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## A contribution to the fauna of cuckoo wasps (Hymenoptera, Chrysididae) in southern Iran

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### Abstract

The present study provides information about the family Chrysididae (Hymenoptera, Chrysidoidea) collected from Fars province, southern Iran. All specimens were collected by Malaise trap during years 2013-2014. Twenty eight species, belonging to 12 genera and 2 subfamilies Cleptinae and Chrysidinae were identified and recorded. Among them, *Hedychrum rutilans viridiauratum* MOCSÁRY, 1889, *Holopyga ignicollis* DAHLBOM, 1854, *Chrysis altaica* MOCSÁRY, 1912, *C. clarinicollis* LINSENMAIER, 1951, *C. stilboides* SPINOLA, 1838 and *C. verna* DAHLBOM, 1854 are newly recorded from Iran. Distributional data for each species are also included.

Key words: Hymenoptera, cuckoo wasps, Malaise trap, Iran, Palaearctic Region, new records.

### Zusammenfassung

Vorliegende Arbeit behandelt das Vorkommen der Familie Chrysididae (Hymenoptera, Chrysidoidea) in der südlichen iranischen Provinz Fars. Das zugrunde liegende Material wurde in den Jahren 2013 bis 2014 mittels Malaise-Fallen gesammelt. Insgesamt gelang der Nachweis von 28 Arten aus 12 Gattungen und den zwei Unterfamilien Cleptinae und Chrysidinae. *Hedychrum rutilans viridiauratum* MOCSÁRY, 1889, *Holopyga ignicollis* DAHLBOM, 1854, *Chrysis altaica* MOCSÁRY, 1912, *C. clarinicollis* LINSENMAIER, 1951, *C. stilboides* SPINOLA, 1838 und *C. verna* DAHLBOM, 1854 sind Erstnachweise für den Iran.

## Introduction

Gold wasps or cuckoo wasps are common name designated to Chrysidae family belonging to aculeae Hymenoptera. Many species are characterized by colors with metallic glares, green, blue, copper, gold, or a combination of these colors (KIMSEY & BOHART 1991). Until now, near to 3000 species have been named while the fauna of southern Asia, Africa and the Middle East have not been fully explored (KIMSEY & BOHART 1991; AGUIAR et al. 2013). Chrysidae wasps are parasitoids or cleptoparasites of other insect's especially solitary wasps (KIMSEY & BOHART 1991).

In countries near Iran, some works on cuckoo wasps have been published on the Turkish fauna (LINSENMAIER 1968, 1987, 1997; ARENS 2004, 2010; STRUMIA & YILDIRIM 2009), and on the fauna of the Arabian Peninsula (LINSENMAIER 1994; STRUMIA 2008, 2014) but none of the comprehensive studies focused specifically on the Chrysidae of Iran.

In Iran, some old studies on cuckoo wasps have been carried out by Russian entomologists (e.g. RADOSZKOWSKI 1866, 1881, 1889 1891; SEMENOV 1892; SEMENOV-TIAN-SHANSKIJ 1932, 1967; SEMENOV-TIAN-SHANSKIJ & NIKOL'SKAYA 1954). In the following years, LINSENMAIER (1959, 1968, 1969, 1987, 1997ab, 1994) and MÓCZÁR (1997, 1998) noted that some species also had been recorded in Iran. Recently, ROSA et al. (2013) provided a preliminary list of Iranian Chrysidae contains 184 species in 20 genera. More recently, some new species (ROSA & LOTFALIZADEH 2013; STRUMIA & FALLAHZADEH 2015; STRUMIA et al. 2016) were described as well as several new species records from Iran were added (TORABIPOUR et al. 2013 a, b; STRUMIA & FALLAHZADEH 2015; FARHAD et al. 2015, 2016). No doubt the fauna of Chrysidae of Iran is still poorly studied (STRUMIA & FALLAHZADEH 2015).

Fars province is located in the south of Iran. The province has various geographical regions and climates and, as a consequence, it would be expected that many additional species remain to be discovered. Therefore, the purpose of this paper is to add more information about the Chrysidae fauna distributed in that region.

## Materials and methods

Specimens for this study were collected by using six standard Malaise traps from different habitats in the Fars province during years in 2013-2014. The specimens were extracted from traps and maintained in 70% ethanol, then pinned and sorted into genus and species level. All specimens are deposited in the insect collection of the Department of Entomology, Marvdasht Branch, Islamic Azad University, Fars, Iran. The taxa were arranged according to BOHART & KIMSEY (1982) and KIMSEY & BOHART (1991).

## Results

In the present study, a total of 118 specimens from 28 species and subspecies in 12 genera and two subfamilies Cleptinae and Chrysinae are reported from Fars province, southern Iran. Among them 6 species which are marked with an asterisk (\*) are new

records for Iran. The chrysidid wasps collected and identified during this 2-year study period are listed as follows:

### Subfamily Cleptinae

#### Genus *Cleptes* LATREILLE, 1802

##### *Cleptes splendidus* (FABRICIUS, 1794)

Material examined: ♀, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 29.vii.2014, leg. N. Saghaei.

Iranian records: Golestan (SEMENOV 1920; MÓCZÁR 1997; ROSA et al. 2013).

General distribution: Widespread in the Palaearctic, Europe, Georgia, Turkey, southern Russia (MÓCZÁR 1997, 1998).

### Subfamily Chrysidinae

#### Tribe Elampini

#### Genus *Hedychridium* ABEILLE DE PERRIN, 1878

##### *Hedychridium flavipes rugulosum* LINSENMAIER, 1959

Material examined: 1♂, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 01.vii.2014, leg. N. Saghaei; 2♂♂, 12.vii.2014, same data; 1♂, 04.ix.2014, same data.

Iranian records: East-Azabaijan (LINSENMAIER 1959; ROSA et al. 2013), Hormozgan (FARHAD et al. 2016).

General distribution: Cyprus, Palestine (LINSENMAIER 1959, 1968).

##### *Hedychridium monochroum* DU BUYSSON, 1888

Material examined: 1♀, Fars province, Olom Tahghighat (52°39'N, 29°59'E), 15.v.2013, leg. F. Farzaneh; ♂, Fars province, Tiyoon (29°25'N, 52°38'E), 13.ix.2014, leg. F. Farzaneh.

General distribution: South-West Europe, Yemen (LINSENMAIER 1959, 1994), Pakistan (NURSE 1904), India (STRUMIA 1999), Myanmar (TSUNEKI 1961), Burma (STRUMIA 1994).

##### *Hedychridium moricei chrysurum* LINSENMAIER 1969

Material examined: 1♀, Fars province, Dehno Ghalandari (29°20'N, 52°38'E), 15.vii.2013, leg. F. Farzaneh.

Remark: LINSENMAIER (1969) tentatively proposed the synonymy *Hedychridium moricei chrysurum* LINSENMAIER 1969 = *Hedychridium moricei davydovi* (SEMENOV, 1967) for the specimens from Iran, and based again mainly on body color variations. The study of Iranian individuals shows that all belong to the *chrysurum* form and not to the ssp. *davydovi*. The above synonymy is to be rejected also because the original Semenov descriptions do not agree with *H. moricei*. In conclusion, *H. davydovi* is a species different from *H. moricei chrysurum*, a subspecies known from Palestine, Syria and

Jordan (in last author collection). KIMSEY & BOHART (1991) considered *Hedychridium davydovi* (SEMENOV 1967) a synonym of *Hedychridium clarum* SEMENOV 1967.

### Genus *H e d y c h r u m* LATREILLE, 1802

#### \**Hedychrum rutilans viridiauratum* MOCsÁRY, 1889

Material examined: 1♀, Fars province, Marvdasht (52°48'N, 29°52'E), 16.vii.2013, leg. F. Farzaneh; ♀, Fars province, Dehno (29°28'N, 52°38'E), 23.vii.2013, leg. F. Farzaneh; 1♂, Fars province, Shraiz, Ghasro Dasht (29°39'N, 52°28'E), 23.vii.2013, leg. F. Farzaneh; 2♀, Fars province, Dehno (29°28'N, 52°38'E), 29.vii.2013, leg. F. Farzaneh; 1♂, 08.vi.2013, same data; 1♀, 13.viii.2013, same data.

General distribution: Algeria, Morocco, Egypt, southern Europe (KIMSEY & BOHART 1991; LINSENMAIER 1999). New for the Iranian fauna.

### Genus *H o l o p y g a* DAHLBOM, 1845

#### *Holopyga cypruscula detrita* LINSENMAIER, 1959

Material examined: 1♂, Fars province, Dehno Ghalandari (29°20'N, 52°38'E), 15.vii.2013, leg. F. Farzaneh.

Iranian records: Alborz, East-Azerbaijan, Qazvin, Mazandaran (LINSENMAIER 1959; ROSA et al. 2013).

General distribution: Cyprus, Turkey (LINSENMAIER 1959, 1968, 1987).

#### \**Holopyga ignicollis* DAHLBOM, 1854

Material examined: 1♀, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 06.vii.2014, leg. N. Saghaei.

General distribution: Morocco, Algeria, Egypt, Palaearctic to middle Asia (LINSENMAIER 1999). New for the Iranian fauna.

### Genus *O m a l u s* PANZER, 1801

#### *Omalus aeneus* (FABRICIUS, 1787)

Material examined: 1♀, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 06.vi.2014, leg. N. SAGHAEI; 1♀, 26.vii.2014, same data.

General distribution: *O. aeneus* is a widespread species in Palaearctic Region and North America (Canada and USA) (KIMSEY & BOHART 1991).

#### *Omalus biaccinctus* (DU BUYSSEN, 1892)

Material examined: 1♀, Fars province, Dehno (29°24'N, 52°39'E), 08.vi.2013, leg. F. Farzaneh; 1♀, Fars province, Shiraz, Kaftarak, (29°33'N, 52°44'E), 06.vii.2014, leg. N. Saghaei; 1♀, Fars province, Tiyoon (29°25'N, 52°38'E), 13.ix.2014, leg. F. Farzaneh.

Iranian record: East-Azerbaijan (ROSA et al. 2013).

General distribution: Widespread in Europe and western Asia (LINSENMAIER 1959).

## Genus *Philotetes* ABEILLE DE PERRIN, 1879

### *Philotetes horvathi* (MOCSÁRY, 1889)

Material examined: 1♀, 1♂, Fars province, Tiyoon (29°25'N, 52°38'E), 13.ix.2014, leg. F. Farzaneh.

Iranian records: Golestan (LINSENMAIER, 1959, ROSA et al. 2013).

General distribution: Austria, China, Hungary, Korea, Israel, Mongolia, Morocco (LINSENMAIER 1959; KIMSEY & BOHART 1991).

## Genus *Pseudomalus* ASHMEAD, 1902

### *Pseudomalus turkestanicus* (MOCSÁRY, 1889)

Material examined: 1♀, Fars province, Olom Tahghighat (52°39'N, 29°59'E), 15.v.2013, leg. F. Farzaneh; 1♀, Fars province, Dehno (29°28'N, 52°38'E), 29.vii.2013, leg. F. Farzaneh; 1♂, 1♀, Fars province, Dehno (29°24'N, 52°39'E), 08.vi.2013, leg. F. Farzaneh; 1♀, 13.viii.2013, same data; 1♀, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 07.v.2014, leg. N. Saghaei; 1♀, 10.v.2014, same data; 1♀, 1♂, 11.vii.2014, same data; 4♀, 26.vii.2014, same data; 1♀, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 12.vii.2014, leg. N. Saghaei; 1♂, 4♀, 22.vii.2014, same data; 2♀, Fars province, Tiyoon (29°25'N, 52°38'E), 13.ix.2014, leg. F. Farzaneh.

Iranian record: Alborz (STRUMLIA & FALLAHZADEH 2015).

General distribution: Uzbekistan and Turkey (STRUMLIA & YILDIRIM 2011).

## Tribe Chrysidiini

## Genus *Chrysidea* BISCHOFF, 1913

### *Chrysidea pumila* (KLUG, 1845)

Material examined: 1♂, Fars province, Olom Tahghighat (52°39'N, 29°59'E), 15.v.2013, leg. F. Farzaneh; 1♂, Fars province, Shriaz, Ghosro Dasht (29°39'N, 52°38'E), 16.v.2013, leg. F. Farzaneh; 1♀, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 10.v.2014, leg. N. Saghaei; 1♀, Fars province, Dehno (29°25'N, 52°38'E), 22.v.2014, leg. F. Farzaneh; 1♀, Fars province, Khosh Makan, Fars province (29°29'N, 52°52'E), 30.v.2014, leg. F. Farzaneh; 1♂, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 01.vii.2014, leg. N. Saghaei; 1♂, 1♀, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 07.vii.2014, leg. N. Saghaei; 1♂, 12.vii.2014, same data.

Iranian records: Iran (ROSA et al. 2013), Fars (STRUMLIA & FALLAHZADEH 2015), Hormozgan (FARHAD et al. 2016).

General distribution: Afrotropical, Palaearctic (KIMSEY & BOHART 1991), Turkey (YILDIRIM & STRUMLIA 2006; STRUMLIA & YILDIRIM 2009).

## Genus *Chrysis* LINNAEUS, 1761

### \**Chrysis altaica* MOCSÁRY, 1912

Material examined: 1♀, Fars province, Dehno Ghalandari (29°20'N, 52°38'E), 15.vii.2013, leg. F. Farzaneh, 2♀, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 11.v.2014, leg. N. Saghaei.

General distribution: Mongolia, S former USSR (KIMSEY & BOHART 1991). New for the Iranian fauna.

**\**Chrysis clarinicollis* LINSENMAIER, 1951**

Material examined: 1♀, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 11.v.2014, leg. N. Saghaei

General distribution: Morocco, Algeria, Italy, Central and southwest Europe (LINSENMAIER 1999). New for the Iranian fauna

***Chrysis inaequalis* DAHLBOM, 1845**

Material examined: 1♀, Fars province, Dehno (29°28'N, 52°38'E), 29.vii.2013, leg. F. Farzaneh

Iranian record: Golestan (ROSA et al. 2013).

General distribution: Europe (LINSENMAIER 1959).

***Chrysis inaequalis sapphirina* SEMENOV-TIAN-SHANSKIJ, 1912**

Material examined: 1♂, Fars province, Dehno (29°24'N, 52°39'E), 08.vi.2013, leg. F. Farzaneh

Iranian record: Tehran (LINSENMAIER 1959).

General distribution: Greece, Bulgaria, Turkey, Palestine, Cyprus, Iran (LINSENMAIER 1959, 1968).

***Chrysis minutissima* RADOSZKOWSKI, 1876**

Material examined: 1♂, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 06.vi.2014, leg. N. Saghaei; 1♂, Fars province, Tiyoon (29°25'N, 52°38'E), 13.ix.2014, leg. F. Farzaneh

Iranian record: Fars (STRUMIA & FALLAHZADEH 2015).

General distribution: Morocco, Egypt, Palestine and Jordan (LINSENMAIER 1999).

***Chrysis palliditarsis* SPINOLA, 1838**

Material examined: 1♂, Fars province, Tiyoon (29°24'N, 52°40'E), 30.v.2013, leg. F. Farzaneh; 1♂, Fars province, Dehno Ghalandari (29°20'N, 52°38'E), 15.vii.2013, leg. F. Farzaneh; 1♂, Fars province, Dehno (29°24'N, 52°39'E), 08.vi.2013, leg. F. Farzaneh; 1♂, 13.viii.2013, same data; 1♂, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 07.v.2014, leg. N. Saghaei, 1♂, 10.v.2014, same data; 2♂♂, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 07.viii.2014, leg. N. Saghaei; 1♂, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 11.v.2014, leg. N. Saghaei; 3♂♂, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 18.vi.2014, leg. N. Saghaei; 1♂, 30.vi.2014, same data; 1♂, 01.vii.2014, same data; 1♂, 12.vii.2014, same data; 1♂, 04.ix.2014, same data; 1♂, 05.ix.2014, same data; 1♂, Fars province, Zafar Abad (29°24'N, 52°35'E), 19.ix.2014, leg. F. Farzaneh.

Iranian record: Fars (STRUMIA & FALLAHZADEH 2015).

General distribution: Afrotropical Region, Egypt, Ethiopia, Eritrea, South Africa, Palestine, Saudi Arabia, Oman, Yemen and U.A.E. (LINSENMAIER 1994; STRUMIA 2008).

### ***Chrysis soror consobrina* MOCSÁRY, 1889**

Material examined: ♀, Fars province, Dehno Ghalandari (29°20'N, 52°38'E), 15.vii.2013, leg. F. Farzaneh; 1♀, 1♂, Fars province, Dehno (29°28'N, 52°38'E), 29.vii.2013, leg. F. Farzaneh, 1♂, Fars province, Faroogh (29°58'N, 53°20'E), 22.vii.2014, leg. F. Farzaneh.

Iranian records: Damavand (MOCSÁRY 1889), Persia (BISCHOFF 1913; BALTHASAR 1953).

General distribution: Transcaspia (LINSENMAIER 1959).

### **\**Chrysis stilboides* SPINOLA, 1838**

Material examined: 1♀, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 29.vii.2014, leg. N. Saghaei.

General distribution: Afrotropical, Palaearctic, Oriental (KIMSEY & BOHART 1991), UAE (STRUMIA 2014). New for the Iranian fauna.

### **\**Chrysis verna* DAHLBOM, 1854**

Material examined: 1♀, Fars province, Dehno Ghalandari (29°20'N, 52°38'E), 15.vii.2013, leg. F. Farzaneh.

General distribution: Palaearctic: S Europe, Turkey, Middle East, S former USSR (KIMSEY & BOHART 1991). New for the Iranian fauna.

### ***Chrysis viridissima* KLUG, 1845**

Material examined: 1♀, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 18.vi.2014, leg. N. Saghaei; 1♀, 01.vii.2014, same data; 1♀, 07.vii.2014, same data.

Iranian records: East-Azrbaijan, Khuzestan (POURRAFEI et al. 2011; ROSA et al. 2013); Fars (STRUMIA & FALLAHZADEH, 2015).

General distribution: Jordan, Mauritania, North Africa, North India, Afrotropical Region (LINSENMAIER 1959, 1999); Middle East, U.A.E. (STRUMIA 2008), Saudi Arabia (STRUMIA & DAWAH 2010).

### ***Chrysis zobeida* DU BUYSSON, 1896**

Material examined: 1♀, Fars province, Tiyoon (29°24'N, 52°40'E), 30.v.2013, leg. F. Farzaneh; 1♂, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 18.vi.2014, leg. N. Saghaei; 2♂♂, 30.vi.2014, same data; 1♀, 12.vii.2014, same data; 1♀, 04.ix.2014, same data; 1♂, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 07.viii.2014, leg. N. Saghaei; 1♀, Fars province, Zafar Abad (29°24'N, 52°35'E), 19.ix.2014, leg. F. Farzaneh.

Iranian record: Fars (STRUMIA & FALLAHZADEH 2015).

General distribution: Egypt, Palestine, Saudi Arabia, U.A.E. (STRUMIA 2014), Turkey (STRUMIA & YILDIRIM 2008) and Iran (LINSENMAIER 1968).

### **Genus *Chrysura* DAHLBOM, 1845**

#### ***Chrysura laevigata* (ABEILLE DE PERRIN, 1879)**

Material examined: 3♂♂, 1♀ Fars province, Faroogh (53°25'N, 29°15'E),

16.iv.2013, leg. F. Farzaneh; 1♀, Fars province, Tiyoon (29°24'N, 52°40'E), 30.v.2013, leg. F. Farzaneh; 1♂, 14.ix.2014, same data, 1♀, Fars province, Dehno (29°24'N, 52°39'E), 08.vi.2013, leg. F. Farzaneh; 1♀, Fars province, Shiraz, Bagh E Jannat (29°36'N, 52°28'E), 01.vii.2014, leg. N. Saghaei.

Iranian records: East-Azerbaijan, Golestan, Qazvin, Tehran (BALTHASAR 1953; LINSENMAIER 1959; ROSA et al. 2013).

General distribution: Caucasus, central and southern Europe, Cyprus, Greece, former Yugoslavia, Palestine (LINSENMAIER 1959, 1968), south-eastern Asia (KIMSEY & BOHART 1991), Turkey (ROSA 2005).

#### ***Chrysura sulcata* DAHLBOM, 1845**

Material examined: 1♂, Fars province, Olom Tahghighat (52°39'N, 29°59'E), 16.iv.2013, leg. F. Farzaneh; 1♂, Fars province, Dehno (29°24'N, 52°39'E), 08.vi.2013, leg. F. Farzaneh.

Iranian record: Fars (ROSA et al. 2013).

General distribution: Italy, Caucasus, Cyprus, Greece, Palestine, Rhodes, Spain, Turkey (LINSENMAIER 1959).

#### ***Chrysura varicornis* (SPINOLA, 1838)**

Material examined: 1♀, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 29.vii.2014, leg. N. Saghaei.

Iranian record: Khorasan, Fars (STRUMIA & FALLAHZADEH 2015).

General distribution: South Europe, North Africa, Middle East and Turkey (KIMSEY & BOHART 1991; LINSENMAIER 1999).

#### **Genus *Stilbum* SPINOLA, 1806**

##### ***Stilbum cyanurum* (FORSTER, 1771)**

Material examined: 1♀, Fars province, Shiraz, Kaftarak (29°35'N, 52°39'E), 02.vi.2014, leg. F. Farzaneh.

Iranian records: Qazvin (MOCSÁRY 1889; MOCSÁRY 1890; du BUYSSON 1898), Fars (STRUMIA & FALLAHZADEH 2015), Hormozgan (FARHAD et al. 2016).

General distribution: Worldwide distributed, excluded Neotropical and Nearctic Regions (KIMSEY & BOHART 1991).

#### **Genus *Trichrysis* LICHTENSTEIN, 1876**

##### ***Trichrysis cyanea* (LINNAEUS, 1758)**

Material examined: 1♀, Fars province, Shiraz, Kaftarak (29°33'N, 52°44'E), 06.vi.2014, leg. N. Saghaei.

Iranian records: East-Azerbaijan (ROSA et al. 2013), Alborz, Fars (STRUMIA & FALLAHZADEH 2015).

General distribution: Widespread in Europe and western Asia (LINSENMAIER 1959). Turkey (STRUMIA & YILDIRIM 2009), Far East Russia (KURZENKO & LELEJ 2007).

### ***Trichrysis longispina* (MOCSÁRY, 1912)**

Material examined: 1♀, Fars province, Faroogh (53°25'N, 29°15'E), 16.iv.2013, leg. F. Farzaneh.

Iranian records: Hormozgan (FARHAD et al. 2016).

General distribution: Saudi Arabia, Africa, Egypt, Palestine (MOCSÁRY 1912; LINSENMAIER 1994, 1999; STRUMIA & DAWAH 2011).

### **Discussion**

In this study, two species of Elampini (*Hedychrum rutilans viridiauratum* MOCSÁRY, 1889 and *Holopyga ignicollis* DAHLBOM, 1854) and four species of Chrysidiini (*Chrysis altaica* MOCSÁRY, 1912, *C. clarinicollis* LINSENMAIER, 1951, *C. stilboides* SPINOLA, 1838 and *C. verna* DAHLBOM, 1854) were identified as new records for the fauna of Iran. The faunistic and taxonomic papers reporting data on the family Chrysidae in Iran increased rapidly through last years (ROSA et al. 2013; STRUMIA & FALLAHZADEH 2015). However, this fauna is relatively poorly understood and possibly very rich (more than 300 species are statistically expected from Iran). Moreover, not all regions of the country have been well investigated, and we believe that a large number of species are still to be discovered.

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### **References**

- AGUIAR A., DEANS A., ENGEL M., FORSHAGE M., HUBER J., JENNINGS J., JOHNSON N., LELEJ A., LONGINO J., LOHRMAN V., MIKO I., OHL M., RAMUSEN C., TAEGER A. & D. KI YU, (2013): Order Hymenoptera, pp. 51-62. In: Animal Biodiversity: An Outline of Higher-level Classification and Survey of Taxonomic Richness (Addenda 2013). (Z.-Q. ZHANG Editor). – Zootaxa **3703**, 82 pp.
- ARENS W. (2004): Revision der Gattung *Holopyga* auf der Peloponnes mit Beschreibung zweier neuer Arten (Hymenoptera; Chrysidae). – Linzer Biologische Beiträge **36** (1): 19-55.
- ARENS W. (2010): Revision der *Hedychridium roseum*-Gruppe in Kleinasien (Hymenoptera: Chrysidae), mit Neubewertung zahlreicher europäischer Taxa und Beschreibung zweier neuer Arten. – Linzer biologische Beiträge **42** (1): 401-458.
- BALTHASAR V. (1953 ["1951"]): Monographie des Chrysides de Palestine et des pais limitrophes. – Acta Entomologica Musei Nationalis Pragae (Suppl. 2) **27** (2): 1-317.
- BISCHOFF H. (1913): Hymenoptera. Fam. Chrysidae. In: Genera insectorum (P. WYTSMAN, Editor.). Fascicule 151. – Bruxelles, L. Desmet-Verteneuil, 86 pp. + 5 pls.

- BOHART R. M. & L. KIMSEY (1982): A synopsis of the Chrysidae in America North of Mexico. – Memoirs of the American Entomological Institute **33**, 266 pp.
- BUYSSON R. DU (1898): Étude des Chrysidiidae du Muséum de Paris. – Annales de la Société Entomologique de France **66** (4): 518-580 + 2 tavv.
- FAHRAD A., ROSA P., TALEBI A. & A. AMERI (2015): The genus *Chrysis* (Hymenoptera: Chrysidae) in Hormozgan province of Iran, with four new records for Iranian fauna. – Entomofauna **36**: 33-48.
- FARHAD A., TALEBI A., ROSA P., FATHIPOUR Y. & H. HAJIQANBAR (2016): Contribution to the knowledge of the Chrysidae (Hymenoptera, Aculeata) in the south of Iran, with nine new records. – Turkish Journal of Zoology **40**: 1-13.
- KIMSEY L. S. & R. M. BOHART (1991 ["1990"]): The Chrysidid wasps of the world. – Oxford Science Publications, Oxford, New York, 652 pp.
- KURZENKO N.V. & A. S. LELEJ (2007): [Fam. Chrysidae—Chrysidid wasps]. – In: LELEJ A.S. (ed.), Key to the Insect of Russian Far East, Vol. 4, Pt 5. – Dalnauka, Vladivostok, pp. 998-1006. [In Russian].
- LINSENMAIER W. (1959): Revision der Familie Chrysidae (Hymenoptera). – Mitteilungen der Schweizerischen Entomologischen Gesellschaft **32**: 1-240.
- LINSENMAIER W. (1968): Revision der Familie Chrysidae (Hymenoptera). Zweiter Nachtrag. – Mitteilungen der Schweizerischen Entomologischen Gesellschaft **41**: 1-144.
- LINSENMAIER W. (1969): The Chrysidae wasps of Palestine, Fauna, Catalogue with descriptions of new species and forms. – Israel Journal of Entomology **6**: 343-376.
- LINSENMAIER W. (1987): Revision der Familie Chrysidae (Hymenoptera). IV Teil. – Mitteilungen der Schweizerischen Entomologischen Gesellschaft **60**: 133-158.
- LINSENMAIER W. (1994): The Chrysidae of the Arabian Peninsula (Insecta: Hymenoptera). – Fauna of Saudi Arabia **14**: 145-206.
- LINSENMAIER W. (1997a): Altes und Neues von den Chrysididen. (Hymenoptera, Chrysidae). – Entomofauna **18**: 245-300.
- LINSENMAIER W. (1997b): Die Goldwespen der Schweiz. – Veröffentlichungen aus dem Natur-Museum Luzern **9**: 1-139.
- LINSENMAIER W. (1999): Die Golwespen Nordafrikas. – Entomofauna Supplement **10**: 1-281.
- MOCSÁRY A. (1889): Monographia Chrysididarum Orbis Terrarum Universi. – Hungarian Academy of Science, Budapest, 643 pp.
- MOCSÁRY A. (1890 ["1889"]): Catalogus Chrysididarum Europae et confinium. – Természetrajzi Füzetek **12** (2-3): 57-71.
- MOCSÁRY A. (1912): Species Chrysididarum novae. – Annales Musei Nationalis Hungarici **10**: 375-414.
- MÓCZÁR L. (1997): Revision of *Cleptes* (*Leiocleptes*) species of the world (Hymenoptera: Chrysidae, Cleptinae). – Folia Entomologica Hungarica **58**: 89-100.
- MÓCZÁR L. (1998): Revision of the Cleptinae of World. Genus *Cleptes* subgenera and species groups (Hymenoptera, Chrysidae). – Entomofauna **30** (19): 501-516.
- NURSE C. G. (1904): New species of Indian Hymenoptera. – Journal of the Bombay Natural History Society **16**: 19-26.
- POURRAFEI L., LOTFALIZADEH H., SHAYESTEH-FAR A. & M. RAMEZANI (2011): Cuckoo wasps of the subfamily Chrysidiinae (Hymenoptera: Chrysidae) in the north-west of Iran. – Applied Entomology & Phytopathology **79** (1): 87-116. [In Persian].

- RADOSZKOWSKI O. (1866): Enumération des espèces de Chrysides de Russie. – Horae Societatis Entomologicae Rossicae **3**: 295-310.
- RADOSZKOWSKI O. (1881): Sitzung am 5 (17) Februar. – Horae Societatis Entomologicae Rossicae **16**: iii-xxii.
- RADOSZKOWSKI O. (1889 ["1888"]): Révision des armures copulatrices des mâles de la tribu des Chrysides. – Horae Societatis Entomologicae Rossicae **23** (1-2): 3-40, pls 1-6.
- RADOSZKOWSKI O. (1891): Descriptions de Chrysides nouvelles. Revue d'Entomologie **10**: 183-198.
- RADOSZKOWSKI O. (1893 ["1892"]): Faune hyménoptérologique Transcaspienne. – Horae Societatis Entomologicae Rossicae **24**: 38-81.
- ROSA P. (2005): I Crisidi (Hymenoptera, Chrysididae) del Museo Civico di Storia Naturale di Milano. – Natura, Milano **94** (II): 1-128.
- ROSA P. & H. LOTFALIZADEH (2013): A new species-group of *Chrysura* DAHLBOM, 1845 (Hymenoptera: Chrysididae), with description of *Ch. baiocchii* sp.nov. from Iran. – Zootaxa **3737**: 24-32.
- ROSA P., LOTFALIZADEH H. & L. POURRAFEI (2013): First checklist of the chrysidid wasps (Hymenoptera: Chrysididae) of Iran. – Zootaxa **3700** (1): 1-47.
- SEMEONOV A. (1892): Chrysididarum species novae. – Bulletin de l'Académie Impériale des Sciences de St. Pétersbourg **13**: 241-265.
- SEMEONOV A. (1920): Revisio synoptica cleptidarum faunae rossicae. – Bulletin de l'Académie des sciences de Russie: 303-388.
- SEMEONOV-TIAN-SHANSKIJ A. (1932): Supplementa ad Chrysididarum monographias ab A.G. Dahlbom (1854), A. Mocsáry (1889), R. du Buysson (1896) et H. Bishoff (1913) editas. I. – Horae Societatis Entomologicae Rossicae **42** (3): 1-48.
- SEMEONOV-TIAN-SHANSKIJ A. (1967): [New species of gold wasps (Hymenoptera, Chrysididae)]. – Trudy Zoologicheskogo Instituta Akademii Nauk SSSR **43**: 118-184. [In Russian].
- SEMEONOV -TIAN-SHANSKIJ A. & M. N. NIKOL'SKAYA (1954): [Cuckoo-wasps (Hymenoptera, Chrysididae) of Tajikistan]. – Trudy Zoologicheskogo Instituta Akademii Nauk SSSR **15**: 89-137. [In Russian]
- STRUMIA F. (1994): *Hedychridium mochii* new species from Burma and *H. monochroum* ssp. *lampunense* TSUNEKI new synonymy). – Bollettino della Societa Entomologica Italiana **126**: 155-159.
- STRUMIA F. (1999): Revision of the Oriental species of genus *Hedychridium*: new species and new synonymies (Hymenoptera Chrysididae). – Bollettino della Societa Entomologica Italiana **131**: 47-76.
- STRUMIA F. (2008): Order Hymenoptera, Family Chrysididae. pp. 375-387. – In: HARTEN A. VAN (ed.), Arthropod Fauna of the U.A.E., vol. **1**. Dar Al Ummah Printing, Abu Dhabi, 754 pp.
- STRUMIA F. (2014): Order Hymenoptera, family Chrysididae. Upgraded checklist of the Chrysididae from the U.A.E. pp. 471-504. – In: HARTEN A. VAN (ed.), Arthropod fauna of the U.A.E., vol. **5**. Dar Al Ummah Printing, Abu Dhabi, 744 pp.
- STRUMIA F. & H. DAWAH (2010 ["2008"]): Contribution to the knowledge of the Chrysididae of Saudi Arabia (Hymenoptera Chrysididae). – Frustula Entomologica **31** (44): 1-10.
- STRUMIA F. & M. FALLAHZADEH (2015): New records and three new species of Chrysididae (Hymenoptera, Chryridoidea) from Iran. – Journal of Insect Biodiversity **3** (15): 1-32.

- STRUMIA F. & E. YILDIRIM (2009) ["2007"]): Contribution to the knowledge of Chrysidae fauna of Turkey (Hymenoptera Aculeata). – *Frustula Entomologica N.S.* **30** (43): 55-92.
- STRUMIA F. & E. YILDIRIM (2011): The present situation of the Chrysidae fauna (Hymenoptera, Aculeata) of Turkey. – *Frustula Entomologica* **33**: 1-21.
- STRUMIA F., FALLAHZADEH M. & E. IZADI (2016): *Chrysura izadiae* sp.nov., a new cuckoo wasp (Hymenoptera, Chrysidae) from Southern Iran. – *Zootaxa* **4061**: 281-285.
- TORABIPOUR Sh., EBRAHIMI E., LOTFALIZADEH H. & P. ROSA (2013<sup>a</sup>): New records of two species of the genus *Pentachrysis* LICHTENSTEIN (Hym.: Chrysidae) in Iran. – *Applied Entomology and Phytopathology* **81** (1): 85-86.
- TORABIPOUR Sh., EBRAHIMI E., LOTFALIZADEH H. & P. ROSA (2013b): Faunistic study of tribe Elampini (Hym.: Chrysidae) in Hayk Mirzayans Insect Museum (HMIM), Iran. – *Field Crop Entomology* **2** (1): 1-14.
- YILDIRIM E. & F. STRUMIA (2006): Contribution to the knowledge of Chrysidae fauna of Turkey. Part 3. Chrysinae (Hymenoptera, Chrysidae). – *Linzer Biologische Beiträge* **38** (1): 973-984.

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