

A Contribution to Heteroptera (Hemiptera) of Arasbaran and Vicinity, Northwestern Iran

伊朗西北部阿拉斯巴兰及附近的蝽类

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Abstract: A list of Heteroptera collected from Arasbaran Biosphere Reserve (East Azarbaijan Province, northwestern Iran) and neighboring areas is provided. A total of 114 species from 87 genera and 19 families were collected from Arasbaran and vicinity. Two species are new records for Iran: *Gerris* (*Gerris*) *maculatus* Tamanini and *Sigara* (*Vermicorixa*) *lateralis* (Leach).

Key words: Heteroptera; fauna; new record, Arasbaran; Iran

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Introduction

Arasbaran Biosphere Reserve is a large region in East Azarbaijan Province, northwestern Iran, ranging from 38°40' to 39°08'N and from 46°39' to 47°02'E. This reserve, situated in the north of Iran at the borders to Armenia and Azerbaijan, belongs to the Caucasus Iranian Highlands. In between the Caspian, Caucasus and

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Mediterranean regions, the area contains mountains up to 2 200 meters (altitude between 250 and 2 887 meters above sea level), high alpine meadows, semi-arid steppes, meadows and forests, rivers and springs. Arasbaran is the territory of about 23 500 nomads who are mainly living in buffer and transition zones.

Although some research has been conducted to determine the heteropteran fauna of Arasbaran and its vicinity (Modarres Awal, 1987, 1996; Farshbaf Pourabad, 2000; Sadeghi, 2004; Khalilzadeh *et al.*, 2005; Hassanzadeh *et al.*, 2009), this fauna remains poorly known because the region is vast and varied.

Today, this region in northwestern Iran is an important area for agriculture. Numerous Heteroptera are agricultural pests inflicting damage on crops, forests and orchards. Detailed accounts are available in the work of Schaefer and Panizzi, 2000, Dolling, 1991; Schuh and Slater, 1995; Stonedahl and Dolling, 1991; Forero, 2008; Froeschner, 1999). Consequently, we are providing this list of recent collections of Heteroptera carried out in the Arasbaran Biosphere Reserve and neighboring areas.

Materials and Methods

The specimens were collected by the first and eighth authors, their colleagues and students through the years 2002-2007 under stones by hand, by sweeping of vegetation and water of rivers and by light trapping. The sampled regions were Ardabil, East Azarbayjan and West Azarbayjan Provinces. Collected materials were put in ethanol 75% and sent to some co-authors as well as to the late I. M. Kerzhner of Russia for identification or confirmation. Materials are preserved in the collections of some authors, primarily the eighth author. In addition, specimens from different insect collections at Iranian universities, including Tehran Science and Research Branch, Ghaemshahr, Garmsar and Shahre Rey Islamic Azad Universities, Tabriz and Maragheh Universities, as well as the personal collections of first and eighth authors, were checked. These data have also been included in this paper. Specific name, author and description date, locality and date of collection, and number of specimens (in parentheses) are provided. Detailed information about synonymies and distribution of quoted species are available in Aukema and Rieger (1995, 1996, 1999, 2001, 2006), Houston and Maynard (1995) and Houston and Wells (2002).

Family and specific names are listed alphabetically.

Results

A total of 114 species in 87 genera and 19 families were determined among the fauna of this region of Iran. The list of species is given below. The number between parentheses of the materials examined part means specimen number.

Family Alydidae Amyot & Serville, 1843

1. *Alydus calcaratus* (Linnaeus, 1758)

Materials examined: East Azarbayjan Province: Khomarloo (3), July 2005. Ardabil Province: Bilehsavar (1), August 2006.

2. *Camptopus tragacanthae* (Konenati, 1845)

Material examined: East Azarbayjan Province: Maragheh (1), June 2005.

3. *Megalotomus ornaticeps* (Stål, 1858)

Material examined: East Azarbayjan Province: Kaleibar (1), August 2005.

4. *Tenosius proletarius* (Schaum, 1853)

Materials examined: West Azarbayjan Province: Ourmieh (2), August 2004.

Family Anthocoridae Fieber, 1836

5. *Anthocoris poissoni* Kiritschenko 1952

Materials examined: Ardabil Province: Pars-Abad (1), June 2002.

6. *Elatophilus (Elatophilus) nigricornis* (Zetterstedt, 1838)

Materials examined: East Azarbayjan Province: Ahar (6), July 2005.

7. *Orius (Dimorphella) albidipennis* (Reuter, 1884)

Materials examined: East Azarbayjan Province: Azarshahr (10), September 2005.

8. *Orius (Heterorius) horvathi* (Reuter, 1884)

Materials examined: West Azarbayjan: Khoy (2), May 2004.

9. *Orius (Orius) niger* Wolff, 1804

Materials examined: East Azarbayjan Province: Khodafarin (3), June 2005.

Family Berytidae Fieber, 1851

10. *Berytinus minor* (Herrich-Schaeffer, 1835)

Material examined: West Azarbayjan Province: Ourmieh (1), August 2004.

Family Coreidae Leach, 1815

11. *Coreus marginatus* (Linnaeus, 1758)

Materials examined: East Azarbayjan Province: Maragheh (2), August 2005.

12. *Coriomeris denticulatus* (Scopoli, 1763)

Materials examined: Ardabil Province: Ardabil (2), June 2002. East Azarbayjan Province: Jolfa (1), September 2006.

13. *Coriomeris hirticornis* (Fabricius, 1794)

Materials examined: East Azarbayjan Province: Aynalo (2), October 2005.

14. *Phyllomorpha lacerata* Herrich-Schaeffer, 1835

Material examined: East Azarbayjan Province: Maragheh (1), June 2005.

Family Corixidae Leach, 1815

15. *Corixa punctata* (Illiger, 1807)

Material examined: East Azarbayjan Province: Khomarloo (1), July 2005.

16. *Sigara (Sigara) assimilis* (Fieber, 1848)

Material examined: West Azarbayjan Province: Ourmieh (1), August 2003.

17. *Sigara (Vermicorixa) lateralis* (Leach, 1817), new record to Iran

Material examined: Ardabil Province: Pars-Abad (1), June 2002.

Family Dipsocoridae Dohrn, 1859

18. *Cryptostemma gracile* Josifov, 1967

Material examined: East Azarbayjan Province: Tabriz (1), September 2002.

19. *Cryptostemma (Pachycoleus) utnapishtim* Linnavuori, 1984

Material examined: Ardabil Province: Ardabil (1), June 2002.

Family Cydnidae Billberg, 1820

20. *Aethus hispidulus* (Klug, 1845)

Material examined: East Azarbayjan Province: Khomarloo (1), July 2005.

21. *Byrsinus comaroffii* (Jakovlev, 1879)

Materials examined: Ardabil Province: Pars-Abad (2), June 2002.

22. *Byrsinus nigroscutellatus* (Montanton, 1900)

Materials examined: East Azarbayjan Province: Khodafarin (2), June 2005.

23. *Geotomus elongatus* (Herrich-Schaeffer, 1840)

Materials examined: West Azarbayjan Province: Ourmieh (3), August 2004.

24. *Linospa orbicularis* (Jakovlev, 1885)

Materials examined: East Azarbayjan Province: Kaleibar (2), August 2005.

25. *Tritomegas sexmaculatus* (Rambur, 1839)

Material examined: East Azarbayjan Province: Abshahmad (1), October 2005.

Family Gerridae Leach, 1815

26. *Aquarius paludum paludum* (Fabricius, 1794)

Materials examined: East Azarbayjan Province: Maragheh (2), August 2005.

27. *Gerris (Gerriselloides) asper* (Fieber, 1860)

Material examined: Ardabil Province: Pars-Abad (1), August 2000.

28. *Gerris (Gerris) costae fieberi* Stichel, 1938

Materials examined: East Azarbayjan Province: Maragheh (3), June 2005.

29. *Gerris (Gerris) maculatus* Tamanini, 1946, new record to Iran

Material examined: Ardabil Province: Aslandooz (1), August 2006.

Family Lygaeidae Schilling, 1829

30. *Acompus rufipes* (Wolff, 1804)

Material examined: East Azarbayjan Province: Azarshahr (1), September 2005.

31. *Drymus (Sylvadrymus) sylvaticus* (Fabricius, 1775)

Materials examined: Ardabil Province: Pars-Abad (2), June 2002.

32. *Emblethis angustus* Montandon, 1890

Material examined: East Azarbayjan Province: Aynalo (1), October 2006.

33. *Emblethis denticollis* Horváth, 1878

Materials examined: West Azarbayjan Province: Ourmieh (3), August 2004.

34. *Geocoris (Geocoris) dispar* (Waga, 1839)

Materials examined: East Azarbayjan Province: Maragheh (4), June 2005.

35. *Geocoris pallidipennis* (Costa, 1843)

Materials examined: East Azarbayjan Province: Tabriz (2), September 2002.

36. *Geocoris (Geocoris) sokotranus* Kirkaldy, 1899

Material examined: Ardabil Province: Pars-Abad (1), July 2007.

37. *Heterogaster artemisiae* Schilling, 1829

Material examined: East Azarbayjan Province: Khodafarin (1), June 2005

38. *Ischnodemus sabuleti* (Fallén, 1826)

Material examined: West Azarbayjan Province: Ourmieh (1), August 2004.

39. *Nysius (Nysius) thymi* (Wolff, 1804)

Material examined: East Azarbayjan Province: Ahar (1), June 2005.

40. *Tropidothorax leucopterus* (Goeze, 1778)

Materials examined: West Azarbayjan: Khoy (2), May 2004.

Family Miridae Hahn, 1833

41. *Adelphocoris vandalicus* (Rossi, 1790)

Material examined: East Azarbayjan Province: Horand (1), July 2005.

42. *Camptotyliidea candida* (Linnavuori, 1984)

Materials examined: East Azarbayjan Province: Aynalo (2), October 2006.

43. *Compsidolon qoshanum* Linnavuori, 1984

Material examined: East Azarbayjan Province: Maragheh (1), June 2005.

44. *Cyphodema mendosa* Montandon, 1887

Materials examined: East Azarbayjan Province: Ahar (2), July 2003. Ardabil Province: Aslandooz (1), August 2007.

45. *Deraeocoris (Knightocapsus) lutescens* (Schilling, 1837)
Materials examined: East Azarbayjan Province: Khodafarin (3), June 2005.
46. *Deraeocoris (Deraeocoris) ruber* (Linnaeus, 1758)
Materials examined: Ardabil Province: Ardabil (2), June 2002.
47. *Ectagela aspersa* Linnavuori, 1984
Material examined: Ardabil Province: Meshkinshahr (1), September 2003.
48. *Europiella alpina* (Reuter, 1875)
Materials examined: East Azarbayjan Province: Maragheh (2), June 2005.
49. *Globiceps (Kelidocoris) fulvicollis* Jakovlev, 1877
Materials examined: West Azarbayjan Province: Mahabad (2), July 2002. East Azarbayjan Province: Jolfa (1), September 2006.
50. *Laemocoris orphanus* Linnavuori, 1964
Material examined: East Azarbayjan Province: Marand (1), August 2005.
51. *Phytocoris (Ktenocoris) falcatus* Linnavuori, 1984
Materials examined: East Azarbayjan Province: Kaleibar (2), August 2005.
52. *Stenodema (Brachystira) calcarata* (Fallén, 1807)
Materials examined: East Azarbayjan Province: Maragheh (2), August 2005.
53. *Strongylocoris atrocoeruleus* (Fieber, 1864)
Material examined: East Azarbayjan Province: Khodafarin (1), October 2005.
54. *Tuponia (Chlorotuponia) hippophaes* (Fieber, 1861)
Material examined: East Azarbayjan Province: Jolfa (1), September 2006.
55. *Yotvata picticornis* (Horváth, 1913)
Materials examined: East Azarbayjan Province: Khomarloo (2), July 2005.
56. *Yotvata (Godataira) pulcherrima* Linnavuori, 1984
Materials examined: East Azarbayjan Province: Kaleibar (2), August 2005.

Family Nabidae A. Costa, 1853

57. *Alloeorhynchus (Alloeorhynchus) flavipes* (Fieber, 1836)
Material examined: East Azarbayjan Province: Ahar (1), July 2005.
58. *Himacerus (Aptus) mirmicoides* (Costa, 1834)
Materials examined: East Azarbayjan Province: Maragheh (3), June 2005.
59. *Nabis (Aspilaspis) pallidus* Fieber, 1861
Materials examined: Ardabil Province: Meshkinshahr (4), September 2003.
60. *Nabis (Nabicula) flavomarginatus* Scholtz, 1847
Material examined: Ardabil Province: Ardabil (1), June 2006.
61. *Nabis (Nabis) punctatus punctatus* A. Costa, 1847
Materials examined: West Azarbayjan Province: Ourmieh (2), August 2004.
62. *Nabis (Nabis) paltifer* Seidenstücker, 1954
Materials examined: East Azarbayjan Province: Kaleibar (3), August 2005.

Family Nepidae Latreille, 1802

63. *Nepa cinerea* Linnaeus, 1758
Material examined: West Azarbayjan Province: Mahabad (1), July 2002.
64. *Ranatra linearis* (Linnaeus, 1758)
Materials examined: East Azarbayjan Province: Kaleibar (2), August 2005.

Family Notonectidae Latreille, 1802

65. *Notonecta viridis* Delcourt, 1909

Material examined: Ardabil Province: Pars-Abad (1), June 2002.

Family Pentatomidae Leach, 1815

66. *Acrosternum heegeri* Fieber, 1861

Material examined: Ardabil Province: Germy (1), September 2003.

67. *Apodiphus integriceps* Horváth, 1888

Materials examined: East Azarbayjan Province: Khodafarin (2), October 2005.

68. *Carpocoris coreanus* Distant, 1899

Material examined: Ardabil Province: Aslandooz (1), August 2006.

69. *Carpocoris purpureipennis* (De Geer, 1773)

Material examined: East Azarbayjan Province: Khodafarin (1), June 2005.

70. *Codophila varia* (Fabricius, 1787)

Material examined: Ardabil Province: Meshkinshahr (1), September 2003.

71. *Dolycoris baccarum* (Linnaeus, 1758)

Materials examined: Ardabil Province: Pars-Abad (3), June 2002.

72. *Eurydema (Eurydema) oleracea* (Linnaeus, 1758)

Materials examined: East Azarbayjan Province: Maragheh (2), June 2001.

73. *Eurydema ventralis* Kolenati, 1846

Materials examined: East Azarbayjan Province: Khomarloo (2), July 2005.

74. *Eysarcoris ventralis* (Westwood, 1837)

Material examined: East Azarbayjan Province: Ahar (1), July 2005.

75. *Gomphocranum adad* Linnavuori, 1984

Material examined: East Azarbayjan Province: Kaleibar (1), August 2005.

76. *Gomphocranum christophi* Jakovlev, 1877

Materials examined: East Azarbayjan Province: Jolfa (2), September 2006.

77. *Graphosoma lineatum* (Linnaeus, 1758)

Materials examined: West Azarbayjan Province: Ourmieh (5), August 2004.

78. *Palomena mursili* Linnavuori, 1984

Material examined: Ardabil Province: Ardabil (1), June 2002.

79. *Palomena viridissima* (Poda, 1761)

Material examined: Ardabil Province: Aslandooz (1), August 2006.

80. *Piezodorus lituratus* (Fabricius, 1794)

Material examined: East Azarbayjan Province: Jolfa (1), September 2006.

81. *Stagonomus (Stagonomus) amoenus* (Brullé, 1832)

Materials examined: East Azarbayjan Province: Tabriz (2), September 2002.

82. *Tholagmus breviceps* Jakovlev, 1883

Material examined: Ardabil Province: Germy (1), September 2003.

83. *Tholagmus enkidu* Linnavuori, 1984

Materials examined: East Azarbayjan Province: Khodafarin (2), June 2007.

Family Reduviidae Latreille, 1807

84. *Ectomocoris ululans* (Rossi, 1790)

Material examined: East Azarbayjan Province: Jolfa (1), September 2006.

85. *Nagusta goedelii* (Kolenati, 1857)

Material examined: East Azarbayjan Province: Khomarloo (1), July 2005.

86. *Oncocephalus pilicornis* Reuter, 1882

Material examined: East Azarbayjan Province: Maragheh (1), June 2005.

87. *Peirates hybridus* (Scopoli, 1763)

Material examined: East Azarbayjan Province: Ahar (1), July 2005.

88. *Reduvius pallipes* (Klug, 1830)

Materials examined: East Azarbayjan Province: Kaleibar (2), August 2005.

89. *Reduvius personatus* (Linnaeus, 1758)

Material examined: Ardabil Province: Meshkinshahr (1), September 2003. East Azarbayjan Province: Jolfa (1), September 2006.

90. *Rhynocoris iracundus* (Poda, 1761)

Material examined: Ardabil Province: Pars-Abad (1), June 2002.

Family Rhopalidae Amyot & Serville, 1843

91. *Chorosoma schillingi* (Schilling, 1829)

Material examined: East Azarbayjan Province: Bostan-Abad (1), June 2006.

92. *Corizus fenestella* (Horváth, 1917)

Materials examined: East Azarbayjan Province: Khomarloo (3), July 2005.

93. *Corizus hyoscyami* (Linnaeus, 1758)

Material examined: Ardabil Province: Pars-Abad (1), June 2002.

94. *Maccevetus errans caucasicus* (Kolenati, 1845)

Materials examined: East Azarbayjan Province: Tabriz (2), September 2002.

95. *Maccevetus corsicus* Signoret, 1862

Materials examined: East Azarbayjan Province: Khomarloo (2), July 2005.

96. *Rhopalus parumpunctatus* Schilling, 1829

Material examined: East Azarbayjan Province: Horand (1), July 2005.

97. *Stictopleurus abutilon* (Rossi, 1790)

Materials examined: Ardabil Province: Ardabil (3), June 2002.

Family Scutelleridae Leach, 1815

98. *Eurygaster maura* (Linnaeus, 1758)

Materials examined: Ardabil Province: Pars-Abad (2), June 2002.

99. *Odontotarsus plicatulus* Horváth, 1906

Material examined: East Azarbayjan Province: Khomarloo (1), July 2005.

100. *Psacasta granulata* (Costa, 1847)

Materials examined: West Azarbayjan Province: Ourmieh (2), August 2004.

Family Stenocephalidae Dallas, 1852

101. *Dicranocephalus agilis* (Scopoli, 1763)

Materials examined: East Azarbayjan Province: Azarshahr (4), September 2005.

102. *Dicranocephalus medius* (Mulsant et Rey, 1870)

Materials examined: East Azarbayjan Province: Horand (3), July 2005.

Family Tingidae Laporte de Castelnau, 1833

103. *Agramma minutum* Horváth, 1874

Materials examined: East Azarbayjan Province: Maragheh (2), June 2004.

104. *Campylosteira heissi* Péricart, 1981

Materials examined: East Azarbayjan Province: Khomarloo (2), July 2005. East Azarbayjan Province: Jolfa (1), September 2006.

105. *Catoplatus citrinus* Horváth, 1897

Materials examined: East Azarbayjan Province: Tabriz (2), September 2002.

106. *Catoplatus nigriceps* (Horváth, 1905)

Material examined: East Azarbayjan Province: Kaleibar (1), August 2005.

107. *Corythucha arcuata* (Say, 1832)

Material examined: Ardabil Province: Germy (1), September 2003.

108. *Dictyla sahlbergi* (Horváth, 1906)

Material examined: East Azarbayjan Province: Azarshahr (1), September 2005.

109. *Galeatus scrophicus* Saunders, 1876

Material examined: East Azarbayjan Province: Aynalo (1), October 2005.

110. *Monosteira discoidalis* (Jakovlev, 1883)

Materials examined: East Azarbayjan Province: Ahar (3), July 2005.

111. *Phaenotropis cleopatra* (Horváth, 1905)

Material examined: Ardabil Province: Pars-Abad (1), June 2002. East Azarbayjan Province: Jolfa (1), September 2006.

112. *Tingis (Neolasiotropis) pauperata* (Puton, 1879)

Materials examined: East Azarbayjan Province: Khomarloo (2), July 2005.

113. *Tingis (Tropidocheila) seidenstueckeri* Péricart, 1981

Material examined: East Azarbayjan Province: Bostan-Abad (1), September 2006.

114. *Urentius nanus* (Schumacher, 1913)

Materials examined: West Azarbayjan Province: Ourmieh (2), August 2004.

Discussion

In the present study, only 19 families (Alydidae, Anthocoridae, Berytidae, Coreidae, Corixidae, Dipsocoridae, Cydnidae, Gerridae, Lygaeidae, Nepidae, Miridae, Nabidae, Notonectidae, Pentatomidae, Reduviidae, Rhopalidae, Scutelleridae, Stenocephalidae and Tingidae) were analyzed. Therefore, additional faunistic surveys would be useful to improve our knowledge of other families and other areas of northwestern Iran not sampled yet. Among the mentioned families, only Anthocoridae has been catalogued for Iran (Ghahari *et al.*, 2009). Catalogues and checklists for some other heteropteran families need to be prepared.

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