

Linzer biol. Beitr.	51/1	361-390	26.07.2019
---------------------	------	---------	------------

Contribution to the Ichneumonidae (Hymenoptera) of Iran, with descriptions of seven new species

Matthias RIEDEL, Ali AMERI, Ali Asghar TALEBI & Ebrahim EBRAHIMI

A b s t r a c t : In this faunistic survey, we give *distributional* records of 78 species of the family Ichneumonidae (Hymenoptera) which were recently collected in the Markazi, Khuzestan and Zajan provinces of Iran with Malaise traps. 33 taxa are reported from Iran for the first time here. Seven of these species are new, namely *Lissonota persica* nov.sp. (Banchinae), *Cymodusopsis rufator* nov.sp. (Campopleginae), *Narolskyia iranica* nov.sp. (Cremastinae), *Pristomerus persicus* nov.sp. (Cremastinae), *Temelucha brunneomaculata* nov.sp. (Cremastinae), *Barichneumon brevipunctatus* nov.sp. (Ichneumoninae), *Mesochorus (Stictopisthus) persicus* nov.sp. (Mesochorinae). For *Mesochorus samarae* SCHWENKE, 1999 (Mesochorinae) and *Gelis divaricatus* HORSTMANN, 1993 (Phygadeuontinae), the males are described for the first time, for *Exochus aenigmatus* TOLKANITZ, 1999 (Metopiinae) we describe the hitherto unknown female. The genus *Cymodusopsis* VIERECK, 1912 which had only been known from the Nearctic region so far, is newly reported from the Palaearctic region.

K e y w o r d s : Ichneumonidae, new species, Iran

Introduction

The Ichneumonidae represents a very large family of Hymenoptera with more than 26.000 extant species worldwide (YU et al. 2016). Members of this family are parasitoids of several insect and arachnid orders and play an important role in biological pest control. However, our knowledge on the taxonomy, distribution and biology of many groups of Ichneumonidae is still fragmentary.

For many years in the past, the Ichneumonid fauna of Iran had been addressed in only a few publications, but faunistical surveys of the Iranian Ichneumonid fauna were substantially intensified in the last decades resulting in many new reports of Ichneumonidae from this country (see listing and references in YU et al. 2016).

Here, we present our results of recent collections of Ichneumonidae from different areas, namely the Markazi, Khuzestan and Zajan provinces of Iran.

Material and Methods

All specimens were collected by Malaise traps in a survey made by the second author and several of his collaborators in the years 2014-2018. The material was collected at the following sites:

- Khuzestan site 1: Iran, Khuzestan Prov., Shoush, Karkheh National Park,

Perslan Fallow Deer Sanctuary, N 32°04'36.5'' E 48°14'15.6'', 45 m, Malaise trap.

- Khuzestan site 2: Iran, Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N 32°04'40.1'' E 48°14'12.6'', tamarisk trees, 53 m, Malaise trap.
- Khuzestan site 3: Iran, Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N 32°04'42.2'' E 48°14'34.8'', 63 m, Malaise trap.
- Markazi site 1: Iran, Markazi Prov., Arak, Haftad-Gholleh, Protected area, Chekab valley, N 34°08'07.2'' E 50°15'56.1'', 2090 m, Malaise trap.
- Markazi site 2: Iran, Markazi Prov., Arak, Haftad-Gholleh, Sibak, 2090 m, N 34°08'06.5'' E 50°10'39.1'', 2090 m, Malaise trap.
- Markazi site 3: Iran, Markazi Prov., Arak, Haftad-Gholleh, Siloak valley, N 34°08'06.5'' E 50°15'50.0'', 2090 m, Malaise trap.
- Markazi site 4: Iran, Markazi Prov., Arak, Haftad-Gholleh, Protected area, Chekab valley, N 34°08'06.5'' E 50°10'59.6'', 1872 m, Malaise trap.
- Zanjan site 1: Iran, Zanjan Prov., Dandi, Anguran P.A., Qareh-Bugh Ranger Station, N 36°38.047'E 47°41.258', 1726 m, Malaise trap.
- Zanjan site 2: Iran, Zanjan Prov., Sohrin, Sorkhabad P.A., Sohrin Ranger station, N 36°52.59' E 48°19.209', 1700 m, Malaise trap.

The material was prepared and sent to the first author for identification, all determinations, descriptions and figures were done by the first author. If not stated differently, the types are deposited in the Zoologische Staatssammlung Munich (ZSM). For the distributional records, we only mention representative reports for the Iranian fauna here, for a more complete list of Iranian records see YU et al. (2016).

The nomenclature of body structures and the actual arrangement of subfamilies were adopted from Broad et al. (2018).

For the measurements we used an Olympus SZX7 stereo microscope with dividing eyepiece. The figures were taken with an Olympus SC 30 CCD-camera using the AnalySIS getIT and Helicon Pro softwares and processed with the Microsoft Office Picture Manager.

List of species

Subfamily Acaenitinae

Acaenitus dubitator (PANZER, 1800)

Material examined: Markazi site 1: 1♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi.

Distribution: Palearctic region, new record for Iran.

Subfamily Banchinae

Exetastes adpressorius var. *syriacus* SCHMIEDEKNECHT, 1910

Material examined: Khuzestan site 1: 18♀♀ 20♂♂ 11.iii.-10.v.2015, leg. E. Gilasian;
Khuzestan site 2: 1♀ 1♂ 11.v.-14.vi.2014, leg. M. Parachami-Araghi.

Distribution: Holarctic region, known from Iran (BARAHOEI et al. 2014).

***Lissonota bistrigata* HOLMGREN, 1860**

Material examined: Markazi site 1: 1♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi.

Distribution: Western Palaearctic region, new record for Iran.

***Lissonota persica* nov.sp. (figs 1-4)**

Type material: Holotype: ♀ "Iran: Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N 32°04'36.5'' E 48°14'15.6'', 45 m, March 11-May 10, 2015, Malaise trap, E. Gilasian" (ZSM). Paratypes: 12♀♀ 3♂♂ with same data; 2♀♀ "Iran: Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N 32°04'40.1'' E 48°14'12.6'', tamarisk trees, May 11-June 14, 2014, 53 m, Malaise trap, M. Parachami-Araghi"; 1♀ 1♂ "Iran: Markazi Prov., Arak, Haftad-Gholleh, Sibak, 2090 m, N 34°08'06.5'' E 50°10'39.1'', Malaise trap, 16.vi.2018, E. Gilasian" (coll. Riedel and Tehran).

Description: ♀: Body length (without ovipositor) 8-9 mm. Antenna with 34-36 flagellomeres; 1st flagellomere 4.3-4.8x longer than wide and 1.5x longer than 2nd one; 2nd flagellomere 3.0-3.5x longer than wide; preapical flagellomere 1.3x longer than wide.

Temple strongly but roundly narrowed behind eye, seen dorsally about 0.3x as long as eye. Distance of lateral ocellus to eye 1.1x ocellar diameter, distance between both lateral ocelli 1.6x ocellar diameter. Frons and face granulate and with fine dense punctures. Face slightly bulging centrally. Clypeus c.2x wider than long, slightly convex, with rather long but scattered pale hairs. MI 0.8. Mandible with two equally sized teeth. Genal carina complete, reaching the hypostomal one far from mandibular base; hypostomal carina moderately elevated (about as wide as distal maxillary palpomere).

Mesosoma covered with fine pale hairs. Side of pronotum finely punctate, pronotal groove with fine longitudinal rugae. Notaulus not impressed on mesoscutum. Mesoscutum granulate, with fine dense punctures. Mesopleuron and metapleuron granulate and densely punctate, more or less shining; speculum smooth and shining. Submetapleural carina strongly lamelliform on fronto-ventral edge of metapleuron. Scutellum moderately elevated, slightly longer than wide, punctate, without lateral carina. Propodeum punctate and granulate, matte; caudal part behind the strong apical transversal carina smooth and shining. Spiracle of propodeum round; pleural carina present but partly obsolete in caudal parts. Hind femur 4.5-4.6x longer than wide, slightly spindle-shaped, with superficial punctures. Hind claw c.2x longer than empodium, with c.6 short teeth.

Areolet of fore wing quadrangular and shortly stalked; 2nd recurrent vein distinctly distal to the middle of areolet; nervulus strongly postfurcal. Nervellus of hind wing intercepted in its apical 0.8.

Metasoma covered with rather dense short pale hairs. 1st tergite 1.45-1.55x longer than wide; granulate, with fine longitudinal rugae posterolaterally. 2nd tergite 1.25x wider than long, granulate and with fine very scattered punctures; 3rd tergite 1.3x wider than long. Ovipositor as long as or slightly longer than metasoma; tip straight, with dorsal rim.

Color: Black. Frontal orbit up to vertex, malar space and gena ivory, facial orbit more pale reddish, face with central reddish spot. Mandible except teeth, clypeus completely and palps mainly yellowish. Wide upper margin and ventral part of pronotum, mesopleuron and metapleuron completely, mesoscutum except black fronto-median stripe, scutel-

lum and propodeum caudal to apical transversal carina reddish. Hind edge of pronotum, tegula, often subtegular ridge and dorsal hind edge of mesopleuron ivory. Legs red, hind tarsus more or less black. Metasomal tergites black, 2nd and 3rd tergites with yellow hind margins, following tergites often with diffuse narrow reddish to yellowish hind margins. Sternites cream-yellow, with brownish lateral stripes; hypopygium brown. Wings hyaline, pterostigma brownish.

♂: Body length 8 mm. Flagellum with 38 flagellomeres, 1st flagellomere 4.1x longer than wide, 2nd flagellomere 3.1x longer than wide. Distance of lateral ocellus to eye 1.2x ocellar diameter, distance between both lateral ocelli 1.4x ocellar diameter. Malar space length 0.7x width of mandibular base. Hind femur 4.4-5.0x longer than wide. 1st tergite 1.7x longer than wide; 2nd and 3rd tergites about as long as wide. 2nd and 3rd tergites granulate, without distinct punctures, matte; following tergites superficially granulate, more or less shining.

Color: Black. Scape and pedicle yellow ventrally, flagellum reddish-brown ventrally. Clypeus and face (except two black paramedian stripes) pale reddish; frontal orbit up to vertex, gena and lower outer orbit ivory. Frontal margin of pronotum cream-yellow; pronotum ventrally and upper margin reddish. Mesoscutum black, with hook-like fronto-lateral yellowish stripes which are confluent caudal-medially. Mesopleuron, metapleuron, scutellum and postscutellum red, sometimes more yellow-red at margins. Hind edge of pronotum, tegula, subtegular ridge and upper hind edge of mesopleuron ivory. Tergites black; 2nd to 7th tergites with apical yellow bands. Sternites ivory. Legs red; fore and mid coxae and trochanters cream-yellow. Pterostigma brown.

Remark: In the key of Western Palaearctic *Lissonota* species (AUBERT 1978: 289-314), this new taxon runs to couplet 6 (*Lissonota elector* GRAVENHORST and *L. dusmeti* SEYRIG). It differs from *L. elector* GRAVENHORST by its smaller size, smooth speculum, completely red scutellum and wider basal tergites, and yellow or ivory tergal hind margins in ♂. From *L. dusmeti* SEYRIG, it can be differentiated by wider basal tergites, finer and scattered punctures of basal tergites, shorter ovipositor, and yellow or ivory hind margins of basal tergites in ♂.

***Syzeuctus bicolor* SZEPLIGETI, 1899**

Material examined: Markazi site 1: 2♀♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi.

Distribution: Palaearctic region, new record for Iran.

***Syzeuctus kasparyator* AUBERT, 1977**

Material examined: Khuzestan site 1: 2♂♂ 11.iii.-10.v.2015, 1♂ 23.vii.-6.ix.2015, leg. E. Gilasian; Khuzestan site 2: 1♀ 11.v.-10.vii.2014, leg. M. Parachami-Araghi; Markazi site 2: 1♀ 16.vi.2018, leg. E. Gilasian.

Distribution: Only known from Kazakhstan so far, new record for Iran.

Subfamily Campopleginae

***Benjaminia polonica* SAWONIEWICZ, 1973**

Material examined: Markazi site 4: 1♀ 2♂♂ 6-10.v.2018, leg. M. Parachami-Araghi.

Distribution: Known from Eastern Europe, new record for Iran.

***Casinaria krieckbaumeri* (COSTA, 1884)**

Material examined: Khuzestan site 2: 1♀ 1♂ 11.v.-14.vi.2014, 1♀ 2♂♂ 10.v.-10.vii.2015, leg. M. Parachami-Araghi; Khuzestan site 1: 3♀♀ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 2: 2♀♀ 4♂♂ 16.vi.2018, leg. E. Gilasian.

Distribution: Western Palaearctic region, new record for Iran.

***Casinaria trochanterator* AUBERT, 1960**

Material examined: Khuzestan site 2: 3♀♀ 3♂♂ 11.v.-14.vi.2014, leg. M. Parachami-Araghi; Khuzestan site 1: 3♀♀ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 4: 3♀♀ 6-10.v.2018, leg. M. Parachami-Araghi.

Distribution: Western Palaearctic region, known from Iran (RIEDEL 2018).

***Cymodusopsis rufator* nov.sp. (figs 5-9)**

Type material: Holotype: ♀ "Iran: Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N32°04'36.5'' E48°14'15.6'', March 11-May 10, 2015, 45 m, Malaise trap, E. Gilasian" (ZSM). Paratypes: 4♀♀ 12♂♂ "Iran: Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N 32°04'40.1'' E 48°14'12.6'', tamarisk trees, May 11-June 14, 2014, 53 m, M. Parachami-Araghi"; 1♀ 1♂ "Iran: Markazi Prov., Arak, Haftad-Gholleh, Sibak, N 34°08'06.5'' E 50°10'39.1'', 16-06-2018, 2090 m, Malaise trap, E. Gilasian" (coll. Riedel and Tehran).

Description: ♀: Body length 4.5-5.0 mm. Antenna with 23-24 flagellomeres; 1st flagellomere 5.2x longer than wide, preapical flagellomere slightly longer than wide. Head granulate, matte, covered with whitish hairs, seen dorsally 2.0x wider than long. Temple strongly and roundly narrowed behind eye, seen dorsally about 0.35x as long as eye. Distance of lateral ocellus to eye 1.3x ocellar diameter, distance between lateral ocelli 1.6x ocellar diameter. Eye bare, inner margins strongly narrowed ventrally; minimal width of face 0.52x frontal width. Clypeus distinctly convex, about as long as wide, with rounded apical margin. Distance of clypeal fovea (tentorial pit) to inner eye margin about 2x foveal diameter. Malar space narrow, 0.25x as long as width of mandibular base. Mandible with upper tooth slightly larger than lower one and with ventral lamella in basal 2/3. Genal carina reaching hypostomal one close to mandibular base, both carinae narrow.

Mesosoma covered with whitish hairs. Side of pronotum granulate and finely rugose in dorsal 1/4, finely striate in ventral 3/4. Notaulus not impressed on mesoscutum. Mesoscutum granulate and finely rugose, matte. Mesopleuron granulate, with fine striae dorsally; speculum finely granulate, but more or less shining. Epinomial carina narrow, reaching anterior margin of mesopleuron. Scutellum moderately elevated, about as long as wide, without lateral carina. Propodeum granulate, spiracle round. Area basalis trapezoid, c.2x longer than wide. Area superomedia about as long as wide, finely rugose, confluent with area petiolaris. Area petiolaris with fine transverse rugae, lateral carina more or less obsolete. Costula present. Legs slender; hind femur 6.1x longer than wide. Hind metatarsus c.0.54x as long as hind tibia, with a rather distinct internal row of fine spurs. Outer spur of hind tibia c.0.85x as long as the inner one. Hind claw short, finely pectinate.

Areolet of fore wing quadrangular, pointed or shortly sessile anteriorly. Nervulus slightly postfurcal (by 1-2x its width). Nervellus of hind wing intercepted in its apical 0.6, discoidella weak.

Metasoma except smooth petiolus granulate. 1st tergite c.3.3x longer than wide, without glymma, distinctly bent at spiracles with an angle of c.30° between petiolus and postpetiolus. 2nd tergite 2.0x longer than wide; thyridium oval, its distance to tergal base 4.5x its diameter. 3rd tergite c.1.15x longer than wide. 6th tergite with slightly concave hind margin; 7th tergite with blunt triangular excision at apical margin. Ovipositor sheath c.0.65x as long as hind tibia. Exposed ovipositor c.1.3x as long as hind tibia, almost straight, its tip with strong dorsal notch, ventrally narrowed.

Color: Black. Scapus, pedicellus and basal third of flagellum yellowish, distal 2/3 of flagellum brownish. Clypeus ± reddish. Palps, mandible except teeth and tegula cream-yellow. 1st tergite brown or black; postpetiolus ± reddish apically; 2nd tergite reddish, narrowly black basally and apically and with brownish subapical band; following tergites reddish, sometimes with diffuse brownish suffusion. Legs including hind coxa reddish; fore and mid coxae, all trochanters and trochantelli, apical spots on fore and mid femora and external stripes on fore and mid tibiae and tarsi cream-yellow; hind tibia red, yellow basally, sometimes with slightly darker subbasal and apical rings. Hind tibial spurs cream-yellow. Wings hyaline, pterostigma brownish.

♂: Body length 4.2-4.5 mm. Antenna with 24-25 flagellomeres; 1st flagellomere c.3.0x longer than wide, preapical flagellomere c.1.7x longer than wide. Tyloids absent. Inner margins of eyes moderately narrowed ventrally, minimal width of face 0.8x width of frons. Speculum with very fine granulation or smooth, shining. Lateral carina of area petiolaris ± present. Hind femur c.5.2x longer than wide. 1st tergite 3.7x longer than wide. 2nd tergite 2.3x longer than wide; thyridium roundish, its distance to basal tergal margin 2x its diameter. 3rd tergite 1.1x longer than wide. Structure otherwise as described for the ♀.

Color: Black. Scapus and pedicellus yellowish, flagellum brown. Palps, mandible except teeth and tegula cream-yellow. 1st tergite black; 2nd tergite brown, with reddish-yellow band in apical 1/3; following tergites yellowish-red, with more or less extended brownish basal spots; 6th and 7th tergites often mainly brown. Fore and mid coxae more or less reddish, hind coxa black. Fore and mid trochanters and all trochantelli cream-yellow. Femora, tibiae and tarsi red; fore and mid tibiae and tarsi with cream-yellow stripes externally; hind femur sometimes with brownish suffusion; hind tibia red, yellow basally, usually with weak brownish subbasal and apical rings; hind tarsus brown to black. Pterostigma brownish.

Remark: Due to its bare compound eyes, form of 1st metasomal tergite and wide distance of clypeal fovea (tentorial pit) from inner eye margin, this new species runs to the genus *Cymodusopsis* VIERECK which have only been known from the New World so far (SANBORNE 1986).

The relation of this genus to *Cymodusa* and *Diadegma* has already been discussed by SANBORNE (1986: 2) who proposed a close relationship between *Cymodusopsis* and *Diadegma*, but in our opinion *Cymodusopsis* seems to be closer related to or is even congeneric with *Cymodusa*. However, a final solution can only be made with further material, rearing results and genetical analyses in the future.

***Diadegma aegyptiacum* HORSTMANN, 1993**

Material examined: Khuzestan site 1: 18♀♀ 11.iii.-10.v.2015, leg. E. Gilasian; Khuzestan site 2: 2♀♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi; Markazi site 1: 2♀♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Markazi site 2: 1♀ 1♂ 16.vi.2018, leg. E. Gilasian.

Distribution: So far only known from Egypt, new record for Iran.

***Diadegma incompletum* HORSTMANN, 1973**

Material examined: Markazi site 2: 1♀ 16.vi.2018, leg. E. Gilasian; Khuzestan site 1: 2♀♀ 11.iii.-10.v.2015, leg. E. Gilasian.

Distribution: Known from Europe, new record for Iran.

***Diadegma majale* (GRAVENHORST, 1829)**

Material examined: Markazi site 1: 1♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi, 1♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Khuzestan site 2: 1♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi.

Distribution: Holarctic regions, known from Iran (MASNADI-YAZDINEJAD et al. 2010).

***Diadegma trochanteratum* (THOMSON, 1887)**

Material examined: Khuzestan site 1: 1♀ 23.vii.-6.ix.2015, leg. E. Gilasian.

Distribution: Western Palearctic region, new record for Iran.

***Hyposoter didymator* (THUNBERG, 1822)**

Material examined: Markazi site 1: 1♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Khuzestan site 1: 2♀♀ 4♂♂ 11.iii.-10.v.2015, leg. E. Gilasian.

Distribution: Palearctic region, known from Iran (BARAHOEI et al. 2012).

***Hyposoter ebeninus* (GRAVENHORST, 1829)**

Material examined: Khuzestan site 2: 9♀♀ 1♂ 11.v.-14.vi.2014, leg. M. Parachami-Araghi; Khuzestan site 3: 1♀ 5-11.v.2014, leg. M. Parachami-Araghi; Khuzestan site 1: 7♀♀ 4♂♂ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 1: 2♀♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Markazi site 2: 1♀ 16.vi.2018, leg. E. Gilasian.

Distribution: Palearctic region, known from Iran (SHAW et al. 2016).

***Leptoperilissus obeliscator* (SHAUMAR, 1966)**

Material examined: Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian.

Remark: The available ♀ differs slightly from the original description (SHAUMAR 1966): Body length 3.5 mm. Antenna with 21 flagellomeres. Costula absent. Ovipositor sheath about as long as the 1st tergite, completely pilose, clubbed apically; ovipositor strongly bent to dorsal. Antenna brown; pedicellus yellowish apically. Clypeus black, with reddish apical margin. Fore and mid coxae red, black basally; hind coxa black; hind trochanter brownish. Hind tibia completely red. Pterostigma pale ochreous. Structure and color otherwise typical.

Distribution: Previously only known from Egypt, new record for Iran.

***Sinophorus juniperinus* (HOLMGREN, 1856)**

Material examined: Markazi site 4: 1♀ 1♂ 6-10.v.2018, leg. M. Parachami-Araghi; Markazi site 1: 1♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Markazi site 3: 3♀♀ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

Distribution: Palaearctic region, new record for Iran.

***Sinophorus xanthostomus* (GRAVENHORST, 1829)**

Material examined: Markazi site 2: 2♀♀ 16.vi.2018, leg. E. Gilasian; Khuzestan site 1: 2♀♀ 11.iii.-10.v.2015, leg. E. Gilasian.

Distribution: Palaearctic and Oriental regions, known from Iran (SANBORNE 1984).

Subfamily Cremastinae***Narolskyia iranica* nov.sp. (figs 10-14)**

Type material: Holotype: ♀ "Iran: Markazi Prov., Arak, Haftad-Gholleh, Protected area, Chekab valley, 1872 m, N 34°08'06.5'' E 50°10'59.6'', Malaise trap, May 6-10, 2018, M. Parachami-Araghi" (ZSM, Munich). Paratype: ♀ with same data (Tehran).

Description: ♀: Body length 12 mm. Fore wing length 6.3 mm. Antenna with 39-40 flagellomeres; 1st flagellomere 3.2x longer than wide, preapical flagellomere square. Head, seen from dorsal, 2.1x wider than long. Temple parallel behind eye, slightly narrowed apically. Distance of lateral ocellus to eye 1.5x ocellar diameter, distance between lateral ocelli 1.5x ocellar diameter.

Frons strongly impressed medially, with transverse striae above antennal grooves, coarsely punctate laterally. Outer orbit with scattered punctures. Face coarsely rugose-punctate, with tooth-like tubercle between antenna. Clypeus slightly bulging, with preapical transversal ridge and rounded apical margin. Malar space length 0.75x width of mandibular base. Mandible with two teeth, lower tooth larger than upper one.

Mesosoma covered with whitish hairs. Side of pronotum coarsely punctate dorsally, with fine striae in pronotal groove; collare with central groove and median longitudinal ridge. Notaulus not impressed. Mesoscutum mainly densely punctate, but punctation becoming scattered in apico-lateral parts. Mesopleuron and metapleuron coarsely and densely punctate, speculum smooth, mesopleuron with some fine striae frontal to speculum. Epicnemial carina narrow, almost reaching subtegular ridge; postpectal carina complete, slightly elevated. Scuto-scutellar groove with longitudinal striae. Scutellum strongly elevated, longer than wide, with complete lateral carina. Area basalis trapezoid, c.3x longer than wide. Area superomedia hexagonal, slightly longer than wide. Area petiolaris with transverse rugae. Costula indistinct. Legs slender; hind femur 5.1x longer than wide; hind tibia longer than hind femur. All claws with c.4 strong teeth.

Areolet of fore wing open distally. Nervulus interstitial or slightly antefurcal. Radial vein strongly sinusoid distal to areolet. Nervellus of hind wing intercepted in its apical 0.6, discoidella weak.

Metasoma strongly compressed laterally. 1st tergite c.3.1x longer than wide, with long glymma, coarsely striate. 2nd tergite 2.1x longer than wide, coarsely striate. Following tergites longer than wide, with fine granulation and scattered very fine setiferous punctures. Apical margin of 6th tergite with median notch. Ovipositor 2.3x longer than hind tibia, strongly sinusoid in its apical 0.2.

Color: Black. Palps and mandible centrally reddish. Inner orbit (widened opposite to antenna), stripe on dorsal half of outer orbit, hook-shaped anterolateral mark on mesoscutum, tegula and scutellum ivory. 1st and 2nd tergites black; 3rd to 5th tergites red, epipleura more or less brownish; 6th tergite red, with median brown stripe. Coxae and trochanters black; legs otherwise red; femora with ivory spots apically; fore and mid tibiae with ivory stripes externally; hind tibia blackish internally and with subbasal blackish ring, ivory externally; hind tarsus black. Wings hyaline, pterostigma brownish, pale proximally.

♂ unknown.

Remark: Although this new taxon has an apical notch of 6th tergite which is typical for *Celor* KOKUJEV, we have no doubt to include it in the genus *Narolskyia* KOÇAK & KEMAL. Its large size, compressed metasoma, wing venation, structure of propodeum and 1st tergite and form of ovipositor resembles the other known species of this genus, *Narolskyia chosrov* (NAROLSKY). It can be differentiated from *N. chosrov* by the notched 6th tergite, larger ocelli, shorter ovipositor, and reddish apical tergites.

***Pristomerus persicus* nov.sp. (figs 15-17)**

Type material: Holotype: ♂ "Iran: Markazi Prov., Arak, Haftad-Gholleh, Protected area, Chekab valley, 2090 m, N 34°08'07.2'' E 50°15'56.1'', Malaise trap, 11.vi.-20.vii.2018, leg. M. Parachami-Araghi" (ZSM, Munich).

Description: ♂: Body length 6.5 mm. Antenna with 30 flagellomeres; 1st flagellomere 4.0x longer than wide, 2nd flagellomere 3.5x longer than wide, preapical flagellomeres slightly longer than wide. Temple strongly and roundly narrowed behind eye. Ocelli large, distance of lateral ocellus to eye 0.5x ocellar diameter. Frons finely granulate and with scattered punctures. Face smooth, with scattered punctures. Minimal distance of compound eyes 0.39x width of head. Malar space length 0.7x width of mandibular base.

Pronotum smooth. Mesoscutum with very scattered punctures, mainly along notauli, otherwise smooth. Scuto-scutellar groove with 4 fine longitudinal ridges, scutellum smooth. Mesopleuron and metapleuron densely punctate, speculum smooth. Propodeum completely carinate, densely punctate, area petiolaris with transversal rugae. Area basalis trapezoid, c.1.5x longer than wide. Area superomedia c.2.8x longer than wide. Hind coxa granulate and with scattered punctures. Hind femur stout, c.3.0x longer than wide; ventral tooth at 0.65 of femoral length and 0.83x as long as basal width of hind tibia. First intercubitus of fore wing c.1.5x longer than vein between cubitus and 2nd recurrent vein; nervulus interstitial. Nervellus of hind wing intercepted at apical 0.8.

Postpetiolus, 2nd tergite completely and basal 1/4 of 3rd tergite finely striate. 2nd tergite c.1.9x longer than wide.

Color: Yellowish-red. Scapus and pedicellus reddish; flagellum black. Cream-yellow are palps, mandible except teeth, clypeus, face, orbits, lateral and paramedian stripes of mesoscutum (confluent anteriorly), scutellum except red basomedian spot, apical spots on mesopleuron and metapleuron and apical 1/4 of propodeum. Black are occiput, scutellar groove and base of propodeum. 1st to 3rd tergites blackish basally and with cream-yellow apical bands. Legs red; apical spots on coxae, trochanters and femora cream-yellow; hind tibia cream-yellow externally; mid and hind tarsi brownish. Wings hyaline; pterostigma brown, pale proximally.

♀ unknown.

Remark: This new species runs to *Pristomerus arabicus* HORSTMANN in his key of West Palaearctic *Pristomerus* species (HORSTMANN 1990), but differs by its larger ocelli, stouter hind femur and a different color pattern.

***Temelucha annulata* (SZEPLIGETI, 1899)**

Material examined: Markazi site 3: 1♀ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

Distribution: Western Palaearctic region, new record for Iran.

***Temelucha meritionellator* AUBERT, 1981**

Material examined: Markazi site 4: 2♀♀ 6-10.v.2018, leg. M. Parachami-Araghi; Markazi site 1: 3♀♀ 8♂♂ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Khuzestan site 1: 1♂ 11.iii.-10.v.2015, 1♂ 23.vii.-6.ix.2015, leg. E. Gilasian.

Distribution: Previously known from Israel, Malta and Turkey, new record for Iran.

***Temelucha brunneomaculata* nov.sp. (figs 19-21)**

Type material: Holotype: ♀ "Iran: Markazi Prov., Arak, Haftad-Gholleh, Protected area, Chekab valley, 1872 m, N 34°08'06.5" E 50°10'59.6", Malaise trap, May, 6-10, 2018, M. Parachami-Araghi" (ZSM, Munich).

Description: ♀: Body length (without ovipositor) 7 mm. Antenna with 30 flagellomeres, filiform; 1st flagellomere 4.6x longer than wide, preapical flagellomere square. Temple roundly narrowed behind eye, seen dorsally c.0.35x as long as eye. Distance of eye to lateral ocellus 1.1x ocellar diameter. Face densely punctate, shining. Inner eye margins slightly divergent ventrally. Clypeus slightly convex, with scattered punctures, strongly shining, apical margin rounded. Malar space length 0.7x width of mandibular base. Mandible with two equally sized teeth.

Side of pronotum punctate, partly rugose-punctate. Mesoscutum with dense and coarse punctures, shining. Mesopleuron densely punctate, rim frontally to smooth speculum with fine striae. Metapleuron densely punctate. Scutellum slightly longer than wide. Propodeum carinate, lateral fields with coarse punctures. Area basalis trapezoid, wider than long. Area superomedia c.1.6x longer than wide, confluent with area petiolaris; both with transverse striae. Costula present. Hind femur 5.0x longer than wide. Hind claw with two basal teeth.

Areolet open distally, 2nd recurrent vein postfurcal. Nervulus slightly antifurcal (by 1x its width). Distal part of radial vein slightly sinusoid. Nervellus of hind wing interstitial, not interrupted, discoidella absent.

1st tergite c.1.2x longer than 2nd one. Petiolus smooth and shining, postpetiolus with fine striation. 2nd tergite 3.2x longer than wide, finely and completely striate. Following tergites granulate and with scattered superficial punctures. Ovipositor c.0.8x as long as fore wing and 1.9x as long as hind tibia, tip slightly bent ventrally.

Color: Mainly yellowish. Black are tip of mandible, inner margins of ocelli, scuto-scutellar groove and lateral margins of apical mesoscutum and scutellum, basal margin and basomedian spot on propodeum, petiolus, median stripe on 2nd tergite in basal half and basal band on 3rd tergite. Pale brown are flagellum, anteromedian and lateral stripes

on mesoscutum, diffuse spots on postpetiolus, subapical band on 2nd tergite and wide basal bands on following tergites. Legs yellowish; hind femur with external brownish stripe, hind tibia with blackish subbasal and apical bands; hind tarsus brownish. Ovipositor sheath dark brown. Wings hyaline, pterostigma ochreous.

♂ unknown.

Remark: This new taxon runs to *Temelucha dorsonigra* (HEDWIG, 1957) in the recent key by VAS (2016) but differs by the caudally open area superomedia, antefurcal nervulus in fore wing, and different color pattern of the metasoma and legs.

Subfamily *C r y p t i n a e*

Cryptus duoalbimaculatus SCHWARZ, 2015

M a t e r i a l e x a m i n e d : Khuzestan site 1: 2♀♀ 6♂♂ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 2: 2♂♂ 16.vi.2018, leg. E. Gilasian.

D i s t r i b u t i o n : Known from Egypt, Iran and Turkmenistan (SCHWARZ 2015).

Cryptus immitis TSCHKE, 1871

M a t e r i a l e x a m i n e d : Markazi site 1: 2♀♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Palaearctic region, new record for Iran.

Cryptus inculcator (LINNAEUS, 1758)

M a t e r i a l e x a m i n e d : Khuzestan site 1: 4♀♀ 1♂ 11.iii.-10.v.2015, leg. E. Gilasian; Khuzestan site 2: 1♀ 5-11.v.2014, leg. M. Parachami-Araghi; Markazi site 2: 2♀♀ 16.vi.2018, leg. E. Gilasian.

D i s t r i b u t i o n : Palaearctic region, known from Iran (SCHWARZ 2015).

Cryptus notaulicus SCHWARZ, 2015

M a t e r i a l e x a m i n e d : Markazi site 1: 1♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Previously known from Turkey, new record for Iran.

Cryptus spinosus GRAVENHORST, 1829

M a t e r i a l e x a m i n e d : Markazi site 1: 1♀ 1.vi.-20.vii.2018, leg. M. Parachami-Araghi; Markazi site 3: 1♀ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Palaearctic region, known from Iran (SCHWARZ 2015).

Cryptus tuberculatus GRAVENHORST, 1829

M a t e r i a l e x a m i n e d : Markazi site 3: 3♀♀ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Palaearctic region, known from Iran (SCHWARZ 2015).

Cryptus viduatorius FABRICIUS, 1804

M a t e r i a l e x a m i n e d : Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian.

D i s t r i b u t i o n : Palaearctic region, known from Iran (BARAHOEI et al. 2012).

***Gambrus incubitor* (LINNAEUS, 1758)**

M a t e r i a l e x a m i n e d : Markazi site 2: 12♀♀ 16.vi.2018, leg. E. Gilasian; Markazi site 4: 6♀♀ 6-10.v.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Palaearctic region, known from Iran (BARAHOEI et al. 2012).

***Hoplocryptus femoralis* (GRAVENHORST, 1829)**

M a t e r i a l e x a m i n e d : Markazi site 1: 1♂ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Palaearctic region, known from Iran (SCHWARZ 2007).

***Hoplocryptus heliophilus* (TSCHEK, 1871)**

M a t e r i a l e x a m i n e d : Khuzestan site 2: 2♀♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi; Markazi site 1: 1♂ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi, 5♀♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Markazi site 2: 1♂ 16.vi.2018, leg. E. Gilasian; Markazi site 3: 3♀♀ 3♂♂ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Palaearctic region, known from Iran (Schwarz 2007).

***Hoplocryptus quadriguttatus* (GRAVENHORST, 1829)**

M a t e r i a l e x a m i n e d : Markazi site 1: 1♀ 1♂ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Markazi site 2: 1♀ 16.vi.2018, leg. E. Gilasian.

D i s t r i b u t i o n : Palaearctic region, new record for Iran.

***Listrognathus mactator persicator* AUBERT, 1970**

M a t e r i a l e x a m i n e d : Khuzestan site 2: 1♂ 11.v.-14.vi.2014, 53 m, leg. M. Parachami-Araghi; Khuzestan site 1: 3♂♂ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 1: 1♂ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi.

D i s t r i b u t i o n : Kyrgyzstan and Iran (AUBERT 1970).

***Mesostenus grammicus* GRAVENHORST, 1829**

M a t e r i a l e x a m i n e d : Khuzestan site 2: 1♂ 10.v.-10.vii.2015, leg. M. Parachami-Araghi; Khuzestan site 1: 2♀♀ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 1: 1♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi, 3♀♀ 6-10.v.2018, leg. M. Parachami-Araghi, 1♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Markazi site 2: 1♀ 16.vi.2018, leg. E. Gilasian; Markazi site 3: 6♀♀ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Palaearctic region, known from Iran (BARAHOEI et al. 2012).

***Synechocryptus erberi erberi* (TSCHEK, 1871)**

M a t e r i a l e x a m i n e d : Khuzestan site 1: 2♂ 11.iii.-10.v.2015, leg. E. Gilasian.

D i s t r i b u t i o n : Palaearctic region, new record for Iran.

***Trychosis ambigua* (TSCHEK, 1871) syn. *Cryptus mesocastaneus* TSCHEK**

M a t e r i a l e x a m i n e d : Markazi site 3: 1♂ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Western Palaearctic region, new record for Iran.

***Trychosia legator* (THUNBERG, 1822)**

Material examined: Khuzestan site 2: 3♀♀ 1♂ 10.v.-10.vii.2015, leg. M. Parachami-Araghi; Markazi site 1: 1♀♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Markazi site 2: 4♀♀ 16.vi.2018, leg. E. Gilasian.

Remark: Some ♀♀ have a more or less extended or complete reddish coloration of mesosoma.

Distribution: Palaearctic region, known from Iran (BARAHOEI et al. 2012).

***Xylophrurus augustus* (DALMAN, 1823)**

Material examined: Markazi site 1: 2♀♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi, 1♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi.

Distribution: Western Palaearctic region, new record for Iran.

Subfamily *Diplazontinae****Diplazon laetatorius* (FABRICIUS, 1781)**

Material examined: Khuzestan site 2: 16♀♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi; Khuzestan site 1: 11♀ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 1: 4♀♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Markazi site 4: 1♀ 6-10.v.2018, leg. M. Parachami-Araghi.

Distribution: Worldwide, known from Iran (BARAHOEI et al. 2012).

***Enizemum ornatum* (GRAVENHORST, 1829)**

Material examined: Markazi site 1: 1♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Markazi site 3: 1♀ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

Distribution: Holarctic region, known from Iran (BARAHOEI et al. 2012).

***Homotropus nigratarsus* (GRAVENHORST, 1829)**

Material examined: Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 1: 1♂ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Markazi site 3: 1♀ 2♂♂ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

Distribution: Holarctic region, known from Iran (KOLAROV 2015).

***Homotropus signatus* (GRAVENHORST, 1829)**

Material examined: Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 1: 1♀ 16.vi.2018, leg. E. Gilasian.

Remark: The available ♀♀ have 18 resp. 19 flagellomeres, a red scutellum and red spots on metapleuron and on propodeum. Structure and coloration of both specimens are otherwise typical for *H. signatus* (GRAVENHORST) (KLOPFSTEIN 2014).

Distribution: Holarctic, known from Iran (KOLAROV 2015).

Subfamily *Ichneumoninae****Auberteterus alternecoloratus* (CUSHMAN, 1929)**

Material examined: Khuzestan site 2: 1♂ 10.v.-10.vii.2015, leg. M. Parachami-Araghi.

Distribution: Palaearctic and Oriental region, new record for Iran.

***Barichneumon brevipunctatus* nov.sp. (figs 22-25)**

Type material: Holotype: ♀ "Iran: Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N 32°04'40.1'' E 48°14'12.6'', tamarisk trees, May 11-June 14, 2014, 53 m, Malaise trap, M. PARACHAMI-ARAGHI" (ZSM, Munich). Paratypes: 2 ♀♀ same data; 3 ♂♂ "Iran: Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N 32°04'40.1'' E 48°14'12.6'', tamarisk trees, May 10-July 10, 2015, 53 m, Malaise trap, M. Parachami-Araghi"; 1 ♀ "Iran: Markazi Prov., Arak, Haftad-Gholleh, Protected area, Chekab valley, 2090 m, N 34°08'07.2'' E 50°15'56.1'', Malaise trap, May 10-June 13, 2018, E. Gilasian & M. Parachami-Araghi"; 1 ♀ 1 ♂ "Iran: Markazi Prov., Arak, Haftad-Gholleh, Sibak, 2090 m, N 34°08'06.5'' E 50°10'39.1'', Malaise trap, 16.6.2018, E. Gilasian" (Coll. Riedel and Tehran).

Description: ♀: Body length 6-6.5 mm. Antenna with 27-31 flagellomeres, almost filiform; 1st flagellomere 1.2x longer than wide, 2nd or 3rd flagellomere square; widest flagellomeres 1.3x wider than long. Temple moderately and roundly narrowed behind eye. Distance of lateral ocellus to eye 1.2-1.3x ocellar diameter. Frons and vertex with coarse but scattered punctures, shining. Face with rather dense punctures laterally and with scattered punctures medially. Clypeus c.3.0x wider than long, with few coarse punctures basally, almost smooth centrally and with subapical row of small punctures. Malar space length c.0.6x width of mandibular base. Gena with scattered punctures ventrally, 1.1x wider than eye. Hypostomal carina slightly elevated, reaching genal carina far from mandibular base.

Mesosoma with pale hairs. Pronotum punctate. Notaulus groove-like impressed at anterior border of mesoscutum. Mesoscutum with coarse but scattered punctures. Mesopleuron and metapleuron with coarse, dense punctures; mesopleuron partly striate apically. Epinemial carina not curved forward behind fore coxa, narrow, reaching or almost reaching the frontal margin of mesopleuron. Subtegular ridge sharp. Juxtacoxal carina present. Scutellum flat, wider than long, without lateral carina, with scattered punctures. Area basalis with median tubercle. Area superomedia heart-shaped, often almost smooth, about as long as wide. Costula distinct and caudal to the middle of area superomedia. Area petiolaris with coarse punctures, apically 0.7x as wide as basally. Mid and hind coxae with very scattered punctures, smooth and shining; hind coxa without scopula. Hind femur 3.0-3.4x longer than wide, with scattered punctures in ventral half; hind tibia without external denticular spurs. Claws not pectinate.

Areolet pentagonal, frontal distance of intercubiti 1x their width; 2nd recurrent vein distal to its middle; nervulus postfurcal (by 2x its width).

Postpetiolus strongly widened, without dorsal carina, densely punctate and smooth, median field not separated. 2nd tergite 1.35x wider than long. Gastrocoelus slightly impressed, almost smooth; thyridium almost transverse, 0.5x as wide as the interval. 2nd to 4th tergites with coarse dense punctures, following tergites with superficial punctures. Ovipositor sheath slightly reaching behind metasomal apex.

Color: Black. Ivory are stripes on flagellomeres 7-11, long sickle-shaped spot on vertex, collar, spot on subtegular ridge, scutellum and large almost triangular spots on 6th and 7th tergites. Scapus and pedicellus ventrally, mandible except teeth, gena and apical margin of clypeus red. Palps yellowish. Hind edge of pronotum and tegula ochreous. Face and propodeum with ± extended reddish suffusion. Metasoma red, 6th and 7th tergites sometimes brownish-red. Legs including coxae and trochanters red. Wings slightly infusate, pterostigma brownish.

♂: Body length 7.5-8 mm. Antenna with 32-33 flagellomeres; 1st flagellomere c.1.8x

longer than wide. Tyloids on flagellomeres 4-12/13, long-oval to linear, c.0.9x as long as their flagellomeres. Temple strongly and roundly narrowed behind eye. OOD 1.0. Frons, face and clypeus densely punctate. Malar space length 0.2x width of mandibular base. Pronotum with dense punctures dorsally, rugose ventrally. Mesoscutum, mesopleuron and metapleuron densely punctate, speculum smooth. Scutellum slightly elevated and slightly wider than long, with scattered punctures and lateral carina in basal 0.3. Hind femur c.3.5x longer than wide; hind tibia with multiple (c.10) denticular spurs externally. 2nd tergite about as long as wide. 1st to 5th tergites densely punctate.

Color: Black. Flagellum yellowish ventrally. Cream-yellow are palps, mandible except teeth, clypeus and face (except small brownish central spot), wide frontal orbit up to vertex, ventral 2/3 of outer orbit, scapus ventrally, frontal and wide upper margin of pronotum, tegula, subtegular ridge, large spot on mesopleuron, posteromedian stripe on mesosternum, scutellum, postscutellum and large posterolateral spot on propodeum. Metasoma red, hind margin of postpetiolus with cream-yellow band. Legs red; fore and mid coxae and trochanters mainly and spot on hind coxa cream-yellow. Fore and mid femora apically and fore and mid tibiae and tarsi frontally cream-yellow. Wings slightly infusate, pterostigma brownish.

Remark: This new species is characterized by the completely red legs and metasoma, by the scattered punctation on head and mesosoma in the ♀ and by the extended cream-yellow coloration on mesosoma of the ♂.

***Coelichneumon comitator* var. *numeratus* (BERTHOUMIEU, 1894)**

Material examined: Markazi site 1: 1♀ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi.

Distribution: Palaearctic region, known from Iran (HEINRICH 1929, RIEDEL 2012).

***Coelichneumon nigratus* (BERTHOUMIEU, 1894)**

Material examined: Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian.

Distribution: Palaearctic region, known from Iran (HEINRICH 1929).

***Coelichneumon singularis* (BERTHOUMIEU, 1892)**

Material examined: Khuzestan site 2: 1♀ 4♂♂ 11.v.-14.vi.2014, 1 ♂ 10.v.-10.vii.2015, leg. M. Parachami-Araghi; Khuzestan site 1: 1♀ 1♂ 11.iii.-10.v.2015, leg. E. Gilasian; Khuzestan Prov., 5♀♀ 6♂♂ ex pupa of *Sesamia cretica* Lederer, 1857 (Lep. Noctuidae), leg. A. Cheraghi; Markazi site 4: 3♀♀ 6-10.v.2018, leg. M. Parachami-Araghi; Markazi site 2: 1♀ 3♂♂ 16.vi.2018, leg. E. Gilasian.

Remark: Some of the available ♀♀ have the propodeum and scutellum partly reddish. The coloration is otherwise typical (see RIEDEL 2012).

Distribution: Palaearctic region, known from Iran (RIEDEL 2012).

***Spilothyrates nuptatorius* (FABRICIUS, 1793)**

Material examined: Khuzestan site 1: 6♀♀ 8♂♂ 11.iii.-10.v.2015, leg. E. Gilasian; Khuzestan site 2: 9♀♀ 2♂♂ 11.v.-14.vi.2014, 2♂♂ 10.v.-10.vii.2015, leg. M. Parachami-Araghi; Markazi site 1: 1♀ 6-10.v.2018, leg. M. Parachami-Araghi, 3♀♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi, 1♀ 1♂ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Markazi site 2: 2♀♀ 4♂♂ 16.vi.2018, leg. E. Gilasian; Markazi site 3: 1♂ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

Distribution: Palaearctic region, known from Iran (BARAHOEI et al. 2012).

Subfamily Mesochorinae

Mesochorus (Stictopisthus) persicus nov.sp. (figs 26-28)

Type material: Holotype: ♂ "Iran: Khuzestan Prov., Shoush, Karkheh National Park, Perslan Fallow Deer Sanctuary, N 32°04'36.5'' E 48°14'15.6'', March 11-May 10, 2015, 45 m, Malaise trap, E. Gilasian" (coll. Riedel).

Description: ♂: Body length 3 mm. Antenna with 22 flagellomeres; 1st flagellomere 5.5x longer than wide and 0.57x as long as eye. Temple strongly and roundly narrowed behind eye, 0.6x as wide as eye. Distance of lateral ocellus to eye 1.1x ocellar diameter. Subantennal transverse carina straight (as typical for the *Stictopisthus* species-group). Face 1.05x wider than eye length and 1.2x wider than length of face+clypeus, finely granulate and with superficial punctures. Inner eye margins slightly convergent ventrally. Clypeus with coarse punctures. Malar space length 0.6x width of mandibular base.

Mesosoma not depressed, length 1.7x height. Mesopleuron and metapleuron with dense and partly rugose punctures. Areae basalis and superomedia confluent. Area superomedia almost hexagonal, c.1.8x longer than wide, costula at 0.4 of area length. Area petiolaris about as long as wide. Hind femur 3.6x longer than wide. Pterostigma wide, 2.4x longer than wide; areolet oblique, 2nd recurrent vein distal to its middle; nervulus strongly postfurcal (by 0.7 its length), strongly inclivous. Distal part of metacarp very short and stub-shaped.

1st tergite c.2.0x longer than wide, postpetiolus distinctly striate. 2nd tergite c.1.3x wider than long, thyridium comma-shaped. Stylet c.1.5x longer than 2nd hind tarsomere, slightly clubbed apically.

Color: Reddish-yellow. Flagellum reddish. Head reddish; palps, mandible except teeth, clypeus, face and wide frontal orbit up to vertex ivory. Pronotum and mesopleuron rufous; mesoscutum brownish, with 4 longitudinal yellow stripes, confluent frontally; scutellum reddish, with lateral yellow stripes; propodeum black in basal 2/3. 1st tergite black, reddish basally and with apical cream-yellow band; 2nd tergite cream-yellow, with brownish spots basolaterally; 3rd tergite reddish, with triangular cream-yellow spot basally; following tergites reddish, with slightly darkened sides. Legs reddish; fore and mid coxae and trochanters cream-yellow; fore and mid tibiae cream-yellow basally; hind tibia cream-yellow, brown in apical 1/10; hind metatarsus apically and 2nd to 5th hind tarsomeres blackish. Pterostigma brown, with pale spot proximally.

♀ unknown.

Remark: This new species resembles *Mesochorus (Stictopisthus) maroccanus* (SCHWENKE, 1999), but differs by larger ocelli, brownish pterostigma, infusate apex of hind tibia and largely black hind tarsus.

Mesochorus samarae SCHWENKE, 1999 new ♂

Material examined: Khuzestan site 1: 1 ♂♂ 11.iii.-10.v.2015, leg. E. Gilasian.

Description: ♂: Body length 3.2 mm. Antenna with 28 flagellomeres; 1st flagellomere 5.0x longer than wide and 0.66x as long as eye; 2nd flagellomere 3.8x longer than

wide; preapical flagellomere c.2.5x longer than wide. Temple strongly and roundly narrowed behind eye, seen dorsally c.0.6x as long as eye. Distance of lateral ocellus to eye 1.0x ocellar diameter. Inner eye margins parallel. Mesopleuron with scattered punctures ventrally. Area basalis triangular, about as wide as long. Area superomedia 1.9x longer than wide and 1.1x longer than area petiolaris; costula in 0.3 its length. Area petiolaris 1.2x longer than wide. Hind femur 4.6x longer than wide. Claws without visible teeth. Areolet pointed with 2nd recurrent vein in its middle; nervulus interstitial; pterostigma c.3.1x longer than wide, radial vein reaching its distal 0.6. 1st tergite 2.2x longer than wide, smooth. 2nd tergite about as long as wide; thyridium roundish. Stylet c.1.5x longer than 2nd hind tarsomere, stab-shaped, not clubbed apically.

Color: Red. Cream-yellow are gena and wide facial and frontal orbits up to vertex, anterior margin and hind edge of pronotum, H-shaped mark on mesoscutum, scutellum except basomedian red spot, fore and mid coxae and trochanters and apical spots on all femora. Basal 1/3 of propodeum, 1st tergite completely and basal 3/4 of 2nd tergite blackish; 2nd tergite with cream-yellow apical band; following tergites yellowish, with brownish sides and cream-yellow apical margins. Hind tibia narrowly at base and in apical 0.2 brownish. Pterostigma hyaline.

Remark: In the key of ♂♂ of the *orbitalis*-group (SCHWENKE, 1999: 62-63) this species runs to 24(23) *M. albolimbatus* SCHWENKE, but differs by its larger ocelli, longer stylet and a different color pattern.

Distribution: Previously only known from Southern Russia, new record for Iran.

Subfamily Metopinae

Exochus aenigmatus TOLKANITZ, 1999 new ♀ (fig. 18)

Material examined: Khuzestan site 1: 12♀♀ 7♂♂ 11.iii.-10.v.2015, 1♀ 23.vii.-6.ix.2015, leg. E. Gilasian; Khuzestan site 2: 1♀ 1♂ 5-11.v.2014, 7♀♀ 1♂ 11.v.-14.vi.2014, 1♀ 3♂♂ 10.v.-10.vii.2015, leg. M. Parachami-Araghi; Markazi site 2: 1♀ 2♂♂ 16.vi.2018, leg. E. Gilasian.

Description: ♀: Body length 6-7 mm. Antenna with 32-34 flagellomeres, moderately spindle-shaped; 1st flagellomere 1.8x longer than wide; 6th flagellomere c.1.5x wider than long, preapical flagellomeres square. Temple strongly and almost linearly narrowed behind eye. Distance between eye and lateral ocellus 1.0x ocellar diameter, distance between lateral ocelli 1.8x their diameter. Occipital carina medially absent, genal carina reaching the hypostomal one far from mandibular base, hypostomal carina moderately elevated. Mandible normal, not widened basally.

Side of pronotum smooth. Notaulus impressed in anterior 1/6 of mesoscutum. Mesoscutum rather densely punctate, punctures less dense on lateral fields. Mesopleuron punctate, smooth in apical third. Metapleuron smooth, with few hairs at apical margin. Propodeum carinate as in ♂ (see TOLKANITZ 2007: 355, fig. 151). Area superomedia about as wide as the lateral fields, usually confluent with area basalis. Costula present. 1st lateral field densely punctate and pilose; 2nd lateral field smooth, with fine punctures and hairs at lateral margin. Hind femur 2.15x longer than wide. Length of external hind tibial spur c.0.7x tibial width at apex. Areolet open laterally; nervulus strongly postfurcal (by 0.5x its length). Nervellus of hind wing strongly antecurvous, intercepted in apical 0.8.

1st tergite 1.15x longer than wide, with complete lateral carina; dorsal carina present in basal 0.3-0.4. 2nd tergite 1.5x wider than long, with scattered punctures and a narrow central smooth area. Epipleuron of 3rd tergite large and convexly rounded.

Color: Black. Flagellum usually blackish dorsally and reddish-brown ventrally, sometimes completely reddish-brown. Face with reddish-yellow transversal band below antenna. Stripe of frontal orbit and triangular spot on vertex ivory, spots often confluent. Palps, mandible except teeth and spot on gena yellow. Mesosoma black, often mesopleuron, metapleuron, propodeum and scutellum $\pm$ red; spot on tegula, wing base, and often hind edge of pronotum ivory; postscutellum and narrow apical band of scutellum yellowish. Metasoma red; base of 1st tergite $\pm$ darkened, 8th tergite red or brownish; ovipositor sheath ivory. Legs red, fore coxa often with frontal yellow mark. Pterostigma brown.

Remark: This species is closely related to *E. castaniventris* BRAUNS, 1896 (see TOLKANITZ 2007) and differs slightly by the stronger and almost linearly narrowed temples and the wide yellow-red transversal band of the upper face. Due to the observed variability in our long series of ♀♀ from Iran, it is not impossible that *E. aenigmatus* TOLKANITZ is a junior synonym of *E. castaniventris* BRAUNS.

D i s t r i b u t i o n : East Europe, Armenia, Azerbaijan, Kazakhstan, new for Iran.

Subfamily O p h i o n i n a e

Enicospilus ocellatus SHESTAKOV, 1926

M a t e r i a l e x a m i n e d : Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian.

D i s t r i b u t i o n : Palaearctic region, known from Iran (HEDWIG 1957).

Ophion obscuratus FABRICIUS, 1798

M a t e r i a l e x a m i n e d : Markazi site 4: 1♀ 6.-10.v.2018, leg. M. Parachami-Araghi;
Markazi site 1: 2♀♀ 1♂ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Zanjan site 2: 1♂
21.v.2016, leg. H. Nasserzadeh.

D i s t r i b u t i o n : Palaearctic and Oriental regions, known from Iran (BARAHOEI et al. 2012).

Subfamily P h y g a d e u o n t i n a e

Aclastus micator (GRAVENHORST, 1807)

M a t e r i a l e x a m i n e d : Khuzestan site 2: 1♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi.

D i s t r i b u t i o n : Holarctic region, known from Iran (Kolarov & Ghahari 2007).

Chivotica insignis (GRAVENHORST, 1829)

M a t e r i a l e x a m i n e d : Markazi site 1: 1♀♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi.

D i s t r i b u t i o n : Western Palaearctic region, new record for Iran.

Diaglyptellodes sculpturator (AUBERT, 1977)

M a t e r i a l e x a m i n e d : Markazi site 3: 2♀♀ 10.vi.-15.vii.2018, leg. M. Parachami-Araghi.

Distribution: Palaearctic region, new record for Iran.

***Dichrogaster saharator* (AUBERT, 1964)**

Material examined: Khuzestan site 2: 1♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi; Khuzestan site 1: 6♂♂ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 1: 5♀♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi, 1♂ 11.vi.-20.vii.2018, leg. M. Parachami-Araghi; Markazi site 4: 1♂ 6-10.v.2018, leg. M. Parachami-Araghi.

Remark: The coloration of the mesosoma is very variable and usually more or less red, rarely completely red in ♀. Hind femur and hind tibia often infusate apically. In ♂, 2nd to 4th tergites reddish, 2nd and 3rd tergites sometimes with blackish apical bands. One ♂ has blackish hind coxae. It is not impossible that this material represent a different but closely related *Dichrogaster*-species.

Distribution: Palaearctic region, known from Iran (KOLAROV & GHAHARI 2007).

***Gelis divaricatus* HORSTMANN, 1993, new ♂**

Material examined: Markazi site 1: 1♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Khuzestan site 1: 1♂ 11.iii.-10.v.2015, leg. E. Gilasian.

Description: ♂: Body length 2.5 mm. Antenna with 19 flagellomeres, 1st flagellomere 4.6x longer than wide, 2nd flagellomere 3.4x longer than wide. Temple roundly narrowed behind eye. Distance of lateral ocellus to eye 1.3x its diameter. Hind femur 4.5x longer than wide. Structure otherwise as described for the ♀ (HORSTMANN 1993).

Color: Black. Clypeus reddish-brown apically. Mandible except teeth yellowish. Scapus, pedicellus and two basal flagellomeres yellowish, following flagellomeres brown. Pronotum reddish-yellow. Central spot on mesopleuron red. Mesoscutum with red hook-shaped anterolateral spot confluent with red paramedian longitudinal stripe. 1st tergite black; 2nd and 3rd tergites yellow, 3rd tergite with brown posterolateral edges; following tergites brown, paler centrally. Fore and mid legs including coxae and trochanters reddish-brown; hind leg brownish, hind tibia cream-yellow in basal 1/5. Wings with two brownish stripes.

Distribution: Europe, new record for Iran.

***Phygadeuon vexator* (THUNBERG, 1822)**

Material examined: Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian.

Distribution: Western Palaearctic region, new record for Iran.

***Thaumtogelis lichtensteini* (PFANKUCH, 1913)**

Material examined: Markazi site 4: 1♀ 6-10.v.2018, leg. M. Parachami-Araghi.

Description: ♀: Body length 5.5 mm. Antenna filiform, with 22 flagellomeres; 1st flagellomere 1.7x longer than wide and 0.7x as long as the 2nd flagellomere; 5th flagellomere 1.3x longer than wide. Temple moderately and roundly narrowed behind eye, seen dorsally temple 0.7x as long as eye. Distance of lateral ocellus to eye 1.6x ocellar diameter. Frons and face granulate and superficially punctate, matte. Clypeus shining, with scattered coarse punctures. Genal carina narrow, hypostomal carina lamelliform elevated.

Mesoscutum and pronotum fused, sides of pronotum with coarse striae in ventral half. Mesoscutum finely rugose-punctate, $\pm$ shining. Scutellum not present. Mesopleuron and metapleuron with coarse transversal striae. Propodeum finely rugose-punctate. Area petiolaris with coarse transverse striae, transversal carina only sublaterally present. Hind femur c.3.1x longer than wide.

1st metasomal tergite 1.9x longer than apically wide, postpetiolus with coarse longitudinal rugose-punctuation; 2nd and 3rd tergites completely fused, but margin between them distinct. 2nd tergite with fine rather dense setiferous punctures (distance 1-2x their diameter); 3rd tergite with very scattered fine setiferous punctures, distance between them c.2x length of hairs. Ovipositor sheath c.0.7x as long as hind tibia. Ovipositor bent below glued body, tip of ovipositor therefore not visible.

Color: Head black. Mandible except teeth, apical margin of clypeus and antenna completely red. Mesosoma with red and black pattern. 1st tergite mainly red; 2nd to 5th tergites black, 6th and 7th tergites reddish-brown. Legs including coxae and trochanters reddish brown; fore and mid femora with brown dorsal stripes; hind femur dark reddish-brown; all tibiae cream-yellow basally, hind tibia infusate apically.

Remark: The description and figures were seen by Martin Schwarz (Linz/Austria) who identified this specimen as *Th. lichtensteini* (PFANKUCH) but quoted that this taxon is very diverse and might be an aggregate of separate taxa. Therefore, we give a detailed description of the Iranian specimen here.

Distribution: Western Palearctic region, known from Egypt and Turkey, new record for Iran.

***Zoophthorus trochanteralis* (DALLA TORRE, 1902)**

Material examined: Markazi site 4: 1♂ 6-10.v.2018, leg. M. Parachami-Araghi.

Distribution: Palearctic region, known from Iran (GHAHARI & JUSSILA 2014).

Subfamily Pimplinae

***Dolichomitus kriechebaumeri* (SCHULZ, 1906)**

Material examined: Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian

Distribution: Palearctic region, known from Iran (KOLAROV & GHAHARI 2006).

***Exeristes arundinis* (KRIECHBAUMER, 1887)**

Material examined: Markazi site 1: 1♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi.

Distribution: Palearctic region, known from Iran (KOLAROV & GHAHARI 2006).

***Exeristes ruficollis* (GRAVENHORST, 1829)**

Material examined: Khuzestan site 1: 1♀ 11.iii.-10.v.2015, leg. E. Gilasian.

Distribution: Palearctic region, known from Iran (MASNADI-YAZDINEJAD & JUSSILA 2008).

***Itopectis maculator* (FABRICIUS, 1775)**

Material examined: Khuzestan site 1: 1♂ 11.iii.-10.v.2015, leg. E. Gilasian.

Distribution: Palaearctic region, known from Iran (KOLAROV & GHAHARI 2006).

***Itopectis tunetana* (SCHMIEDEKNECHT, 1914)**

Material examined: Khuzestan site 2: 2♀♀ 3♂♂ 11.v.-14.vi.2014, leg. M. Parachami-Araghi.

Distribution: Palaearctic region, known from Iran (KASPARYAN 1973).

***Itopectis viduata* (GRAVENHORST, 1829)**

Material examined: Khuzestan site 2: 1♂ 11.v.-14.vi.2014, leg. M. Parachami-Araghi.

Distribution: Holarctic region, known from Iran (KASPARYAN 1973).

***Pimpla rufipes* (MILLER, 1759)**

Material examined: Markazi site 1: 1♂ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Markazi site 4: 1♂ 6-10.v.2018, leg. M. Parachami-Araghi; Khuzestan site 2: 1♀ 1♂ 11.v.-14.vi.2014, leg. M. Parachami-Araghi; Markazi site 2: 1♀ 16.vi.2018, leg. E. Gilasian.

Distribution: Palaearctic and Oriental regions, known from Iran (BARAHOEI et al. 2012).

***Pimpla spuria* GRAVENHORST, 1829**

Material examined: Khuzestan site 1: 2♀♀ 2♂♂ 11.iii.-10.v.2015, leg. E. Gilasian; Markazi site 1: 2♀♀ 1♂ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi; Markazi site 4: 4♀♀ 1♂ 6-10.v.2018, leg. M. Parachami-Araghi; Khuzestan site 2: 3♀♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi.

Distribution: Palaearctic and Oriental regions, known from Iran (Kasparyan 1974).

***Zabrachypus primus* CUSHMAN, 1920**

Material examined: Khuzestan site 2: 7♀♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi; Markazi site 1: 1♀ 10.v.-13.vi.2018, leg. E. Gilasian & M. Parachami-Araghi.

Distribution: Holarctic region, known from Iran (BARAHOEI et al. 2012).

Subfamily Tryphoninae***Netelia* (*Netelia*) *armeniaca* TOLKANITZ, 1971**

Material examined: Zanjan site 1: 1♀ 1♂ 23.v.2016, leg. H. Nasserzadeh; Zajan site 2: 1♂ 17.v.2016, leg. H. Nasserzadeh.

Distribution: Known from Armenia, Azerbaidjan and Iran (MASNADI-YAZIDEAD et al. 2010).

***Netelia* (*Netelia*) *arabs* (STRAND, 1911)**

Material examined: Khuzestan site 2: 2♀♀ 11.v.-14.vi.2014, leg. M. Parachami-Araghi.

Distribution: Palearctic and Afrotropical regions, known from Iran (BARAHOEI et al. 2012).

***Netelia (Netelia) dilatata* (THOMSON, 1888)**

Material examined: Zanjan site 2: 1♂ 21.v.2016, leg. H. Nasserzadeh.

Distribution: Palearctic region, known from Iran (BARAHOEI et al. 2012).

***Netelia (Toxochiloides) krishtali* TOLKANITZ, 1971**

Material examined: Zanjan site 1: 1♀ 6♂♂ 23.v.2016, leg. H. Nasserzadeh.

Distribution: Eastern Europe and Near East, known from Iran (BARAHOEI et al. 2012).

***Netelia (Netelia) testacea* (GRAVENHORST, 1829)**

Material examined: Zanjan site 2: 1♂ 21.v.2016, leg. H. Nasserzadeh.

Distribution: Almost worldwide, known from Iran (BARAHOEI et al. 2012).

Zusammenfassung

In der vorliegenden Arbeit werden faunistische Angaben zu 78 Arten der Familie Ichneumonidae (Hymenoptera) gemacht, die in den letzten Jahren in den iranischen Provinzen Markazi, Chuzestan und Zandjan in Malaise-Fallen gesammelt wurden. 33 Taxa werden hier erstmals für den Iran genannt.

Sieben Arten werden neu beschrieben und illustriert: *Lissonota persica* nov.sp. (Banchinae), *Cymodusopsis rufator* nov.sp. (Campopleginae), *Narolskyia iranica* nov.sp. (Cremastinae), *Pristomerus persicus* nov.sp. (Cremastinae), *Temelucha brunneomaculata* nov.sp. (Cremastinae), *Barichneumon brevipunctatus* nov.sp. (Ichneumoninae) und *Mesochorus (Stictopisthus) persicus* nov.sp. (Mesochorinae).

Von *Mesochorus samarae* SCHWENKE, 1999 (Mesochorinae) und *Gelis divaricatus* HORSTMANN, 1993 (Phygadeuontinae) werden erstmals die Männchen beschrieben, von *Exochus aenigmatus* TOLKANITZ, 1999 (Metopiinae) die bisher unbekannten Weibchen.

Die Gattung *Cymodusopsis* VIERECK, 1912 war bisher nur aus Nordamerika bekannt und wird erstmals für die paläarktische Fauna gemeldet.

Acknowledgement

We thank Martin Schwarz (Linz/Austria) for his kind comments to *Thaumtogelis lichtensteini* and Stefan Schmidt (Munich/Germany) for the allowance to work in the Hymenoptera collection of the Zoologische Staatssammlung in Munich. We also thank Ebrahim Gilasian, Mehrdad Parachami and Hiva Naser Zadeh (Tehran/Iran) for their efforts to collect the Ichneumonid material.

References

- AUBERT J.-F. (1970): Ichneumonides pétiolées inédites. — Bulletin de la Société Entomologique de Mulhouse **1970**: 65-73.
- AUBERT J.-F. (1978): Les Ichneumonides ouest-paléarctiques et leurs hotes. 2. Banchinae et Suppl. aux Pimplinae. — OPIDA, Échauffour: 1-318.

- BARAHOEI H., RAKHSHANI E. & M. RIEDEL (2012): A checklist of Ichneumonidae (Hymenoptera: Ichneumonoidea) from Iran. — *Iranian Journal of Animal Biosystematics* **8**: 83-132.
- BROAD, G.R., SHAW M.R. & M.G. FITTON (2018): Ichneumonid wasps (Hymenoptera: Ichneumonidae): their Classification and Biology. Handbooks for the Identification of British Insects. Vol 7, Part 12. — Royal Entomological Society, London: 1-417.
- GAHARI H. & JUSSILA R. (2014): A faunistic study on the Ichneumonidae (Hymenoptera: Ichneumonoidea) from the west of Iran. — *Linzer biologische Beiträge* **46** (2): 1373-1377.
- HEDWIG K. (1957): Ichneumoniden und Braconiden aus Iran 1954. — *Jahrbuch des Vereins vaterländischer Naturkunde Württemberg* **112**: 104-117.
- HEINRICH G.H. (1929): Beiträge zur Kenntnis der Insektenfauna Nordpersiens. Ichneumonidae. — *Deutsche entomologische Zeitschrift* **1929**: 305-326.
- HORSTMANN K. (1990): Die westpaläarktischen Arten der Gattung *Pristomerus* CURTIS, 1836. — *Entomofauna* **11**: 9-44.
- HORSTMANN K. (1993): Nachträge zu Revisionen der Gattungen *Aclastus* FÖRSTER, *Ceratophygadeuon* VIERECK, *Chirotica* FÖRSTER und *Gelis* THUNBERG. — *Nachrichtenblatt der Bayerischen Entomologen* **42**: 7-15.
- KASPARYAN D.R. (1973): A review of the Palearctic ichneumonids of the tribe Pimplini. The genera *Itopectis* FÖRSTER and *Apechthis* FÖRSTER. — *Entomological Reviews* **52**: 444-455.
- KASPARYAN D.R. (1974): A review of the Palearctic ichneumonids of the tribe Pimplini. The genus *Pimpla* FABRICIUS. — *Entomological Reviews* **53**: 102-117.
- KLOPFSTEIN S. (2014): Revision of the Western Palearctic Diplazontinae (Hymenoptera, Ichneumonidae). — *Zootaxa* **3801**: 1-143.
- KOLAROV J. (2015): Diplazontinae species (Hymenoptera, Ichneumonidae) from Balkan Peninsula, Turkey and Iran. — *Entomofauna* **36**: 297-304.
- KOLAROV J. & H. GHAHARI (2006): A study of the Iranian Ichneumonidae (Hymenoptera): I. Pimplinae and Tryphoninae. — *Zoology in the Middle East* **38**: 63-68.
- KOLAROV J. & H. GHAHARI (2007): A study of the Iranian Ichneumonidae (Hymenoptera): II. Brachycyrtinae and Cryptinae. — *Zoology in the Middle East* **42**: 79-82.
- MASNADI-YAZDINEJAD A. & R. JUSSILA (2008): Contribution to the knowledge of Ichneumonid wasps of Iran. — *Entomofauna* **29**: 293-320.
- MASNADI-YAZDINEJAD A., JUSSILA R. & M. RIEDEL (2010): The Iranian fauna of the subfamilies Acaenitinae, Banchinae, Campopleginae, Ophioninae and Tryphoninae (Hymenoptera: Ichneumonidae) with some new records. — *Entomologica Fennica* **21** (2): 70-83.
- MOHAMMADI-KHORAMABADI A., HESAMI S. & S. SHAFIEI (2016): A contribution to the knowledge of the fauna of Ichneumonidae in Rafsanjan county of Kerman province, Iran. — *Entomofauna* **37**: 453-468.
- NAROLSKY N.B. (1991): Contribution to a revision of parasitic wasps of the subfamily Cremastinae (Hymenoptera, Ichneumonidae) of the USSR. — *Entomological Reviews* **70**: 104-116.
- RIEDEL M. (2012): Revision der westpaläarktischen Arten der Gattung *Coelichneumon* THOMSON (Hymenoptera, Ichneumonidae). — *Linzer biologische Beiträge* **44** (2): 1477-1611.
- RIEDEL M. (2018): Revision of the Western Palearctic species of the genus *Casinaria* HOLMGREN (Hymenoptera, Ichneumonidae, Campopleginae). — *Linzer biologische Beiträge* **50** (1): 723-763.
- SANBORNE M. (1986): A revision of the Nearctic species of *Cymodusopsis* VIERECK. *Contributions of the American Entomological Institute* **22** (10): 1-24.

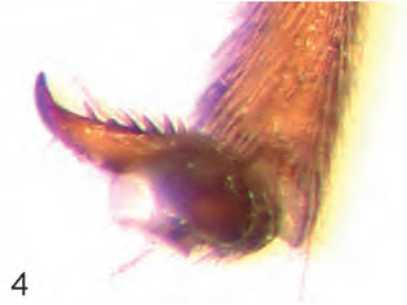
- SCHWARZ M (2007): Revision der westpaläarktischen Arten der Gattung *Hoplocryptus* THOMSON (Hymenoptera, Ichneumonidae). — Linzer biologische Beiträge **39** (2): 1161-1219.
- SCHWARZ M. (2015): Zur Kenntnis paläarktischer *Cryptus*-Arten (Hymenoptera, Ichneumonidae, Cryptinae). — Linzer biologische Beiträge **47** (1): 749-896.
- SHAUMAR N. (1966): Les Ichneumonides d'Egypte. — Entomophaga **11**: 441-469.
- SHAW M.R., HORSTMANN K. & A.L. WHIFFIN (2016): Two hundred and twenty-five species of reared western Palaearctic Campopleginae (Hymenoptera: Ichneumonidae) in the National Museums of Scotland, with descriptions of new species of *Campoplex* and *Diadegma*, and records of fifty-five species new for Britain. — Entomologist's Gazette **67**: 177-222.
- TOLKANITZ V.I. (2007): Ichneumon flies of the genus *Exochus* GRAVENHORST (Hymenoptera: Ichneumonidae, Metopiinae) of the fauna of Palaearctic region. — Russian Entomological Journal **16**: 339-358.
- VAS Z. (2016): A new species of *Temelucha* FÖRSTER from Malta with an updated and revised identification key to the Western Palaearctic *Temelucha* species (Hymenoptera, Ichneumonidae, Cremastinae). — Journal of Hymenoptera Research **48**: 67-84.
- YU D.S.K., VAN ACHTERBERG C. & K. HORSTMANN (2016): Taxapad 2016 – World Ichneumonoidea 2015. Taxonomy, Biology, Morphology and Distribution. — On USB Flash Drive. Nepean, Ontario, Canada.

Authors' addresses:

Matthias RIEDEL
 Zoologische Staatssammlung München
 Münchhausenstr. 21, D-81247 Munich, Germany
 E-mail: mamaflo.riedel@t-online.de

Ali AMERI & Ebrahim EBRAHIMI
 Insect Taxonomy Research Department and Hayk Mirzayans Insect
 Museum, Iranian Research Institute of Plant Protection, Agricultural
 Research, Education and Extension Organisation, No. 1,
 Yaman (Tabnak) St., Chamran Highway, Tehran 19395, Tehran, Iran

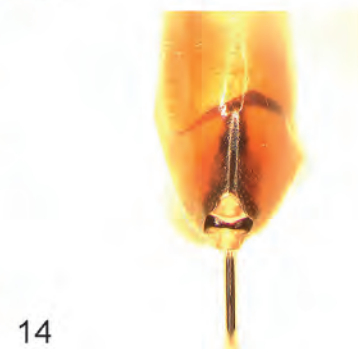
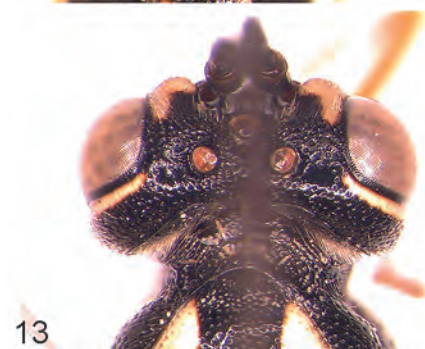
Ali Asghar TALEBI
 Department of Entomology, Faculty of Agriculture,
 Tarbiat Modares University,
 P.O.Box 14115-336, Tehran, Iran



Figs 1-2: Habitus of (1) *Lissonota persica* nov.sp. ♀, and (2) *Lissonota persica* nov.sp. ♂.
Figs 3-4: *Lissonota persica* nov.sp. ♀: (3) head dorsally; (4) hind claw.



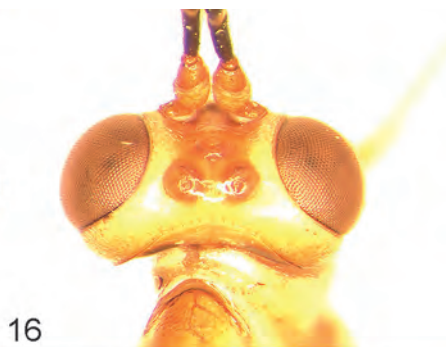
Figs 5-9: *Cymodusopsis rufator* nov.sp. ♀: (5) habitus; (6) face; (7) propodeum; (8) metasoma dorsally; (9) face of ♂.



Figs 10-14: *Narosklyia iranica* nov.sp., Holotype: (10) habitus; (11) face; (12) tip of ovipositor; (13) head dorsally; (14) metasomal apex dorsally.



15



16



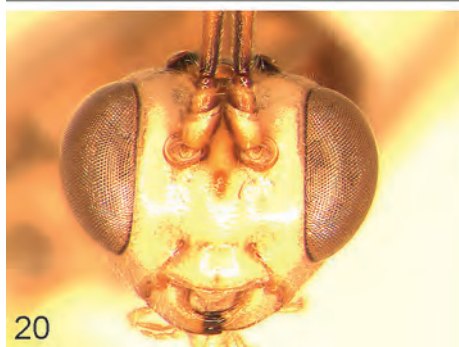
17



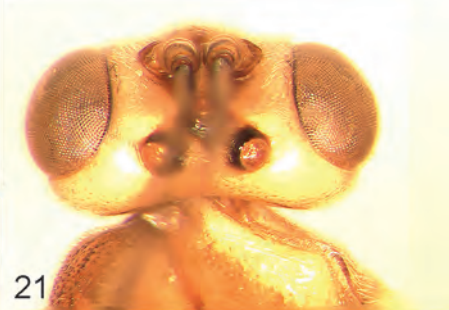
18



19

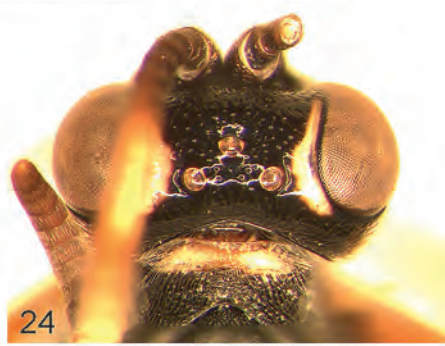


20



21

Figs 15-17: *Pristomerus persicus* nov.sp., Holotype: (15) hind femur; (16) head dorsally; (17) propodeum. **Fig. 18:** *Exochus aenigmatosus* TOLKANITZ, 1999 ♀, habitus. **Figs 19-21:** *Temelucha brunneomaculata* nov.sp., Holotype: (19) habitus; (20) face; (21) head dorsally.



Figs 22-25: *Barichneumon brevipunctatus* nov.sp., Holotype: (22) habitus; (23) face; (24) head dorsally; (25) mesoscutum.



Figs 26-28: *Mesochorus (Stictopisthus) persicus* nov.sp., Holotype: (26) habitus; (27) face; (28) head dorsally.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2019

Band/Volume: [0051_1](#)

Autor(en)/Author(s): Riedel Matthias, Ameri Ali, Talebi Ali Asghar, Ebrahimi Ebrahim

Artikel/Article: [Contribution to the Ichneumonidae \(Hymenoptera\) of Iran, with descriptions of seven new species 361-390](#)