

## Corrections to the List of Encyrtidae (Hymenoptera: Chalcidoidea) from Iran

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### ABSTRACT

The present paper gives a corrected list of Iranian encyrtids published with some errors by different authors. We list 132 species belonging to 45 genera.

*Key words:* Hymenoptera, Chalcidoidea, Encyrtidae, Iran.

### INTRODUCTION

The first published records of Iranian Encyrtidae were those by Kiriukhin (1947), who reported some encyrtid parasitoids of scale insects. A comprehensive review of the work done on Iranian encyrtid wasps by various researchers was by Fallahzadeh and Japoshvili (2010), based on all the available information, plus examination of some specimens and descriptions of two new species. In total, this review included 93 species representing 32 genera. Since that time the known number of Iranian encyrtids has grown. Lotfalizadeh (2010a) described a new species from the country and, separately, corrected some previous misidentifications (Lotfalizadeh, 2010b). Subsequently, Golpayegani *et al.* (2010), Fallahzadeh *et al.* (2011) and Moghbeli-Gharaei *et al.* (2013) have added some species records from area. Papers published by Ghahari *et al.* (2010), Abd-Rabou *et al.* (2011), Ghahari and Abd-Rabou (2012) and Rastegar *et al.* (2012) contain some new faunal data, but with some findings of unclear and doubtful. In total 33 species in Ghahari *et al.* (2010) and 12 species in Rastegar *et al.* (2012) were identified as new records for Iranian fauna without perfect attention to all the resources available on Iranian Encyrtidae. However in these papers 19 species were recorded erroneously as a new. Here we present a species list showing all first record references for Iran: *Ageniaspis fuscicollis* (Dalman, 1820) (Esmaili, 1983; Haeselbarth, 1983), *Anagyrus aligarhensis* Agarwal and Alam, 1959 (Asadeh and Mosadegh, 1991), *Anagyrus pseudococci* (Girault, 1915) (Chojai, 1968), *Anagyrus schoenherri* (Westwood, 1837) (Kiriukhin, 1947), *Blastothrix sericea* (Dalman, 1820) (Farahbakhsh, 1961), *Cerapterocerus mirabilis* Westwood, 1833

(Chojai, 1968), *Coccidoxenoides perminutus* Girault, 1915 (Talebi *et al.*, 2008), *Encyrtus aurantii* (Geoffroy, 1785) (Farahbakhsh, 1961), *Encyrtus infidus* (Rossi, 1790) (Esfandiari, 2002), *Homalotylus flaminus* (Dalman, 1820) (Fallahzadeh *et al.*, 2006), *Homalotylus quaylei* Timberlake, 1919 (OILB, 1971), *Metaphycus helvolus* (Compere, 1926) (Esmaili, 1983), *Microterys lunatus* (Dalman, 1820) (Chodjai, 1968), *Microterys nietneri* (Motschulsky, 1859) (Farahbakhsh, 1961), *Zaomma lambinus* (Walker, 1838) (Chodjai, 1989).

*Homalotylus flaminus* (Dalman, 1820) was recorded by Fallahzadeh *et al.* (2006), *Bothriothorax serratellus* (Dalman, 1820), *Microterys sylvius* (Dalman, 1820) were recorded by Ghahari *et al.* (2010) and *Metaphycus melanostomatus* (Timberlake, 1916) was recorded by Lotfalizadeh (2010a), but Rastegar *et al.* (2012) recorded them as new once again.

Ghahari *et al.* (2010) was submitted to the journal in 10.12.2009; sent for revision: 05.01.2010 and accepted: 07.01.2010, while Fallahzadeh and Japoshvili (2010) was submitted in 22.01.2009 and accepted: 01.09.2009, so one species was recorded as a new in both publications: *Prochiloneurus bolivari* Mercet, 1919.

Ghahari *et al.* (2010) and Abd-Rabou *et al.* (2011) mentioned in their publications species *Leptomastix ava* Mercet, which is not valid name for any encyrtid species. Must be noted that species recorded as *Microteris darevskii* in Ghahari and Abd-Rabou (2012) in fact can be *M. iranicus* described by Fallahzadeh and Japoshvili (2010), as much as they are very close species and this fact needs verification.

The encyrtid species, their hosts and their host plants that have been recorded in 4 papers by Ghahari *et al.* (2010), Abd-Rabou *et al.* (2011), Ghahari and Abd-Rabou (2012) and Rastegar *et al.* (2012) very similar to those found in Turkey (Kaydan *et al.*, 2006; Japoshvili and Karaca, 2007), but deposit locations of voucher specimens are unknown.

In this short communication, we correct some information about Iranian encyrtid records. The present list is compiled to provide a reference for future studies on this family in Iran. We follow the classification and taxonomic arrangement of Noyes (2012).

### The encyrtid species recorded from Iran are listed as follows:

1. *Ageniaspis fuscicollis* (Dalman, 1820), 2. *A. testaceipes* (Ratzeburg, 1848), 3. *Anagyrus agragensis* Saraswat, 1975, 4. *A. aligarhensis* Agarwal and Alam, 1959, 5. *A. dactylopii* (Howard, 1898), 6. *A. fusciventris* (Girault, 1915), 7. *A. kamali* Moursi, 1948, 8. *A. matritensis* (Mercet, 1921), 9. *A. mirzai* Agarwal and Alam, 1959, 1959, 10. *A. pseudococci* (Girault, 1915), 11. *A. schoenherri* (Westwood, 1837), 12. *Aphycooides clavellatus* (Dalman, 1820), 13. *Anicetus italicus* (Masi, 1917), 14. *Blastothrix brittanica* Girault, 1917, 15. *B. longipennis* Howard, 1881, 16. *B. illicicola* Mercet, 1921, 17. *B. hungarica* Erdös, 1959, 18. *B. sericea* (Dalman, 1820), 19. *B. turanica* Sugonjaev, 1964, 20. *Bothriothorax clavicornis* (Dalman, 1820), 21. *B. serratellus* (Dalman, 1820), 22. *Cerapterocerus mirabilis* Westwood, 1833, 23. *Cheiloneurus boldyrevi* Trjapitzin and Agekyan, 1978, 24. *Ch. ceroplastis* Ishii, 1923, 25. *Ch. claviger* Thomson, 1876,

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26. *Ch. fulvescens* Hoffer, 1957, 27. *Ch. kollari* (Mayer, 1876), 28. *Ch. paralia* (Walker, 1837), 29. *Ch. pistaciae* Manickavasagam and Mehrnejad, 2008, 30. *Choreia maculata* (Hoffer, 1954), 31. *Coccidoxenoides perminutus* Girault, 1915, 32. *Coelopencyrtus callidii* (Jansson, 1957), 33. *Comperiella bifasciata* Howard, 1906, 34. *C. lemniscata* Compere and Annecke, 1961, 35. *Copidosoma floridanum* (Ashmead, 1900), 36. *C. pistacinellae* Hoffer, 1970, 37. *C. varicorne* (Nees, 1834), 38. *Discodes coccophagus* (Ratzeburg, 1848), 39. *D. obscuriclavus* Myartseva, 1981, 40. *Dusmetia fuscipennis* (Noyes and Hayat, 1984), 41. *Echthroplexiella aeneiventris* Mercet, 1921, 42. *Encyrtus aurantii* (Geoffroy, 1785), 43. *E. infidus* (Rossi, 1790), 44. *E. trjapitzini* Myartseva and Sugonjaev, 1977, 45. *Epitetracnemus intersectus* (Fonscolombe, 1832), 46. *Ericydnus robustior* Mercet, 1921, 47. *Eupoecilopoda perpunctata* (Masi, 1942), 48. *Gyranusoidea indica* Shafee, Alam and Agarwal, 1975, 49. *G. iranica* Japoshvili and Fallahzadeh, 2010, 50. *Habrolepis dalmanni* (Westwood, 1837), 51. *H. pascuorum* Mercet, 1921, 52. *H. tergrigorianae* Trjapitzin, 1962, 53. *Heterococcidoxenus schlechtendali* (Mayr, 1876), 54. *Homalotylus albiclavatus* (Agarwal, 1970), 55. *H. eytelweini* (Ratzeburg, 1844), 56. *H. flaminus* (Dalman, 1820), 57. *H. hemipterinus* (De Stefani, 1898), 58. *H. nigricornis* Mercet, 1921, 59. *H. quaylei* Timberlake, 1919, 60. *H. turkmenicus* Myartseva, 1981, 61. *H. vicinus* Silvestri, 1915, 62. *Hoplopsis minuta* (Fabricius, 1793), 63. *Isodromus atriventris* Ashmead, 1900, 64. *I. collimaculatus* Xu and Lotfalizadeh, 2000, 65. *Leptomastidea abnormis* (Girault, 1915), 66. *L. alleni* Noyes and Hayat, 1994, 67. *L. matritensis* Mercet, 1916, 68. *Leptomastix flava* Mercet, 1921, 69. *L. dactylopii* Howard, 1885, 70. *L. histrio* Mayr, 1876, 71. *Mahencyrtus comara* (Walker, 1837), 72. *Mayridia formosula* Mercet, 1921, 73. *M. procera* (Mercet, 1921), 74. *M. pulchra* Mercet, 1921, 75. *Metaphycus asterolecanii* Mercet, 1923, 76. *M. davoodii* Lotfalizadeh, 2010, 77. *M. annecke* Guerrieri and Noyes, 2000, 78. *M. chermis* (Fonscolombe, 1832), 79. *M. claviger* (Timberlake, 1916), 80. *M. dispar* (Mercet, 1921), 81. *M. flavus* (Howard, 1881), 82. *M. helvolus* (Compere, 1926), 83. *M. hodzhevanishvili* Yasnosh, 1972, 84. *M. insidiosus* (Mercet, 1921), 85. *M. lounsburyi* (Howard, 1898), 86. *M. melanostomatus* (Timberlake, 1916), 87. *M. pulvinariae* (Howard, 1881), 88. *M. punctipes* (Dalman, 1820), 89. *M. silvestrii* Sugonjaev, 1960, 90. *M. stagnarum* Hoffer, 1954, 91. *M. stanleyi* Compere, 1940, 92. *M. zebratus* (Mercet, 1917), 93. *Microterys bellae* Trjapitzin, 1968, 94. *M. cneus* Trjapitzin and Sugonjaev, 1976, 95. *M. cuprinus* (Nikol'skaya, 1952), 96. *M. darevskii* Trjapitzin, 1968, 97. *M. ericeri* Ishii, 1923, 98. *M. hortulanus* Erdős, 1956, 99. *M. iranicus* Japoshvili and Fallahzadeh, 2010, 100. *M. lunatus* (Dalman, 1820), 101. *M. masii* Silvestri, 1919, 102. *M. nietneri* (Motschulsky, 1859), 103. *M. nuticaudatus* Xu, 2000, 104. *M. sylvius* (Dalman, 1820), 105. *M. tricoloricornis* (De Stefani, 1886), 106. *Monodiscodes intermedium* (Mayr, 1876), 107. *Ooencyrtus cinctus* Prinsloo, 1987, 108. *O. fecundus* Ferrière and Voegelé, 1961, 109. *O. nigerrimus* Ferrière and Voegelé, 1961, 110. *O. telenomicida* (Vassiliev, 1904), 111. *Paranathrix tachikawai* (Shafee, Alam and Agarwal, 1975), 112. *Paraphaenodiscus sugonjaevi* Myartseva, 1980, 113. *Prionomitus mitratus* (Dalman, 1820), 114. *Prochiloneurus aegyptiacus* (Mercet, 1929), 115. *P. bolivari* Mercet, 1919, 116. *P. indicus* Shafee, Alam and Agarwal, 1975, 117. *P. pulchellus* Silvestri, 1915,

118. *Psyllaephagus claripes* Trjapitzin, 1967, 119. *P. pistaciae* Ferrière, 1961, 120. *P. procerus* (Mercet, 1921) 121. *P. stenopsyllae* (Tachikawa, 1963), 122. *P. zdeneki* Noyes and Fallahzadeh, 2005, 123. *Psyllaphycus diaphorinae* (Hayat, 1972), 124. *Syrphophagus aeruginosus* (Dalman, 1820), 125. *S. aphidivorus* (Mayr, 1876), 126. *S. mamitus* (Walker, 1837), 127. *Tetracnemus diversicornis* (Mercet, 1923), 128. *T. heydeni* (Mayr, 1876), 129. *Trechnites insidiosus* (Crawford, 1910), 130. *Trichomasthus albimanus* Thomson, 1876, 131. *T. cyaneus* (Dalman, 1820), 132. *Zaomma lambinus* (Walker, 1838).

Rastegar *et al.* (2012) erroneously stated that Iranian encyrtid species number is 136, but based on our revision of the material and corrections, we revise that to 132. Changes, corrections, and additions since the publication of the original checklist also have been incorporated. We did not intend to confirm identifications of previous studies, except in very obvious cases. A more comprehensive collection-based study is needed to confirm the actual Iranian occurrence of each species listed in this checklist.

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