

Contribution to the knowledge of the fauna of aquatic Adepfaga (Coleoptera) of Mazandaran province of Iran (Families Haliplidae and Dytiscidae)

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Abstract: 9 species of aquatic Adepfaga beetles (Coleoptera) belonging to 2 families (Haliplidae and Dytiscidae) and 7 genera were collected in Mazandaran Province of Iran during 2013 and 2014. Of these 2 species from the genus *Haliplus* (Haliplidae) are new for Iranian fauna.

Introduction

In most recent list of Palaearctic beetles - Catalogue of Palaearctic Coleoptera (thereafter - "Catalogue") [Nilsson, 2003; Vondel van, 2003] 7 species of Haliplidae and 87 species of Dytiscidae are referred to Iranian fauna. Further works [Vafaei et al., 2009; Atamehr & Alaei, 2010; Darilmaz et al., 2013, etc.] enlarged this number by another 5 species including 2 Haliplidae and 3 Dytiscidae. In this paper the results of study of small material collected by one of the authors (A. Mousavi) in 2013-2014 in Mazandaran Province are presented; in general 9 species were collected including 4 Haliplidae and 5 Dytiscidae. Two of them belonging to the genus *Haliplus* (Haliplidae) are new for Iranian fauna.

Material and method

The material was collected in several wetlands of Mazandaran province, mainly in Rice Fields of the plain in Mazandaran along Caspian Sea coast but also in some streams in 2013 and 2014 in the framework of survey of benthic insects' fauna.

Material was collected using D-shaped and Surber samplers.

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The size of the D-shaped sampler was 20x20 cm with depth of about 45 cm and Surber sampler - 30x30 cm. Material was fixed in 4 % Formalin and then replaced to the lab where materials of each sample were sieved with a sieve with 250-micron cells. Then material was washed under running water to remove organic particles and Formalin. The contents of the sieve were transferred into large flat trays with light background, divided by the higher taxa and kept in 70% alcohol.

Aquatic Adephaga selected were identified in Scientific Centre of Zoology and Hydroecology of the National Academy of Sciences of Armenia. Material is deposited in the scientific collection of the Center. Data on general distribution, taxonomy and nomenclature are given according to Catalogue.

List of species

Family Haliplidae

Peltodytes caesus (Duftschmid, 1805)

Material. Siyahbisheh River near Siyahbisheh village up of Siyahbisheh Powerhouse and its dam, 36.3440° N 51.2584° E, alt.: 2112 m, 26.06.2014 (1 ex.); Rice fields near Sari, 36.5617°N 53.2027° E, alt.: 96 m, 21.08.2013 (1 ex.); Rice fields near Babolsar, 36.6902° N 52.6187° E, alt.: 23 m, 17.07.2013 (2 ex.); Rice fields near Bahnamir, 36.6752° N 52.7589° E, alt.: 15 m, 17.07.2013 (1 ex.); Rice fields near Babol, 36.5492° N 52.5752° E, alt.: 3 m, 19.06.2013 (3 ex.); Rice fields near Abasabad 36. 7455° N 51.0070° E, alt.: 21 m, 03.07.2013 (1 ex.); Rice fields near Amol., 36.5058° N 52.3068° E, alt.: 42 m, 05.06.2013 (1 ex.).

Distribution. Whole Europe, Morocco, Central Asia, Iraq, Iran, Israel, Syria, Turkey, Northwest China.

Haliplus (Liaphlus) flavicollis Sturm, 1834

Material. Rice fields near Sari, 36. 5105° N 53.0335° E, alt.: 27 m, 08.05.2013 (1 ex.); Rice fields near Sari, 36.5617° N 53.2027° E, alt.: 96 m, 21.08.2013 (1 ex.).

Distribution. Whole Europe, Turkey, Iran, Iraq, Kazakhstan, West Siberia, Mongolia. New record for Iran.

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Haliplus (Liaphlus) variegatus Sturm, 1834

Material. Rice fields near Mahmoodabad, 36.6227° N 52.2517°E, alt.: 23 m, 05.06.2013 (4 ex.).

Distribution. Whole Europe, Algeria, Iran, Israel, Turkey, Kyrgyzstan. New record for Iran.

Haliplus (s.str.) ruficollis DeGeer, 1774

Material. Rice fields near Mahmoodabad, 36.6227° N 52.2517°E, alt.: 23 m, 05.06.2013 (2 ex.).

Distribution. Whole Europe, Turkey, Iran, Iraq, Afghanistan, Kazakhstan, Tajikistan, Uzbekistan, West Siberia.

Family Dytiscidae

Eretes sticticus (Linnaeus, 1767)

Material. Rice fields near Salmanshahr, 36.7174°N 51.0302°E, alt.: 22m, 03.07.2013 (1 ex.).

Distribution. Whole Europe and Northern Africa, nearly whole Southern Palearctic Asia up to Japan, Oriental and Ethiopian Regions.

Agabus (Gaurodytes) bipustulatus (Linnaeus, 1767)

Material. Siyahbisheh River near Siyahbisheh village up of Siyahbisheh Powerhouse and its dam, 36.3440° N 51.2584° E, alt.: 2112 m, 26.06.2014 (1 ex.).

Distribution. Whole Europe and Northern Africa, Asia Minor, Iran, Afghanistan, Central Asia, West Siberia, China (Sinkiang).

Hydroglyphus geminus (Fabricius, 1792)

Material. Abpari riv. near Royan city, 36.5333° N 51.9475° E, alt.: 25 m, 07.08.2014 (2 ex.).

Distribution. Whole Europe and Northern Africa, Minor and Central Asia, Iran, Mongolia, West Siberia, Northern India, China; Oriental Region.

Porhydrus lineatus (Fabricius, 1775)

Material. Rice fields near Babol, 36.5492° N 52.5752° E, alt.: 3 m, 19.06.2013 (1 ex.); Rice fields near Nur, 36.6055° N 52.3068° E,

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alt.: 14 m, 05.06.2013 (2 ex.).

Distribution. Whole Europe, Iran, West Siberia.

Laccophilus poecilus Klug, 1834

Material. Rice fields near Chaloos, 36.6663° N 51.4518° E, alt.: 18 m, 15.05.2013 (2 ex.); Rice fields near Nur, 36.6055° N 52.3068° E, alt.: 14m, 05.06.2013 (3 ex.); Rice fields near Ghaemshahr, 36.5664° N 52.8763° E, alt.: 0 m, 08.05.2013 (1 ex.); Rice fields near Amol, 36.5058° N 52.4548° E, alt.: 18 m, 06.08.2013 (2 ex.); Rice fields near Amol, 36.5363° N 52.4898° E, alt.: 2 m, 06.08.2013 (4 ex.); Rice fields near Babolsar, 36.6902° N 52.6187° E, alt.: 23 m, 17.07.2013 (1 ex.); Rice fields near Babol, 36.5492° N 52.5752° E, alt.: 3 m, 19.06.2013 (1 ex.); Rice fields near Sari, 36.5385° N 52.96° E, alt.: 4 m, 08.05.2013 (1 ex.); Rice fields near Sari, 36. 5105° N 53.0335° E, alt.: 27 m, 08.05.2013 (1 ex.); Rice fields near Tonekabon, 36. 8171° N 50.8607° E, alt.: 8 m, 03.07.2013 (2 ex.); Rice fields near Ganjafroz (Babol), 36.4575° N 52.6992° E, alt.: 20 m, 19.06.2013 (1 ex.); Rice fields near Salmanshahr, 36.7174° N 51.0302° E, alt.: 22 m, 03.07.2013 (2 ex.).

Distribution. Whole Europe and North Africa, Central Asia, Israel, Turkey, Syria, Egypt (Sinai), Iran, Iraq, Kuwait, Saudi Arabia, China (Sinkiang).

REFERENCES

- Atamehr A., Alaei M. 2010. Two Aquatic Beetles Reported (Halipidae: Coleoptera) from Azerbaijan, Iran. - World Applied Sciences Journal. 11(8): 918-923.
- Darilmaz M.C., Incekara U., Vafaei R. 2013. Contributions to the knowledge of Iranian Aquatic Adephaga (Coleoptera). - Spixiana. 36(1): 149-152.
- Nilsson, A.N. 2003. Dytiscidae, pp. 35-78. In: Catalogue of Palaearctic Coleoptera (I. Löbl, A. Smetana eds.). Vol. 1. Stenstrup: Apollo Books. 819 p.
- Vafaei R., Darilmaz M.C., Nazari E., Incekara U., Piazak N. 2009. Contributions to the knowledge of Iranian aquatic Coleoptera fauna (Dytiscidae, Gyrinidae, Helophoridae and Hydrophilidae) with new records and notes on the rare species *Coleostoma transcaspicum* Reitter, 1906. - Acta entomologica Serbica. 14(1): 101-107.
- Vondel van, B.J. 2003. Halipidae. P. 30-33. In: Catalogue of Palaearctic Coleoptera (I. Löbl, A. Smetana eds.). Vol. 1. Stenstrup: Apollo Books. 819 p.

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