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New records of Spider Wasps (Hymenoptera, Pompilidae) from northern Iran with description of a new species

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A b s t r a c t : 17 species of Pompilidae from Northern Iran are reported. *Cryptocheilus schakuhensis* nov.sp. is described with male and female. The male of *Arachnospila satyrus* is described for the first time, the female is redescribed. Five species are recorded in Iran for the first time.

K e y w o r d s : Hymenoptera, Pompilidae, Iran, fauna, new species

Introduction

The Pompilidae fauna of Iran was recently treated in a checklist by ENAYATNIA et al. (2018) and is still poorly known. The present sample bases on a collecting trip by the junior author to northern Iran in July 2018. Among the collected species was an undescribed species, a hitherto unclear species which was never collected after its description in 1930, and several species new to the fauna of Iran. These results are summarized in the present paper.

Material and methods

Collecting areas

Specimens were collected on the following sites:

- Abparan (Golestan): *Eryngium* spec. on a gentle slope on the roadside, 432 m NN (37.247 N, 55.507 E)
- Amol (Mazandaran): fallow land with ruderal plants, 213 m NN (36.400 N, 52.343 E)
- Astane (Semnan): ruderal vegetation at the roadside, 1448 m NN (36.268 N, 54.121 E)
- Chamestan (Mazandaran): 107 m NN (36.484 N, 52.106 E)
- Emam (Golestan): field fallow with *Eryngium* spec., 243 m NN (37.020 N, 55.153 E)
- Firuzkuh (Teheran): extensive meadow with *Eryngium* spec., 2157 m NN (35.776 N, 52.808 E)
- Hossein Abad (Semnan): high shrubs with *Euphorbia* spec. on the field edge, 1134 m NN (37.197 N, 55.702 E)

- Pol Aram (Golestan): high shrubs with *Eryngium* spec. on the roadside edge, 786 m NN (36.920 N, 55.115 E)
- Razan (Mazandaran): high shrubs with *Euphorbia* spec. on the roadside edge, 1127 m NN (36.176 N, 52.207 E)
- Shakuh-e Sofla (Golestan): high shrubs with *Euphorbia* spec. at the foot of a northeast-facing rubble zone with hedgehog cushion vegetation, 2515 m NN (36.543 N, 54.419 E), fig. 20
- Tashte (Golestan): high shrubs with *Eryngium* spec. on the roadside edge, 699 m NN (37.224 N, 55.470 E)
- Ziarat, mountain road (Golestan): vegetation-rich meadow bordered by small bushes and trees, 2157 m NN (36.680 N, 54.564 E)
- Ziarat, plateau (Golestan): gravel plateau with extensive *Euphorbia* spec. stocks, 2299 m NN (36.696 N, 54.575 E), fig. 19

Morphological terms

Mesosoma of Pompilidae is divided (seen dorsally from anterior) into pronotum, mesoscutum, scutellum, metanotum, metapostnotum and propodeum. The propodeum is divided into propodeal dorsum and propodeal declivity. Metapostnotum is sometimes reduced to a narrow band and not visible because it is hidden by metanotum.

T1, T2 etc. = Tergites and sternites are abbreviated with T and S.

SGP = Subgenital plate (S8).

Antennomeres (abbreviated with AS) are consequently counted from the base: scape is AS I, pedicellus is AS II, and flagellomere I is AS III. Females have 12 and males 13 antennomeres.

All measurements of the face were done in frontal view, as are the width of face and width of the eye, always using the maximum width or diameter.

Depositories of specimens

The specimens are all collected by and stored in the collection of the junior author, some doubles also in the collection of the senior author, the holotype in SDEI (Müncheberg).

Species list

Agenioideus cinctellus (SPINOLA, 1808)

Material examined: 1♂ 01.vii.2018 Chamestan (Mazandaran).

Distribution in Iran: New to the fauna of Iran. Widespread in Europe and Palearctic Asia, eastwards to Mongolia.

Anoplius viaticus (LINNAEUS, 1758)

Material examined: 1♀ 05.vii.2018 Ziarat, mountain road (Golestan).

Distribution in Iran: ENAYATNIA et al. (2018).

***Arachnospila satyrus* (HAUPT, 1930) (figs 1-9)**

Material examined: 6♀ 05.vii.2018 Ziarat, plateau (Golestan), 1♂ 03.vii.2018 Razan (Mazandaran).

Distribution in Iran: ENAYATNIA et al. (2018).

Remark: The species was described under *Psammochares satyrus* HAUPT, 1930: 590, from Mazandaran province and was never collected later. *A. satyrus* lacks in the revision of *Arachnospila* s.str. by LELEJ & LOKTIONOV (2011) as well as the closely related *A. ionica* (WOLF, 1965), described from Greece. The male was unknown and is described here for the first time.

Diagnosis: The female of *A. satyrus* is unique in the *A. rufa* species group (subgenus *Arachnospila* KINCAID sensu LELEJ & LOKTIONOV (2011)) by the following character combination: Foretarsomere with 4 spines, apical spine longer than second tarsal segment, apical clypeal margin straight, abdomen all black. For a more detailed description see HAUPT (1930). *A. ionica* shares the long foretarsal spines and the straight apical clypeal margin with *A. satyrus*, and has tergites I and II red. AS 3 is shorter in *A. ionica* (0.7x as long as ocular distance near ocelli), compared to *A. satyrus* (0.8x as long as ocular distance near ocelli). The females of *A. satyrus* measure 14-16 mm.

The male is characterized by a short propodeum and by an all black abdomen. Medial keel of S8 is relatively flat compared with related species, and bears some erect setae.

Description male: Body length 14.0 mm. All black species including setae. Basal half of mandible, clypeus laterally and lower half of face with silver, appressed pubescence. Wings greyish infumate with darker apical zone. Head, forecoxa, most parts of mesosoma and T1 basally and laterally with long pilosity. Longest setae of frons as long as scape, remaining pilosity somewhat shorter. AS3 somewhat longer than AS1. Propodeum short, similar to *A. sogdianoides*. S6 apically deeply U-shaped emarginated. Keel of S8 flat, with some short erect setae. Genital see fig. 7, SGP see fig. 8 and 9.

Habitat: Most specimens were collected in a mountain steppe with flowering *Euphorbia* spec. (see fig. 19).

***Arachnotheutes leucurus* (MORAWITZ, 1891)**

Material examined: 1♂ 03.vii.2018 Razan (Mazandaran).

Distribution in Iran: New to the fauna of Iran. General distribution: Morocco, southern Europe and Palearctic Asia, eastwards to eastern Russia, also recorded from Pakistan.

***Arachnotheutes rufithorax* (COSTA, 1882)**

Material examined: 2♂♂ 05.vii.2018 Ziarat, plateau (Golestan).

Distribution in Iran: New to the fauna of Iran. General distribution: Algeria, southern Europe and Palearctic Asia, eastwards to eastern Russia, also recorded from Pakistan.

***Cryptocheilus alternatus* (LEPELETIER, 1845)**

Material examined: 1♀ 12.vii.2018 Astane (Semnan).

Distribution in Iran: ENAYATNIA et al. (2018).

***Cryptocheilus octomaculatus* (ROSSI, 1790)**

Material examined: 1♀ 08.vii.2018 Abparan (Golestan); 1♂ 06.vii.2018 Emam (Golestan); 1♀ 07.vii.2018 Tashte (Golestan).

Distribution in Iran: ENAYATNIA et al. (2018).

***Cryptocheilus fischeri* (SPINOLA, 1838)**

Material examined: 1♀ 10.vii.2018 Shakuh-e Sofla (Golestan).

Distribution in Iran: ENAYATNIA et al. (2018).

***Cryptocheilus schakuhensis* SCHMID-EGGER & LIEBIG nov.sp. (figs 10-18)**

Holotype: 1♀ 04.vii.2018 Amol (Mazandaran) 36.400 N, 52.343 E leg. Liebig, coll. SDEI (Müncheberg).

Paratypes: 1♀ 06.vii.2018 Pol Aram (Golestan) 36.920 N, 55.115 E; 1♀ 02.vii.2018 Ziarat, mountain road (Golestan) 36.680 N, 54.564 E; 1♂ 05.vii.2018 Ziarat, plateau (Golestan) 2299 m 36.696 N, 54.575 E; 1♀ 08.vii.2018 Hossein Abad (Semnan) 37.197 N, 55.702 E all leg. Liebig, coll. Liebig and CSE.

Remark: The genus *Cryptocheilus* is under revision by the senior author. There is no key for species from Iran available, and species can only be recognized by original descriptions.

Diagnosis: The female of *C. schakuhensis* nov.sp. is characterized by colour pattern. It is all black with lateral white spots on T2 and a medial white spot on T4. Inner eye margin has a small white spot. This colour pattern is unique among *Cryptocheilus* species from the palearctic region. The male is all black, with lower inner eye margin white, and innerside of foretibia orange-red. Wing colour is distinctive: Wings are yellowish-grey infusate, with wing apex dark with violet shimmer.

Description female: Body length 13.5 mm. Colour: Black, the following parts whitish (with some yellow tinge): Small round spot on inner eye margin medially, small irregular spot near hindmargin of mesoscutum, large triangular spots on T2 laterally, large oval spot on T4 medially. Mandible medially and foretibia apically with some red. Wings infumate yellowish-greyish, apex dark. Apical clypeal margin emarginated in whole width. Metapostnotum narrow. Propodeum with fine, crosswise striation. Tergites without punctures. Otherwise similar to *Cryptocheilus elegans*.

Variation in females paratypes: Paratypes are smaller, 9.5-11.0 mm, and agree otherwise with holotype.

Description male: Body length 11.5 mm. Black, large triangular band on inner eye margin (between antennal socket and clypeus) whitish. Innerside of foretibia and small spot on apex of forefemora reddish. Clypeus laterally, lower mesopleuron and coxa with thin silver pubescence. Wings as in females, but contrast between grey-yellowish part and dark apex is more distinct as in females. Metapostnotum 0.6x as long as metatnotum, with some distinct rugae. Striation of propodeum coarser as in females. S8 flat, with indistinct medial keel, apically truncate, with a row of short setae around margin in apical half of S8. Genital see fig. 17, SGP see fig. 18.

E t y m o l o g y : The species is named after the mountain Schah Kuh north of Bastam close to the type area.

D i s t r i b u t i o n : Northern Iran.

***Dicyrtomellus tingitanus* (WOLF, 1966)**

M a t e r i a l e x a m i n e d : 2♀ 08.vii.2018 Abparan (Golestan); 14♂♂ 1♀ 05.vii. 2018 Ziarat, plateau (Golestan).

D i s t r i b u t i o n i n I r a n : ENAYATNIA et al. (2018).

***Telostegus paglianoi* (WOLF, 1999)**

M a t e r i a l e x a m i n e d : 1♀ 10.vii.2018 Shakuh-e Sofla (Golestan); 1♀ 05.vii.2018 Ziarat, plateau (Golestan).

D i s t r i b u t i o n i n I r a n : ENAYATNIA et al. (2018).

***Eoferreola manticata* (PALLAS, 1771)**

M a t e r i a l e x a m i n e d : 1♀ 10.vii.2018 Shakuh-e Sofla (Golestan); 3♂♂ 05.vii.2018 Ziarat, plateau (Golestan).

D i s t r i b u t i o n i n I r a n : ENAYATNIA et al. (2018).

***Evagetes dubius* (VANDER LINDEN, 1827)**

M a t e r i a l e x a m i n e d : 1♂ 05.vii.2018 Ziarat, plateau (Golestan).

D i s t r i b u t i o n i n I r a n : New to the fauna of Iran. The species is widespread in the Palearctic region.

***Evagetes trispinosus* (KOHL, 1886)**

M a t e r i a l e x a m i n e d : 3♂♂ 05.vii.2018 Ziarat, plateau (Golestan).

D i s t r i b u t i o n i n I r a n : ENAYATNIA et al. (2018)

***Pedinpompilus wolffi* PRIESNER, 1965**

M a t e r i a l e x a m i n e d : 1♂ 03.vii.2018 Razan (Mazandaran).

D i s t r i b u t i o n i n I r a n : New to the fauna of Iran. The species is known from the eastern Mediterranean area.

***Priocnemis minuta* (VANDER LINDEN, 1827)**

M a t e r i a l e x a m i n e d : 1♀ 04.vii.2018 Amol (Mazandaran).

D i s t r i b u t i o n i n I r a n : ENAYATNIA et al. (2018).

***Telostegus inermis* (BRULLÉ, 1832)**

M a t e r i a l e x a m i n e d : 1♀ 10.vii.2018 Shakuh-e Sofla (Golestan); 2♂♂ 4♀♀ 05.vii.2018 Ziarat, plateau (Golestan); 4♀♀ 03.vii.2018 Razan (Mazandaran); 1♀ 13.vii.2018 Firuzkuh (Teheran).

D i s t r i b u t i o n i n I r a n : ENAYATNIA et al. (2018).

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Zusammenfassung

Eine Reise des Zweitautors in den Nordiran erbrachte 17 Wegwespenarten. *Cryptocheilus schakuhensis* nov.sp. wird in beiden Geschlechtern beschrieben. Das Männchen von *Arachnospila satyrus* wird erstmalig, das Weibchen wird nachträglich beschrieben. Fünf Arten sind neu für die Fauna des Iran.

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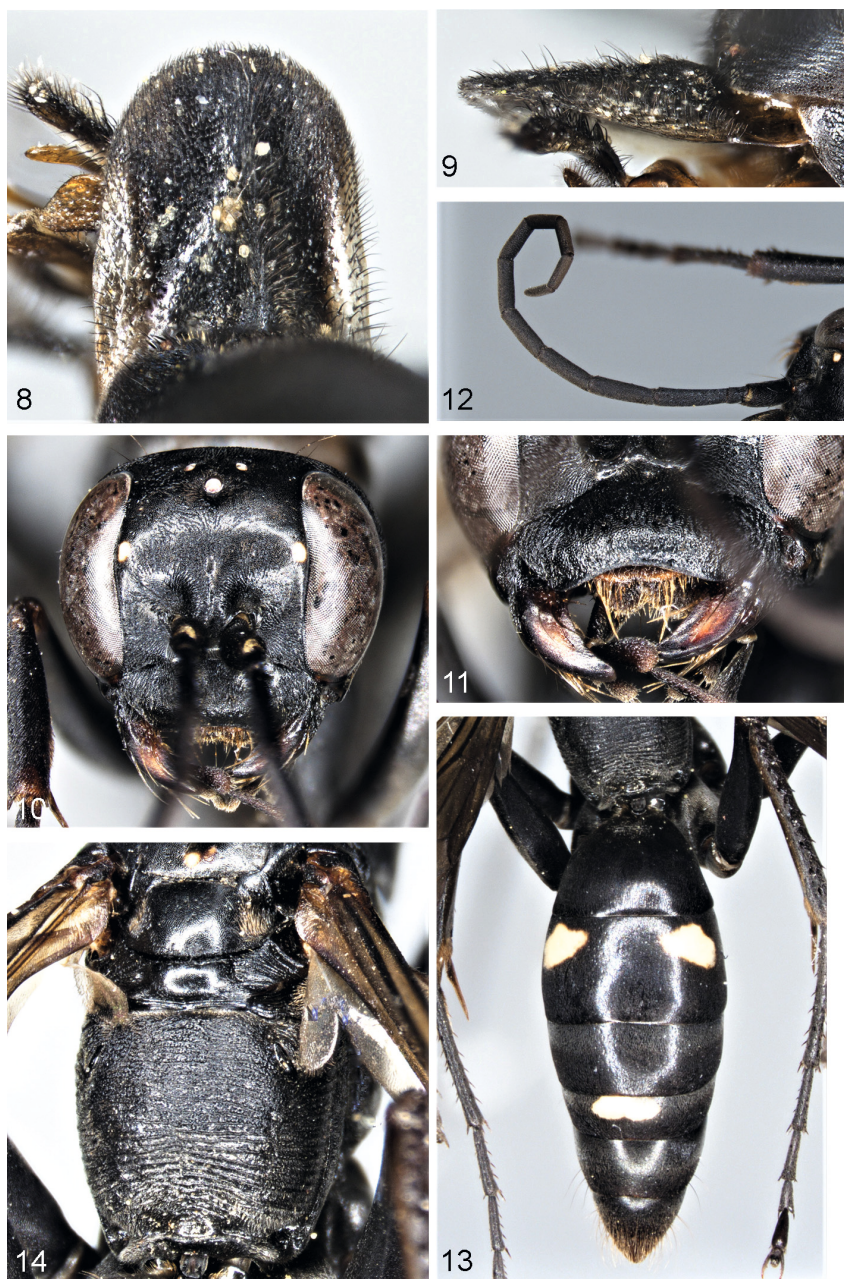
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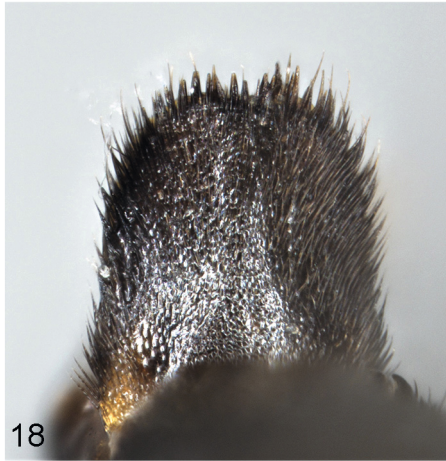
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Figs 1-7:(1) *Arachnospila satyrus* ♀, face; (2) antenna; (3) foreleg; (4) propodeum; (5) wing; (6) face; (7) *Arachnospila satyrus* ♂, genital dorsal view.



Figs 8-14: (8) *Arachnospila satyrus* ♂, subgenital plate, ventral view; (9) lateral view; (10) *Cryptocheilus schakuhensis* ♀ holotype, face; (11) clypeus; (12) antenna; (13) abdomen; (14) propodeum.



Figs 15-18: (15) *Cryptocheilus schakuhensis* ♀ paratype, forewing; (16) *Cryptocheilus schakuhensis* ♂ paratype, face; (17) ♂ genital, dorsal view; (18) ♂ genital, subgenital plate, ventral view;

Figs 19-20: (19) Collecting place at Ziarat, plateau; (20) Collecting place at Shakuh-e Sofla.