

ARTIGO / ARTÍCULO / ARTICLE

Some new records of the subfamilies Ichneumoninae and Tryphoninae (Hymenoptera: Ichneumonidae) from Iran.

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Abstract: A total of 11 species of the subfamilies Ichneumoninae and Tryphoninae (Hymenoptera, Ichneumonidae) are reported in this paper as new records for the fauna of Iran. For Ichneumoninae, 6 species belonging to 4 genera, *Diphyus* Kriechbaumer, 1890 (1), *Ichneumon* Linnaeus, 1758 (3), *Rictichneumon* Heinrich, 1961 (1), and *Vulgichneumon* Heinrich, 1962 (1) and, for Tryphoninae, 5 species belonging to 4 genera, *Cosmoconus* Förster, 1869 (1), *Ctenochira* Förster, 1869 (1), *Monoblastus* Hartig, 1837 (1), and *Tryphon* Fallén, 1813 (2), are studied in this paper.

Key words: Hymenoptera, Ichneumonidae, Ichneumoninae, Tryphoninae, new records, Iran.

Resumen: Algunas citas nuevas de las subfamilias Ichneumoninae y Tryphoninae (Hymenoptera: Ichneumonidae) para Irán. Se citan por primera vez para la fauna de Irán un total de 11 especies de las subfamilias Ichneumoninae y Tryphoninae (Hymenoptera: Ichneumonidae). Se estudian en este trabajo 6 especies pertenecientes a 4 géneros de Ichneumoninae, *Diphyus* Kriechbaumer, 1890 (1), *Ichneumon* Linnaeus, 1758 (3), *Rictichneumon* Heinrich, 1961 (1) y *Vulgichneumon* Heinrich, 1962 (1) y 5 especies pertenecientes a 4 géneros de Tryphoninae, *Cosmoconus* Förster, 1869 (1), *Ctenochira* Förster, 1869 (1), *Monoblastus* Hartig, 1837 (1) y *Tryphon* Fallén, 1813 (2).

Palabras clave: Hymenoptera, Ichneumonidae, Ichneumoninae, Tryphoninae, citas nuevas, Irán.

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Introduction

The family Ichneumonidae is the largest family of Hymenoptera with 48 generally recognized subfamilies, 1,579 genera and 24,281 described species (Yu *et al.* 2012; Çoruh *et al.* 2014). These beneficial insects are parasitoids of Lepidoptera, Coleoptera, Diptera and, to a less extent, spiders and the egg sacs of spiders and pseudoscorpions (Wahl & Sharkey 1993; Finch 2005; Çoruh & Kolarov 2010). Some of these parasitoids have been used successfully as biological control agents (Gupta 1991).

The fauna of Iranian Ichneumonidae is not well studied: Kolarov & Ghahari (2005) listed 144 species from 14 subfamilies; seven years later Barahoei *et al.* (2012) listed 502 species belonging to 189 genera and 24 subfamilies. Later, many authors (Ghahari 2014; Ghahari & Jussila 2014a, b, 2015; Ghahari *et al.* 2014a, b; Barahoei *et al.* 2014a, b, 2015; Ghahari & Gadallah 2015, etc.) have made contributions to the knowledge of the Iranian fauna.

The aim of the present research is the report of new records of Ichneumonidae for the fauna of Iran, a total of 11 species belonging to the subfamilies Ichneumoninae (4 genera, *Diphyus* Kriechbaumer, 1890, *Ichneumon* Linnaeus, 1758, *Rictichneumon* Heinrich, 1961, and *Vulgichneumon* Heinrich, 1962) and Tryphoninae (4 genera, *Cosmoconus* Förster, 1869, *Ctenochira* Förster, 1869, *Monoblastus* Hartig, 1837, and *Tryphon* Fallén, 1813) (Hymenoptera, Ichneumonidae).

Material and methods

The Ichneumonidae recorded in this paper were collected by the use of Malaise traps and sweeping nets in some regions of Iran. The collected materials were put in alcohol 75% or mounted on triangular labels and were examined with a stereoscopic binocular microscope.

The subfamilies, genera and species are listed in alphabetic order according to the recent *Interactive Catalogue of World Ichneumonidae* (Yu *et al.* 2012). The distributional records were also based on Yu *et al.* (2012).

Results

Subfamily Ichneumoninae Latreille, 1802

Genus *Diphyus* Kriechbaumer, 1890

Diphyus montivagans (Berthoumieu, 1897)

Material examined: Province of Kordestan: Qorveh, 35°15'N 47°40'E, 1♂, September 2012.

General distribution: Czech Republic, France, Poland, Slovakia, Spain, Switzerland, Turkey.

Genus *Ichneumon* Linnaeus, 1758

Ichneumon exilicornis Wesmael, 1857

Material examined: Province of West Azarbaijan: Takab, 36°27'N 47°04'E, 2♀♀, August 2013.

General distribution: Austria, Belarus, Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Netherlands, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Turkey, UK, former Yugoslavia.

Ichneumon gracilicornis Gravenhorst, 1829

Material examined: Province of Hamadan: Razan, 35°25'N 49°00'E, 2♀♀, June 2014.

General distribution: Austria, Belarus, Belgium, Bulgaria, China, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, Turkey, UK, Ukraine, former Yugoslavia.

Ichneumon quaesitorius Linnaeus, 1761

Material examined: Province of Guilan: Siahkal, 36°56'N 49°54'E, 1♀, July 2014.

General distribution: Austria, Bulgaria, Czech Republic, Croatia, Finland, France, Germany, Hungary, Italy, Kazakhstan, Kyrgyzstan, Latvia, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, UK, Ukraine.

Genus *Rictichneumon* Heinrich, 1961

Rictichneumon lombardi (Berthoumieu, 1897)

Material examined: Province of Chaharmahal & Bakhtiari: Kuhrang, 32°25'N 50°00'E, 1♀, May 2013.

General distribution: Albania, Bulgaria, France, Hungary, Israel, Romania, Switzerland, Turkey.

Genus *Vulgichneumon* Heinrich, 1962***Vulgichneumon deceptor* (Scopoli, 1763)**

Material examined: Province of Kuhgiloyeh & Boyerahmad: Sisakht, 30°88'N 51°41'E, 1♂, September 2013.

General distribution: Austria, Belarus, Belgium, Czech Republic, Finland, France, Georgia, Germany, Hungary, Ireland, Italy, Kazakhstan, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Turkey, UK, Ukraine.

Subfamily Tryphoninae Shuckard, 1840**Genus *Cosmoconus* Förster, 1869*****Cosmoconus elongator* (Fabricius, 1775)**

Material examined: Province of Kuhgiloyeh & Boyerahmad: Pataveh, 30°82'N 50°83'E, 1♂, 2♀♀, September 2013.

General distribution: Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Czech Republic, Croatia, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Ireland, Italy, Kazakhstan, Korea, Latvia, Lithuania, Luxembourg, Moldova, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Turkey, UK, Ukraine.

Genus *Ctenochira* Förster, 1869***Ctenochira pratensis* (Gravenhorst, 1829)**

Material examined: Province of Zanjan: Khorramdarreh, 36°25'N 49°55'E, 1♀, June 2012.

General distribution: Austria, Azerbaijan, Belgium, Bulgaria, Czech Republic, Finland, France, Georgia, Germany, Hungary, Ireland, Mongolia, Norway, Poland, Spain, Sweden, UK, Ukraine.

Genus *Monoblastus* Hartig, 1837***Monoblastus brachyacanthus* (Gmelin, 1790)**

Material examined: Province of Zanjan: Abhar, 36°16'N 49°03'E, 1♂, 1♀, June 2011.

General distribution: Algeria, Austria, Azerbaijan, Belgium, Bulgaria, Croatia, Czech Republic, Finland, France, Georgia, Germany, Hungary, Ireland, Italy, Kazakhstan, Moldova, Netherlands, Norway, Poland, Romania, Russia, Spain, Switzerland, Turkey, UK, Ukraine.

Genus *Tryphon* Fallén, 1813***Tryphon signator* Gravenhorst, 1829**

Material examined: Province of Kordestan: Qorveh, 35°15'N 47°40'E, 1♀, September 2012.

General distribution: Albania, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Lithuania, Luxembourg, Moldova, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, Turkey, UK, Ukraine.

***Tryphon zavreli* Gregor, 1939**

Material examined: Province of Ardabil: Germe, 39°00'N 47°57'E, 2♂♂, 1♀, September 2011.

General distribution: Armenia, Azerbaijan, Bulgaria, Czech Republic, Georgia, Germany, Kazakhstan, Moldova, Poland, Russia, Slovakia, Turkey, Ukraine.

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