

## New records of Vespidae (Hymenoptera) from Iran with descriptions of three species

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**Abstract:** The present contribution lists 61 species of Vespidae collected in northern Iran in July 2018 and in southern Iran in May 2019, among them ten species new for the fauna of Iran. Additionally, the following species are described: *Brachykipona irana* nov.sp. (females), *Brachykipona montana* nov.sp. (males), *Leptochilus iranus* nov.sp. (females). Diagnostic characters for females of *Polistes wattii* and *Polistes indicus* are given. *Raphiglossa irana* GIORDANI SOIKA, 1970 is transferred to the genus *Psiliglossa*: comb. nov.

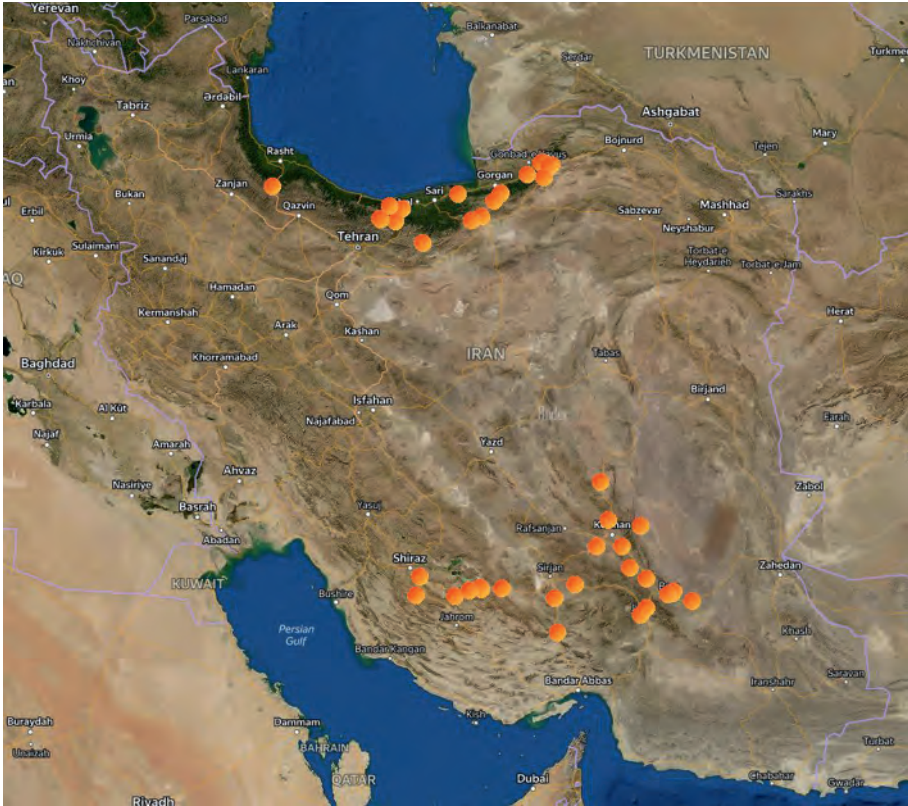
**Key words:** Hymenoptera, Vespidae, Iran, fauna, new species

### Introduction

The present contribution summarizes the results of two collection trips of the authors to Iran. W.H. Liebig visited northern Iran in July 2018, and the authors together apart from J. Gusenleitner visited southern Iran in May 2019. The map (fig. 1) shows the collecting locations from both trips, and fig. 12-14 some biotopes. The sample includes three undescribed species and ten species which are new for the fauna of Iran. The new species will be described here.

The Vespidae fauna of Iran is far from being adequately explored, although there have several new checklists and catalogues of Iranian Vespidae been published in the last years. EBRAHIMI & CARPENTER (2008) listed 182 species in 51 genera for the fauna of Iran. GUSENLEITNER (2013) published a checklist of Eumeninae from species of southwest Asia and north Africa with additional records also for Iran. Later, GUSENLEITNER (2014, 2016, 2018) and GUSENLEITNER & OCKERMÜLLER (2018) add descriptions of new species or new records for Iranian fauna. The social paper wasps (Vespinae) of Iran are also treated by DVORAK et al. (2012). RAMANI et al. (2020) present the most updated checklist for Iran and list 231 species in 55 genera.

EBRAHIMI & CARPENTER (2008) give identification keys to all Vespidae genera of Iran, and GUSENLEITNER (2013) for all Eumeninae genera of West Asia and North Africa. Vespinae species can be identified with the key of DVORAK et al. (2012), and *Polistes* species with the key of SCHMID-EGGER et al. (2017) apart from *P. indicus*, which is discussed below. There are no complete identification keys to most species of Eumeninae. The identification was done by unpublished keys and comparison with specimens from the collection of J. Gusenleitner.



**Fig. 1:** Collecting locations of both trips to Iran. Northern locations from July 2018, southern locations from May 2019 (MultiBaseCS: Yandex-Map).

## Material and methods

All mentioned specimens were collected by the authors (apart from J. Gusenleitner) during two collection trips to northern Iran in July 2018 (only W.H. Liebig) and in May 2019 to the provinces Fars, Kerman and Hormozgan in southern Iran. The specimens were collected by hand netting. A single specimen was collected by the late Klaus Warncke. The material is deposited in the collection of the authors, for type depository see below at the species descriptions. All species of Eumeninae are identified by J. Gusenleitner, the Vespinae and Polistinae species by C. Schmid-Egger. Masarinae are not treated here.

Collecting locations are mentioned each with the species records, including latitude, longitude and sea level (indicated in "m", what means meters about sea level). Information about fauna of Iran bases mainly on RAMANI et. al. (2020), and GUSENLEITNER (2013). We refer to RAMANI et. al. (2020) in the present contribution and add additional information only if species are not mentioned in this paper, or are otherwise unclear. All species which are not mentioned in both publications are marked

as "new for the fauna of Iran". Only for these species overall distribution is given, for distribution of remaining species see GUSENLEITNER (2013).

The present examination bases on 107 specimens of Polistinae (5 species), 6 specimens of Vespinae (4 species) and 224 specimens of Eumeninae (52 species).

### Species list

#### Eumeninae

##### *Alastor iranus* BLÜTHGEN, 1956

Material examined: Kerman prov., 1♂, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m.

Distribution in Iran: RAHMANI et al. (2020).

##### *Alastor mediomaculatus* GIORDANI SOIKA, 1952

Material examined: Fars prov., 1♂, 16.v.2019 Schiras 19 km SE, Maharlu Lake 29.4381 N 52.7528 E, 1480 m.

Distribution in Iran: New for the Fauna of Iran. Already known from Israel, Syria and Jordan (GUSENLEITNER 2013).

##### *Alastor zoroaster* GUSENLEITNER, 1986

Material examined: Hormozgan prov., 2♀♀, 05.v.2019 Hajjiabad 4 km NW 28.3329 N 55.8441 E, 1276 m. Fars prov., 1♂, 15.v.2019 Qatruyeh 19 km E 29.1595 N 54.9078 E, 1673 m., 1♂, 18.v.2019 Parishan, 1,3 km N 29.5426 N 51.8161 E, 1205 m.

Distribution in Iran: RAHMANI et al. (2020).

##### *Antepipona arabica* GIORDANI SOIKA, 1979

Material examined: Fars prov., 1♂, 04.v.2019 Haji Abad 2,5 km SW 29.1855 N 54.1389 E, 1677 m. Kerman prov., 2 ♂♂ 1♀, 05.v.2019 Sirdschan 45 km S 29.0156 N 55.7848 E, 1725m, 1♀, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m, 1♂, 15.v.2019 Qatruyeh 18 km E 29.2063 N 54.5823 E, 1762 m.

Distribution in Iran: EBRAHIMI & CARPENTER (2008), not in RAHMANI et al. (2020).

##### *Antepipona barrei* (RADOSZKOWSKI, 1893)

Material examined: Kerman prov., 1♀, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m, 1♀, 14.v.2019 Rayen, 3 km NE 29.6220 N 57.4590 E, 2117 m.

Distribution in Iran: RAHMANI et al. (2020).

##### *Antepipona omanensis* GIORDANI SOIKA, 1979

Material examined: Kerman prov., 2♂♂ 1♀, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m.

Distribution in Iran: New for the Fauna of Iran. Already known from Oman (GUSENLEITNER 2013).

***Antepipona vagabunda* (DALLA TORRE, 1889)**

**M a t e r i a l e x a m i n e d :** Kerman prov., 4♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m.

**D i s t r i b u t i o n i n I r a n :** RAHMANI et al. (2020).

***Brachypipona irana* GUSENLEITNER & SCHMID-EGGER, nov.sp. (figs 2-4)**

**H o l o t y p e :** Iran, Fars prov., 1♀ 04.v.2019 Haji Abad 2,5 km SW 29.1855 N 54.1389 E, 1677 m (leg. et coll. Schmid-Egger).

**P a r a t y p e s :** Iran, Fars prov., 1♀, 17.v.2019 Zanjiran, 3,4 km NE 29.0748 N 52.6540 E, 1776 m. (leg. Jacobs, coll. J. Gusenleitner).

**D i a g n o s i s :** The species is characterized by its overall appearance (figs 2-4).

**D e s c r i p t i o n o f f e m a l e h o l o t y p e :** Body length 10 mm. **C o l o u r :** Black, the following parts light yellow: bands on mandible, two lateral spots on clypeus, scape below, inner side of eye, spot on frons and on gena, two large spots on pronotum, tegula, transverse band on scutellum (medially interrupted), legs from end to femora (with some smaller spots on backside of tibiae), large band on tergite I, laterally larger than medially, bands on tergites II-V (laterally emarginated), deeply emarginated band on sternite II, three spots on apex of sternite III. Glossa and tarsi reddish. Wings transparent, costal area of forewing weakly infuscate. **M o r p h o l o g y :** Apical clypeal margin deeply emarginated, with sparse punctation, shiny interspaces larger than punctures. Frons, vertex and gena evenly and coarsely punctured, interspaces smaller than punctures, shiny, some denser punctation on scape. Pronotum, mesoscutum, scutellum, metanotum and mesopleuron distinctly denser punctured than frons. Corner of pronotum laterally shortly pointed, pronotum with transverse weak edge towards apex. Mesonotum laterally with deep longitudinal furrow in apical part (parapsidae). Surface of metanotum declined, above punctuate, below shiny and without punctures. Propodeum with dense punctation, interspaces dull. Metapleuron shiny and smooth. Tegula with some large punctures. Legs dull with a few punctures only. Tergites II-VI and sternites II-VI finer punctured than tergite I, and the latter finer punctured than mesoscutum and sternite II. Sternite II basally with short longitudinal furrow. Body without pubescence.

The male is unknown.

**E t y m o l o g y :** The species is named after its country of origin, Iran.

**D i s t r i b u t i o n :** Fars province in Southern Iran.

***Brachypipona montana* GUSENLEITNER & SCHMID-EGGER, nov.sp. (figs 5-8)**

**H o l o t y p e :** Iran, Fars prov., 1♂, 15.v.1978 10 km S Deh Bid, 1770m, [29.82N, 52.800E], (leg. Klaus Warncke, coll. Gusenleitner).

**P a r a t y p e :** Iran. Kerman prov., 1♂, 05.v.1978 Sirdschan 40 km S 28.9845 N 55.7893 E, 1750 m. (leg. et coll. Schmid-Egger), habitat see fig. 12.

**D i a g n o s i s :** The species is characterized by its overall appearance (figs 5-8).

**D e s c r i p t i o n o f m a l e h o l o t y p e :** Body length 7 mm. **C o l o u r :** Black, the following parts are yellow: mandible, glossa, clypeus, scape (paratype with black band above), space between antennae and spot on frons, inner eye margin including emargination of eye, band on gena, large band on pronotum, upper part of mesopleuron,

tegula, parategula, band on scutellum and on metanotum, propodeum laterally, fore- and midleg completely, hindleg from mid-femora, large bands on tergites I-VI, bands of tergite I-II medially deeply emarginated, large bands on sternites II-V (III-V laterally emarginated), spot on sternite VI. Last flagellomeres reddish. Wings transparent. Morphology: Clypeus longer than wide, below with deep emargination (as a  $\frac{1}{4}$  circle). Clypeus densely punctuate, without interspaces. Scape sparsely and finely punctuate, last hook-like antennal segment reaches end of 10. antennal segment (fig. 8). Frons, vertex and gena with medium sized punctation and small interspaces. Puncture of pronotum, mesoscutum, scutellum and mesopleuron larger and coarser than those of frons. Pronotum with narrow transverse edge. Scutellum with weak longitudinal furrow. Metanotum coarsely sculptured, shiny and smooth beneath. Propodeal declivity indistinctly striate, laterally with some edges, propodeum laterally with coarse striae. Metapleuron without punctures, dull. Tegula coarsely punctured. Legs shiny and smooth. Tergite I coarsely punctured, tergite II-VII finer punctured, interspaces shagreened. Sternite II with coarser punctation than tergite II, all interspaces of sternites shiny. Sternite II with longitudinal furrow basally. Head and mesosoma with short pubescence, setae shorter than ocellar diameter.

The female is unknown.

**E t y m o l o g y** : The species is named after its area of origin, the mountains of Iran.

**D i s t r i b u t i o n** : Kerman and Fars provinces in Southern Iran.

***Chlorodynerus incisipes* (KOSTYLEV, 1935)**

**M a t e r i a l e x a m i n e d** : Kerman prov., 1♀, 11.v.2019 Fahraj 28.9551 N 58.8789 E, 678 m.

**D i s t r i b u t i o n i n I r a n** : EBRAHIMI & CARPENTER (2008), not in RAHMANI et al. (2020).

***Cyrtolabulus gracilis* (KOHL, 1906)**

**M a t e r i a l e x a m i n e d** : Kerman prov., 1♀, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m.

**D i s t r i b u t i o n i n I r a n** : New for the Fauna of Iran. Already known from Arabian peninsula and Egypt (GUSENLEITNER 2013).

***Cyrtolabulus zarudnyi* (KOSTYLEV, 1939)**

**M a t e r i a l e x a m i n e d** : Hormozgan prov., 1♀, 05.v.2019 Hajjiabad 4 km NW 28.3329 N 55.8441 E, 1276 m.

**D i s t r i b u t i o n i n I r a n** : RAHMANI et al. (2020).

***Delta dimidiatipenne* (SAUSSURE, 1852)**

**M a t e r i a l e x a m i n e d** : Golestan prov., 1♀, 03.vii.2018 Davilat 36.2003 N 51.8661 E, 1978 m.

**D i s t r i b u t i o n i n I r a n** : RAHMANI et al. (2020).

***Delta esuriens* (FABRICIUS, 1787)**

**M a t e r i a l e x a m i n e d** : Kerman prov., 3♂♂ 4♀♀, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m.

**D i s t r i b u t i o n i n I r a n** : RAHMANI et al. (2020).

***Delta unguiculatum* (VILLERS, 1789)**

Material examined: Semnan prov., 1♀, 08.vii.2018 Hossein Abad 37,1972 N 55,7022 E, 1134 m.

Distribution in Iran: RAHMANI et al. (2020).

***Eumenes coarctatus* (LINNAEUS, 1758)**

Material examined: Golestan prov., 1♀, 10.vii.2018 Shakuh-e Sofla 36,5428 N 54,4194 E, 2515 m.

Distribution in Iran: RAHMANI et al. (2020).

***Eumenes coronatus* (PANZER, 1799)**

Material examined: Mazandaran prov., 1♀, 02.vii.2018 Kashpel Park 36,4567 N 52,0736 E, 250 m.

Distribution in Iran: RAHMANI et al. (2020).

***Eumenes mediterraneus* KRIECHBAUMER, 1879**

Material examined: Golestan prov., 3♀, 10.vii.2018 Shakuh-e Sofla 36.5428 N 54.4194 E, 2515 m. Kerman prov., 1♀, 1♂, 07.v.2019 Ravar 31.2981 N 56.8011 E, 1171 m, 1♂, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m. Fars prov., 1♂, 15.v.2019 Estahban 12 km W 29.1767 N 53.8663 E, 1668 m.

Distribution in Iran: RAHMANI et al. (2020).

***Eumenes modestus* GUSENLEITNER, 2006**

Material examined: Kerman prov., 1♂, 07.v.2019 Ravar 31.2981 N 56.8011 E, 1171 m, 1♂, 11.v.2019 Fahraj 28.9551 N 58.8789 E, 678 m.

Distribution in Iran: RAHMANI et al. (2020).

***Eumenes pedunculatus* (PANZER, 1799)**

Material examined: Golestan prov., 1♂, 03.vii.2018 Davilat 36,2003 N 51,8661 E, 1978 m.

Distribution in Iran: New for the Fauna of Iran. Known from Europe and Central Asia (VECHT & FISCHER 1972).

***Euodynerus dantici* (ROSSI, 1790)**

Material examined: Golestan prov., 1♂, 03.vii.2018 Davilat, Straßenrand 36.,2317 N 51.8467 E, 2771 m, 1♀, 09.vii.2018 Kashidar 36.,9703 N 55.5378 E, 1378 m.

Distribution in Iran: RAHMANI et al. (2020).

***Euodynerus disconotatus* (LICHTENSTEIN, 1884)**

Material examined: Kerman prov., 1♂, 07.v.2019 Ravar 31.2981 N 56.8011 E, 1171 m, 2♂♂ 1♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m, 1♂, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m, 1♂, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m.

Distribution in Iran: RAHMANI et al. (2020).

***Euodynerus posticus* (HERRICH-SCHÄFFER, 1841)**

Material examined: Mazandaran prov., 1♂, 02.vii.2018 Kashpel Park 36.4567 N 52.0736 E, 250 m.

Distribution in Iran: RAHMANI et al. (2020).

***Euodynerus semisaecularis* (DALLA TORRE, 1889)**

Material examined: Golestan prov., 5♂♂, 03.vii.2018 Davilat 36.,2003 N 51.8661 E, 1978 m, Semnan prov., 1♀, 08.vii.2018 Hossein Abad 37,1972 N 55.7022 E, 1134 m, Gilan prov., 3♀♀, 30.vi.2018 Rudbar 36.8067 N 49,4236 E, 417 m.

Distribution in Iran: RAHMANI et al. (2020).

***Eustenancistrocerus amadanensis* (SAUSSURE, 1855)**

Material examined: Kerman prov., 2♂♂, 07.v.2019 Ravar 31.2981 N 56.8011 E, 1171 m, 6♂♂ 6♀♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m, 1♀, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m, 43♂♂ 5♀♀, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m.

Distribution in Iran: RAHMANI et al. (2020).

***Eustenancistrocerus jerichoensis* (VON SCHULTHESS, 1928)**

Material examined: Kerman prov., 1♀, 09.v.2019 Mahan 30.0273 N 57.2846 E, 1935 m.

Distribution in Iran: RAHMANI et al. (2020).

***Eustenancistrocerus khuzestanicus* GIORDANI SOIKA, 1970**

Material examined: Kerman prov., 6♂♂, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m,

Distribution in Iran: RAHMANI et al. (2020).

***Hemipterochilus rubrosignatus* (ANDRÉ, 1884)**

Material examined: Fars prov., 1♀, 04.v.2019 Haji Abad 2.5 km SW 29.1855 N 54.1389 E, 1677 m.

Distribution in Iran: New for the Fauna of Iran. Described from Turkestan (VECHT & FISCHER 1972).

***Jucancistrocerus atrofasciatus* (MORAWITZ, 1885)**

Material examined: Kerman prov., 1♂, 06.v.2019 Bardsir 20 km NE 30.0287 N 56.7294 E, 2153 m, 1♀, 07.v.2019 Kerman 25 km N 30.5443 N 56.9771 E, 1869 m, 7♂♂ 1♀, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m.

Distribution in Iran: RAHMANI et al. (2020).

***Jucancistrocerus caspicus* GIORDANI SOIKA, 1970**

Material examined: Kerman prov., 1♂, 07.v.2019 Ravar 31.2981 N 56.8011 E, 1171 m, 1♂, 09.v.2019 Bam 29.0898 N 58.3270 E, 1113 m, 2♂♂ 3♀♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m, 2♀♀, 11.v.2019 Bam 8 km NE 29.1500 N 58.4674 E, 956 m, 1♀, 9.v.2019

Mahan 30.0273 N 57.2846 E, 1935 m, 5♂♂ 7♀♀, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m.

Distribution in Iran: RAHMANI et al. (2020).

***Jucancistrocerus citreodecoratus* GIORDANI SOIKA, 1970**

Material examined: Semnan prov., 1♂, 12.vii.2018 Astane 36,2678 N 54,1211 E, 1448 m. Kerman prov., 1♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m.

Distribution in Iran: RAHMANI et al. (2020).

***Jucancistrocerus consimilis* (MORAWITZ, 1895)**

Material examined: Kerman prov., 1♂, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m.

Distribution in Iran: New for the Fauna of Iran. Described from Central Asia (VECHT & FISCHER 1972).

***Katamenes dimidiatus* (BRULLÉ, 1832)**

Material examined: Kerman prov., 1♀, 14.v.2019 Ostur 10 km SE 29.2814 N 56.2395 E, 2141 m.

Distribution in Iran: RAHMANI et al. (2020).

***Katamenes flavigularis* (BLÜTHGEN, 1951)**

Material examined: Golestan prov., 1♂, 10.vii.2018 Shakuh-e Sofla 36.5428 N 54,4194 E, 2515 m.

Distribution in Iran: RAHMANI et al. (2020).

***Knemodynerus excellens* (PEREZ, 1907)**

Material examined: Kerman prov., 6♂♂ 4♀♀, 07.v.2019 Ravar 31.2981 N 56.8011 E, 1171 m, 3♀♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m, 9♂♂, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m.

Distribution in Iran: RAHMANI et al. (2020).

***Leptochilus (Sarochilus) iranus* GUSENLEITNER & SCHMID-EGGER, nov.sp. (figs 9-11)**

Holotype: Iran. Fars prov., 1♀ 04.v.2019 Haji Abad 2 km NW 29.2268 N 54.1054 E, 1562 m (leg. et coll. Schmid-Egger)

Paratypes: Iran, Fars prov., 2♀♀. 03.v.2019 Fasa 10 km NW 29.0644 N 53.5409 E, 1982 m, 7♀♀, 04.v.2019 Haji Abad 2,5 km SW 29.1855 N 54.1389 E, 1677 m, 1♀, 16.v.2019 Schiras 19 km SE, Maharlou Lake 29.4381 N 52.7528 E, 1480 m. Hormozgan prov., 1♀, 05.v.2019 Hajjiabad 4 km NW 28.3329 N 55.8441 E, 1276 m (leg et coll. Liebig, Jacobs, Schmid-Egger, a paratype also in coll. Gusenleitner).

Diagnosis: The species is similar to *Leptochilus (Sarochilus) praestans* GIORDANI SOIKA, 1970, but colour pattern is different and apical clypeal margin is widely emarginated (fig. 11), straight in *L. praestans*.

Description of female holotype: Body length. 6 mm. Colour: Black with the following parts red: distal half of mandible, scape, small spots on gena,



scutellum, metanotum, legs (apart from coxa), and tergite I (apart from pale apical band). White are: large band on pronotum, tegula, apical bands on tergites I and II, and lateral spots on sternite II. Wings transparent, marginal cell weakly infusate. **Morphology:** Clypeus wider than long, with weak and wide triangular emargination (fig. 11). Clypeus and scape with sparse punctation, interspaces shiny, base of clypeus with dense punctation. Clypeus apico-lateral with weak keel. Frons, vertex and gena evenly punctuate, interspaces smaller than puncture diameter, shiny, partly with some micro-reticulation. Pronotum rounded versus apex, laterally without corner, rounded. Pronotum near white band less dense punctured than frons, remaining parts of pronotum, mesonotum, scutellum and mesopleuron with the same punctation as frons. Metanotum with transverse edge, surface sculptured, backside punctured above, shiny and without punctures below. Backside of propodeum weakly concave and evenly punctured. Propodeum laterally striate. Legs dull and with short pubescence. Tergit I wider than long (4:3), in front of apical band somewhat impressed and with scattered punctation, interspaces shagreened. Tergite II evenly punctuate, interspaces with fine micro-punctation, Apical margin of tergite II weakly impressed, with barely visible row of macro punctures. Tergite III-VI finely and densely punctuate, sternites similar in sculpture as corresponding tergites (St. II without apical margin). Clypeus and surface of mesosoma with prickly pubescence, setae as long as ocellar diameter. Abdomen with very short pubescence. Clypeal base and lower part of frons with silver pubescence.

The male is unknown.

**E t y m o l o g y :** The species is named after its country of origin, Iran.

**D i s t r i b u t i o n :** Fars and Hormozgan province in southern Iran.

***Leptochilus neutralis* (GIORDANI SOIKA, 1943)**

**M a t e r i a l e x a m i n e d :** Kerman prov., 1♀, 12.v.2019 Jiroft 16 km NE 28.8218 N 57.8439 E, 1574 m.

**D i s t r i b u t i o n i n I r a n :** RAHMANI et al. (2020).

***Leptochilus regulus* (SAUSSURE, 1855)**

**M a t e r i a l e x a m i n e d :** Semnan prov., 1♂, 12.vii.2018 Astane 36.,2678 N 54.1211 E, 1448 m.

**D i s t r i b u t i o n i n I r a n :** RAHMANI et al. (2020).

***Odynerus laticinctus* BIALYNICKI-BIRULA, 1926**

**M a t e r i a l e x a m i n e d :** Kerman prov., 2♂♂ 7♀♀, 06.v.2019 Bardsir 29.9477 N 56.5622 E, 2000 m: 1♀, 09.v.2019 Mahan 30.0273 N 57.2846 E, 1935 m.

**D i s t r i b u t i o n i n I r a n :** New for the fauna of Iran. Described from Central Asia (VECHT & FISCHER 1972).

***Odynerus shestakovae* (KOSTYLEV, 1934)**

**M a t e r i a l e x a m i n e d :** Kerman prov., 7♀♀, 06.v.2019 Bardsir 20 km NE 30.0287 N 56.7294 E, 2153 m.

**D i s t r i b u t i o n i n I r a n :** New for the fauna of Iran. Described from Central Asia (VECHT & FISCHER 1972).

***Paragymnomerus amitinorum* BLÜTHGEN, 1952**

Material examined: Fars prov., 1♂, 3.v.2019 Fasa 10 km NW 29.0644 N 53.5409 E, 1982 m.

Distribution in Iran: RAHMANI et al. (2020).

***Paravespa quadricolor* (MORAWITZ, 1885)**

Material examined: Hormozgan prov., 1♂ 4♀♀, 05.v.2019 Hajjiabad 4 km NW 28.3329 N 55.8441 E, 1276 m.

Distribution in Iran: RAHMANI et al. (2020).

***Parodontodynerus aramaeus* BLÜTHGEN, 1955**

Material examined: Fars prov., 1♀, 04.v.2019 Haji Abad 2.5 km SW 29.1855 N 54.1389 E, 1677 m.

Distribution in Iran: RAHMANI et al. (2020).

***Psiliglossa irana* (GIORDANI SOIKA, 1970), nov.comb.**

Material examined: Hormozgan prov., 1♂, 05.v.2019 Hajjiabad 4 km NW 28.3329 N 55.8441 E, 1276 m. Kerman prov., 1♀, 12.v.2019 Jiroft 16 km NE 28.8218 N 57.8439 E, 1574 m.

Distribution in Iran: The species was described under *Raphiglossa* and was mentioned under this genus for the fauna of Iran (RAHMANI et al. 2020, GUSENLEITNER 2013). The examination of the present specimens leads to the result that it belongs to the genus *Psiliglossa* as defined in the key of GUSENLEITNER (2013), with large first tergite: *Psiliglossa irana* (GIORDANI SOIKA, 1970).

***Stenancistrocerus leonhardi* GUSENLEITNER, 2015**

Material examined: Kerman prov., 1♀, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m.

Distribution in Iran: New genus and species for the fauna of Iran, so far only known from Oman (GUSENLEITNER 2015).

***Stenancistrocerus obstrictus* (MORAWITZ, 1895)**

Material examined: Kerman prov., 4♂♂ 7♀♀, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m.

Distribution in Iran: New genus and species for the fauna of Iran. Described from Central Asia (VECHT & FISCHER 1972).

***Stenodynerus xanthomelas* (HERRICH-SCHÄFFER, 1839)**

Material examined: Mazandaran prov., 8♂♂ 1♂, 02.vii.2018 Kashpel Park 36.4567 N 52.0736 E, 250 m.

Distribution in Iran: RAHMANI et al (2020).

***Tachyancistrocerus komarowi* (MORAWITZ, 1885)**

Material examined: Kerman prov., 1♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m, 1♀, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m.

Distribution in Iran: RAHMANI et al. (2020).

***Tachyancistrocerus rhodensis* (SAUSSURE, 1855)**

**M a t e r i a l e x a m i n e d :** Mazandaran prov., 1♀, 03.vii.2018 Razan 36,1758 N 52,2067 E, 1127 m.

**D i s t r i b u t i o n i n I r a n :** New for the Fauna of Iran. Already known from eastern Mediterranean area (GUSENLEITNER 2013).

**Polistinae*****Polistes bucharensis* ERICHSON, 1849**

**M a t e r i a l e x a m i n e d :** Gilan prov., 1♂ 2♀♀, 30.vi.2018 Rudbar 36,806 N 49,423 E, 417 m. Mazandaran prov., 3♀♀, 04.vii.2018 Amol, 36,400 N 52,343 E, 213 m. Golestan prov., 2♀♀, 02.vii.2018 Davilat 36,200 N 51,866 E, 1978 m, 1♂, 08.vii.2018 Abparan, Straßenrand 37,246 N 55,506 E, 432 m, 1♂ 3♀♀, 06.vii.2018 Emam 37,019 N 55,153 E, 243 m, 2♂♂, 08.vii.2018 Farang 37,216 N 55,576 E, 774 m, 1♀, 07.vii.2018 Kolosare 37,165 N 55,635 E, 925 m, 1♀, 07.vii.2018 Tashte 37,223 N 55,47 E, 699 m, 2♀♀, 02.vii.2018 Ziarat 36,68 N 54,563 E, 2175 m. Semnan prov., 1♀, 12.vii.2018 Astane 36,267 N 54,121 E, 1448 m, 4♀♀, 08.vii.2018 Hossein Abad 37,197 N 55,702 E, 1134 m. Kerman prov., 12♀♀, 06.v.2019 Bardsir 29.9477 N 56.5622 E, 2000 m.

**D i s t r i b u t i o n i n I r a n :** RAHMANI et al. (2020).

**R e m a r k :** The species was revised by SCHMID-EGGER et al. (2017). It is a valid species close to *P. dominula* and restricted in its distribution to western Asia and northeastern Africa. *P. dominula* occurs in the Mediterranean area and Central Europe. It is rare in western Asia and occurs north of Iran. The records of "*P. dominula*" from Iran (RAHMANI et al. 2020, EBRAHIMI & CARPENTER 2008) have to be checked and probably refer to *P. bucharensis*. We do not know valid records of *P. dominula* from Iran so far.

***Polistes indicus* STOLFA, 1934**

**M a t e r i a l e x a m i n e d :** Kerman prov., 3♀♀, 08.v.2019 Shahdad 30.4393 N 57.7107 E, 420 m, 15♀♀, 09.v.2019 Bam 29.0898 N 58.3270 E, 1113 m, 45♀♀, 1♂ 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m, 3♀♀, 11.v.2019 Bam 8 km NE 29.1500 N 58.4674 E, 956 m, 4♀♀, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m.

**D i s t r i b u t i o n i n I r a n :** RAHMANI et al. (2020).

**R e c o g n i t i o n :** *Polistes wattii* and *P. indicus* were collected together and in large numbers in some places in the desert (fig. 14). The males of both species can easily be recognized by form of last sternites (RICHARDS 1984), whereas the females of these predominantly or all yellow coloured species look similar and can distinguished in the field mainly by size. Female recognition with the characters given by RICHARDS (1984) is difficult. For that reason, new recognition characters for females are listed below:

Character	<i>P. wattii</i> female	<i>P. indicus</i> female
Body length	18-21 mm	11-15 mm
Mesopleuron	Sculpture and level between mesepisternum and epicnemium different, with abrupt transition (= epicnemial ridge distinct)	Sculpture and level between mesepisternum and epicnemium similar, transition gradual (= epicnemial ridge absent or obsolescent),
Mesopleural lamella in front of midcoxa	Oval, distinctly longer than wide	Formed like an ear, nearly as wide as long
POL	0.9-1.1x as long as diameter of hindocellus	1.5-2x as long as diameter of hindocellus

### ***Polistes mongolicus* BUYSSON, 1911**

**Material examined:** Golestan prov., 1♀, 03.vii.2018 Davilat 36,200 N 51,866 E, 1978 m. Mazandaran prov., 1♀, 12.vii.2018 Sorkh Deh 36,192 N 53,906 E, 1700 m. Semnan prov., 3♀, 12.vii.2018 Astane 36,267 N 54,121 E, 1448 m, Teheran prov., 2♀, 13.vii.2018 Firuzkuh 35,775 N 52,807 E, 1967 m. Kerman prov., 4♀, 06.v.2019 Bardsir 29,9477 N 56.5622 E, 2000 m. 4♀, 13.v.2019 Bam 40 km NW 29.3970 N 57.8506 E, 1741 m. Fars prov., 1♀, 15.v.2019 Estahban 12 km W 29.1767 N 53.8663 E, 1668 m.

**Distribution in Iran:** Widespread in northern and southern Iran, probably occurring in the whole country.

**Remark:** *P. gallicus* s. lat. was revised by SCHMID-EGGER et al. (2017). It is a complex of three species. The true *P. gallicus* is restricted in its distribution to the western Mediterranean area. *P. mongolicus* is widespread from the Balkans to Central Asia, southwest Asia, Iran and northeast Africa. The records of "*P. gallicus*" from Iran (EBRAHIMI & CARPENTER 2008) refer to *P. mongolicus* or *P. foederatus* KOHL, 1898. However, the latter species is not yet recorded from Iran. It is known from northeast Italy to Greece, Turkey and Azerbaijan (SCHMID-EGGER et al. 2017). RAHMANI et al. (2020) mentioned *P. mongolicus*, *P. gallicus* and "*P. foederata*" (= *P. foederatus*) from Iran without checking specimens. We do not know valid records of *P. foederatus* from Iran so far.

### ***Polistes semenowi* MORAWITZ, 1889**

**Material examined:** Golestan prov., 3♂♂ 1♀, 05.vii.2018 Ziarat 36,670 N 54,558 E, 2157 m.

**Distribution in Iran:** RAHMANI et al. (2020).

**Remark:** The species was listed under "*Polistes sulcifer*" in earlier publications. This taxon name, however, is a synonym of *P. semenowi*. See SCHMID-EGGER et al. (2017).

***Polistes wattii* CAMERON, 1900**

Material examined: Kerman prov., 2♀♀, 06.v.2019 Bardsir 29.9477 N 56.5622 E, 2000 m, 3♀♀, 06.v.2019 Bardsir 20 km NE 30.0287 N 56.7294 E, 2153 m, 3♀♀, 07.v.2019 Ravar 31.2981 N 56.8011 E, 1171 m, 2♀♀, 09.v.2019 Bam 29.0898 N 58.3270 E, 1113 m, 4♀♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m, 3♀♀, 11.v.2019 Bam 8 km NE 29.1500 N 58.4674 E, 956 m, 1♀, 12.v.2019 Jiroft 28.6847 N 57.7123 E, 716 m.

Distribution in Iran: RAHMANI et al. (2020).

**Vespinae*****Dolichovespula sylvestris* (SCOPOLI, 1763)**

Material examined: Golestan prov., 1♀, 03.vii.2018 Davilat 36,2003 N 51,8661 E, 1978 m.

Distribution in Iran: RAHMANI et al. (2020)

***Vespa crabro* LINNAEUS, 1758**

Material examined: Mazandaran prov., 1♀, 04.vii.2018 Behschahr 36,6683 N 53,5958 E, 377 m.

Distribution in Iran: RAHMANI et al. (2020)

***Vespa orientalis* LINNAEUS, 1771**

Material examined: Fars prov., 1♀, 04.v.2019 Haji Abad 2,5 km SW 29.1855 N 54.1389 E, 1677 m. Hormozgan prov., 1♀, 05.v.2019 Hajjiabad 4 km NW 28.3329 N 55.8441 E, 1276 m. Kerman prov., 1♀, 10.v.2019 Bam 4 km E 29.1162 N 58.4294 E, 1000 m.

Distribution in Iran: RAHMANI et al. (2020)

***Vespula germanica* (FABRICIUS, 1793)**

Material examined: Kerman prov., 1♀, 06.v.2019 Bardsir 29.9477 N 56.5622 E, 2000 m.

Distribution in Iran: RAHMANI et al. (2020)

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**Zusammenfassung**

In der vorliegenden Arbeit werden 61 Arten der Faltenwespen (Vespidae) ausgewertet, die im Juli 2018 und im Mai 2019 im Iran gesammelt wurden. Darunter befinden sich zehn neue Arten für die Fauna von Iran. Zusätzlich werden die folgenden Arten neu beschrieben: *Brachypipona irana* nov.sp. (Weibchen), *Brachypipona montana* nov.sp. (Männchen), *Leptochilus iranus* nov.sp. (Weibchen). Unterscheidungsmerkmale für die Weibchen von *Polistes wattii* und *Polistes indicus* werden aufgeführt. *Raphiglossa irana* GIORDANI SOIKA, 1970 wird in die Gattung *Psiliglossa* gestellt: comb. nov.

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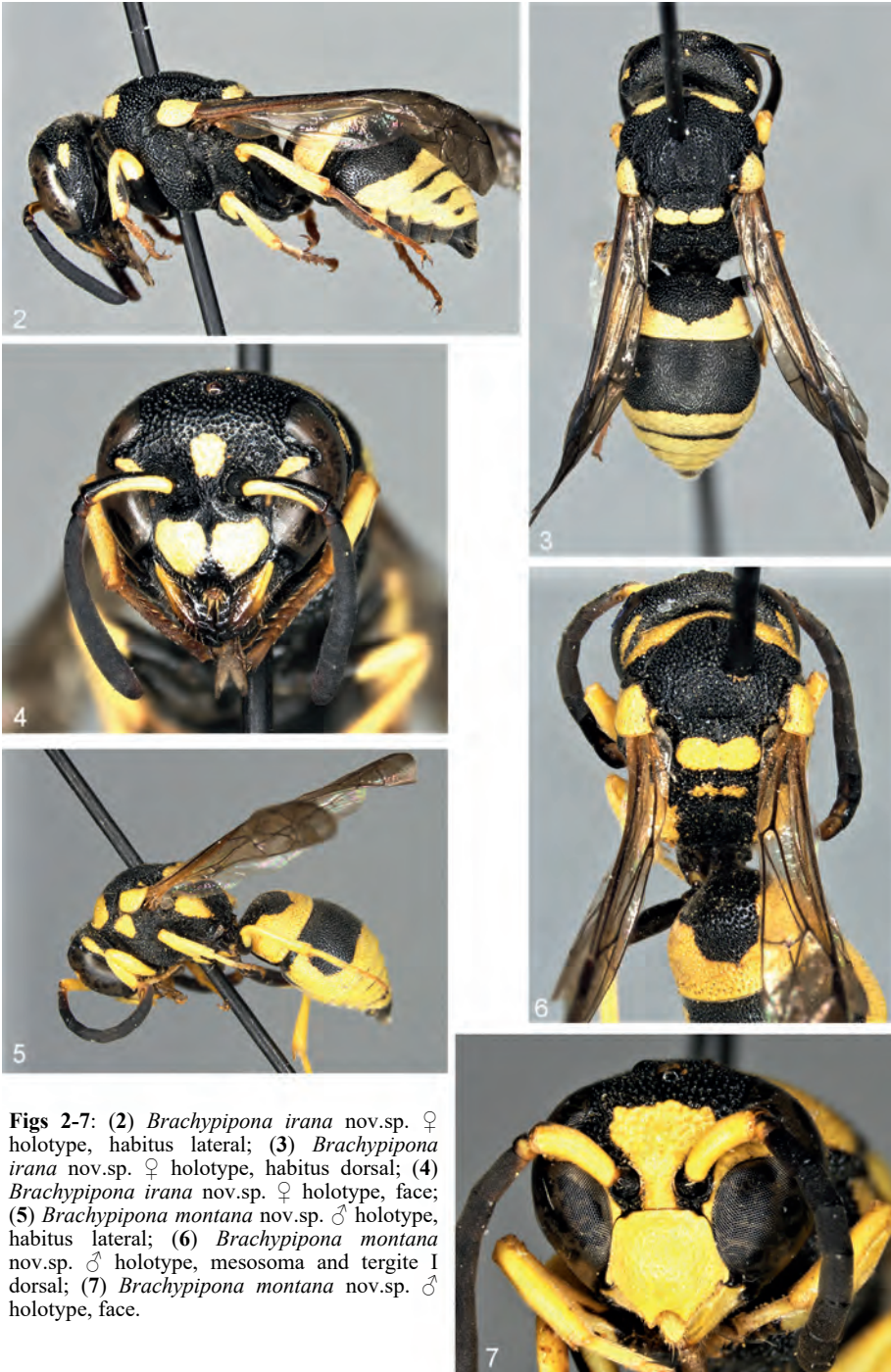
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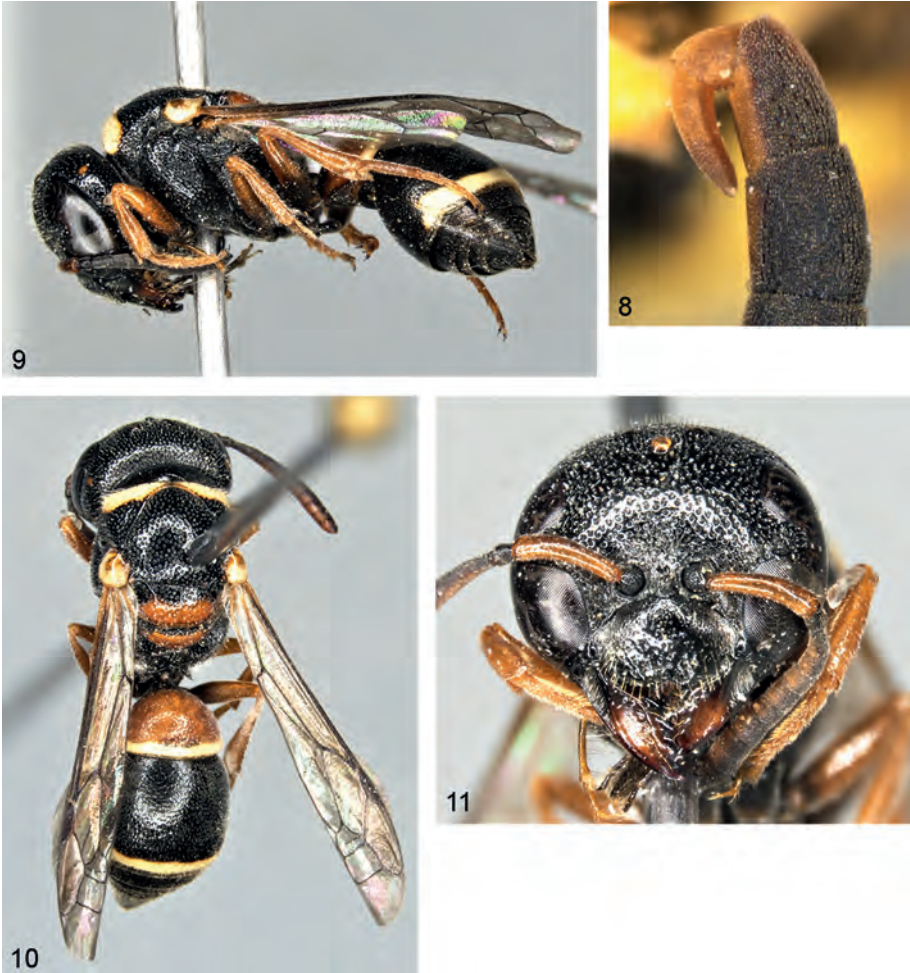
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**Figs 2-7:** (2) *Brachytipona irana* nov.sp. ♀ holotype, habitus lateral; (3) *Brachytipona irana* nov.sp. ♀ holotype, habitus dorsal; (4) *Brachytipona irana* nov.sp. ♀ holotype, face; (5) *Brachytipona montana* nov.sp. ♂ holotype, habitus lateral; (6) *Brachytipona montana* nov.sp. ♂ holotype, mesosoma and tergite I dorsal; (7) *Brachytipona montana* nov.sp. ♂ holotype, face.



**Figs 8-11:** (8) *Brachypipona montana* nov.sp. ♂ holotype, last antennomeres; (9) *Leptochilus iranus* nov.sp. ♀ holotype, habitus lateral; (10) *Leptochilus iranus* nov.sp. ♀ holotype, habitus dorsal; (11) *Leptochilus iranus* nov.sp. ♀ holotype, face.





**Figs 12-14:** (12) Collection place of *Brachypipona montana* nov.sp., 40 km south of Sirdshan; (13) Collection place 50 km East of Sirdshan; (14) Flowering *Allium* fields 40 km East of Bam, visited by *Polistes watti*, *P. indicus* and many Eumeninae species.



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