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A contribution to the knowledge of ichneumonid wasps from Mazandaran province, northern Iran

(Hymenoptera, Ichneumonidae)

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The species of the subfamilies Cremastinae, Cryptinae, Ichneumoninae, Pimplinae and Rhyssinae (Hymenoptera: Ichneumonidae) from Mazandaran province, northern Iran are listed. 20 species belonging to 15 genera are here reported. *Exeristes arundinis* (Kriechbaumer) is a new record for the fauna of Iran.

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Introduction

Ichneumon wasps (Hymenoptera: Ichneumonidae) are important parasitoids of insects and spiders. Common hosts are larvae and pupae of Coleoptera, Hymenoptera, Diptera and Lepidoptera. There are over 60 000 species worldwide (Townes 1969, Gupta 1987, Wahl & Sharkey 1993).

The fauna of Iranian Ichneumonidae was studied rather well recently (Kolarov & Ghahari 2005, 2006, 2007, 2008; Ghahari & Jussila 2010a,b; Ghahari et al. 2010a,b). In continuing to complete the knowledge of the Iranian ichneumonids, Cremastinae, Cryptinae, Ichneumoninae, Pimplinae and Rhyssinae collected in the last years in the Mazandaran province, which is located in northern Iran and south of the Caspian Sea (Fig. 1), are recorded here.

Materials and methods

The Ichneumonidae recorded in this paper were sampled using Malaise traps, yellow pan traps, sweep netting and hand collecting at each of the sampled regions on Mazandaran province. In some localities a yellow plastic bowl (165 mm diameter, 40 mm depth) was de-

posited on the forest floor and charged with propylene glycol. These yellow pan traps were exposed for 5 days. Four Malaise traps were run at each region for a period of seven days and cleared daily. The Malaise traps were constructed as described by Townes (1972), using fine-meshed nettings (grid size 0.2 mm), with black walls and a white roof. The sweep net used for sampling was based on the design of Noyes (1982) with a collecting bag made of fine-meshed nettings with a grid size of 0.2 mm. Classification, nomenclature and distributional data of Ichneumonidae suggested by Kasparyan (1973, 1981), Yu & Horstmann (1997), Yu et al. (2005) and Jussila et al. (2010) have been followed. H. Ghahari, R. Jussila, J. Šedivý and J. Kolarov have identified the specimens listed below.

Results

Totally 20 species belonging to 15 genera of the subfamilies Cremastinae, Cryptinae, Ichneumoninae, Pimplinae and Rhyssinae collected in the Mazandaran province (northern Iran) are here recorded. 5 species were collected by yellow pan traps, 12 species by Malaise traps and 3 species by sweeping. The list of the species with their data is given below.

Subfamily Cremastinae

Cremastus pungens Gravenhorst, 1829

Material examined: Mazandaran province, Fereydonkenar (53 m), 5♀, 14 July 2007.

Distribution outside Iran: Europe, Turkey, Russia and Mongolia.

Eucremastus collaris Narolsky, 1990

Material examined: Mazandaran province, Sari (17 m), 1♀, 10 August 2007.

Distribution outside Iran: Greece, Turkey, Georgia, Azerbaijan and Armenia.

Pristomerus horribilis Narolsky, 1987

Material examined: Mazandaran province, Tonekabon (55 m), 1♂, 11 July 2008.

Distribution outside Iran: Czechoslovakia, Germany, Switzerland, Bulgaria and Ukraine.

Pristomerus mesopotamicus Horstmann, 1990

Material examined: Mazandaran province, Qaemshahr (31 m), 1♀, 22 September 2006.

Distribution outside Iran: Iraq, Turkey.

Temelucha caudata (Szépligeti, 1899)

Material examined: Mazandaran province, Savadkooch (422 m), 1♀, 18 July 2006.

Distribution outside Iran: Middle and South Europe and Turkey.

Temelucha decorata (Gravenhorst, 1829)

Material examined: Mazandaran province, Amol (227 m), 1♀, 25 April 2009.

Distribution outside Iran: Madeira and Canary Islands, North Africa, Europe, Azerbaijan, Turkey, Cyprus, Israel, Uzbekistan, Russia, Afghanistan and USA.

Temelucha interruptor (Gravenhorst, 1829)

Material examined: Mazandaran province, Ramsar (12 m), 1♀, 8 July 2008.

Distribution outside Iran: Europe and Mongolia, Turkey, introduced into North America.

Temelucha signata (Holmgren, 1860)

Material examined: Mazandaran province, Sari (17 m), 1♀, 10 August 2007.

Distribution outside Iran: Europe, Mongolia and Turkey.

Subfamily Cryptinae

Mesoleptus inceptor (Haliday, 1839)

Material examined: Mazandaran province, Ramsar (12 m), 2♀, 2♂, 8 July 2006.

Distribution outside Iran: Western Palaearctic.

Subfamily Ichneumoninae

Protichneumon pisorius (Linnaeus, 1758)

Material examined: Mazandaran province, Savadkooch (422 m), 4♀, reared from *Sphinx* spec. (Lep.: Sphingidae), 18 July 2006.

Distribution outside Iran: Palaearctic.

Virgichneumon albosignatus (Gravenhorst, 1829)

Material examined: Mazandaran province, Amol (227 m), 3♀, reared from *Abraxas grossulariatus* (L.) (Lep.: Geometridae), 27 September 2006.

Distribution outside Iran: Palaearctic.

Subfamily Pimplinae

Exeristes arundinis (Kriechbaumer, 1887)

Material examined: Mazandaran province, Chalus (44 m), 1♀, 16 August 2008. **New record for Iran.**

Distribution outside Iran: Palaearctic.

Scambus foliae (Cushman, 1938)

Material examined: Mazandaran province, Savadkooch (422 m), 1♂, 6 June 2006.

Distribution outside Iran: Europe and Russia (Komi and Sakhalin Island).

Subfamily Tryphoninae

Ctenochira propinqua (Gravenhorst, 1829)

Material examined: Mazandaran province, Qaemshahr (31 m), 2♂, 1♀, Joibar (6 m), 3♂, 2♀, 3 July 2006.

Distribution outside Iran: Palaearctic region.

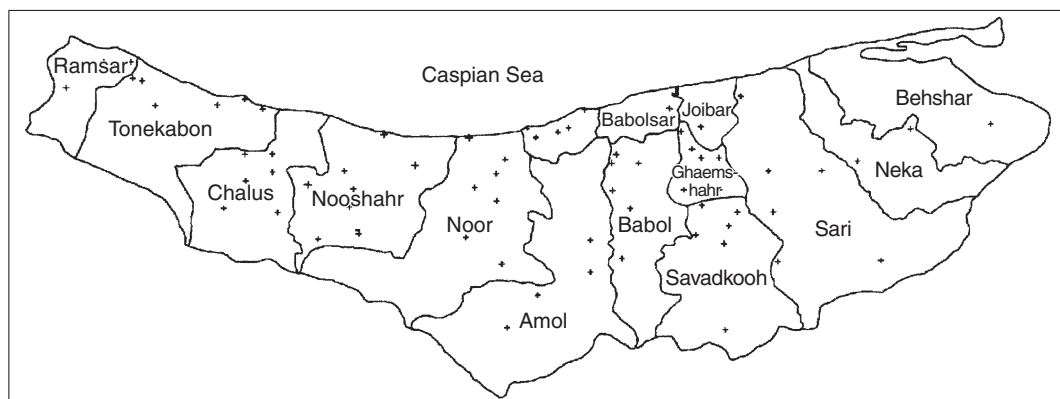


Fig. 1. Map of Mazandaran with its different localities.

Erromenus calcator (Müller, 1776)

Material examined: Mazandaran province, Ramsar (12 m), 2♂, 1♀, 24 August 2008.

Distribution outside Iran: Palaearctic region.

Grypocentrus albipes Ruthe, 1855

Material examined: Mazandaran province, Savadkooh (336 m), 1♂, 18 July 2006.

Distribution outside Iran: Holarctic region.

Polyblastus (Polyblastus) pedalis carbonator Kasparyan, 1970

Material examined: Mazandaran province, Mahmood-Abad (447 m), 2♂, 1♀, 12 October 2007.

Distribution outside Iran: Holarctic region.

Polyblastus (Labroctonus) alternans Schiødte, 1839

Material examined: Mazandaran province, Savadkooh (336 m), 1♂, 6 June 2006.

Distribution outside Iran: Europe, Turkey, Caucasus, Russia and Nearctic.

Subfamily Rhyssinae

Megarhyssa superba (Schrank, 1781)

Material examined: Mazandaran province, Sari (26 m), 1♂, 1♀, 3 June 2007.

Distribution outside Iran: Europe and Eastern Palaearctic.

Rhyssa amoena Gravenhorst, 1829

Material examined: Mazandaran province, Qaemshahr (31 m), 3♂, 1♀, 2 October 2006.

Distribution outside Iran: Europe and Eastern Palaearctic.

Discussion

Upon the results of this research and also other researches on Iranian Ichneumonidae (see References), the fauna of ichneumonids is diverse in Mazandaran province. With attention to the importance of Mazandaran in having diverse forests and agricultural products, ichneumonid wasps have an efficient role in biological control of agricultural and forest pests in this region of northern Iran. It is very important to continue the faunistic surveys of Iranian Ichneumonidae.

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