Characters of *Microterys nederlandicus* sp. n. compared with closely related species.

Character	<i>Microterys nederlandicus</i> sp. n.	<i>M. iranicus</i> Japoshvili & Falahzadeh	<i>M. margaritae</i> (Myartseva)	<i>M. triozae</i> (Andre)	<i>M. carpaticus</i> (Hoffer)
Color of head, pronotum, mesopleuron and axilla	Black	Yellow	Black	Black	Black
Scape L:W	~2.2×	~3.0×	~2.0×	~1.9×	~2.1×
Frontovertex L:W	~1.1×	~2.0×	~1.3×	~1.6×	~1.8×
F1 shape	Longer than wide	Longer than wide	Longer than wide	Almost quadrate	Almost quadrate
F2 shape	Longer than wide	Longer than wide	Quadrate	Almost quadrate	Transverse
Funicle color	F1 and F2 light brown, F3-6 yellow, F3, F4 and F6 with infuscated outer lateral surface, clava dark brown to blackish	F1-3 yellow, F4-6 whitish, clava dark brown	Funicle brownish, clava darker than funicle	Funicle segments yellowish to brown, lighter than dark brown clava	Funicle dark brown to blackish including clava
Relative venation length	Marginal vein (MV) ≥ Stigmal vein (SV) ≈ Postmarginal vein (PV)	MV < SV, SV 1.4× as long as PV	MV < SV, SV 2.5× as long as PV	MV ≥ SV, SV almost 2.0× as long as PV	MV ≥ SV, SV almost 1.8× as long as PV
Gonostylus length relative to maximum width of outer plates	Shorter than maximum width of outer plates	Slightly longer	Shorter	Longer or as long as	Shorter
Ovipositor	Not more than 4.5× as long as gonostylus	Almost 4.5× as long as gonostylus	Not more than 4.5× as long as gonostylus	Not more than 4.3× as long as gonostylus	Almost 5× as long as gonostylus

Hosts. Unknown.

Distribution. Netherlands

Material examined: Type material. Holotype: Montferland-Bergherbosch, 51.886, 6.196, sweeping net, 1 female, 31.10.2020, Leg. Rudy Soethof.

Holotype deposited in Naturalis Biodiversity Center, Museum and research in Leiden, the Netherlands.

Comments. *Microterys nederlandicus* sp. n. is very similar to some other *Microterys* species, but differs by the characters given in Table 1.

Etymology. The species is named after Nederland, which is Dutch name of Netherlands, where the holotype was collected.

9. *M. seyon* Guerrieri, 1996 (Figs. 5a–c)

Material examined: Almere-Verzetswijk, Coordinates: 52.380, 5.239, 1 male, yellow pan trap, 29.05.2019, Leg. P.H. Hoekstra.

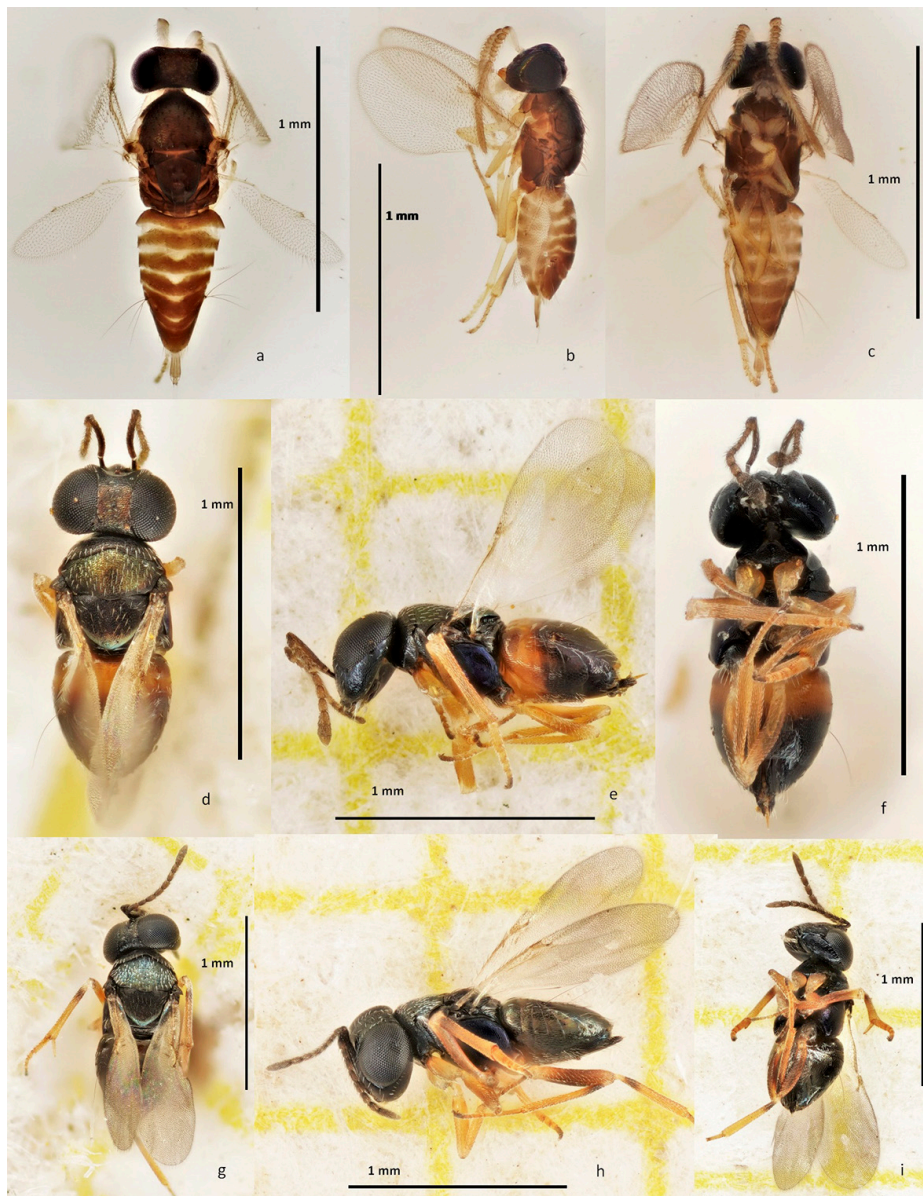


FIGURE 5. a–c: *Microterys seyon*, female. a, dorsal habitus; b, lateral habitus; c, ventral habitus; d–f: *Ooencyrtus brunneipes*, female. d, dorsal habitus; e, lateral habitus; f, ventral habitus; g–i: *O. gonoceri*, female. g, dorsal habitus; h, lateral habitus; i, ventral habitus.

Genus *Ooencyrtus* Ashmead, 1900

10. *Ooencyrtus brunneipes* Noyes, 1978 (Figs. 5d–f)

Material examined: Montferland-Bergherbosch, Coordinates: 51.887, 6.200, 1 female, sweeping net, 24.07.2021, Leg. Rudy Soethof. The sample is lost.

11. *O. gonoceri* Viggiani, 1971 (Figs. 5g–i)

Material examined: Doetinchem-Wehl-Stille Wald, Coordinates: 51.950, 6.190, 1 female, sweeping net, 02.09.2021, Leg. Rudy Soethof.

Genus *Parablatticida* Girault, 1915

12. *Parablatticida citri* (Mercet, 1921) (Figs. 6a–c)

Material examined: Montferland-Bergherbosch, Coordinates: 51.886, 6.196, sweeping net, 1 female, 27.10.2020, Leg. Rudy Soethof; Bronckhorst-Hummelo-Kruisbergsche Bosschen, Coordinates: 51.993, 6.255, sweeping net, 1 female, 08.09.2021, Leg. Rudy Soethof.

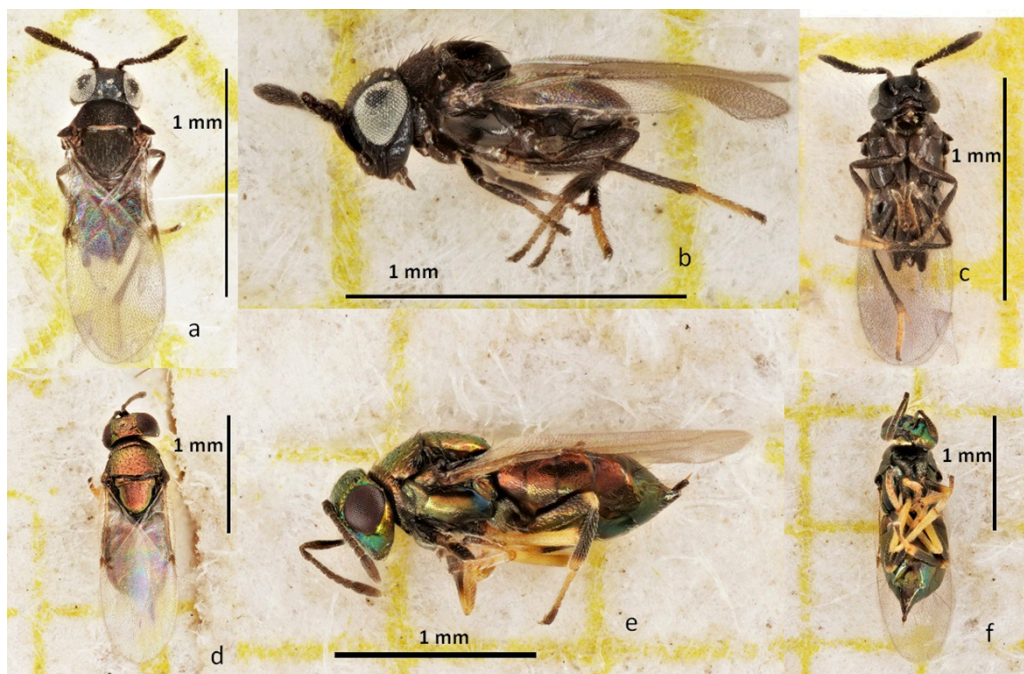


FIGURE 6. a–c: *Parablatticida citri*, female. a, dorsal habitus; b, lateral habitus; c, ventral habitus; d–f: *Prionomitus tiliaris*, female. d, dorsal habitus; e, lateral habitus; f, ventral habitus.

Genus *Prionomitus* Mayr, 1876

13. *Prionomitus tiliaris* (Dalman, 1820) (Figs. 6d–e)

Material examined: NL-Duiven-Rijnstrangen-Kandia, 51.916, 6.002, sweeping net, 1 female, 30.04.2021, Leg. Rudy Soethof.

Genus *Syrphophagus* Ashmead, 1900

14. *Syrphophagus ariantes* (Walker, 1837) (Figs. 7a–c)

Material examined: Doetinchem-De Zumpe, Coordinates: 51.958, 6.314, sweeping net, 1 female, 02.06.2021, Leg. Rudy Soethof.

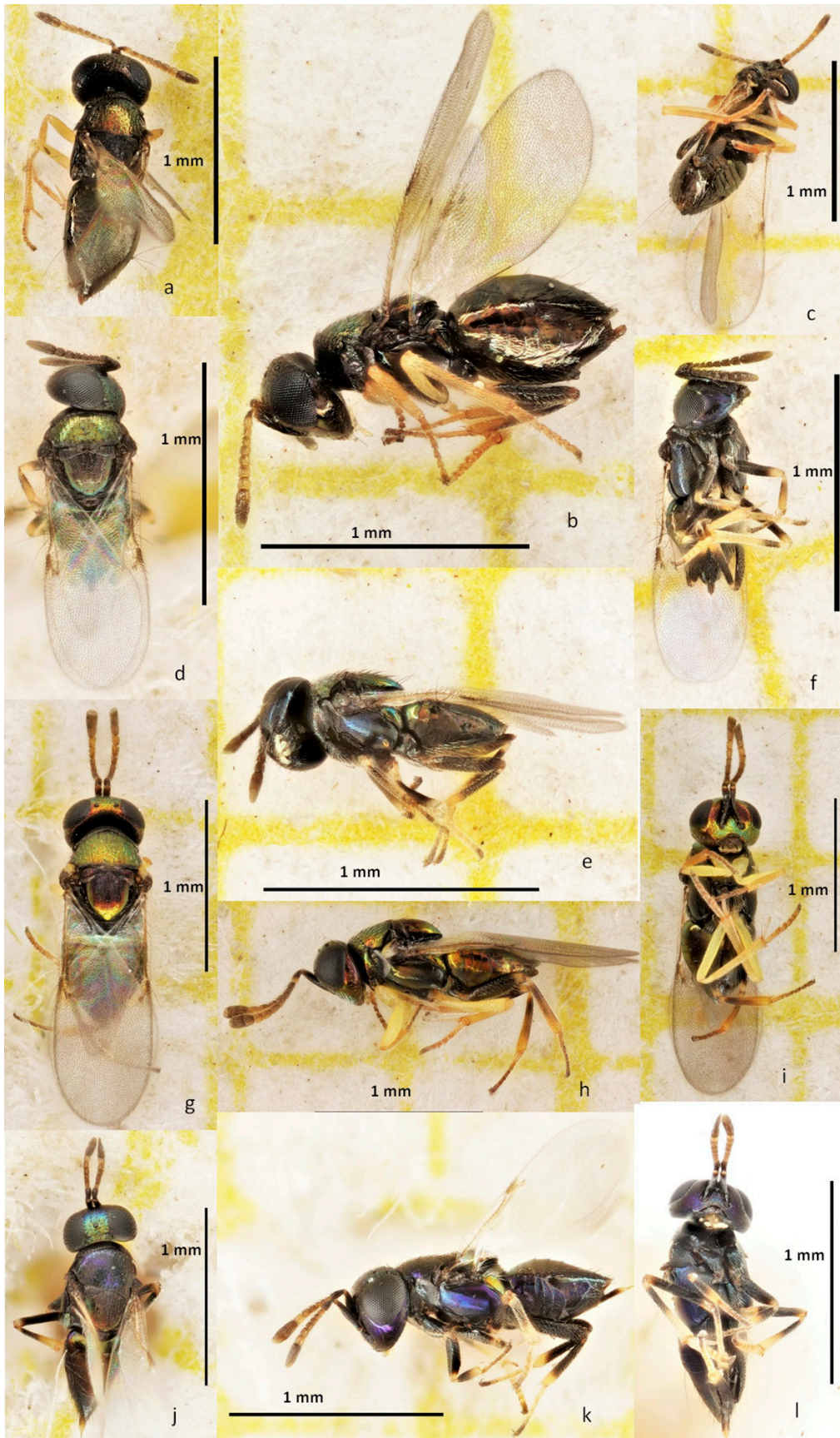


FIGURE 7. a–c: *Syrphophagus ariantes*, female. a, dorsal habitus; b, lateral habitus; c, ventral habitus; d–f: *S. arundinicola*, female. d, dorsal habitus; e, lateral habitus; f, ventral habitus; g–i: *S. herbidus*, female. g, dorsal habitus; h, lateral habitus; i, ventral habitus; j–l *S. taeniatus*, female. j, dorsal habitus; k, lateral habitus; l, ventral habitus.

15. *S. arundinicola* Hoffer, 1965 (Figs. 7d–f)

Material examined: Doetinchem-De Zumpe, Coordinates: 51.958, 6.314, sweeping net, 1 female, 02.06.2021, Leg. Rudy Soethof.

16. *S. herbidas* (Dalman, 1820) (Figs. 7g–i)

Material examined: Duiven-Rijnstrangen-Kandia, Coordinates: 51.916, 6.002, sweeping net, 1 female, 20.08.2021, Leg. Rudy Soethof.

17. *S. taeniatus* (Foerster, 1861) (Figs. 7j–l)

Material examined: NL-Zevenaar-Ooij: 51.914, 6.051, sweeping net, 1 female, 08.05.2021, Leg. Rudy Soethof.

Conclusion

Based on our survey of parasitic Hymenoptera in the Netherlands, we recorded 16 species of Encyrtidae previously unknown from the country, and we describe one new species of *Microterys*. Thus, the number of Encyrtidae known from the Netherlands has increased to 123 species. By contrast, the small county of Georgia (Sakartvelo) has 234 recorded species (Japoshvili, 2017), suggesting that many species of Encyrtidae in the Netherlands remain to be discovered.

Acknowledgment

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Supplemental File: List of species previously recorded from Netherlands

List of species previously recorded from Netherlands, compiled from:

Noyes, J. (2019) The Universal Chalcidoidea Database. Natural History Museum, London. Available from <https://www.nhm.ac.uk/our-science/data/chalcidoids/database/> (accessed 4 April, 2022)

Genus *Achalcerinys* Girault, 1915

1. *Achalcerinys lindus* (Mercet, 1921) (Gijswijt, 2003).

Genus *Adelencyrtus* Ashmead, 1900

=*Epitetracnemus* Girault, 1915

2. *Adelencyrtus intersectus* (Fonscolombe, 1832) (Gijswijt, 2003).

Genus *Ageniaspis* Dahlbom, 1857

3. *Ageniaspis atricollis* (Dalman, 1820) (Gijswijt, 2003).
4. *A. fuscicollis* (Dalman, 1820) (Gijswijt, 2003).
5. *A. testaceipes* (Ratzeburg, 1848) (Gijswijt, 2003).

Genus *Aglyptus* Foerster, 1856

6. *Aglyptus rufus* (Dalman, 1820) (Gijswijt, 2003).

Genus *Anagyrus* Howard, 1896

7. *Anagyrus belibus* (Walker, 1837) (Trjapitzin 1989)

Comment: we were not able to find original source for this record.

8. *A. bohemanni* (Westwood, 1837) (Gijswijt, 2003).
9. *A. bouceki* Hoffer, 1853 (Gijswijt, 2003).
10. *A. pseudococci* (Girault, 1915) (Gijswijt, 2003).
11. *A. schoenherri* (Westwood, 1837) (Gijswijt, 2003).
12. *A. securicornis* Domenichini, 1953 (Gijswijt, 2003).

Genus *Aphycus* Mayr, 1876

13. *Aphycus apicalis* (Dalman, 1820) (Gijswijt, 2003).

Genus *Baeocharis* Mayr, 1876

14. *Baeocharis pascuorum* Mayr, 1876 (Gijswijt, 2003).

Genus *Blastothrix* Mayr, 1876

15. *Blastothrix brittanica* Girault, 1917 (Gijswijt, 2003).

Genus *Bothriothorax* Ratzeburg, 1844

16. *Bothriothorax aralius* (Walker, 1837) (Gijswijt, 2003).
17. *B. clavicornis* (Dalman, 1820) (Gijswijt, 2003).
18. *B. paradoxus* (Dalman, 1820) (Gijswijt, 2003).
19. *B. serratellus* (Dalman) (Gijswijt, 2003).

Genus *Cerapterocerus* Westwood, 1833

20. *Cerapterocerus mirabilis* Westwood, 1833 (Gijswijt, 2003).

Genus *Cerchysiella* Girault, 1914

21. *Cerchysiella planiscutellum* (Mercet, 1921) (Gijswijt, 2003).

Genus *Cerchysius* Westwood, 1832

22. *Cerchysius subplanus* (Dalman)

Genus *Cercobelus* Walker, 1842

23. *Cercobelus jugaeus* (Walker, 1837) (Gijswijt, 2003).

Genus *Cheiloneurus* Westwood, 1833

24. *Cheiloneurus boldyrevi* Trjapitzin and Agekyan, 1978 (Gijswijt, 2003).

25. *Ch. claviger* Thomson, 1876 (Gijswijt, 2003).

26. *Ch. elegans* (Dalman, 1820) (Gijswijt, 2003).

27. *Ch. paralia* (Walker, 1837) (Gijswijt, 2003).

Genus *Choreia* Westwood, 1833

28. *Choreia inepta* (Dalman, 1820) (Gijswijt, 2003).

Genus *Copidosoma* Ratzeburg 1844

29. *Copidosoma albipes* (Westwood, 1837) (Gijswijt, 2003).

30. *C. anceus* (Walker, 1837) (Guerrieri & Noyes, 2000, 2005).

31. *C. ancharus* (Walker, 1837) (Guerrieri & Noyes, 2000, 2005).

32. *C. aretas* (Walker, 1838) (Guerrieri & Noyes, 2000, 2005).

33. *C. babas* (Walker, 1837) (Guerrieri & Noyes, 2000, 2005).

34. *C. boucheanum* Ratzeburg, 1844 (Gijswijt, 2003).

35. *C. cervius* (Walker, 1846) (Guerrieri & Noyes, 2000, 2005).

36. *C. chalconotum* (Dalman, 1820) (Gijswijt, 2003).

37. *C. cuproviride* Springate and Noyes, 1990 (Guerrieri & Noyes, 2000, 2005).

38. *C. dius* (Walker, 1837) (Guerrieri & Noyes, 2000, 2005).

39. *C. filicorne* (Dalman, 1820) (Gijswijt, 2003).

40. *C. flagellare* (Dalman, 1820) (Gijswijt, 2003).

41. *C. floridanum* (Ashmead, 1900) (Guerrieri & Noyes, 2000, 2005).

42. *C. genale* (Thomson, 1876) (Guerrieri & Noyes, 2000, 2005).

43. *C. iracundum* Erdos 1957 (Guerrieri & Noyes, 2000, 2005).

44. *C. peticus* (Walker, 1846) (Gijswijt, 2003).

45. *C. radnense* Erdos, 1957 (Guerrieri & Noyes, 2000, 2005).

46. *C. serricorne* (Dalman, 1820) (Gijswijt, 2003).

47. *C. shawi* Guerrieri and Noyes, 2005 (Guerrieri & Noyes, 2000, 2005).

48. *C. sosares* (Walker, 1837) (Guerrieri & Noyes, 2000, 2005).

49. *C. subalbicorne* (Hoffer, 1960) (Gijswijt, 2003).

50. *C. thebe* (Walker, 1838) (Guerrieri & Noyes, 2000, 2005).

51. *C. tibiale* Hoffer, 1970 (Guerrieri & Noyes, 2000, 2005).

52. *C. truncatellum* (Dalman, 1820) (Gijswijt, 2003).

Genus *Dinocarsis* Foerster, 1856

53. *Dinocarsis hemiptera* (Dalman, 1820) (Gijswijt, 2003).

Genus *Discodes* Foerster, 1856

54. *Discodes aeneus* (Dalman, 1820) (Gijswijt, 2003).

Genus *Echthroplexiella* Mercet, 1921

55. *Echthroplexiella dunensis* (Six, 1876) (Gijswijt, 2003).

Genus *Encyrtus* Latreille, 1809

56. *Encyrtus albitarsis* Zetterstedt, 1838 (Gijswijt, 2003).

57. *E. aurantii* (Geoffroy, 1785) (Gijswijt, 2003).

58. *E. infelix* (Embleton, 1902) (Noyes, 2010)

Comment: According to Noyes (2010) the species was recorded from Biological Control Co. in Netherlands.

59. *E. infidus* (Rossi, 1790) (Gijswijt, 2003).

Genus *Ericydnus* Haliday, 1832

60. *Ericydnus baleus* (Walker, 1838) (Gijswijt, 2003).

61. *E. strigosus* (Nees, 1834) (Gijswijt, 2003).

62. *E. ventralis* (Dalman, 1820) (Gijswijt, 2003).

Genus *Eusemion* Dahlbom, 1857

63. *Eusemion cornigerum* (Walker) (Gijswijt, 2003).

Genus *Ginsiana* Erdos and Novicky, 1955

64. *Ginsiana carpetana* (Mercet) (Trjapitzin, 1989)

Comment: we were not able to find the original source for this record.

Genus *Habrolepis* Foerster, 1856

65. *Habrolepis dalmanni* (Westwood), (Gijswijt, 2003).

Genus *Homalotyloidea* Mercet, 1921

66. *Homalotyloidea erginus* (Walker), (Gijswijt, 2003).

67. *H. nowickyi* Hoffer,

Genus *Homalotylus* Mayr, 1876

68. *Homalotylus eytelweinii* (Ratzeburg, 1844), (Gijswijt, 2003).

Genus *Hoplopsis* De Stefani, 1889

69. *Hoplopsis minuta* (Fabricius), (Gijswijt, 2003).

Genus *Isodromus* Howard, 1887

70. *Isodromus vinulus* (Dalman) (Gijswijt, 2003).

Genus *Lamennaisia* Girault, 1922

71. *Lamennaisia ambigua* (Nees) (Gijswijt, 2003).

Genus *Leptomastidea* Mercet, 1916

72. *Leptomastidea abnormis* (Girault, 1915) (Hennekam et al. 1987)

Comment: The species was recorded from greenhouses.

Genus *Leptomastix* Foerster, 1856

73. *Leptomastix dactylopii* Howard, 1885 (Hennekam et al. 1987)

Comment: The species was recorded from greenhouses.

74. *L. epona* (Walker) (Gijswijt, 2003).

Genus *Mahencyrtus* Masi, 1917

75. *Mahencyrtus comara* (Walker) (Trjapitzin 1989).

Comment: we were not able to find original source for this record.

Genus *Mayridia* Mercet, 1921

76. *Mayridia myrlea* (Walker, 1838) (Gijswijt, 2003).

Genus *Mira* Schellenberg, 1803

77. *Mira mucora* Schellenberg, 1803 (Gijswijt, 2003).

Genus *Metaphycus* Mercet, 1917

78. *Metaphycus asterolecanii* (Mercet, 1923) (Guerrieri & Noyes, 2000, 2005).

79. *M. chermis* (Fonscolombe, 1832) (Guerrieri & Noyes, 2000, 2005).

80. *M. flavovarius* (Mercet, 1921) (Gijswijt, 2003).

81. *M. helvolus* (Compere, 1926) (Gijswijt, 2003).

82. *M. lounsburyi* (Howard, 1898) (Jourdheuil 1986; Noyes & Hayat 1994).

Comment: The species was recorded as *M. bartletti* from Netherlands.

83. *M. melanostomatus* (Timberlake, 1916) (Gijswijt, 2003).

84. *M. nadius* (Walker, 1838) (Guerrieri & Noyes, 2000, 2005).

85. *M. pappus* (Walker, 1838) (Guerrieri & Noyes, 2000, 2005).

86. *M. stagnarum* Hoffer, 1954 (Guerrieri & Noyes, 2000, 2005).

87. *M. zebratus* (Mercet) (Guerrieri & Noyes, 2000, 2005).

Genus *Microterys* Thomson, 1876

88. *Microterys nietneri* (Motschulsky, 1859) (Kole & Hennekam, 1990; Noyes & Hayat, 1994).

Comment: The species was recorded as *M. flavus*. (Kole & Hennekam, 1990; Noyes & Hayat, 1994).

Genus *Ooencyrtus* Ashmead, 1900

90. *Ooencyrtus ennomophagus* Yoshimoto, 1975 (Drooz, 1983).

Comment: The species was reared in the laboratory.

91. *O. tardus* (Ratzeburg, 1844) (Trjapitzin, 1989).

Comment: we were not able to find original source for this record.

Genus *Parablastothrix* Mercet, 1917

92. *Parablastothrix montana* Erdos, 1955 (Gijswijt, 2003).

Genus *Prionomitus* Mayr, 1876

93. *Prionomitus mitratus* (Dalman) (Gijswijt, 2003).

Genus *Pseudencyrtus* Ashmead, 1900

94. *Pseudencyrtus misellus* (Dalman, 1920) (Gijswijt, 2003).

95. *Ps. salicisstrobili* (Linnaeus, 1758) (Gijswijt, 2003).

Genus *Psyllaephagus* Ashmead, 1900

96. *Psyllaephagus lusitanicus* (Mercet, 1921) (Gijswijt, 2003).

Genus *Syrphophagus* Ashmead, 1900

97. *Syrphophagus aeruginosus* (Dalman, 1820) (Gijswijt, 2003).

98. *S. annulipes* (Thomson, 1876) (Trjapitzin, 1989).

Comment: we were not able to find original source for this record.

99. *S. aphidivorus* (Mayr, 1876) (Gijswijt, 2003).

100. *S. mamitus* (Walker, 1837) (Gijswijt, 2003).

101. *S. pertiades* (Walker, 1837) (Trjapitzin, 1989).

Comment: we were not able to find original source for this record.

102. *S. quercicola* (Hoffer) (Gijswijt, 2003).

Genus *Trechnites* Thomson, 1876

103. *Trechnites alni* Erdos, 1957 (Trjapitzin, 1989).

Comment: we were not able to find original source for this record.

Genus *Trichomasthus* Thomson, 1876

104. *Trichomasthus cyanifrons* (Dalman, 1820) (Gijswijt, 2003).

Genus *Tyndarichus* Howard, 1910

105. *Tyndarichus scaurus* (Walker, 1837) (Gijswijt, 2003).

Genus *Zaomma* Ashmead, 1900

106. *Zaomma lambinus* (Walker, 1838) (Gijswijt, 2003).

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