

## Contribution to the knowledge of the Encyrtidae of Greece (Hymenoptera: Chalcidoidea)

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Fourteen species are added to the list of Greek encyrtid fauna with data on their geographical distributions. Among 68 species known now from Greece, only 12 are Mediterranean, 5 purposely introduced, and 2 penetrated with their hosts, by ecesis. The origin of *Gyransoidea advena* Beardsley is unknown.

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Fragmentary data on Encyrtidae of Greece are scattered in different sources, and a list of Greek species of this important family of parasitoid insects had never been published. Basing on information collected by the author until April 2004, the following 54 species of encyrtids were recorded from Greece:

*Agenaspis fuscicollis praysincola* Silvestri, 1907; *A. mayri* (Masi, 1908); *Aglyptus rufus* (Dalman, 1820); *Anagyrus micans* Noyes, 2000; *A. pseudococci* (Girault, 1915); *Anicetus italicus* (Masi, 1917); *Aschitus balcanicus* Jensen, 1989; *A. madyes* (Walker, 1837); *Blastothrix britannica* Imms, 1918; *Callipteroma sexguttata* Motschulsky, 1863; *Cerapterocerus mirabilis* Westwood, 1833; *Comperiella bifasciata* Howard, 1906; *Encyrtus aurantii* (Geoffroy, 1785); *Gyransoidea advena* Beardsley, 1969; *Homalotylus eytelweini* (Ratzeburg, 1844); *Isodromus flaviscutum* Hoffer & Trjapitzin, 1978; *Leptomastidea abnormis* (Girault, 1915); *L. rubra* Tachikawa, 1956; *Leptomastix algerica* Trjapitzin, 1989; *Mayridia procera* (Mercet, 1921); *Metaphycus annecke* Guerrieri & Noyes, 2000; *M. asterolecanii* (Mercet, 1923); *M. chermis* (Fonscolombe, 1832); *M. delos* Guerrieri & Noyes, 2000; *M. dispar* (Mercet, 1925); *M. ecares* Guerrieri & Noyes, 2000; *M. flavus* (Howard, 1881); *M. garmon* Guerrieri & Noyes, 2000; *M. gennaroi* Guerrieri & Noyes, 2000; *M. hageni* Daane & Caltagirone, 1999; *M. helvolus* (Compere, 1926); *M. insidiosus* (Mercet, 1921); *M. lounsburyi* (Howard, 1898); *M. maculipennis* (Timberlake, 1916); *M. melanostomatus* (Timberlake, 1916); *M. nadius* (Walker, 1838); *M. petitus* (Walker, 1851); *M. philippiae* (Masi,

1908); *M. pretiosus* (Mercet, 1921); *M. stanleyi* Compere, 1940; *M. swirskii* Annecke & Mynhardt, 1977; *M. unicolor* Hoffer, 1954; *M. zebra-tus* (Mercet, 1917); *Microterys duplicatus* (Nees, 1834); *M. masii* Silvestri, 1919; *M. nietneri* (Motschulsky, 1859); *M. nikolskajae* Erdős, 1955; *M. tricoloricornis* (De Stefani, 1886); *Monodiscodes intermedius* (Mayr, 1876); *Negeniaspidius nobilis* (Nees, 1834); *Ooencyrtus kuvanae* (Howard, 1910); *O. pityocampae* (Mercet, 1921); *Prionomitus mitratus* (Dalman, 1820); *Syrphophagus taeniatus* (Förster, 1861).

The following 14 species are added to this list as a result of examination of collections listed below. Abbreviations for insect depositories: MB – Hungarian Natural History Museum, Budapest; MBrl – Zoological Museum of A. Humboldt University, Berlin; MH – University Museum, Helsinki; ML – Museum of Natural History, London; MM – National Museum of Natural History, Madrid; MW – National Museum of Natural History, Washington; ZIN – Zoological Institute, Russian Academy of Sciences, St.Petersburg.

**Achalcerinys lindus** (Mercet, 1921). 1 ♀, Samos, 12.X.1989 (M. Koponen); 1 ♀, Samos, Kalami, 10.X.1989 (M. Koponen) [MH]; 1 ♀ Kos, Lagoudi, 24.VIII.1994 (J.S. Noyes); 1 ♀, Rhodos, Ixia, 15-29.VIII.1984 (M.C. Day) [ML]. – Distribution: Central and Mediterranean Europe, Moldavia, Ukraine, Turkey, Armenia, Azerbaijan, Middle Asia, Ethiopia, India. Biology: hyperparasitoid of Pseudococcidae (Homoptera).

**Anagyrus abdulrassouli** Myartseva, Sugonjaev & Trjapitzin, 1982. 1 ♀, Corfu [= Kérkyra], Agios Markos, 27.VIII.1987 (J.S. Noyes) [MW]. Det. J.S. Noyes, 1991. – Distribution: the species was known only from Iraq, where it was reared from Pseudococcidae (Homoptera) on *Alhagi* sp.

**Boucekiella depressa** Hoffer, 1954. ♀♀, Kos, Psalidi, 5 km E Kos town, *Phragmites australis*, 26.VIII.1994 (J.S. Noyes) [ML]. – Distribution: Central and Mediterranean Europe, Moldavia, Ukraine, Armenia, Azerbaijan, Uzbekistan, Afghanistan, Japan. Biology: hyperparasitoid of Pseudococcidae (Homoptera).

**Cerchysius gigas** Erdős, 1955. 2 ♀, Kos, Psalidi, 5 km W Kos town, *Phragmites australis*, 26.VIII.1994 (J.S. Noyes) [ML]. – Distribution: the species was known only from Finland, Czech Republic, Hungary and the Ukraine.

**C. subplanus** (Dalman, 1820). 1 ♂, environments of Stylos, 15.V.1977 (Zombori) [MB]. – Distribution: widely distributed in Palaearctic; found also in Thailand. Biology: in Russia (Karelia), reared from puparia of *Chamaemyia juncorum* Fallén (Chamaemyiidae, Diptera).

**Cheiloneurus boldyrevi** Trjapitzin & Agekian, 1978. 1 ♀, Crete, Canea [= Iraklion], VII.1906 (Biró) [MB]. – Distribution: Europe, Georgia, Armenia, Uzbekistan, Tadzhikistan. Biology: reared from puparia of Syrphidae (Diptera), presumably as hyperparasitoid.

**Ch. elegans** (Dalman, 1820). 1 ♀, Hellas mer., Lakonia, Waterfall b. Nomia Lyra, I.VI.1979 (Gozmany) [MB]; 2 ♀, Samos, 12.X.1989 (M. Koponen) [MH]. – Distribution: widely distributed in Palaearctic; found also in Canada, USA, Mexico, Ecuador (Galapagos Islands) and Argentina. Biology: in Eurasia, hyperparasitoid of various Coccoidea (Homoptera); in USA, hyperparasitoid of the Hessian fly, *Mayetiola destructor* Say (Cecidomyiidae, Diptera).

**Ch. yasumatsui** Trjapitzin, 1971. 2 ♀, Kos, 4 km W Kos town, 20.VIII.1994 (J.S. Noyes) [ML]. – Distribution: the species was known from Egypt, Turkmenistan, Tadzhikistan, Afghanistan, India (including Andaman Islands), Tahiti and Australia. Record by Trjapitzin (1989) from Orenburg Province of Russia was erroneous.

**Encyrtus infidus** (Rossi, 1790). 1 ♀, Rodi, Egeo, V.1939 (R. Meyer); 1 ♀, Südl. Sporaden, Karpathos (v. Oertzen) [MBrl]. – Distribution: widely distributed in Palaearctic. Biology: parasitoid of Coccidae (Homoptera).

**Isodromus vinulus** (Dalman, 1820). 1 ♀, Olympo, 2.IX.1924 (C. Bolívar) [MM]. – Distribution: widely distributed in Palaearctic; found also in Canada. Biology: parasitoid of Chrysopidae (Neuroptera).

**Mayridia formosula** Mercet, 1921. 1 ♀, Korfu [= Kérkyra], Nissaki, 6.IX.1984 (J.S. Noyes); 1 ♀, Kos, Lagoudi, 24.VIII.1994 (J.S. Noyes) [ML]. – Distribution: widely distributed in Palaearctic, but not found in Northern Europe, North Africa, Near and Middle East, the Far East of Russia, and China.

**M. viridiscutellum** (Hoffer, 1970). 2 ♀, 5 ♂, Korfu [= Kérkyra], Soraki, 450 m, 5.IX.1987 (J.S. Noyes); ♂♂, Korfu [= Kérkyra], Strilines, 600 m, 1-3.IX.1987 (J.S. Noyes) [ML]. – Distribution: Bulgaria, Armenia.

**Platencyrtus parkeri** Ferrière, 1955. ♀♀, ♂♂, Kos, Psalidi, 5 km E Kos town, *Phragmites australis*, 26.VIII.1994 (J.S. Noyes) [ML]. – Distribution: Central and Southern Europe; found also in Finland, Georgia and Armenia. Biology: parasitoid of the mealybug *Chaetococcus phragmitis* Marchal (Pseudococcidae, Homoptera).

**Syrphophagus aphidivorus** (Mayr, 1876). 4 ♀, Samos, 9, 12.X.1989 (M. Koponen) [MH]. – Distribution: widely distributed in Palaearctic; not found in the Far East of Russia and in Japan, but discovered in India. Data on its presence in the Nearctic Region need confirmation, but those from Argentina (De Santis, 1964) seem to be correct. Biology: hyperparasitoid of Aphidoidea (Homoptera).

## Comments

Among 68 species of Encyrtidae known to the author from Greece, only 12 can be regarded as Mediterranean, namely: *Ageniaspis fuscicollis praysincola*, *A. mayri*, *Aschitus balcanicus*, *Leptomastidea abnormis*, *Leptomastix algerica*, *Metaphycus delos*, *M. garmon*, *M. gennaroi*, *M. hageni*, *M. philippiae*, *Microterys masii*, and *Ooencyrtus pityocampae*. *Encyrtus aurantii* and *Microterys nieteri* penetrated into this country accidentally, by ecesis, with their host *Coccus hesperidum* L. (Coccidae, Homoptera); their native land is South-East Asia. The East Asiatic species *Ooencyrtus kuvanae*, egg-parasitoid of the Gypsy Moth, *Lymantria dispar* L. (Lymantriidae, Lepidoptera), was purposely introduced into Europe, and, most probably, entered into Greece from the former Yugoslavia or from Bulgaria. Five species were introduced into Greece for biological control of coccid pests. Four of them, parasitoids of soft scales (Coccidae, Homoptera), are Afrotropical in their origin: *Metaphycus helvolus*, *M. lounsburyi*, *M. stanleyi*, and *M. swirskii*. The Red Scale race of *Comperiella bifasciata*, of East-Asiatic origin, was introduced into Crete; for classification of races of *C. bifasciata* see Trjapitzin & Ruiz Cancino (2000). The purpose of this introduction was control of armoured scale, *Aonidiella aurantii* Maskell (Diaspididae, Homoptera), on citrus plants.

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