

Checklist and new data on Encyrtidae of Transcaucasia and Turkey (Hymenoptera: Chalcidoidea)

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Japoshvili, G.O. & Noyes, J.S. 2005. Checklist and new data on Encyrtidae of Transcaucasia and Turkey (Hymenoptera: Chalcidoidea). *Zoosystematica Rossica*, **14**(1): 135-145.

Distributional and host records are summarised for 307 species, belonging to 101 genera that are recorded from Transcaucasia and Turkey. Of these, 160 species are recorded from Georgia, 171 from Armenia, 145 from Azerbaijan and 111 from Turkey; 21 species are recorded for the first time from Georgia, 34 from Turkey and 3 from Azerbaijan; one species from Georgia (*Discodes valentinae* sp. n.) is described as new; *Ericydnus aeneus* Nikol'skaya is restored as a distinct species (not a synonym of *E. robustior* Mercet); four species are treated as junior synonyms (*Callipteroma testacea* Motschulsky = *C. baglanensis* Myartseva, *Microterys bellae* Trjapitzin = *M. eulecanii* Pilipjuk & Sugonjaev, *Psyl-laephagus elaeagni* Trjapitzin = *P. bachardenicus* Myartseva = *P. rubriscutellatus* Myartseva); other possible synonyms are also discussed and 17 new host records are presented.

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Introduction

The Hymenopteran superfamily Chalcidoidea is a hyperdiverse group of insects currently including some 22,500 described species worldwide. However, this group has received relatively little attention from taxonomists in the past with the result that only a tiny proportion of the likely fauna of the World has been described yet recent estimates suggest that there may be at least 500,000 species worldwide (Noyes, 2000). Most species are parasitoids of other arthropods with more than 500 families acting as hosts. These hosts range from mites, ticks and spiders to immature stages of most orders of insects.

Of the included families, the Encyrtidae is particularly important as many species regulate pests, or potential pests of natural or agricultural ecosystems. This family is one of the most important groups in the biological control of agricultural insect pests (Greathhead, 1985; Noyes, 1985). Thus the group is particularly important in parts of the world where natural control is preferable to pesticide use for ecological, financial or political reasons. This is largely the case in the Caucasus and adjacent countries such as Turkey. The first comprehensive account of encyrtids from

the area is that of Trjapitzin (1968) who recorded 173 species of encyrtids from the Caucasus, including only 74 from Georgia. In his key to the Palaearctic encyrtids (Trjapitzin, 1989), 248 species were cited from Transcaucasia. The number of species known from Georgia later increased to 144 (Yasnosh, 1972; Trjapitzin, 1989; Japoshvili, 2000a, 2000b). Herthevtzian (1986) noted 170 species from Armenia and Rzaeva (2002) recorded 146 species from Azerbaijan. Trjapitzin & Doganlar (1997) recorded only 50 species from Turkey, but a further 18 species were recorded by other authors (Tunçyürek, 1970; Japoshvili & Karaca, 2002, 2004; Karaca & Japoshvili, 2002; Uygun et al., 2004; Japoshvili, 2005). When compared with the more than 230 species recorded from the United Kingdom (Noyes, 2004), a relatively small area, it is likely that the recorded encyrtid fauna of these areas represents only a tiny fraction of the actual fauna.

This paper is intended to summarise the published data concerning Encyrtidae in the region, and also to communicate new data resulting largely from survey work undertaken in Georgia and Turkey by the senior author since 1994. For synonymy, distribution of species, and references to previous records from the region, see Noyes (2004).

Material and methods

In parentheses, we list the material examined in the scope of this study and compared with the specimens from the collection of the Natural History Museum, London. Most of the new records are based on material deposited in the collections of the Institute of Zoology, Georgian Academy of Sciences, Tbilisi, including that collected in Georgia and Turkey by the first author during 1994–2004. Additional records are based on material housed in the collections of the Natural History Museum, London.

Morphological terminology follows that of Trjapitzin (1989), Noyes & Woolley (1994) and Gibson et al. (1997). Abbreviations used in the text are as follows: AOL – distance between posterior and anterior ocelli; EL – maximum eye length; F1, F2, etc. – first funicle segment, second funicle segment, etc.; FV – maximum frontovertex width; FVL – maximum frontovertex length; GL – maximum gonostylus (third valvula) length; GW – gonostylus width; HW – maximum head width; MS – malar space (shortest distance from eye to mouth margin); MT – middle tibia length; OCL – occipital-ocellar line (shortest distance between posterior ocellus and occipital margin); OL – ovipositor length; OOL – ocular-ocellar line (shortest distance between posterior ocellus and adjacent eye margin); OPL – outer plate length; OPW – outer plate width; POD – diameter of posterior ocellus; POL – posterior ocellar line (shortest distance between the posterior ocelli); TA – distance between toruli and anterior ocellus.

Abbreviations for depositories of specimens mentioned below are as follows: BMNH – Natural History Museum, London, UK; IZGAS – Institute of Zoology, Georgian Academy of Sciences, Tbilisi, Georgia; ZIN – Zoological Institute, Russian Academy of Sciences, St.Petersburg, Russia.

Abbreviations for collectors are as follows: B. – Babayan; B.A. – B. Aslan; B.K. – B. Kaydan; C.O. – C. Oncuer; D.K. – D. Kasparyan; E.E. – E. Erkin; E.S. – E. Sugonjaev; G.J. – G. Japoshvili; H. – Herthevtzian; H.G. – H. Giray; I.K. – I. Khojevanishvili; I.S. – I. Sulikashvili; J.N. – J. Noyes; L.E. – L. Erkilic; L.R. – L. Rzaeva; M.A. – M. Akhvlediani; N.D. – N. Dikyar; O.D. – O. Demirozer; P. – Prokopenko; S.I. – S. Ibadova; S.M. – S. Myartseva; S.U. – S. Ulgenturk; Sh.B. – Sh. Barjadze; T.Ch. – T. Chkhaidze; V.T. – V. Trjapitzin; V.Y. – V. Yasnosh; Z.H. – Z. Hajibeili.

Abbreviations for countries: AR – Armenia; AZ – Azerbaijan; GE – Georgia; TR – Turkey. New records are asterisked (*).

List of species

Achalcerinys lindus (Mercet, 1921). AR, TR (4 ♀, Ankara: Oyak Cagmas Mahe, ex pseudococcids on *Cynodon dactylon*, 4.IX.2002, B.K.; 1 ♀, Ankara: Cubuk Kara Gol yaylasi, ex *Trionymus aberrans* on *Triticum*, 17.X.2001, B.K., IZGAS). – The record from AZ (Trjapitzin, 1989) is probably in error, as the species is not included in the most recent list for that country (Rzaeva, 2002).

Adelenyrtus aulacaspidis (Brèthes, 1914). AZ, GE, TR. **Agekianella notatifemur** (Hoffer, 1976). GE.

Ageniaspis atricollis (Dalman, 1820). GE.

A. avetianae Trjapitzin & Herthevtzian, 1971. AR.

A. fuscicollis (Dalman, 1820). AR, AZ, GE (3 ♀, incl. 1 ♀ on slide, Adigeni: Ude, swept on *Pyrus*, 6.VIII.1995, G.J., IZGAS), TR (12 ♀, 6 ♂, Ankara: Cubuk, ex larva of *Yponomeuta* on apple, 28.VI. and 6.VII.1960, N.D., BMNH).

A. longicornis Trjapitzin, 1968. AR.

A. testaceipes (Ratzeburg, 1848). AR, AZ, GE.

Agyptus rufus (Dalman, 1820). AZ.

Anagyrus aligarhensis Agarwal & Alam, 1959. AR, AZ, GE, TR.

A. belibus (Walker, 1837). AZ, GE.

A. bouceki Hoffer, 1953. AR, AZ, *GE (1 ♀, Betania, forest, swept, 23.VII.1960, M.A., IZGAS).

A. galinae (Myartseva, 1982). *GE (1 ♀, Babaneuri, sweep, 23.V.1961, M.A., IZGAS).

A. matritensis (Mercet, 1921). AZ.

A. nitidus Trjapitzin & Rzaeva, 1967. AZ.

A. orbitalis (Ruschka, 1923). AR, *TR (14 ♀, 4 ♂, Mugla: Tlos, 500–700 m, 27.VIII.1992, J.N.; 1 ♀, Mugla: Fethiye, 300 m, Olu Deniz, 31.VIII.1992, J.N.; 2 ♀, 2 ♂, Mugla: nr Fethiye, 4 km N. Olu Deniz, 21.VIII.1992, J.N.; 1 ♀, 43 km, Fethiye-Korkuteli Rd, 23.VIII.1992, J.N.; 3 ♀, 2 ♂, 44 km, Fethiye-Korkuteli Rd, 1000 m, 21.VIII.1992, J.N.; 4 ♀, 1 ♂, 56 km, Fethiye-Korkuteli Rd, 23.VIII.1992, J.N., BMNH).

A. pseudococci (Girault, 1915). AR, AZ, GE (4 ♀, 4 ♂, incl. 1 ♀, 1 ♂ on slide, Tbilisi: Ortachala, ex *Plano-coccus ficus* on *Ficus*, 16.VIII.–2.IX.1998, G.J., IZGAS), TR (1 ♀, 1 ♂, Hatay: Dortuol, ex *P. citri* on *Citrus*, 5.VII.2002, B.K.; 1 ♂, Isparta, ex *P. voyae* on *Cupressus*, 5–10.VII.2001, G.J.; 9 ♂, Ankara, ex *P. citri* on *Citrus*, 5.VI.2002, S.U.; 2 ♂, Ankara, ex *P. ficus* on *Citrus*, 25.VIII.2002, S.U.; 1 ♀, 1 ♂, Adana, ex *P. voyae* on *Juniperus*, 15.VI–1.VII.2001, G.J., IZGAS; 1 ♀, 56 km, Fethiye-Korkuteli Rd, 1000 m, 21.VIII.1992, J.N.; 1 ♂, Tlos, 500–700 m, 27.VIII.1992, J.N., BMNH).

A. schoenherri (Westwood, 1837). AR, AZ, TR (3 ♀, Ankara, ex *Phenacoccus aceris* on *Fraxinus*, 4.VII.2000, B.K. (slides), IZGAS).

A. spaici Hoffer, 1970. GE.

A. tamaricicola Trjapitzin, 1968. GE.

Anicetus italicus (Masi, 1917). TR.

Anthemus pini Ferrière, 1927. AZ, GE.

A. fumicularis (Bakkendorf, 1939). GE (1 ♀, 4 ♂, incl. 1 ♀, 1 ♂ on slide, Tbilisi: Bot. Gard., ex *Leucaspis loewi* on *Pinus*, 21.V.–5.VI.1995, G.J.; 4 ♀, 3 ♂, Khazbegi, ex *L. sp.* on *Pinus*, 28.VI.–23.VII.2003, G.J., IZGAS), *TR (7 ♀, 4 ♂, Ankara: Haskoy malazgirt cad., ex probably *L. sp.* on *Pinus nigra*, 4.VI.2003, B.K., IZGAS).

Anusia nasicornis Förster, 1860. AR, AZ, GE.

Aphycinus magdalinae Trjapitzin, 1962. AR.

Aphycooides clavellatus (Dalman, 1820). GE (1 ♀, Tbilisi: Bot. Gard., ex *Physokermes hemicyrphus* on *Picea*, 27.V.1998, G.J. (slide), IZGAS), TR (3 ♀, Ankara, ex *Physokermes* sp. on *Picea pungens*, 24.IV. and 8.VI.1998, B.K. (slides), IZGAS).

- Aphytus apicalis** (Dalman, 1820). AR, AZ, *GE (1 ♀, Tbilisi: Bot. Gard., swept on *Buxus*, 16.VIII.2003, G.J. (slide); 1 ♀, Tsagveri, on *Platanus orientalis*, 26.VI.1972, V.Y., IZGAS). – Comment: body colour varies from yellow to dark brown.
- A. hadzibejliae** Trjapitzin, 1962. AR, AZ (1 ♀, Baku: park, ex *Phenacoccus aceris* on peach, 11.V.1973, BMNH), GE (4 ♀, Tbilisi, ex *P. aceris* on *Fraxinus*, 3.VII.1958, V.Y., IZGAS).
- A. longicornis** Trjapitzin, 1962. AR, GE.
- A. pallidus** Trjapitzin, 1962. AR, AZ.
- A. primus** (Mercet, 1917). *TR (1 ♀, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N., BMNH).
- A. sumavicus** Hoffer, 1954. GE.
- Arrhenophagus chionaspidis** Aurivillius, 1888. AZ, GE.
- Aschitus aeneiventris** (Walker, 1837). AR.
- A. annulatus** Erdős, 1957. *TR (1 ♀, Mugla: 56 km E. Fethiye, Fethiye-Korkuteli Rd, 1200 m, juniper scrub, 23.VIII.1992, J.N., BMNH).
- A. sugonjaevi** (Trjapitzin, 1968). AZ.
- Asitus phragmitis** (Ferrière, 1955). AR, AZ.
- Avetianella capnodioibia** Trjapitzin, 1968. AR.
- Baeocharis pascuorum** Mayr, 1876. AR, AZ.
- Blastothrix aprica** Sugonjaev, 1964. AR (1 ♀, Megri, ex *Eulecanium*, 20.V.1961, B., ZIN), AZ.
- B. britannica** Girault, 1920. AR, AZ, GE (11 ♀, Batumi, ex *Eulecanium* on *Persica*, 25.V.1961, M.A., IZGAS).
- B. erythrostetha** (Walker, 1847). AR, GE, *TR (1 ♀, Mugla: 43 km E. Fethiye, Fethiye-Korkuteli Rd, dry river gulley, 23.VIII.1992, J.N., BMNH).
- B. gurselae** Japoshvili & Karaca, 2004. TR.
- B. hungarica** Erdős, 1959. *AZ (6 ♀, 2 ♂, incl. 2 ♀ on slide, ex *Parthenolecanium persicae*, 6.V.1961, I.K., IZGAS), GE, TR (1 ♀, Isparta: Kuleonu, ex *P. persicae* or *Eulecanium rugulosum* on *Prunus*, 5-16.VI.2002, G.J., IZGAS). – Comment: it is likely that *B. turanica*, *B. hungarica*, and *B. britannica* are synonymous as they differ only slightly in the relative lengths of the fore wing venation.
- B. longipennis** Howard, 1881. AR, AZ, GE (1 ♀, 1 ♂, Tbilisi: above Lisi, ex *Parthenolecanium corni* on *Padus racemosa*, 6-21.VI.1998, G.J. (slides); 3 ♀, 3 ♂, incl. 1 ♀, 1 ♂ on slide, Tbilisi: Bot. Gard., ex *P. corni* on *Prunus*, 27-28.V.1998, G.J.; 5 ♀, 5 ♂, Tskneti, ex *P. corni* on *Fraxinus*, 7.VI.1961, M.A.; 2 ♀, 2 ♂, Tbilisi: above Lisi, ex *P. rufulum* on *Corylus*, 6-21.VI.1998, G.J.; 3 ♀, 3 ♂, Tbilisi: Cairo st., ex *P. corni* on *Prunus*, 1-10.V.1999, G.J.; 1 ♀, Adigeni: Ude, 6.VIII.1995, G.J.; 5 ♀, Tbilisi: Turtles lake, ex *P. corni* on *Crataegus*, 16.V-3.VI.1998, G.J.; 2 ♀, 2 ♂, Tbilisi: Turtles lake, ex *P. corni* on *Acacia*, 16.V-28.V.1998, G.J.; 1 ♀, 1 ♂, Tbilisi: Bot. Gard., ex *Sphaerolecanium prunastri* on *Prunus*, 21.V-5.VI.1995, G.J.; 2 ♀, 1 ♂, Tbilisi: Mtskheta st., ex *P. corni* on *Fraxinus*, 16.V-5.VI.1998, G.J.; 3 ♀, 2 ♂, nr. Tbilisi sea, ex *P. corni* on *Fraxinus*, 21-25.V.1998, G.J.; 2 ♀, 1 ♂, Tbilisi: above Nutsubidze near church, Agaraketi, ex *P. corni* on *Fraxinus*, 6-7.VI.1998, G.J.; 6 ♀, 1 ♂, same locality, ex *P. corni* on *Padus racemosa*, 6-21.VI.1998, G.J.; 1 ♀, 1 ♂, same locality, ex *P. corni* on *Crataegus*, 6-8.VI.1998, G.J.; 4 ♀, Tbilisi: Ethn. Museum, ex *P. corni* on *Fraxinus*, 16-25.V.1998, G.J., IZGAS), TR (1 ♀, Ankara, ex *P. rufulum* on *Quercus*, 27.IV.1998, S.U., IZGAS). – Comment: *Blastothrix ilicicola* Mercet may be a synonym of *B. longipennis* as it was considered to be a possible synonym of *B. confusa* (= *longipennis*) previously by Boucek (1961), Chumakova (1961) and Ferrière in Sugonjaev (1965).
- B. nikolskiae** Sugonjaev, 1964. AR (1 ♀, Shurnukhi-Goriskii region, on *Spiraea*, 7.IX.1956, V.T., ZIN), GE (6 ♀, 3 ♂, incl. 1 ♀, 1 ♂ on slides, Tbilisi: Ethn. Museum, ex *Rhodococcus spiraeae* on *Spiraea*, 16-25.V.1998, G.J.; 9 ♀, 2 ♂, incl. 2 ♀, 1 ♂ on slides, Tbilisi: Saburtalo, ex *R. spiraeae* on *Spiraea*, 6-10.VI.1998, G.J.; 1 ♀, Mtskheta, ex *R. spiraeae* on *Spiraea*, 31.V.1958, V.Y.; 1 ♀, Karsani, ex *R. spiraeae* on *Spiraea*, 11.VI.1969, V.Y.; 1 ♀, Tbilisi: Bot. Gard., ex *Physokermes hemicyprhus* on *Picea*, 17.V-10.VI.1998, G.J., IZGAS).
- B. sericea** (Dalman, 1820). GE, TR.
- B. turanica** Sugonjaev, 1964. AR, AZ, GE, TR.
- Bothriothorax araliaus** (Walker, 1837). AR, AZ.
- B. clavicornis** (Dalman, 1820). AR, TR.
- B. serratellus** (Dalman, 1820). AR, TR.
- B. trichops** Thomson, 1876. AR.
- Boucekiella depressa** Hoffer, 1954. AR, AZ.
- Callipteroma sexguttata** Motschulsky, 1863. AR, AZ, GE, *TR (2 ♀, 1 ♂, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N., BMNH).
- C. testacea** Motschulsky, 1863 (= *baglanensis* Myartseva, 1982, syn. n. Holotype: ♀, Afghanistan, ZIN, examined). *TR (2 ♀, 1 ♂, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N., BMNH). – Comment: Specimens of *C. testacea* present in the collections of the BMNH show the complete range of colouration of the thorax and base of abdomen being almost completely yellow to largely brown. We therefore have no doubt that *C. baglanensis* is a dark form of *C. testacea* and have no hesitation in treating the two names as synonyms.
- Ceballosia dusmeti** Mercet, 1921. AR, AZ. – Variation: Females vary from being brachypterous to fully winged.
- Cerapterocerus celadus** (Walker, 1838). AR, AZ, GE (1 ♀, 3 ♂, Tbilisi: Bot. Gard., ex *Eriococcus buxi* on *Buxus*, 25.VI.1970, I.K.; 1 ♀, Gori: Variani, ex *Eriopeltis festucae*, 17.VII.1966, V.Y.; 3 ♀, 1 ♂, Vashlovani, ex *Scythia stipae* on Poaceae, 30.VI.1965, I.K., IZGAS).
- C. mirabilis** Westwood, 1833. AR, AZ, GE (1 ♂, Vashlovani, ex *Scythia stipae*, 21.VII.1968, V.Y. (slide); 2 ♀, 1 ♂, incl. 1 ♀, 1 ♂ on slide, Tbilisi: Bot. Gard., ex *Sphaerolecanium prunastri* on *Prunus*, 21.V.1995, G.J.; 1 ♀, Tbilisi, ex *S. prunastri* on *Prunus*, 12.VI.1967, V.Y.; 2 ♂, Tbilisi, ex *S. prunastri* on *Prunus*, 27.VI.1961, M.A., IZGAS), TR (1 ♂, Cire (Jire), ex *Kermes palestiniensis* on *Quercus coccifera*, 18-28.VI.2002, G.J. (slide); 2 ♀, incl. 1 ♀ on slide, Kuleonu, ex *S. prunastri* on *Prunus*, 1-4.VI.2001, G.J.; 2 ♀, 2 ♂, Egirdir, ex *S. prunastri* on *Prunus*, 3-8.VII.2001, G.J.; 4 ♀, Izmir, ex *S. prunastri*, 20.VI.1974, C.O., BMNH).
- Cerchyssiella laeviscuta** (Thomson, 1876). *GE (1 ♀, Velistsikhe: Meskhi, 29.VII.1963, V.Y., IZGAS).
- C. planiscutellum** (Mercet, 1921). AR, AZ, GE (1 ♀, Tskneti, 26.VI.1966, V.Y., IZGAS), TR.
- Cerchyssiulus subplanus** (Dalman, 1820). AR, AZ, GE (1 ♀, Tbilisi: Nataktari, on *Quercus*, 4.VII.1966, V.Y., IZGAS), TR.
- Cercobetus jugaeus** Walker, 1840. AR, AZ.
- Charitopus fulviventris** Förster, 1860. AR, AZ, *TR (13 ♀, 2 ♂, Mugla: 44 km E. Fethiye, Fethiye-Korkuteli Rd, 1000 m, 21.VIII.1992, J.N.; 1 ♀, Mugla: 43 km Fethiye, 4 km N. Olu Deniz, 21.VIII.1992, J.N.; 2 ♀, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N.; 2 ♀, 1 ♂, 56 km, Fethiye-Korkuteli Rd, 23.VIII.1992, J.N., BMNH).
- C. obscurus** (Erdős, 1946). AR, AZ.
- C. trjapitzini** Hoffer, 1980. AR.
- Cheiloneurus boldyrevi** Trjapitzin & Agekian, 1978. AR, GE. – Comment: This species is possibly synonymous with *C. claviger* but this needs to be confirmed by examination of the holotype (ZIN).
- C. claviger** Thomson, 1876. AR, AZ, GE (2 ♀, incl. 1 ♀ on slide, nr. Tbilisi sea, ex *Parthenolecanium corni* on *Fraxinus*, 21.V.1998, G.J.; 1 ♀, Tbilisi: Bot. Gard., ex

Ceroplastus japonicus on *Ilex*, 5-8.VI.1995, G.J.; 1 ♀, Akhmeta: Babaneuri, ex *P. rufulum* on *Quercus*, 17.VI.-3.VII.1997, G.J.; 1 ♀, Tbilisi Ethn. Mus., ex *Rhodococcus spiraeae* on *Spiraea*, 16-25.V.1998, G.J.; 1 ♀, Tbilisi: Bot. Gard., ex *Rh. turanicus* on *Corylus*, 27-28.V.1998, G.J.; 1 ♀, Vashlovani, ex *Stotzia maxima* on *Ephedra procera*, 18.VI.1966, V.Y.; 1 ♀, Vashlovani, ex *Pulvinaria* sp. on *Populus*, 11.VI.1969, V.Y., IZGAS), TR. – New host records: *Ceroplastes japonicus*, *Parthenolecanium rufulum*, *Rhodococcus spiraeae* (Hemiptera: Coccidae). – Variation: We have noted some variation in colour with F5-F6 varying from white to dark brown and the abdomen from yellow to dark brown.

C. elegans (Dalman, 1820). AR, AZ, GE.

C. kollarri Mayr, 1876. AR, AZ, GE (1 ♀, Gori: Vari-*ani*, ex *Eriopeltis festucae*, 17.VII.1966, V.Y.; 1 ♀, Tbilisi: Bot. Gard., ex *Planchonia arabis* on *Hedera*, 10.V.1966, V.Y., IZGAS).

C. paralia (Walker, 1837). AR, AZ, GE (1 ♀, 1 ♂, Vashlovani, ex *Stotzia maxima* on *Ephedra procera*, 18.VI.1966, V.Y., IZGAS), TR.

C. querucus Mayr, 1876. TR.

C. submuticus Thomson, 1876. AR.

Choreia inepta (Dalman, 1820). AR, AZ.

C. maculata Hoffer, 1954. AR, AZ, GE (123 ♂, Vashlovani: ex *Scythia stipae* on Poaceae, 30.VI.1965, I.K., 5 ♀; 2 ♂, Tbilisi, ex *Eulecanium festucae* on Poaceae, 28.VI.1960, M.A., IZGAS), *TR (1 ♀, 1 ♂, Ankara, ex *Eriopeltis* sp. on Poaceae, 1.VII.1999, S.U. (slide), IZGAS).

Coccidoxenoides permunitus Girault, 1915. *TR (1 ♀, Adana: Chukurova, ex *Carulaspis minima* on *Thuja*, 15.VI.-2.VII.2001, G.J.; 1 ♀, 1 ♂, Isparta, ex *Planococcus vovae* on *Cupressus*, 10.VII.2001, G.J.; 1 ♀, Antalia: Kursunlu, ex *Aspidotius nerii* on *Oleander*, 24-28.VI.2001, G.J., IZGAS). – New host records: *Aspidotius nerii*, *Carulaspis minima* (Hemiptera: Diaspididae); *Planococcus vovae* (Hemiptera: Pseudococcidae).

Coeolopencyrtus callidii (Jansson, 1957). TR.

Comperiella bifasciata Howard, 1906. AZ, GE, TR (28 ♀, 35 ♂, incl. 24 ♀, 31 ♂ on slides, Antalia: Adrasan, ex *Aonidiella aurantii* on Cherry laurel, 25.VIII-5.IX. 2001, G.J., IZGAS).

Copidosoma agrotis (Fonscolombe, 1832). AR, *GE (23 ♀, 28 ♂, incl. 8 ♀, 10 ♂ on slides, Ninotsminda: Lake Sagamo, swept on the Poaceae, 15.VIII.1997, G.J., IZGAS). – Comments: This species is very close to *C. cuproviride* Springate & Noyes, both species having similar antennae and “lineolate” sculpture on scutellum medially that contrasts with the large polygonal cells on the mesoscutum. However, in females of *C. agrotis* the ovipositor is relatively shorter (not more than 1.3 times as long as the middle tibia) and not exerted, or hardly so, whereas in *C. cuproviride* it is longer (at least 1.4 times as long as the middle tibia and clearly exserted). Further work may show that the two species are synonymous, but we are treating the specimens from Georgia as *C. agrotis* as the females have the ovipositor a little less than 1.3 times as long as the middle tibia.

C. albipes (Westwood, 1837). GE.

C. atheas (Walker, 1837). *GE (5 ♀, incl. 2 ♀ on slide, Ninotsminda: Lake Sagamo, swept on the Poaceae, 15.VIII.1997, G.J., IZGAS).

C. augasmatis Trjapitzin, 1968. AR, AZ.

C. boucheanum Ratzeburg, 1844. AR, TR.

C. breviclava Hoffer, 1970. *GE (1 ♀, Variani, 8.VI. 1969, V.Y. (slide); 2 ♀, Tbilisi: Turtles lake, swept, 21.VI.2000, G.J., IZGAS), TR.

C. cervius (Walker, 1846). GE (3 ♀, incl. 1 ♀ on slide, Racha ridge, south-eastern slope, 1800 m, swept, 7.VIII.2003, G.J., IZGAS).

C. chalconotum (Dalman, 1820). AR.

C. filicorne (Dalman, 1820). AR, *GE (1 ♀, Tskneti, 26.VI.1969, V.Y. (slide), IZGAS).

C. flagellare (Dalman, 1820). AZ.

C. floridanum Ashmead, 1900. AZ, GE (1 ♂, Kobuleti: Legva, Choloki, 3.VIII.1996, G.J. (slide); 5 ♂, incl. 1 ♂ on slide, Kharagauli: Sakreula gorge, 18.VIII.1995, G.J.; 1 ♀, Adigeni: Ude, 6.VIII.1995, G.J. (slide); 1 ♀, Tetri tskhlbi, 29.VII.1961, M.A.; 1 ♀, Akhmeta: Babaneuri, 23.VII.1961, M.A.; 1 ♀, Avadkhara, 13.VIII.1961, M.A.; 1 ♀, Ninotsminda: nr. Lake Sagamo, on the Poaceae, 15.VIII.1997, G.J.; 1 ♂, 1 ♂, Kharagauli: Vardzia, Jvari, 25.VIII.1995, G.J.; 1 ♀, 1 ♂, Racha ridge, south-eastern slope, 1800 m, 7.VIII.2003, G.J., IZGAS), TR.

C. genale (Thomson, 1876). *GE (3 ♂, incl. 2 ♂ on slide, Ninotsminda: nr. Lake Sagamo, on the Poaceae, 15.VIII.1997, G.J., IZGAS).

C. gloriosum (Mercet, 1917). *GE (6 ♂, Tbilisi: Turtles lake, 21.VI.2000, G.J., IZGAS).

C. minutum (Herthetvzian, 1979). AR.

C. peticus (Walker, 1846). *GE (1 ♂, Gorge Vere, on *Elaeagnus*, 9.VII.1997, G.J., IZGAS).

C. phthorimaeae Logvinovskaya, 1982. GE.

C. sasheyense Erdös, 1957. GE.

C. sosares (Walker, 1837). GE.

C. sp. aff. thebe (Walker, 1838). GE.

C. truncatellum (Dalman, 1820). *GE (1 ♀, Tetri tskhlbi, 29.VII.1961, M.A. (slide); 2 ♀, 2 ♂, Nadikvari, 30.VIII.1961, M.A.; 1 ♀, Avadkhara, 13.VIII.1961, M.A.; 1 ♂, Tbilisi: Turtles lake, 21.VI.2000, G.J.; 2 ♀, Kiketi-Samadlo-Tetritskaro Rd, 13.VII.2000, G.J.; 1 ♀, Racha ridge, above Khorkhebi, near forest, 1400-1700 m, 7.VIII. 2003, G.J., IZGAS), TR (1 ♂, Isparta: Sutcular, Adada, 10.VII.2002, G.J., IZGAS).

C. varicornis (Nees, 1834). AR, AZ.

C. vicinum (Herthetvzian, 1979). AR.

Cowperia areolata (Walker, 1872). AR, GE, TR.

Dicarnosis sugonjaevi Myartseva, 1977. *TR (2 ♀, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N., BMNH).

D. superba Mercet, 1921. AZ (4 ♀, Divichi, dry hills, 27.V.1962, V.T., ZIN and BMNH).

D. vicina Trjapitzin & Hoffer, 1977. AR, AZ.

Dinocarsiella alpina (Girault, 1917). AR, AZ, GE.

Dinocarsis hemiptera (Dalman, 1820). AR, AZ, TR.

D. hofferi Graham, 1966. *GE (29 ♀, incl. 6 ♀ on slide, Ninotsminda: nr. Lake Sagamo, swept on the Poaceae, 15.VIII.1997, G.J., IZGAS and BMNH).

Discodes acanthopulvinariae Trjapitzin, 1968. AR.

D. anthores (Walker, 1848). AR.

D. coccophagus (Ratzeburg, 1848). AR, AZ, GE (1 ♀, 1 ♂, Tbilisi, ex *Sphaerolecanium prunastri* on *Prunus*, 11.V.1967, V.Y.; 14 ♀, 15 ♂, incl. 1 ♀, 3 ♂ on slides, Tbilisi: Bot. Gard., ex *S. prunastri* on *Prunus*, 21.V-5.VI. 1995, IZGAS), TR (1 ♀, 1 ♂, Isparta: Kuleonu, ex *S. prunastri* on *Prunus*, 1-4.VII.2001, G.J. (slide); 5 ♀, 3 ♂, Isparta: Mehmet-Tonge, ex *S. prunastri* on *Prunus*, 8-9.VII.2001, G.J., IZGAS).

D. differens Yasnosh, 1972. GE.

D. sp. aff. encopiformis (Walker, 1847). GE.

D. obscuriclavus Myartseva, 1981. *TR (1 ♀, Mugla: Fethiye, 300 m, Olu Deniz, 31.VIII.1992, J.N., BMNH).

D. rubtzovi Sugonjaev, 1971. AR, AZ.

D. trjapitzini Herthetvzian, 1979. AR (2 ♀, Erevan, Bot. Gard., 20.VIII.1971 and 8.VIII.1972, H., BMNH), AZ, *TR (1 ♀, Mugla: 44 km E. Fethiye, Fethiye-Koruteli Rd, 1000 m, 21.VIII.1992, J.N., BMNH).

D. valentinae sp. n. GE.

Dusmetia ceballosi Mercet, 1921. AZ.

D. euripersiae Trjapitzin, 1962. AR, AZ.

Echthplexiella aeineiventris Mercet, 1921. AR, AZ, GE (1 ♀, Vashlovani, ex *Scythia stipae*, 21.VII.1968,

V.Y. (slide), IZGAS), *TR (3 ♀, Mugla: 44 km E. Fethiye, Korkuteli Rd, 1000 m, 21.VIII.1992, J.N., BMNH).

E. flava Mercet, 1921. AZ.

E. obscura (Hoffer), 1954. GE (2 ♀, 3 ♂, Gonio nr. Batumi, ex Eriococcidae on grass, 30.VI.1958, D.K. & V.T., BMNH).

Ectroma albiclavatum (Hoffer, 1957). GE.

E. fulvescens Westwood, 1833. AZ.

Encyrtus aurantii (Geoffroy, 1785). AR, AZ, GE (1 ♀, Sukhumi, ex *Coccus pseudomagnolarium*, 1949, P., BMNH; 1 ♀, 1 ♂, Tbilisi, ex *Coccus hesperidum*, X.1952, V.Y. (slide); 1 ♀, Tbilisi: Mziuri, Vere river, ex *C. hesperidum* on *Elaeagnus*, 15.X.1997, G.J. (slide); 1 ♀, Batumi: Akhalsheni, ex *C. hesperidum* on *Citrus*, 18.IX. 1981, V.Y.; 5 ♀, 1 ♂, Tbilisi, ex *C. hesperidum*, X.1952, V.Y.; 1 ♀, Kobuleti: Legva, ex *C. hesperidum* on *Citrus*, 30.VIII.-9.IX.1994, G.J.; 1 ♀, Batumi: Gorodoki, on *Citrus*, 9.VI.1996, G.J.; 1 ♀, Tbilisi: Mziuri, ex *C. hesperidum* on *Elaeagnus*, 15-18.X.1997, G.J.; 1 ♀, Tbilisi: Isani, ex *C. hesperidum* on *Hedera*, 14.VII.1997, G.J.; 2 ♀, Tbilisi: Isani, nr Mtvari, ex *C. hesperidum* on *Acacia*, 8-9.VIII.1997, G.J.; 2 ♀, Tbilisi, ex *C. hesperidum* on *Cinnamomum camphora*, 24-29.VI.2000, G.J., IZGAS), TR.

E. infidus (Rossi, 1790). AR, AZ, GE (5 ♀, Tskneti, ex *Eulecanium transcaucasicum* on *Ulmus*, 28.VI.1968, V.Y.; 2 ♀, Tskneti, ex *Eulecanium* sp. on *Ulmus*, 28.VI.1966, V.Y., IZGAS), TR (1 ♀, Kalacik, ex *E. ciliatum* on *Prunus*, 10.VI.1999, B.K., IZGAS).

E. swederi Dalman, 1820. AR, AZ, GE (2 ♀, Tbilisi, ex *Pulvinaria* sp. on *Populus*, 5.VIII.1954, V.Y.; 2 ♀, Tbilisi: Digomi, ex *Pulvinaria* on *Populus*, 15.V.1957, V.Y.; 2 ♀, 1 ♂, Tbilisi: Ethn. Mus., ex *Coccus pseudomagnolarium* on *Juglans*, 13.V-5.VI.2000, G.J., IZGAS).

Epitetracnemus intersecatus (Fonscolombe, 1832). AR, AZ, GE (1 ♀, 1 ♂, Tbilisi, ex *Lepidosaphes ulmi* on *Populus gracilis*, 8.VIII.1961, M.A.; 11 ♀, 14 ♂, incl. 3 ♀, 3 ♂ on slides, Tbilisi, ex *L. ulmi* on *Populus*, 15.VII.1960, M.A.; 3 ♀, Tbilisi, ex *L. ulmi* on *Populus gracilis*, 4.VI.1960, M.A.; 3 ♀, Tbilisi, ex *L. ulmi* on *Populus gracilis*, 16.VII.1960, M.A.; 7 ♀, 10 ♂, Tbilisi, ex *L. ulmi* on *Populus gracilis*, 26.VII.1960, M.A.; 9 ♂, Tbilisi, ex *L. ulmi* on *Populus gracilis*, 19-27.VIII.1960, M.A., IZGAS), TR (1 ♀, Burdur, Tefenni, on *Malus* sp., 25.V.1998, B.K. (slide), IZGAS).

Eremophasma peliococci Myartseva, 1982. GE.

Ericydinus aeneus Nikol'skaya, 1952, sp. dist. *TR (12 ♀, 5 ♂, Ankara, Ayvali cad., ex *Trionymus multivorus* on *Sideritis* sp., 2.VIII.2002, B.K., IZGAS). – This species was erroneously synonymized with *E. robustior* Mercet, 1921 (Trjapitzin, 1989). The two species are distinct and can be separated using the characters listed below:

<i>E. aeneus</i> Nikol'skaya	<i>E. robustior</i> Mercet
Fore wings with 4-5 lines of setae basad of linea calva	Fore wings with 6-7 lines of setae basad of linea calva.
Stigmal vein slightly curved	Stigmal vein straight
Body completely dark	Body with yellow parts
Apical lamina of scutellum relatively narrow, at most 0.05 times as long as scutellum	Apical lamina of scutellum relatively broad, at least 0.1 times as long as scutellum

E. caudatus Erdös, 1957. AR.

E. heliococci Trjapitzin & Herthevtzian, 1972. AR.

E. robustior Mercet, 1921. AZ, *TR (1 ♀, Ankara: Sanatoryum aksaray, ex *Peliococcopsis priesneri* on *Cynodon*

dactylon, 25.VII.2002, B.K.; 1 ♀, 1 ♂, Ankara, Ayvali cad., ex *Trionymus multivorus* on *Sideritis* sp., 2.VIII.2002, B.K.; 1 ♀, Ege mahallesi, ex *Mirococcus inermis* on *Chenopodium album*, 13.VIII.2003, B.K., IZGAS). – Comment: It is possible that *E. danatensis* Myartseva is the same as *E. robustior* as both species have very similar colouration, in particular the infuscate anterior margin of the fore wing. This can be confirmed only after comparison of the relative type material of both species.

E. siyplus (Walker, 1837). AZ, GE.

E. strigosus (Nees, 1834). GE (1 ♂, Kharagauli: Varzia, Choda, 24.VI.1996, G.J. (slide), IZGAS).

E. ventralis (Dalman, 1820). GE (1 ♀, Tbilisi: nr. Lisi Lake, VI.1957, Dlabola, BMNH).

Eugahania fumipennis (Ratzeburg, 1852). AR, TR.

Eusemion cornigerum (Walker, 1838). GE.

Ginsiana carpetana (Mercet, 1921). AR, AZ, GE (2 ♀, Betania, 23.VII.1960, M.A., IZGAS), TR.

G. longicornis Trjapitzin, 1969. AR.

G. obscura Erdös & Novicky, 1955. *GE (2 ♀, incl. 1 ♀ on slide, Gombori, 31.VII.1961, M.A.; 1 ♀, 2 ♂, Racha ridge, south-easter slope, 1800 m, 7.VIII.2003, G.J., IZGAS).

G. praepannonica (Erdös, 1957). AR, AZ.

Habrolepis dalmanni (Westwood, 1837). AR, AZ, GE (5 ♀, incl. 1 ♀ on slide, Tbilisi: Bot. Gard., ex *Asterodiaspis quercicola* on *Quercus*, 2.VI.1968, V.Y., IZGAS), *TR (2 ♀, 43 km, Fethiye-Korkuteli Rd, 23.VIII.1992, J.N., BMNH).

H. italicus Delucchi, 1965. *TR (2 ♀, 43 km, Fethiye-Korkuteli Rd, 23.VIII.1992, J.N.; 1 ♀, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N.; 2 ♀, Mugla: Fethiye, Olu Deniz, 30 m, 31.VIII.1992, J.N., BMNH).

H. pascuorum Mercet, 1921. AZ.

H. tergrigoriana Trjapitzin, 1962. AR, AZ.

Hadzhibeylia physococci Myartseva & Trjapitzin, 1981. GE.

Helegonatopus citripes (Erdös, 1957). AZ, GE.

H. dimorphus (Hoffer, 1954). AZ.

Homalotyloidea erginus (Walker, 1837). AR.

Homalotylus eytelweinii (Ratzeburg, 1844). AZ, GE (1 ♂, Tbilisi: Gorge Vere, 1.5 km, 9.VII.1997, G.J., IZGAS).

H. flaminius (Dalman, 1820). *TR (2 ♀, 1 ♂, Izmir: Menemen, ex syrphid *Chenopodium* aphids (?), 28.V.1975, E.E., BMNH).

H. nigricornis Mercet, 1921. AR, AZ.

H. platynaspidis Hoffer, 1963. AR, *AZ (1 ♀, Baku, 4.VII.2002, S.I. (slide), IZGAS).

H. quaylei Timberlake, 1919. AR, AZ, GE, TR (4 ♀, Ankara: Kecioren Ataturk bahcesi, ex *Planococcus vovae* on *Juniperus*, 6.VIII.2003, B.K., IZGAS). – New host record: *Planococcus vovae* (Hemiptera: Pseudococcidae).

Hoplopsis minuta (Fabricius, 1793). AR, AZ, TR.

Iodromus flaviscutum Hoffer & Trjapitzin, 1978. AR, AZ, TR.

I. niger Ashmead, 1900. GE, TR.

I. ustianae Hoffer & Trjapitzin, 1967. AR, AZ.

I. vinulus (Dalman, 1820). AR, GE.

Lamennaisia ambigua (Nees, 1834). AR, AZ, GE, TR.

L. nobilis (Nees, 1834). AR, AZ, GE.

Leptomastidea abnormis (Girault, 1915). AZ, TR.

L. bifasciata (Mayr, 1876). AR, AZ.

Leptomastix algirica Trjapitzin, 1989. *TR (1 ♀, Mugla: 4 km N. Olu Deniz, 21.VIII.1992, J.N.; 1 ♀, 44 km, Fethiye-Korkuteli Rd, 1000 m, 21.VIII.1992, J.N.; 3 ♀, Mugla: Fethiye, Olu Deniz, 300 m, 31.VIII.1992, J.N., BMNH).

L. dactylopis Howard, 1885. TR.

L. flava Mercet, 1921. AR, AZ, GE, TR (1 ♀, 2 ♂, Mugla: Fethiye, Olu Deniz, 300 m, 31.VIII.1992, J.N.;

7 ♀, 9 ♂, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N.; 1 ♂, Mugla: Tlos, 300 m, 28.VIII.1992, J.N.; 2 ♀, 5 ♂, Mugla: 44 km E. Fethiye, Fethiye-Korkuteli Rd, 1000 m, 21.VIII.1992, J.N.; 1 ♂, Mugla: 43 km, Fethiye-Korkute-li Rd, 23.VIII.1992, J.N., BMNH).

Mahencyrtus comara (Walker, 1837). AR, GE.

Mayridia colocensis Erdős, 1957. GE.

M. formosula Mercet, 1921. AR, AZ, *TR (5 ♀, Ankara: Cubuk Kara Gol yaylasi, ex *Trionymus aberrans* on *Triticum*, 17.X.2001, B.K., IZGAS).

M. sp. aff. formosula Mercet, 1921. GE.

M. hyalipennis Trjapitzin, 1968. AR, AZ.

M. merceti Trjapitzin, 1969. AR, TR (2 ♀, 1 ♂, Cubuk Kara Gol yaylasi, ex *Trionymus aberrans* on *Triticum*, 17.X.2001, B.K., IZGAS). – New host record: *Trionymus aberrans* (Hemiptera: Pseudococcidae).

M. myrlea (Walker, 1838). AR, AZ.

M. procera (Mercet, 1921). *GE (1 ♀, Tbilisi: Nata-khtari, on *Quercus*, 4.VII.1966, V.Y., IZGAS).

M. pulchra Mercet, 1921. AR, AZ, *TR (1 ♀, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N. (slide); 1 ♀, Ankara, ex *Trionymus multivorus* on *Stachys* sp., 19.VII.2003, B.K., IZGAS).

M. terteriana Herthevtzian, 1979. AR.

M. viridiscutellum (Hoffer, 1970). AR.

Metanotalia maderensis (Walker, 1872). *TR (4 ♀, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N., BMNH; 1 ♀, Ankara, ex *Trionymus multivorus* on *Sideritis* sp., 2.VIII.2002, B.K., IZGAS).

Metaphaenodiscus nemoralis Mercet, 1921. AR.

Metaphycus asterolecanii Mercet, 1923. AR, GE, TR (1 ♀, Ankara, ex *Asterodiaspis* sp. on *Quercus*, 20.V.1998, G.J. (slide), IZGAS).

M. babajani Sugonjaev, 1975. AR, AZ.

M. bogdanovikatkovi Myatseva, 1984. GE.

M. dispar (Mercet, 1921). AR, AZ (4 ♀, 1 ♂, Baku, on *Morus*, 4.VII.2002, S.I. (slide), IZGAS), GE (3 ♂, Tbilisi: Bot. Gard., ex *Parthenolecanium corni* on *Cercis siliquastrum*, 16-17.IV.1998, G.J. (slides), IZGAS), TR. – Comment: The male of this species was erroneously determined as "Genus aff. *Bureshiella* Hoffer, 1983" (Japoshvili, 2000a, 2000b).

M. flavovarius (Mercet, 1921). AR.

M. flavus (Howard, 1881). TR. – Comment: Simmonds (1969; see also Noyes & Hayat, 1994; Guerreri & Noyes, 2000; Noyes, 2004) recorded that *Metaphycus flavus* was released in Batumi (= Batumi) from California and that initial establishment occurred. The species has not since been found in the area and therefore we assume that permanent establishment did not occur and therefore Georgian records of this species are excluded from this account.

M. helvolus (Compere, 1926). TR.

M. hispanicus (Mercet, 1921). *GE (1 ♂, Java, ex *Chionaspis salicis* on *Salix*, 20.X.1953, V.T. (slide), IZGAS). – New host record: *Chionaspis salicis* (Hemiptera: Diaspididae).

M. hodzhevaniashvili Yasnosh, 1972. GE (9 ♀, incl. 2 ♀ on slide, Vashlovani, Kumro, ex *Stotzia maxima* on *Ephedra*, 22.VI.1973, I.K., IZGAS).

M. insidiosus (Mercet, 1921). AR, AZ, GE (5 ♀, 4 ♂, incl. 1 ♀, 1 ♂ on slides, Tbilisi: Ethn. Mus., ex *Parthenolecanium corni* on *Fraxinus*, 13.V.-7.VI.2000, G.J.; 1 ♀, Tbilisi: Mziuri, ex *P. corni* on *Acacia*, 15.IV.1998, G.J.; 2 ♀, 1 ♂, Kaspi, Doesi, ex *P. corni* on *Prunus*, 17.IV.-3.V.2001, Sh.B., IZGAS), TR.

M. luteolus (Timberlake, 1916). AZ, GE.

M. melanostomatus (Timberlake, 1916). AR, AZ, TR. – The record of this species from Georgia is incorrect (Guerreri & Noyes, 2000) and should be disregarded.

M. nadius (Walker, 1838). *GE (3 ♀, incl. 1 ♀ on slide,

Tbilisi: Bot. Gard., ex *Asterodiaspis querxicola* on *Quercus hartwissiana*, 8.V.1966, V.Y., IZGAS).

M. silvestrii Sugonjaev, 1960. AR, AZ, GE (1 ♂, Tbilisi: Bot. Gard., ex *Sphaerolecanium prunastri* on *Prunus*, 21.V.-5.VI.1995, G.J. (slide), IZGAS), TR.

M. stagnarum Hoffer, 1954. TR (5 ♀, incl. 3 ♀ on slide, Isparta, ex *Planococcus ficus* on *Cydonia*, 16-17.IX.2002, G.J.; 8 ♀, 1 ♂, incl. 2 ♀ on slide, Isparta, ex *P. ficus* on *Cydonia*, 14-22.X.2002, G.J.; 1 ♀, Isparta, Halikent, ex *P. ficus* on *Cydonia*, 19-22.IX.2002, B.A. (slide), IZGAS).

M. zebraetus (Mercet, 1917). GE (3 ♀, incl. 1 ♀ on slide, Tbilisi: Bot. Gard., ex *Planchonia arabidis* on *Hedera*, 4.VII.1969, V.Y.; 1 ♀, Kiketi, Samadlo, 13.VII.2000, G.J. (slide), IZGAS).

Metapsyllaephagus tashlievi Myartseva, 1980. AR.

Microterys bellae Trjapitzin, 1968 (= *eulecanii* Pilip-yuk & Sugonjaev, 1971, syn. n. Holotype: ♀, Russia, Sa-khalin, ZIN, examined). TR (18 ♀, 13 ♂, incl. 1 ♀ on slide, Isparta, ex *Rhodococcus perornatus* on *Rosa damascena*, 5-20.V. and 5-20.VI.2001, O.D., IZGAS).

M. chalcostomus (Dalman, 1820). AR, AZ, GE.

M. clauseni Compere, 1926. GE (2 ♀, 2 ♂, incl. 1 ♀ on slide, Tbilisi: Bot. Gard., ex *Ceroplastes japonicus* on *Ilex*, 21.V.-5.VI.1998, G.J.; 1 ♀, Tbilisi: Kairo st., ex *C. japonicus* on *Laurus*, 15.V.1999, G.J. (slide); 1 ♂, Batumi, ex *C. japonicus* on *Acer*, 5-8.VI.2003, G.J.; 1 ♀, Tbilisi: Samgori, ex *C. japonicus* on *Laurus nobilis*, 15.V.1999, G.J.; 12 ♀, 2 ♂, Tbilisi: Bot. Gard., ex *C. japonicus* on *Laurus*, 23.V.-9.VI.1998, G.J.; 1 ♀, 3 ♂, Tbilisi: Mtskheta st., ex *C. japonicus* on *Diospyros* and *Acer*, 15.V.-5.VI.1998, G.J.; 1 ♀, Tbilisi: Bot. Gard., ex *C. japonicus* on *Laurus nobilis*, 5.VI.1998, G.J., IZGAS). – Comment: *Microterys clauseni* is very close to *M. lunatus* and further work may show that they are synonymous. However, although the species are difficult to separate morphologically, there do appear to be differences in host preference (see comment under *M. lunatus*).

M. cneus Trjapitzin & Sugonjaev, 1976. *TR (2 ♂, Isparta: Halikent, ex *Planococcus ficus* on *Cydonia*, 16-22.IX.2002, G.J. and B.A., IZGAS).

M. cuprinus (Nikol'skaya, 1952). AR (3 ♀, Zovashen, ex *Didesmococcus unifasciatus*, 15.V.1971, B., BMNH), AZ.

M. cyanocephalus (Dalman, 1820). AR.

M. darevskii Trjapitzin, 1968. AR, AZ, *TR (1 ♀, Sogut-Burdur, ex *Puto* sp. on Poaceae, *Galium*, *Medicago*, 30.V.2000, B.K., BMNH). – New host record: *Puto* sp. (Hemiptera: Coccoidea).

M. duplicatus (Nees, 1834). AR, AZ (1 ♀, Ordubad, ex *Rhodococcus turanicus* on *Prunus*, 13.V.1970, L.R., BMNH), GE (1 ♂, Tbilisi: Nutsubidze, ex *R. spiraea* on *Spiraea*, 6-10.VI.1998, G.J. (slide); 1 ♀, Tbilisi: Bot. Gard., ex *Parthenolecanium corni* on *Cercis siliquastrum*, 16.IV.1998, G.J. (slide); 1 ♀, Kvemo Gomi, ex *Palaeolecanium bituberculatum* on *Malus*, 9.X.1953, V.Y.; 3 ♂, Tbilisi: Lisi, forest, ex *R. spiraea* on *Spiraea*, 6-10.VI.1998, G.J., IZGAS). – Comment: Examination of the above material leads us to suggest that *Microterys turanicus* Sugonjaev and *M. herbaceus* Sugonjaev are very close to *M. duplicatus* and may eventually prove to be synonymous. However, we believe that this synonymy should be proposed only after comparison of the relevant type material with recently reared material.

M. ferrugineus (Nees, 1834). AR, GE (1 ♀, 1 ♂, Tbilisi: Saburtalo, Agarakobi, ex *Kermes roboris* on *Quercus*, 6.VI.1998, G.J. (slides); 27 ♀, 6 ♂, Tbilisi: Saburtalo, Lisi above Nutsubidze, 6-8.VI.1998, G.J., IZGAS).

M. fuscipennis (Dalman, 1820). AZ.

M. hortulanus Erdős, 1957. AR, AZ, GE (6 ♀, 7 ♂, incl. 1 ♀, 2 ♂ on slides, Tbilisi, ex *Sphaerolecanium pru-*

nastri on *Prunus*, 21.V.-5.VI.1995, G.J.; 1 ♂, Telavi: Kisis Khevi, ex *S. prunastri* on *Prunus*, 21.VI.1954, V.Y., IZGAS), TR (1 ♂, Isparta: Mehmet-Tonge, ex *S. prunastri* on *Prunus*, 8-9.VII.2001, G.J. (slide); 2 ♀, incl. 1 ♀ on slide, Isparta: Kuleonu, ex *S. prunastri* on *Armeniaca vulgaris*, 10.V.2002, O.D.; 17 ♀, 2 ♂, Izmir, ex coccid on *Prunus*, 14.V.1974, C.O.; 3 ♀, Izmir, Karsiyaka, ex *S. prunastri* on plum, 20. and 26.VI.1974, C.O. and H.G.; 1 ♀, Ege, Afion, ex *S. prunastri* on cherry, 24.V.1999, S.U., BMNH). – Comment: Males of this species were misidentified previously as *Metablastostix truncatipennis* (Ferrière) (Japoshvili, 2000a, 2000b).

M. lehri Sugonjaev, 1965. AR.

M. lunatus (Dalman, 1820). *AZ (1 ♀, Baku, ex *Ceroptastes japonicus*? on quince, 3.VII.2000, S.I. (slide), IZGAS), TR. – Comment: *Microterys lunatus* is very difficult to distinguish morphologically from *M. clauseni*, suggesting that the two species might be synonymous. The specimens reared from *C. japonicus* in Baku are morphologically most similar to specimens of *M. lunatus* that have been examined (BMNH), although the normal host of *M. lunatus* is *Physokermes* (Sugonjaev, 1984) and that of *M. clauseni* is *Ceroptastes* (Trjapitzin, 1989).

M. masii Silvestri, 1919. TR.

M. nietneri (Motschulsky, 1859). AZ, GE (1 ♀, Tbilisi: Bot. Gard., ex *Sphaerolecanium prunastri*? on *Prunus*, I.K., (slide), IZGAS), TR (1 ♀, Mersin: Tece, ex *Ceroptastes japonicus* on *Laurus*, 25.IX.2002, L.E., IZGAS).

M. rufulus (Mercet, 1921). AR, AZ.

M. sceptriger (Fürster), 1841. GE.

M. stepanovi Trjapitzin, 1989. GE.

M. sylvius (Dalman, 1820). AR, AZ, GE (2 ♀, 1 ♂, incl. 1 ♀ on slide, Tbilisi: Ethn. Mus., ex *Rhodococcus spiraeae* on *Spiraea*, 16-25.V.1998, G.J.; 1 ♂, Kaspi, on the grass, 6.VI.1960, M.A.; 1 ♀, 1 ♂, Tbilisi: Natakharti, ex *Parthenolecanium rufulum* on *Quercus*, 6.VI.1966 and 6.VI.1968, V.Y.; 1 ♀, Tbilisi: Lisi, Agarakebi forest, ex *R. spiraeae* on *Spiraea*, 6-12.VI.1998, G.J., IZGAS), TR (1 ♀, Isparta: Kuleonu, ex *Eulecanium* sp. on *Prunus*, 5-16.VI.2002, G.J. (slide); 5 ♀, Isparta: Kuleonu, ex *Eulecanium douglasii* on *Prunus*, 5-16.VI.2002, G.J.; 2 ♀, 1 ♂, Isparta: Kuleonu, ex *P. persicae* on *Prunus*, 5-16.VI.2002, G.J., IZGAS).

M. tessellatus (Dalman, 1820). AR, AZ, GE (1 ♂, Tskneti, on the grass, 7.VII.1960, M.A. (slide); 1 ♂, Bakuriani: Kokhta, 24.VII.1966, V.Y. (slide); 1 ♀, Tskneti, forest, 12.VII.1960, M.A., IZGAS).

M. tricoloricornis (De Stefani, 1886). GE, TR.

M. trjapitzini Yasnosh, 1969. GE.

M. vashlovanicus Yasnosh, 1972. GE.

Mira mucora Schellenberg, 1803. AR, AZ.

Monodiscodes intermedium (Mayr, 1876). AR, AZ, GE (1 ♀, Tbilisi: Bot. Gard., on the grass, 26.VII.1956, V.Y., IZGAS), TR.

M. dimorphus (Mercet, 1921). AR, AZ, TR.

Oobius rudnevi (Novicky, 1928). GE.

O. zahaikevitshi Trjapitzin, 1963. GE.

Ooencyrtus brunneipes Noyes, 1978. *GE (1 ♀, Racha: Khorkhebi, 8.VIII.2003, G.J., IZGAS).

O. krasilnikovae (Myartseva, 1979). AR.

O. kuvanae (Howard, 1910). TR.

O. obscurus (Mercet, 1921). AR.

O. pityocampae (Mercet, 1921). TR (10 ♀, 1 ♂, Boranova, ex *Eurydema*, 23.VII.1957; 27 ♀, 3 ♂, Antalia: Duzlercan, ex eggs of *Thaumatopoea pityocampa* on *Pinus brutis*, 23.IX.1992, BMNH).

O. tardus (Ratzeburg, 1844). GE.

O. telenomicida (Vassiljev, 1904). AR (6 ♀, 2 ♂, Shurnukh: nr. Goris, 10.IX.1956, V.T., BMNH), AZ, GE (1 ♀, Racha: Zemo Imereti, Khorkhebi, 8.VIII.2003, G.J., IZGAS),

TR (9 ♀, 5 ♂, Isparta, 25.VII.2001, G.J. (slide); 9 ♀, 3 ♂, incl. 4 ♀, 1 ♂ on slides, Isparta, Yalvac, ex Pentatomidae, 17.V.2002, G.J.; 9 ♀, 3 ♂, Isparta, Pentatomidae, 22.VII.2002, G.J., IZGAS).

[**Ooencyrtus vinulae** (Masi, 1909). – This species was originally recorded from Azerbaijan by Rzaeva (1967) and this was followed by Trjapitzin (1989) and Noyes (2004). However, in her more recent list (Rzaeva, 2002) of chalcidoidea from Azerbaijan it is not mentioned. We therefore concluded that the original record from this country was erroneous and excluded it from our list.]

Parablatticida brevicornis (Dalman, 1820). AZ, GE. P. citri (Mercet, 1921). GE.

Paracopidosoma parallelum Hoffer, 1957. AR.

Paramasia slovaca Hoffer, 1953. AR, AZ.

Parasauliea trjapitzini Hoffer, 1968. TR (3 ♀, 2 ♂, 2 ♀, 1 ♂ on slide, Isparta: Konukeve, ex *Lepidosaphes newsteadi*, 6-9.VII.2001, G.J., IZGAS). – New host record: *Lepidosaphes newsteadi* (Hemiptera: Diaspididae).

Paratetracnemoidea malenotti (Mercet, 1918). AR, AZ.

Pentacladocerus araraticus (Trjapitzin, 1962). AR, TR.

P. matranus Erdös, 1963. AR.

P. stepanovi Trjapitzin, 1968. AR.

Plagiomyia sp. AZ.

Platencyrtus parkeri Ferrière, 1955. AR, AZ.

Prionomitus mitratus (Dalman, 1820). AR, AZ, GE (1 ♀, Tbilisi: Khudadovi forest, ex *Cacopsylla crataegi* on *Crataegus*, 11-12.VI.1998, G.J. (slide); 4 ♀, 4 ♂, Lanchkhuti, ex *C. pruni* on *Prunus*, 14.VI.1974, T.Ch., IZGAS).

P. tiliaris (Dalman, 1820). AR, AZ. – Variation: We have noted some variation in the colour of the thoracic dorsum with the mesoscutum and scutellum varying from metallic green to metallic purple.

Prochiloneurus bolivari Mercet, 1919. AR, AZ, GE. – Variation: F1-F4 from completely dark brown to completely white, middle tibia from yellow to dark brown; size from 1-2mm.

P. pulchellus Silvestri, 1915. GE.

Pseudaphycus hungaricus Erdös, 1956. GE.

P. maculipennis Mercet, 1923. GE.

P. malinus Gahan, 1946. AR, AZ, GE (1 ♀, 1 ♂, Tbilisi, ex Aphidiidae?, on *Populus*, 20.VIII.1960, M.A., IZGAS).

P. phenacoci Yasnosh, 1957. AR, AZ, GE.

Pseudococcobius obenbergeri (Novicky, 1926). AR, AZ, GE, *TR (1 ♀, Eymur, ex *Eriococcus devoniensis* (= *Acanthococcus devoniensis*) on *Achillea*, 28.VIII.2003, B.K., IZGAS). – New host record: *Eriococcus devoniensis* (Hemiptera: Eriococcidae).

Pseudorhopus testaceus (Ratzeburg, 1848). AZ.

Psilophrys ghilarovi Japoshvili, 2005. TR.

P. sp. TR. – This species is being described in a paper currently in preparation.

P. tenuicornis Graham, 1969. AR, TR.

Psyllaephagus abbreviatus (Hoffer, 1963). AR.

P. badchysi Myartseva, 1980. GE.

P. belanensis (Hoffer, 1963). AZ.

P. caillardiae Sugonjaev, 1968. *TR (1 ♀, 1 ♂, Mugla: 43 km, Fethiye-Korkuteli Rd, 23.VIII.1992, J.N., BMNH).

P. elaeagni Trjapitzin, 1967 (= *bachardenicus* Myartseva, 1980, syn. n. Holotype: ♀, Turkmenistan, Ipal-Kala, ZIN, examined; = *rubriscutellatus* Myartseva, 1981, syn. n. Holotype: ♀, Turkmenistan, Cheleken, ZIN, examined). AR (4 ♀, Megrli, on *Elaeagnus* sp., 23.VI.1953, ZIN), AZ, GE (6 ♀, 5 ♂, Gorge Vere, ex *Trioza magniseta* on *Elaeagnus*, 9-11.VII.1997, G.J.; 2 ♀, Tbilisi: Saburtalo, ex *Cacopsylla rhamnicola* on *Rhamnus*, 6-

12.VI.1998, G.J.; 3 ♀, 6 ♂, Kumisi, ex psyllids on *Elaeagnus*, 30.V.-8.VI.1997, G.J., IZGAS), *TR (1 ♀, Mugla: nr. Fethiye, 4 km N. Olu Deniz, 21.VIII.1992, J.N., BMNH). – Comment: The differences between the three species cited by Myartseva (1980, 1981) fall within the range of variation noted in material recently collected in Georgia and Turkey and therefore we are treating the names as synonymous. – Diagnosis: Head, most of thorax and gaster with a metallic green sheen; scutellum with a violet sheen; FV above toruli with a violet lustre; scape and pedicel dark brown; flagellar segments brown, gradually becoming paler apically so that F6 is very pale brown almost yellow, and clava is yellow; tegula with base white and apex dark brown; mesopleuron and gaster with some golden reflection; fore coxa yellow; middle and hind coxa and hind femur dark brown. Frontovertex about 0.4 times head width; ocelli forming an obtuse angle; OOL about half ocellar diameter; OCL about 1.5 times ocellar diameter. Mesoscutum with slightly deeper sculpture than scutellum. Gaster with cercal plates in the apical half; ovipositor hardly exerted.

P. euphyllurae (Masi, 1911). TR.

P. georgicus Yasnosh & Japoshvili, 1999. GE.

P. pistaciae Ferrière, 1961. TR.

P. procerus (Mercet, 1921). AR, AZ, GE (2 ♀, 1 ♂, Gori, ex *Cacopsylla* on *Fraxinus*, 20.VI.1973, IZGAS), TR. – New host record: *Cacopsylla* sp. (Hemiptera: Psyllidae).

P. pulchellus (Mercet, 1921). TR (1 ♀, Mugla: 43 km E. Fethiye Rd., 1100 m, dry river gulley, 23.VIII.1992, J.N. (slide); 2 ♀, Mugla: nr. Fethiye, 4 km N. Olu Deniz, 21.VIII.1992, J.N.; 1 ♀, 1 ♂, Mugla: 43 km, Fethiye-Korkuteli Rd, 23.VIII.1992, J.N., BMNH)

P. pulcher Herthevtzian, 1979. AR.

P. smaragdinus (Hoffer, 1963). AR, AZ.

P. tamaricicola Myartseva, 1979. AR.

P. tokgaevi Myartseva, 1979. GE (2 ♀, incl. 1 ♀ on slide, Gldanula, 28.VI.-20.VII.1998, G.J., IZGAS). *TR (1 ♀, Mugla: 43 km E. Fethiye, Fethiye-Korkuteli Rd, 1100 m, dry river gulley, 23.VIII.1992, J.N.; 4 ♀, Mugla: 43 km, Fethiye-Korkuteli Rd, 23.VIII.1992, J.N. (BMNH).

Rhopus flavidus (Mercet, 1921). *TR (4 ♀, 5 ♂, Ankara: Oyak Cagmas Mahe, ex *Pseudococcus* on *Cynodon dactylon*, 4.IX.2002, B.K., IZGAS). – Comment: The above specimens compare well with Spanish material identified as *R. flavidus* in the BMNH.

R. longicornis (Trjapitzin & Herthevtzian, 1974). AR, AZ.

R. meridionalis (Ferrière, 1955). AZ.

R. stepanovi Liao, 1961. GE.

Sectriclava cleone (Walker, 1844). AZ, GE.

Subprioronotus festucae (Mayr, 1876). AR, GE (4 ♀, Achara: Keda, ex *Eriopeltis festucae*, 20.VII.1962, Z.H.; 5 ♀, 1 ♂, Variani, ex *E. festucae* on *Lolium*, 15.VII.1966, V.Y.; 1 ♀, Vashlovani, ex *Scythia stipae* on the Poaceae, 21.VII.1968, V.Y., IZGAS).

Syrphophagus aeruginosus (Dalman, 1820). AR, AZ, GE (1 ♀ (on slide), 1 ♂, Tbilisi: Samgori, ex *Brachycaudus amygdalinus* on peach, VI-VIII.1967, I.S.; 1 ♀, ex pupae, 1.VII.1961, V.Y. (slide); 1 ♀, Tbilisi, Samgori, ex *Cacopsylla pyri* on pear, 17.V.1969, T.Ch., IZGAS), TR.

S. aphidivorus (Mayr, 1876). AR, AZ, GE (5 ♀, 1 ♂, Kodis Tskaro, ex Aphidiidae on *Cirsium*, 15.VII.1966, V.Y.; 2 ♀, Ninotsminda: nr lake Sagamo, 15.VIII.1997, G.J.; 1 ♀, Tbilisi: Turtles lake, 21.VI.2000, G.J.; 1 ♀, Kharagauli: Vardzia, Borotsminda, 25.VI.1995, G.J., IZGAS), TR (2 ♀, 2 ♂, Egirdir, ex *Aphis pomi* on *Malus*, 19.VI-12.VII.2001, G.J.; 1 ♀, Isparta: Kuleonu, ex aphids on *Armeniaca vulgaris*, 1-3.VII.2001, G.J. (slide), (IZGAS); 1 ♀, Izmir, IV.1975, E.E.; 1 ♀, Aydin, VI.1975, E.E.; 2 ♀, Manisa, VI.1976, E.E., BMNH).

S. arundinicola Hoffer, 1965. AR.

S. elaeagni (Trjapitzin, 1969). AR, AZ, *GE (1 ♀, Tbilisi: Gorge Vere, ex *Trioza magnisetosa* on *Elaeagnus*, 8.VII.2000, G.J. (slide), IZGAS).

S. herbidus (Dalman, 1820). AR, AZ, *GE (3 ♀, 1 ♂, Kharagauli: Vardzia, Chalkheeti, nr. river Sakreula, 24.VI.1996, G.J., IZGAS).

S. hyalinipennis (Mayr, 1876). AR, AZ.

S. manitus (Walker, 1837). GE (2 ♀, 1 ♂, incl. 1 ♀, 1 ♂ on slides, Tbilisi: Khudadovi forest, ex *Cacopsylla crataegi* on *Crataegus*, 11-12.VI.1998, G.J.; 2 ♀, Lanchkhuti, ex *C. pyri* on *Prunus*, 14.VI.1973, T.Ch., IZGAS). – New host record: *Cacopsylla crataegi* (Hemiptera: Psyllidae).

S. pertiades (Walker, 1837). GE.

S. taeniatus (Förster, 1861). GE (4 ♀, Tbilisi: Samgori, ex *Cacopsylla pyri* on *Pyrus*, 29.V.1969, T.Ch.; 2 ♀, Tbilisi, Dend. Park., ex *C. pyri* on *Pyrus*, 28.V. and 29.VI.1969, T.Ch., IZGAS).

Tachardiaephagus tachardiae (Howard, 1896). AZ.

Tachinaephagus zealandicus Ashmead, 1904. *GE (1 ♀, Tbilisi, Didgori st., swept in the house, 15.X.1997, G.J. (slide), IZGAS).

Tetracnemoidea brevicornis (Girault, 1915). GE.

Tetracnemus avetianae Herthevtzian, 1978. AR.

T. bifasciatellus (Mercet, 1921). AR, AZ.

T. heydeni (Mayr, 1876). AZ, GE, *TR (43 ♀, 8 ♂, Mugla: Fethiye, 21-31.VIII.1992, J.N., BMNH).

T. peliococci Myartseva, 1979. GE.

T. simillimus (Hoffer, 1953). GE (1 ♀, Vashlovani, ex *Rhizopulvinaria armeniaca* on *Cryptostegia grandiflora*, 8.VI.1969, V.Y., IZGAS).

T. terminassianae Herthevtzian, 1978. AR (1 ♀ (paratype), Erevan, 23.VII.1970, H., BMNH), AZ, *TR (2 ♀, Mugla: Tlos, 500-700 m, 27.VIII.1992, J.N., BMNH).

Thomsonica amethystus (Walker, 1838). AR, AZ, GE.

Trichneutes flavipes (Mercet, 1921). AR, AZ, *TR (1 ♀, Kars: Ararat, 4.IX.1960, BMNH).

T. psyllae (Ruschka, 1923). AR, AZ, GE, *TR (1 ♀, Mugla: 56 km, Fethiye, 23.VIII.1992, J.N., BMNH).

Trichomastus albimanus Thomson, 1876. AR, AZ, GE (12 ♀, 3 ♂, incl. 3 ♀, 1 ♂ on slides, Tbilisi, ex *Eriopeltis festucae* on the Poaceae, 28.VI.1960, M.A.; 1 ♀, Kumisi, 21.VI.1961, M.A. (slide); 7 ♀, 3 ♂, incl. 1 ♀, 1 ♂ on slides, Tbilisi, Bot. Gard., ex *Planchonia arabis* on *Hedera*, 10.IV.1966, 4.VI.1969, 22.IV.1970, V.Y.; 1 ♂, Kharagauli: Vardzia, Chalkheeti, 24.VI.1996, G.J. (slide); 1 ♂, Tbilisi: above Nutsubidze, ex *Rhodococcus spiraeae* on *Spiraea*, 6-10.VI.1998, G.J. (slide), IZGAS), TR. – New host record: *Rhodococcus spiraeae* (Hemiptera: Coccoidea).

T. coeruleus Mercet, 1923. AR.

T. cyaneus (Dalman, 1820). AR, GE (1 ♀, Variani, 15.VII.1966, V.Y., IZGAS), TR.

T. ivericus Yasnosh, 1969. GE.

Trjapitzinellus obscurus (Mercet, 1921). AR.

Tyndarichus melanacus (Dalman, 1820). AR, AZ, GE (6 ♀, 1 ♂, Nadikvari, 30.VII.1961, M.A.; 1 ♀, Bakuriani, 28.VII.1966, V.Y.; 3 ♀, incl. 1 ♀ on slide, Tsalka, 25.V.1997, G.J.; 1 ♀, Omalo, on *Padus racemosa*, 28.VI.1960, M.A., IZGAS).

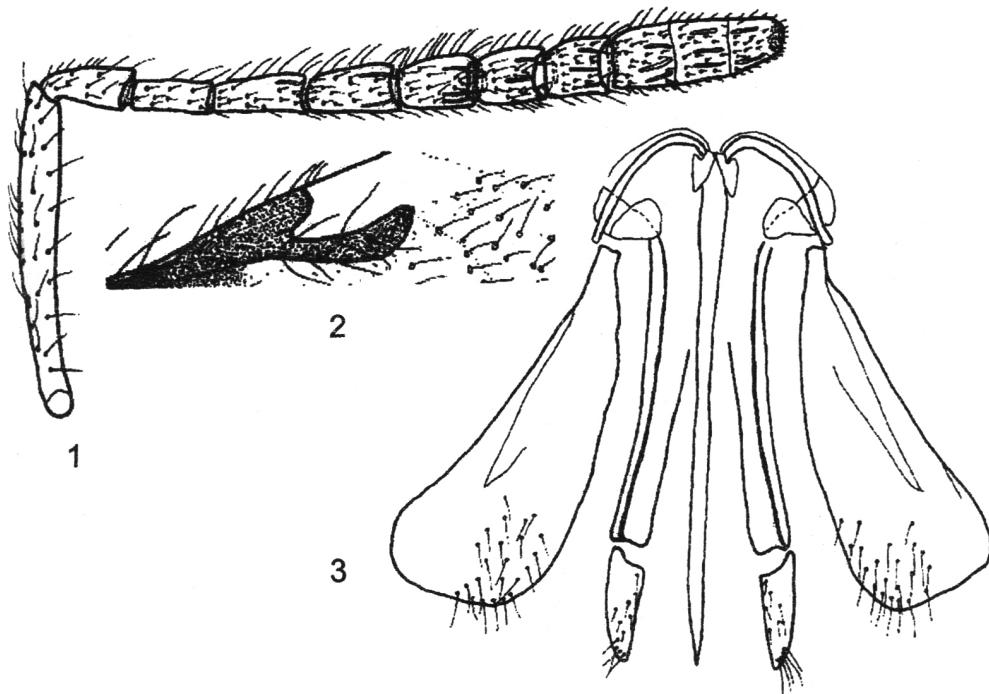
T. scaurus (Walker, 1838). AR.

Xanthoectroma aquilinum Mercet, 1925. AR.

Xenostryxis jasnoshae (Myartseva & Trjapitzin, 1974). AR.

Zaomma eriococci (Ferrière, 1955). AR (1 ♀, Erevan: Karagach, 22.IX.1956, V.T., BMNH), GE (1 ♀, 1 ♂, Tbilisi: Bot. Gard., ex *Eriococcus aceris*, 30.V.1957, V.Y., IZGAS).

Z. lambinus (Walker, 1838). AR, AZ, GE (7 ♀, 1 ♂, incl. 2 ♀, 1 ♂ on slide, Tbilisi: Gldanula, ex *Adiscodius*



Figs 1-3. *Discodes valentinae* sp. n., ♀. 1, antenna; 2, venation of forewing; 3, ovipositor.

aspis tamaricicola on *Tamarix*, 28.VI.-20.VII.1998, G.J.; 2 ♀, 1 ♂, Tbilisi, ex *Lepidosaphes ulmi* on *Populus gracilis*, 15.VII.1960, M.A., IZGAS), TR (1 ♀, Isparta, Egirdir, ex *Diaspidiotus ostreaeformis* on *Platanus*, 16-18.VIII.2001, G.J. (slide); 1 ♀, Zelve-Nevsehir, ex *L. ulmi* on *Juglans regia*, VIII.2000, B.K., IZGAS). – New host records: *Aspidiota tamaricicola*, *Aulacaspis* sp. (Hemiptera: Diaspididae).

Zaommoencyrtus liaoii (Trjapitzin, 1962). GE.

Description of the new species

Discodes valentinae sp. n. (Figs 1-3)

Holotype. ♀, Georgia, Tbilisi, Botanical Garden, ex *Planchonia arabidis* on *Hedera helix*, 24.V.1965, V. Yasnosh (slide), IZGAS.

Description. Female (critical point dried holotype): length 1.43 mm.

Body black with a violet-green metallic sheen; antenna brownish; legs dark brown; tarsal segments I-IV yellow; middle femur with a narrow, subbasal brown ring-like band; fore wing hyaline in proximal 1/4-1/5, remainder infuscate but gradually becoming paler distally so that apex almost hyaline.

Head about 2.68 times as wide as FV; FV 1.5 times as wide as long; ocelli forming an obtuse triangle of about 105°; distance between torulus and

eye margin about 1.4 times as long as distance between toruli; mandible tridentate; palp formula 4-3; scape about 7.5 times as long as wide; sensillae present on F2-F6. Relative measurements: POL 18, POD 3, AOL 10, OOL 2, OCL 2.5, HW 70, FV 26, FVL 18, EL 43, MS 19, TA 35.

Mesoscutum about 3 times as wide as long; scutellum about 1.3 times as wide as long; fore wing about 1.9 times as long as wide; marginal and stigmal vein equal in length and each about 2.7 times as long as postmarginal; hind wing about 3.4 times as long as wide; midtibial spur about 0.38 times as long as middle tibia; fore femur slightly flattened and about 3 times as long as wide.

Ovipositor not exserted, subequal in length to middle tibia; gonostylus about 3.7 times as long as wide. Relative measurements: OL 52, MT 52/54, GL 11, GW 3, OPL 37/38, OPW 14/15.

Etymology. The species is named in honour of the worldly known chalcid taxonomist Dr Valentina Yasnosh.

Comparison. *Discodes valentinae* is most similar to *D. anthores* (Walker, 1848), both species being of similar general body shape and colouration, especially the antenna, which is completely brown, without any pale segments. Females of the two species differ as follows:

<i>D. valentinae</i> sp. n.	<i>D. anthores</i> (Walker)
Fore wing with stigmal vein 2.7 times as long as postmarginal vein	Fore wing with stigmal vein at most 1.5 times as long as postmarginal vein
Fore wing with base hyaline, the remainder infuscate but gradually becoming paler distally	Fore wing completely evenly infuscate, at most with only the apex very narrowly hyaline
Scape about 7.5 times as long as wide and 1.8 times as long as club	Scape about 6.3 times as long as wide and 1.3-1.5 times as long as club
Funicle segments relatively longer, F1 2.5 times as long as broad and F6 at least 1.1 times as long as broad	Funicle segments relatively shorter with F1 less than 1.5 times as long as broad and F6 transverse or quadrate
Ovipositor not longer than middle tibia and nearly 5 times as long as gonostylus	Ovipositor at least 1.25 times as long as middle tibia and less than 4 times as long as gonostylus

Acknowledgements

Special thanks to The Royal Society for the financial support of this project by NATO fellowship program Ref. 15135/02B/TB and the Department of Entomology of the Natural History Museum, London for use of its facilities.

References

- Boucek, Z. 1961. Notes on the chalcid fauna (Chalcidoidea) of Moldavian SSR. *Trudy Moldavskogo Nauchno-Issledovatel'skogo Instituta Sadovodstva, Vinogradarstva i Vinodeliya*, 7: 5-30.
- Chumakova, B.M. 1961. Parasites of injurious scale insects from Kabardino-Balkaria (Hymenoptera, Chalcidoidea). *Entomol. Obozrenie*, 40(2): 315-338. (In Russian).
- Gibson, G., Huber, J. & Woolley, J. 1997. *Annotated key to the genera of Nearctic Chalcidoidea (Hymenoptera)*. National Research Council of Canada. 794 p.
- Greathead, D.J. 1985. Parasitoids in classical biological control. Insect parasitoids. *13th Symp. Roy. entomol. Soc. London, 18-19 September 1985*: 289-316.
- Guerrieri, E. & Noyes, J. 2000. Revision of European species of genus *Metaphycus* Mercet (Hymenoptera: Chalcidoidea: Encyrtidae), parasitoids of scale insects. *Syst. Entomol.*, 25: 147-222.
- Herthevtzian, E.K. 1986. *Entsirity (Encyrtidae) Armyanskoi SSR. Fauna Armyanskoi SSR. Nasekomye pereponchatokrylye* [Encyrtids (Encyrtidae) of the Armenian SSR. Fauna of the Armenian SSR. Insecta, Hymenoptera]. Erevan: Inst. Zool. Akad. Nauk Arm. SSR. 226 p. (In Russian).
- Japoshvili, G.O. 2000a. An annotated list of the Encyrtidae (Hymenoptera: Chalcidoidea) of Tbilisi (Georgia). *Hymenoptera evolution, biodiversity and biological control*: 338-341. Australia: CSIRO.
- Japoshvili, G.O. 2000b. Checklist of encyrtids (Hymenoptera: Chalcidoidea, Encyrtidae) in Georgia. *Proc. Inst. Zool. Georgian Acad. Sci.*, 20: 162-173.
- Japoshvili, G.O. 2002. Chalcids from South Georgia. *Parasitic wasps: evolution, systematics, biodiversity and biological control*: 291-293. Budapest: Agroinform.
- Japoshvili, G. 2005. A new species of encyrtid, *Psilophrys ghilarovi* (Hymenoptera, Chalcidoidea, Encyrtidae) from Turkey. *Zool. Zh.*, 84(4): 524-527. (In Russian).
- Japoshvili, G. & Karaca, I. 2002a. Coccid (Homoptera: Coccoidea) species of Isparta Province, and their parasitoids from Turkey and Georgia. *Turk. J. Zool.*, 26: 371-376.
- Japoshvili, G. & Karaca, I. 2002b. An annotated list of the chalcid (Hymenoptera: Chalcidoidea) parasitoids of coccids (Hemiptera, Coccoidea) in Isparta Province (Turkey). *Proc. Inst. Zool. Georgian Acad. Sci.*, 21: 173-175.
- Japoshvili, G. & Karaca, I. 2004. New records of encyrtid parasitoids of *Kermes palestiniensis* Balachowsky (Hemiptera: Kermesidae), with the description of a new species of *Blastothrix* Mayr (Hymenoptera: Encyrtidae) from Turkey. *Entomol. News*, 114(4): 187-191.
- Myatseva, S.N. 1980. On the fauna of *Psyllaephagus* (Hymenoptera, Encyrtidae) in Southern Turkmenistan. *Izv. Akad. Nauk Turkmen. SSR, Ser. biol. Nauk*, 1980(1): 47-54. (In Russian).
- Myartseva, S.N. 1981. New species of encyrtids (Hymenoptera, Chalcidoidea) from Turkmenistan. *Izv. Akad. Nauk Turkmen. SSR, Ser. biol. Nauk*, 1981(1): 11-21. (In Russian).
- Noyes, J.S. 1985. Chalcidoids and biological control. *Chalcid Forum*, 5: 5-10.
- Noyes, J.S. 2000. Encyrtidae of Costa Rica (Hymenoptera: Chalcidoidea), 1. The subfamily Tetraeninae, parasitoids of mealybugs (Homoptera: Pseudococcidae). *Mem. Amer. entomol. Inst.*, 62: 1-355.
- Noyes, J.S. 2004. *Universal Chalcidoidea Database*. World Wide Web electronic publication. www.nhm.ac.uk/entomology/chalcidoids/index.html [accessed 25th September 2004].
- Noyes, J.S. & Hayat, M. 1994. *Oriental mealybug parasitoids of the Anagyrini (Hymenoptera: Encyrtidae)*. Oxon, UK: CAB International. viii+554 p.
- Noyes, J.S. & Woolley, J.B. 1994. North American encyrtid fauna (Hymenoptera: Encyrtidae) taxonomic changes and new taxa. *J. natur. Hist.*, 28: 1327-1401.
- Rzaeva, L.M. 1967. Material for the study of chalcid wasps (Hymenoptera, Chalcidoidea) in the Kuba-Khachmas region of Azerbaijan. *Trudy Inst. Zool. Akad. Nauk Azerb. SSR*, 26: 31-44. (In Russian).
- Rzaeva, L.M. 2002. *Khal'tsidi (Hymenoptera, Chalcidoidea) Vostochnogo Zakavkaz'ya i ikh khozyaistvennoe znachenie* [Chalcids of Eastern Transcaucasia and their economic importance]. Baku: Elm. 356 p. (In Russian).
- Simmonds, F.J. 1969. *Commonwealth Institute of Biological Control. Brief résumé of activities and recent successes achieved*. Curepe, Trinidad. 16 p.
- Sugonjaev, E.S. 1965. Palaearctic species of the genus *Blastothrix* Mayr (Hymenoptera, Chalcidoidea) with remarks on their biology and economic importance. Part II. *Entomol. Obozrenie*, 44: 395-410. (In Russian).
- Sugonjaev, E.S. 1984. Chalcid (Hymenoptera, Chalcidoidea) parasites of coccids (Homoptera, Coccoidea) in the fauna of the USSR. *Trudy zool. Inst. Akad. Nauk SSSR*, 117. 233 p. (In Russian).
- Trjapitzin, V.A. 1968. A survey of the encyrtid fauna (Hym. Encyrtidae) of the Caucasus. *Trudy vsesoyuz. entomol. Obshch.*, 52: 43-125. (In Russian).
- Trjapitzin, V.A. 1989. Parasitic Hymenoptera of the fam. Encyrtidae of Palaearctics. *Opredeliti po Faune*

- SSSR, 158. Leningrad: Nauka. 488 p. (In Russian with English summary).
- Trjapitzin, V.A. & Doganlar, M.** 1997. A review of encyrtids (Hymenoptera, Encyrtidae) of Turkey. *Entomol. Obozrenie*, 76(1): 213-222. (In Russian).
- Tuncyurek, M.** 1970. Parasitoids and predators of citrus and fig scale insects in Aegean region of Turkey. *Bitti Koruma Bilt.*, 10(1): 32-52. (In Turkish).
- Uygun, N., Öncüer, C., Karaca, İ., Yıldas, Z., Sengonca, C., Erkiliç, L. & Japoshvili, G.** 2004. An annotated list of the natural enemies of the scale insects (Hemiptera: Coccoidea) of Turkey. *Proc. Inst. Zool. Georgian Acad. Sci.*, 22: 173-188.
- Yasnosh, V.A.** 1972. Chalcids (Hymenoptera, Chalcidoidea) parasitizing coccids (Homoptera, Coccoidea) in arid open woodlands of Georgia. *Trudy vsesoyuz. entomol. Obshch.*, 55: 217-247. (In Russian).

Received 31 January 2005