



New records of Ichneumonidae (Hymenoptera) for the Italian fauna

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Abstract

New distributional records on 55 ichneumonids (Hymenoptera, Ichneumonidae) from Italy are provided. Of these, 47 species are new for Italy, including representatives of the subfamily Diacritinae and of the tribes Zimmeriini (Ichneumoninae) and Pseudorhyssini (Poemeniinae); six species are new for Sardinia, one for Sicily and one for the Italian mainland. The hitherto unknown female of *Baranisobas hibericus* Heinrich, 1972 (Ichneumoninae) is described.

Keywords

Ichneumonidae, Italy, checklist, Italian mainland, Sicily, Sardinia, new records

Introduction

With more than 24,000 species described (Yu et al. 2012), Ichneumonidae is one of the largest families of Hymenoptera and one of the largest within insects. More than 6,500 species have been recorded for Europe so far (Achterberg and Zwakhals 2004). Despite their richness and the role they play as pest control agents, the faunistic knowledge of this group in many European countries and worldwide remains scarce.

It is difficult to give a precise estimate of the number of species of Ichneumonidae occurring in Italy. About 1,850 species are recorded for the country in the checklist of the Italian fauna (Scaramozzino 1995). Most of the data refer to northern and central regions of Italy, while records on the ichneumonid fauna of the south, Sicily and Sardinia are relatively few (Scaramozzino 1995, Zwakhals and Turrisi 2014). More recently, the Fauna Europaea project increased this number to about 2,000 species (Achterberg and Zwakhals 2004). In both cases, however, it is not possible to link records in the checklist to voucher specimens in collections or to data in the literature, which makes it difficult to verify the records, keep track of nomenclatorial and systematic changes, and update the checklist accordingly. Based exclusively on records from the literature, the Taxapad database (Yu et al. 2012) reports about 1,700 species for Italy, but the real number of species in the country is likely to be much higher. By crossing the references in the Italian checklist (Scaramozzino 1995) with those in Fauna Europaea and Taxapad (Achterberg and Zwakhals 2004, Yu et al. 2012), the number of ichneumonid species recorded for Italy reaches about 2,200 species. This result cannot be considered reliable, as only a direct verification of the literature and of the specimens in private and public collections can attest the real number and identity of ichneumonid species found in Italy. References to the literature and/or to voucher specimens in collections would be essential to make a scientific and reliable checklist, and would allow to track taxonomic changes through time and update the checklist properly.

The present study reports 47 new species for the Italian fauna, six new species for Sardinia, one for Sicily and one new record for the Italian mainland. Thanks to some intensive samplings conducted in Italy in the last few years, our paper provides a remarkable - though probably still incomplete - contribution to the knowledge of this group in the Italian territory.

Materials and methods

Most of the records in the present paper originate from sampling efforts in central and north-eastern Italy (Fig. 1) aimed at investigating parasitoid community composition in fragmented landscapes (Di Giovanni et al. 2014, Inclán et al. 2014). The field sampling in north-eastern Italy was carried out in 2013 using Malaise traps (Omnes Artes s. a. s.) in the understory of semi-natural and artificial oak-hornbeam forests of the eastern Po Plain (Fig. 2). Some further records stem from canopy sampling with Malaise traps, carried out in 2008 in the natural reserve of Bosco della Fontana (Lombardy; see Di Giovanni et al. 2014). The field sampling in central Italy (Tuscany) was conducted in 2012 using yellow

pan traps in fragments of semi-natural grasslands derived from eroded claystones (Fig. 3; see Inclán et al. 2014). Additional records come from the private collection of the first author (with the exception of one specimen from DAFNAE and one from ZSM) and from the Sardinian CONECOFOR (Forest Ecosystem Control) sampling project, carried out by Italian State Forestry Service between 2003 and 2006 (see Nardi et al. 2011).



Figure 1.
Italian administrative regions.



Figure 2.
Malaise trap in an oak-hornbeam forest in north-eastern Italy.



Figure 3.

Field sampling with yellow pan traps in Tuscany claystones (courtesy of D. Inclán).

All taxa are listed in alphabetical order. The assignment of species to higher taxa follows the Catalogue of World Ichneumonidae (Yu et al. 2012). Distributional notes, with minor changes, follow the Catalogue of World Ichneumonidae (Yu et al. 2012) and the Fauna Europaea website (Achterberg and Zwakhals 2004).

The following references were used to the identification of most of the species listed in the present paper. It is not an exhaustive list, as many genera still need a revision and the identification to species level often requires the comparison with type material in collections: Varga (2013) (Acaenitinae); Kasparyan (1990) (Adelognathinae); Kuslitzky (1973), Aubert (1978) (Banchinae); Horstmann (2009) (Campopleginae); Gürbüz and Kolarov (2006) (Collyriinae); Donovan (1810), Förster (1871), Habermehl (1935), Horstmann (1983), Townes (1983), Horstmann (1990) (Cryptinae); Gravenhorst (1829), Bauer (1961), Kasparyan (1981), Hinz (1986), Hinz (1991), Hinz and Horstmann (1998), Kasparyan (2000), Kasparyan (2001), Kasparyan (2004), Kasparyan (2011), Reshchikov (2013), Kasparyan (2014) (Ctenopelmatinae); Kolarov (1997) (Diacritinae); Klopstein (2014) (Diplazontinae); Aubert (1958), Aubert (1969), Kasparyan (1981), Selfa and Diller (1995), Selfa and Anento (1996), Tereshkin (2009), Diller and Shaw (2014) (Ichneumoninae); Kasparyan (1981) (Lycorininae); Schwenke (1999) (Mesochorinae); Aubert (1965) (Metopiinae); Broad (2010) (Orthocentrinae); Kolarov (1997), Zwakhals (2006), Fritzen and Shaw (2014) (Pimplinae); Oehlke (1966), Kolarov (1997) (Poemeniinae); Kasparyan (1973) (Tryphoninae).

The material is deposited in the following collections:

- DAFNAE: Dipartimento di Agronomia, Animali, Alimenti, Risorse Naturali e Ambiente in Padua, Italy
- MR: private collection of Matthias Riedel in Bad Fallingbostel, Germany

- MZUR: Museo di Zoologia, Università degli Studi di Roma "Sapienza" in Rome, Italy
- NRM: Naturhistoriska Riksmuseet in Stockholm, Sweden
- ZSM: Zoologische Staatssammlung in München, Germany

Taxon treatment

Baranisobas hibericus Heinrich, 1972

Materials

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Monteroni d'Arbia; verbatimElevation: 195 m; verbatimLatitude: 43° 13'5.48"N; verbatimLongitude: 11° 26'55.29"E; samplingProtocol: yellow pan trap; eventDate: 02-05.V.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR
- b. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Monteroni d'Arbia; verbatimElevation: 195 m; verbatimLatitude: 43° 13'5.48"N; verbatimLongitude: 11° 26'55.29"E; samplingProtocol: yellow pan trap; eventDate: 11-12.V.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR

Description

Male (from Heinrich 1972):

Mesoscutum with dense and rather coarse punctures, ground between punctures smooth and shiny. Margin of clypeus shiny. Malar space about $\frac{3}{4}$ the length of the base of mandible. Flagellum with short elliptical tyloids on flagellomere 7-16.

Colour: face and thorax mostly black; white are inner orbits, narrow stripe on outer orbits, central spot on face, scapus and flagellum ventrally, collar, upper hind margin of pronotum, subalar ridge, tegulae, scutellum and postscutellum. Metasoma black; postpetiolus, tergite 2 and 3, and basal part of tergite 4 red; tergite 6 with white spot, tergite 7 mostly white. Coxae, trochanters and legs black; coxae I and II with white spot, ventral side of tibiae I and II, femur I except the base and apex of femur II pale yellowish.

Female:

Body length 6-7 mm. Flagellum with 27-28 segments, slightly lanceolate. First flagellomere about 1.8 times longer than wide, widest flagellomeres about 1.2 times wider than long. Temples roundly narrowed behind eyes. Clypeus moderately convex. Head with coarse dense puncture, clypeus with scattered puncture.

Pronotum with a strong longitudinal ridge medially. Mesoscutum with coarse puncture and fine granulation, strongly shining. Mesopleurum with coarse puncture (slightly rugose-punctate apically), intervals smooth and shining, metapleurum with coarse

puncture, shining. Scutellum slightly wider than long, with lateral carinae in the basal 0.5. Propodeum completely carinate, area superomedia hexagonal, about as long as wide. Hind coxa punctate, without scopa. Hind femur stout, about 3.3 times as long as wide.

Postpetiolus strongly widened, not differentiate and without dorsal carina, almost smooth and with very scattered puncture medially. Second tergite with strong transverse thyridia, each thyridium about 1.6 times wider than the thyridial interval. Tergites 2-3 with coarse puncture, shining, tergite 4 superficially punctate, following tergites smoothened.

Colour: mostly black. Flagellum with ivory ring on flagellomeres 7-11. Ivory are narrow stripe on frontal orbit, apical half of scutellum, narrow apical band on tergite 6 (one specimen with completely black tergite 6) and wide apical band on tergite 7. Tergites 1-3 red. Following tergites black, the fourth one more or less reddish laterally. Coxae and trochanteres black. Femora I-II reddish, more or less infuscate at bases. Tibiae and tarsi I-II reddish, yellowish-red on frontal side. Hind leg black, tibia III with red subbasal ring. Pterostigma black.

Diagnosis

The female of *B. hibericus* Heinrich is similar to *B. ridibundus* (Gravenhorst, 1829) but it differs in having a stouter first flagellomere, strongly shining mesoscutum with coarse punctation, and a stouter hind femur (Figs 4, 5).



Figure 4.

Baranisobas hibericus Heinrich, 1972, female habitus.



Figure 5.

Baranisobas hibericus Heinrich, 1972, female, dorsal view.

Distribution

Previously known only from Portugal (Heinrich 1972).

Notes

New for Italy.

Species new for Italy

Subfamily Acaenitinae Förster, 1869

Tribe Coleocentrini Clément, 1938

Coleocentrus heteropus Thomson, 1894

Material

- a. country: Italy; stateProvince: Trentino-Alto Adige; verbatimLocality: Bolzano, Castelrotto, Alpe di Maritzen; eventDate: 13.VII.2013; individualCount: 1; sex: female; recordedBy: D. Sechi; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR

Distribution: Finland, Sweden, Hungary, Romania and Ukraine (Varga 2013).

Notes: New for Italy.

Subfamily Adelognathinae Thomson, 1888

Adelognathus maculosus Kasparyan, 1990

Material

- a. country: Italy; stateProvince: Sardinia; verbatimLocality: Iglesias, Marganai; verbatimElevation: 700 m; verbatimLatitude: 39°20'59.74"N; verbatimLongitude: 8°34'18.70"E; samplingProtocol: Malaise trap; eventDate: 20.V-16.VI.2005; individualCount: 1; sex: female; recordedBy: G. Chessa; identifiedBy: A. Reshchikov; dateIdentified: 2015; institutionCode: NRM

Distribution: South Europe and Middle East.

Notes: Already recorded for Italy. It is new for Sardinia.

Subfamily Banchinae Wesmael, 1845

Tribe Glyptini Cushman & Rohwer, 1920

Glypta cylindrator (Fabricius, 1787)

Material

- a. country: Italy; stateProvince: Sicily; verbatimLocality: Palermo, Madonie, Vallone di Zottafonda; verbatimElevation: 1600 m; eventDate: 20.VI.1998; individualCount: 1; sex: male; recordedBy: M. Romano; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR

Distribution: Palaearctic.

Notes: Already recorded for Italy. It is new for Sicily.

Teleutaea striata (Gravenhorst, 1829)

Material

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Venezia, Mestre, bosco di Zaher; verbatimElevation: 0 m; verbatimLatitude: 45°31'13.70"N; verbatimLongitude: 12°17'20.71"E; samplingProtocol: Malaise trap; eventDate: 22.VII-04.VIII.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR

Distribution: Palaearctic.

Notes: New for Italy (Fig. 6).



Figure 6.

Teleutaea striata (Gravenhorst, 1829), male.

Subfamily Campopleginae Förster, 1869

Dusona aurita (Kriechbaumer, 1883)

Materials

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Palazzolo dello Stella, Nogali Braide, bosco Brussa; verbatimElevation: 0 m; verbatimLatitude: 45° 45'54.05"N; verbatimLongitude: 13° 04'52.15"E; samplingProtocol: Malaise trap; eventDate: 09-21.VI.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR
- b. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Otello; verbatimElevation: 20 m; verbatimLatitude: 45° 51'38.06"N; verbatimLongitude: 12° 29'31.71"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR

Distribution: Palaearctic.

Notes: New for Italy.

Subfamily Collyriinae Cushman, 1924

Collyria trichophthalma (Thomson, 1877)

Material

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Marano Lagunare, proprietà Villabruna; verbatimElevation: 0 m; verbatimLatitude: 45° 46'36.36"N; verbatimLongitude: 13° 09'32.06"E; samplingProtocol: Malaise trap; eventDate:

08-18.V.2013; individualCount: 6; sex: 2 males, 4 females; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Subfamily Cryptinae Kirby, 1837

Tribe Cryptini Kirby, 1837

Agrothereutes leucorhaeus (Donovan, 1810)

Material

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Chiusure; verbatimElevation: 340 m; verbatimLatitude: 43°10'53.96"N; verbatimLongitude: 11°34'48.71"E; samplingProtocol: yellow pan trap; eventDate: 26-27.V.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Schwarz; dateIdentified: 2013; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Agrothereutes monticola (Habermehl, 1935)



Figure 7.

Agrothereutes monticola (Habermehl, 1935), female.

Material

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Torrenieri; verbatimElevation: 220 m; verbatimLatitude: 43°07'19.96"N; verbatimLongitude: 11°33'26.49"E; samplingProtocol: yellow pan trap; eventDate: 22-23.VI.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Schwarz; dateIdentified: 2013; institutionCode: MZUR

Distribution: Previously known only from Spain and France.

Notes: New for Italy (Fig. 7)

Ateleute linearis* Förster, 1871*Materials**

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Cessalto, Santa Maria di Campagna, bosco San Marco; verbatimElevation: 0 m; verbatimLatitude: 45°42'21.22"N; verbatimLongitude: 12°34'42.45"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- b. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Meolo; verbatimElevation: 0 m; verbatimLatitude: 45°36'24.76"N; verbatimLongitude: 12°27'25.19"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Tribe Phygadeuontini Förster, 1869***Chirotica rubrotincta* (Thomson, 1885)****Material**

- a. country: Italy; stateProvince: Latium; verbatimLocality: Rieti, Orvinio, Vallebuona; verbatimElevation: 780 m; eventDate: 15.VI.2008; individualCount: 1; sex: female; recordedBy: G. Lo Giudice, M. Mei, D. Petriccione; identifiedBy: F. Di Giovanni; dateIdentified: 2012; institutionCode: MZUR

Distribution: South Europe and North Africa.

Notes: New for Italy.

Mastrus rufobasalis* (Habermehl, 1920)*Material**

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Pienza; verbatimElevation: 335 m; verbatimLatitude: 43°03'51.89"N; verbatimLongitude: 11°39'56.44"E; samplingProtocol: yellow pan trap; eventDate: 02-05.X.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Schwarz; dateIdentified: 2013; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Xenolytus substriatus* Townes, 1983*Materials**

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Arbia; verbatimElevation: 220 m; verbatimLatitude: 43°16'53.18"N; verbatimLongitude: 11°25'35.12"E; samplingProtocol: yellow pan trap; eventDate: 02-05.X.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Schwarz; dateIdentified: 2013; institutionCode: MZUR
- b. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Bollano; verbatimElevation: 230 m; verbatimLatitude: 43°10'32.29"N; verbatimLongitude: 11°31'44.98"E; samplingProtocol: yellow pan trap; eventDate: 02-05.X.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Schwarz; dateIdentified: 2013; institutionCode: MZUR
- c. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Arbia; verbatimElevation: 220 m; verbatimLatitude: 43°16'53.18"N; verbatimLongitude: 11°25'35.12"E; samplingProtocol: yellow pan trap; eventDate: 23-26.X.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Schwarz; dateIdentified: 2013; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Subfamily Ctenopelmatinae Förster, 1869**Tribe Euryproctini Thomson, 1883*****Hadrodactylus nigrifemur* Thomson, 1883****Materials**

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Venezia, Mestre, bosco di Zaher; verbatimElevation: 0 m; verbatimLatitude: 45°31'13.70"N; verbatimLongitude: 12°17'20.71"E; samplingProtocol: Malaise trap; eventDate: 09-19.V.2013; individualCount: 1;

sex: female; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: MZUR

- b. country: Italy; stateProvince: Veneto; verbatimLocality: Venezia, Mestre, bosco di Zaher; verbatimElevation: 0 m; verbatimLatitude: 45°31'13.70"N; verbatimLongitude: 12°17'20.71"E; samplingProtocol: Malaise trap; eventDate: 09-19.V.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Palaearctic.

Notes: New for Italy.

Phobetres nigriventris (Teunissen, 1953)

Materials

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, San Giorgio di Nogaro, bosco Ronchi di Sass; verbatimElevation: 5 m; verbatimLatitude: 45°48'21.10"N; verbatimLongitude: 13°14'27.08"E; samplingProtocol: Malaise trap; eventDate: 08-18.V.2013; individualCount: 2; sex: males; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: MZUR
- b. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Mansuè, bosco di Basalghelle; verbatimElevation: 25 m; verbatimLatitude: 45°49'44.28"N; verbatimLongitude: 12°31'12.07"E; samplingProtocol: Malaise trap; eventDate: 09-19.V.2013; individualCount: 2; sex: 1 male, 1 female; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM
- c. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Otello; verbatimElevation: 20 m; verbatimLatitude: 45°51'38.06"N; verbatimLongitude: 12°29'31.71"E; samplingProtocol: Malaise trap; eventDate: 09-19.V.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: MZUR
- d. country: Italy; stateProvince: Lombardy; verbatimLocality: Mantova, Marmiolo, Bosco della Fontana; verbatimElevation: 35 m; verbatimLatitude: 45°12'00.16"N; verbatimLongitude: 10°44'38.78"E; samplingProtocol: Malaise trap; eventDate: 11-21.V.2013; individualCount: 3; sex: males; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: MZUR
- e. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, San Giorgio di Nogaro, bosco Ronchi di Sass; verbatimElevation: 5 m; verbatimLatitude: 45°48'21.10"N; verbatimLongitude: 13°14'27.08"E; samplingProtocol: Malaise trap; eventDate: 09-21.VI.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: MZUR
- f. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Carlino, bosco Pro Quain e Venchiarate; verbatimElevation: 5 m; verbatimLatitude: 45°47'06.26"N; verbatimLongitude: 13°12'54.68"E; samplingProtocol: Malaise trap; eventDate: 09-21.VI.2013; individualCount: 2; sex: males; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: MZUR

Distribution: Previously recorded only for Netherlands and Russia.

Notes: New for Italy (Fig. 8).



Figure 8.
Phobetes nigriventris (Teunissen, 1953), female.

Tribe Mesoleiini Thomson, 1883

Mesoleius aulicus (Gravenhorst, 1829)

Material

- a. country: Italy; stateProvince: Sardinia; verbatimLocality: Iglesias, dintorni colonia Beneck; verbatimElevation: 636 m; verbatimLatitude: 39°20'51.45"N; verbatimLongitude: 8°33'55.40"E; samplingProtocol: Malaise trap; eventDate: 02-16.V.2006; individualCount: 1; sex: female; recordedBy: G. Chessa; identifiedBy: A. Reshchikov; dateIdentified: 2015; institutionCode: NRM

Distribution: Holarctic.

Notes: Already recorded for Italy. It is new for Sardinia.

Mesoleius tibialis Holmgren, 1857

Material

- a. country: Italy; stateProvince: Sardinia; verbatimLocality: Iglesias, dintorni colonia Beneck; verbatimElevation: 636 m; verbatimLatitude: 39°20'51.45"N; verbatimLongitude: 8°33'55.40"E; samplingProtocol: Malaise trap; eventDate: 02-16.V.2006; individualCount: 2; sex: females; recordedBy: G. Chessa; identifiedBy: A. Reshchikov; dateIdentified: 2015; institutionCode: NRM

Distribution: Europe.

Notes: Already recorded for Italy. It is new for Sardinia.

Mesoleius tibiator* Kasparyan, 2000*Material**

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Muzzana del Turgnano; verbatimElevation: 0 m; verbatimLatitude: 45°47'56.80"N; verbatimLongitude: 13°06'36.09"E; samplingProtocol: Malaise trap; eventDate: 21.VII-03.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Palaearctic.

Notes: New for Italy (Fig. 9). In Europe, it is known from Scandinavia (Kasparyan 2000). This is the most southerly record for this species.



Figure 9.

Mesoleius tibiator Kasparyan, 2000, female.

Rhinotorus leucostomus* (Gravenhorst, 1829)*Materials**

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Meolo; verbatimElevation: 0 m; verbatimLatitude: 45°36'24.76"N; verbatimLongitude: 12°27'25.19"E; samplingProtocol: Malaise trap; eventDate: 10-22.VI.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM
- b. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Marano Lagunare; verbatimElevation: 0 m; verbatimLatitude: 45°46'36.36"N; verbatimLongitude: 13°09'32.06"E; samplingProtocol: Malaise trap; eventDate: 21.VII-03.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM
- c. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Meolo; verbatimElevation: 0 m; verbatimLatitude: 45°36'24.76"N; verbatimLongitude: 12°27'25.19"E;

samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Europe.

Notes: New for Italy.

Tribe Perilissini Thomson, 1883

Absyrtus vernalis Bauer, 1961

Material

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Otello; verbatimElevation: 20 m; verbatimLatitude: 45°51'38.06"N; verbatimLongitude: 12°29'31.71"E; samplingProtocol: Malaise trap; eventDate: 09-19.V.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Europe.

Notes: New for Italy.

Lathrolestes (Lathrolestes) luteolator (Gravenhorst, 1829)

Materials

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Padova; eventDate: 17.V.1958; individualCount: 1; sex: male; identifiedBy: J. F. Perkins; dateIdentified: 1959; institutionCode: DAFNAE
- b. country: Italy; stateProvince: Lombardy; verbatimLocality: Mantova, Marmirolo, Bosco della Fontana; verbatimElevation: 35 m; verbatimLatitude: 45°12'00.16"N; verbatimLongitude: 10°44'38.78"E; samplingProtocol: Malaise trap; eventDate: 13-27.V.2008; individualCount: 1; sex: male; occurrenceRemarks: collected in the canopy (15-20 m); identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM
- c. country: Italy; stateProvince: Lombardy; verbatimLocality: Mantova, Marmirolo, Bosco della Fontana; verbatimElevation: 35 m; verbatimLatitude: 45°12'00.16"N; verbatimLongitude: 10°44'38.78"E; samplingProtocol: Malaise trap; eventDate: 05-19.VIII.2008; individualCount: 1; sex: female; occurrenceRemarks: collected in the canopy (15-20 m); identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Holarctic. Introduced into New Zealand.

Notes: The species was not recorded in the checklist of the Italian fauna (Scaramozzino 1995), even though a specimen of this species was present in the DAFNAE collection (Padua) and identified by Dr. J. F. Perkins in 1958. It is new for Italy.

Lathrolestes (Lathrolestes) tripunctor* (Thunberg, 1822)*Material**

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Palazzolo dello Stella, Nogali Braide, bosco Brussa; verbatimElevation: 0 m; verbatimLatitude: 45° 45'54.05"N; verbatimLongitude: 13° 04'52.15"E; samplingProtocol: Malaise trap; eventDate: 08-18.V.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Europe.

Notes: New for Italy.

Perilissus pallidus* (Gravenhorst, 1829)*Material**

- a. country: Italy; stateProvince: Sardinia; verbatimLocality: Iglesias, dintorni colonia Beneck; verbatimElevation: 636 m; verbatimLatitude: 39° 20'51.45"N; verbatimLongitude: 8° 33'55.40"E; samplingProtocol: Malaise trap; eventDate: 02-16.V.2006; individualCount: 1; sex: male; recordedBy: G. Chessa; identifiedBy: A. Reshchikov; dateIdentified: 2015; institutionCode: NRM

Distribution: Palaearctic.

Notes: Already recorded for Italy. It is new for Sardinia.

Trematopygodes aprilinus* (Giraud, 1872)*Material**

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Verona, dintorni di Monte, Stramonte; verbatimElevation: 500 m; eventDate: 05.V.2014; individualCount: 1; sex: female; recordedBy: P. Cerretti, F. Di Giovanni, G. Lo Giudice; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Europe.

Notes: New for Italy.

Tribe Pionini Smith & Shenefelt, 1955***Rhorus nigrinus* (Habermehl, 1909)****Material**

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Cessalto, Santa Maria di Campagna, bosco San Marco; verbatimElevation: 0 m; verbatimLatitude: 45° 42'21.22"N; verbatimLongitude: 12° 34'42.45"E; samplingProtocol: Malaise trap; eventDate:

09-19.V.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Europe.

Notes: New for Italy.

***Sympherta facialis* Hinz, 1991**

Material

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Torrenieri; verbatimElevation: 220 m; verbatimLatitude: 43°07'19.96"N; verbatimLongitude: 11°33'26.49"E; samplingProtocol: yellow pan trap; eventDate: 27-28.IV.2012; individualCount: 1; sex: male; recordedBy: D. J. Inclán; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Europe.

Notes: New for Italy.

***Trematopygus lethierryi* Thomson, 1894**

Material

- a. country: Italy; stateProvince: Emilia-Romagna; verbatimLocality: Bologna, Sasso Marconi, Palazzo Rossi; eventDate: II-III.2010; individualCount: 1; sex: male; recordedBy: L. Colacurcio; identifiedBy: A. Reshchikov; dateIdentified: 2014; institutionCode: NRM

Distribution: Europe.

Notes: New for Italy.

Tribe Scolobatini Schmiedeknecht, 1911

***Scolobates auriculatus* (Fabricius, 1804)**

Material

- a. country: Italy; stateProvince: Sardinia; verbatimLocality: Iglesias, dintorni colonia Beneck; verbatimElevation: 636 m; verbatimLatitude: 39°20'51.45"N; verbatimLongitude: 8°33'55.40"E; samplingProtocol: Malaise trap; eventDate: 16-30.V.2006; individualCount: 1; sex: male; recordedBy: G. Chessa; identifiedBy: A. Reshchikov; dateIdentified: 2015; institutionCode: NRM

Distribution: Holarctic and Indian peninsula.

Notes: Already recorded for Italy. It is new for Sardinia.

Subfamily Diacritinae Townes, 1965***Diacritus aciculatus* (Vollenhoven, 1878)****Materials**

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Precenicco, bosco Bando; verbatimElevation: 10 m; verbatimLatitude: 45°46'42.63"N; verbatimLongitude: 13°03'45.84"E; samplingProtocol: Malaise trap; eventDate: 09-21.VI.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- b. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, San Giorgio di Nogaro, frazione di Zellina, bosco Boscat; verbatimElevation: 10 m; verbatimLatitude: 45°49'59.51"N; verbatimLongitude: 13°10'03.50"E; samplingProtocol: Malaise trap; eventDate: 09-21.VI.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- c. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Porpetto, bosco Sgobitta; verbatimElevation: 15 m; verbatimLatitude: 45°51'13.54"N; verbatimLongitude: 13°11'44.78"E; samplingProtocol: Malaise trap; eventDate: 09-21.VI.2013; individualCount: 2; sex: males; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- d. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Crasere; verbatimElevation: 15 m; verbatimLatitude: 45°54'01.85"N; verbatimLongitude: 12°30'00.86"E; samplingProtocol: Malaise trap; eventDate: 10-22.VI.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- e. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Otello; verbatimElevation: 20 m; verbatimLatitude: 45°51'38.06"N; verbatimLongitude: 12°29'31.71"E; samplingProtocol: Malaise trap; eventDate: 10-22.VI.2013; individualCount: 4; sex: 3 males, 1 female; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- f. country: Italy; stateProvince: Veneto; verbatimLocality: Venezia, Portogruaro, frazione di Lison, bosco del Merlo; verbatimElevation: 0 m; verbatimLatitude: 45°44'58.18"N; verbatimLongitude: 12°44'37.58"E; samplingProtocol: Malaise trap; eventDate: 10-22.VI.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- g. country: Italy; stateProvince: Veneto; verbatimLocality: Venezia, Portogruaro, frazione di Lison, bosco del Merlo; verbatimElevation: 10 m; verbatimLatitude: 45°44'47.91"N; verbatimLongitude: 12°44'30.40"E; samplingProtocol: Malaise trap; eventDate: 10-22.VI.2013; individualCount: 2; sex: males; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- h. country: Italy; stateProvince: Lombardy; verbatimLocality: Mantova, Marmirolo, Bosco della Fontana; verbatimElevation: 35 m; verbatimLatitude: 45°12'00.16"N; verbatimLongitude: 10°44'38.78"E; samplingProtocol: Malaise trap; eventDate: 11-23.VI.2013; individualCount: 12; sex: 9 males, 3 females; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR
- i. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Otello; verbatimElevation: 20 m; verbatimLatitude: 45°51'38.06"N; verbatimLongitude: 12°29'31.71"E; samplingProtocol: Malaise trap; eventDate:

23.VII-05.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni;
 identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR

Distribution: Palaearctic.

Notes: New for Italy. The subfamily Diacritinae is recorded for the first time for the Italian fauna (Fig. 10).



Figure 10.

Diacritus aciculatus (Vollenhoven, 1878), female.

Subfamily Diplazontinae Viereck, 1918

Diplazon parvus Klopstein, 2014

Material

- a. country: Italy; stateProvince: Lombardy; verbatimLocality: Mantova, Marmirolo, Bosco della Fontana; verbatimElevation: 35 m; verbatimLatitude: 45°12'00.16"N; verbatimLongitude: 10°44'38.78"E; samplingProtocol: Malaise trap; eventDate: 13-27.V.2008; individualCount: 1; sex: female; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR

Distribution: Palaearctic.

Notes: Recently described by Klopstein (2014), it can be separated by similar *D. tibiatorius* (Thunberg, 1824) for the smaller size and different sculpture of both mesopleuron and tergites 2 and 3. It is new for Italy.

Subfamily Ichneumoninae Latreille, 1802**Tribe Heresiarchini Ashmead, 1900*****Heresiarches eudoxius* (Wesmael, 1845)****Materials**

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Palazzolo dello Stella, Nogali Braide, bosco Brussa; verbatimElevation: 0 m; verbatimLatitude: 45° 45'54.05"N; verbatimLongitude: 13° 04'52.15"E; samplingProtocol: Malaise trap; eventDate: 08-18.V.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR
- b. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Porpetto, bosco Sgobitta; verbatimElevation: 15 m; verbatimLatitude: 45°51'13.54"N; verbatimLongitude: 13° 11'44.78"E; samplingProtocol: Malaise trap; eventDate: 08-18.V.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR
- c. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Cessalto, Santa Maria di Campagna, bosco San Marco; verbatimElevation: 0 m; verbatimLatitude: 45°42'21.22"N; verbatimLongitude: 12°34'42.45"E; samplingProtocol: Malaise trap; eventDate: 10-22.VI.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR
- d. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Palazzolo dello Stella, Nogali Braide, bosco Brussa; verbatimElevation: 0 m; verbatimLatitude: 45° 45'54.05"N; verbatimLongitude: 13° 04'52.15"E; samplingProtocol: Malaise trap; eventDate: 21.VII-03.VIII.2013; individualCount: 7; sex: males; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR
- e. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Crasere; verbatimElevation: 15 m; verbatimLatitude: 45°54'01.85"N; verbatimLongitude: 12°30'00.86"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR
- f. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Cessalto, Santa Maria di Campagna, bosco San Marco; verbatimElevation: 0 m; verbatimLatitude: 45°42'21.22"N; verbatimLongitude: 12°34'42.45"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 7; sex: males; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Tribe Ichneumonini Latreille, 1802

Barichneumon montgator Selfa & Anento, 1996

Materials

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, San Giovanni d'Asso; verbatimElevation: 285 m; verbatimLatitude: 43°08'13.85"N; verbatimLongitude: 11°33'50.53"E; samplingProtocol: yellow pan trap; eventDate: 23-26.X.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR
- b. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, San Quirico d'Orcia; verbatimElevation: 285 m; verbatimLatitude: 43°04'30.84"N; verbatimLongitude: 11°34'44.84"E; samplingProtocol: yellow pan trap; eventDate: 23-26.X.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR

Distribution: Previously known only after the original description from Spain (Selfa and Anento 1996).

Notes: New for Italy.

Cratichneumon albifrons (Stephens, 1835)

Material

- a. country: Italy; stateProvince: Sardinia; verbatimLocality: Mt. Limbara, 8 km SE of Tempio (Vallicciola); verbatimElevation: 900 m; eventDate: 19.V.1996; individualCount: 1; sex: female; recordedBy: Haeseler; identifiedBy: M. Riedel; dateIdentified: 2015; institutionCode: ZSM

Distribution: Europe.

Notes: New for Italy (Sardinia).

Eutanyacra pallidicornis (Gravenhorst, 1829)

Material

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Otello; verbatimElevation: 15 m; verbatimLatitude: 45°51'40.91"N; verbatimLongitude: 12°29'37.53"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Stenobarichneumon protervus* (Holmgren, 1864)*Materials**

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Otello; verbatimElevation: 20 m; verbatimLatitude: 45°51'38.06"N; verbatimLongitude: 12°29'31.71"E; samplingProtocol: Malaise trap; eventDate: 09-19.V.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR
- b. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Muzzana del Turgnano; verbatimElevation: 0 m; verbatimLatitude: 45°47'56.80"N; verbatimLongitude: 13°06'36.09"E; samplingProtocol: Malaise trap; eventDate: 21.VII-03.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy. The specimen from Veneto (bosco Otello) differs from the typical form in having flagellum with 26 flagellomeres and postpetiolus, tergite 6, scutellum and outer orbits black.

Vulgichneumon trifarius* (Berthoumieu, 1892)*Material**

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Palazzolo dello Stella, Nogali Braide, bosco Brussa; verbatimElevation: 0 m; verbatimLatitude: 45°45'54.05"N; verbatimLongitude: 13°04'52.15"E; samplingProtocol: Malaise trap; eventDate: 08-18.V.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MZUR

Distribution: Europe and Middle East.

Notes: New for Italy.

Tribe Phaeogenini Förster, 1869***Aethecerus ruberpedatus* Diller & Shaw, 2014****Material**

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Cessalto, Santa Maria di Campagna, bosco San Marco; verbatimElevation: 0 m; verbatimLatitude: 45°42'21.22"N; verbatimLongitude: 12°34'42.45"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: E. Diller; dateIdentified: 2014; institutionCode: MZUR

Distribution: Previously known only from England.

Notes: This species was recently described from England (Diller and Shaw 2014). It is new for Italy and the record suggests the species may have a wider distribution in Europe.

***Diadromus subtilicornis* (Gravenhorst, 1829)**

Materials

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Vescona Chiesa; verbatimElevation: 315 m; verbatimLatitude: 43°16'30.47"N; verbatimLongitude: 11°29'29.97"E; samplingProtocol: yellow pan trap; eventDate: 22-23.VI.2012; individualCount: 1; sex: male; recordedBy: D. J. Inclán; identifiedBy: E. Diller; dateIdentified: 2014; institutionCode: MZUR
- b. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, Arbia; verbatimElevation: 220 m; verbatimLatitude: 43°16'53.18"N; verbatimLongitude: 11°25'35.12"E; samplingProtocol: yellow pan trap; eventDate: 13-16.IX.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: E. Diller; dateIdentified: 2014; institutionCode: MZUR

Distribution: Holarctic.

Notes: New for Italy.

***Dicaelotus (Dicaelotus) morosator* Aubert, 1969**



Figure 11.

Dicaelotus (Dicaelotus) morosator Aubert, 1969, male.

Materials

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Venezia, Mestre, bosco di Carpenedo; verbatimElevation: 10 m; verbatimLatitude: 45°30'40.61"N; verbatimLongitude: 12°14'46.92"E; samplingProtocol: Malaise trap; eventDate:

22.VII-04.VIII.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: E. Diller; datelIdentified: 2014; institutionCode: MZUR

- b. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Meolo; verbatimElevation: 0 m; verbatimLatitude: 45°36'24.76"N; verbatimLongitude: 12°27'25.19"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: E. Diller; datelIdentified: 2014; institutionCode: MZUR

Distribution: France and Turkey.

Notes: New for Italy (Fig. 11).

Dicaelotus (Dicaelotus) suspectus Perkins, 1953

Materials

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Venezia, Concordia Sagittaria, frazione Sindacale, bosco delle Lame; verbatimElevation: 0 m; verbatimLatitude: 45°41'47.55"N; verbatimLongitude: 12°52'05.79"E; samplingProtocol: Malaise trap; eventDate: 21.VII-03.VIII.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: E. Diller; datelIdentified: 2014; institutionCode: MZUR
- b. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Cessalto, bosco Olmè; verbatimElevation: 10 m; verbatimLatitude: 45°41'55.82"N; verbatimLongitude: 12°37'08.53"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: E. Diller; datelIdentified: 2014; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Dicaelotus (Gnathichneumon) mandibulator (Aubert, 1958)

Material

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, San Giovanni d'Asso; verbatimElevation: 285 m; verbatimLatitude: 43°08'13.85"N; verbatimLongitude: 11°33'50.53"E; samplingProtocol: yellow pan trap; eventDate: 09-10.VI.2012; individualCount: 1; sex: male; recordedBy: D. J. Inclán; identifiedBy: E. Diller; datelIdentified: 2014; institutionCode: MZUR

Distribution: Europe and Middle East.

Notes: New for Italy.

Herpestomus minimus (Berthoumieu, 1901)

Materials

- a. country: Italy; stateProvince: Tuscany; verbatimLocality: Siena, San Quirico d'Orcia; verbatimElevation: 285 m; verbatimLatitude: 43°04'30.84"N; verbatimLongitude: 11°

34'44.84"E; samplingProtocol: yellow pan trap; eventDate: 24-25.VII.2012; individualCount: 1; sex: female; recordedBy: D. J. Inclán; identifiedBy: E. Diller; dateIdentified: 2014; institutionCode: MZUR

- b. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Meolo; verbatimElevation: 0 m; verbatimLatitude: 45°36'24.76"N; verbatimLongitude: 12°27'25.19"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: E. Diller; dateIdentified: 2014; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Tycherus amaenus (Wesmael, 1845)

Material

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Cessalto, Santa Maria di Campagna, bosco San Marco; verbatimElevation: 0 m; verbatimLatitude: 45°42'21.22"N; verbatimLongitude: 12°34'42.45"E; samplingProtocol: Malaise trap; eventDate: 10-22.VI.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: E. Diller; dateIdentified: 2014; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Tycherus juvenilis (Wesmael, 1848)

Material

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gaiarine, Francenigo, bosco Otello; verbatimElevation: 20 m; verbatimLatitude: 45°51'38.06"N; verbatimLongitude: 12°29'31.71"E; samplingProtocol: Malaise trap; eventDate: 10-22.VI.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: E. Diller; dateIdentified: 2014; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy.

Tribe Zimmeriini Heinrich, 1934

Cotihersiarches dirus (Wesmael, 1853)

Material

- a. country: Italy; stateProvince: Latium; verbatimLocality: Roma, San Polo dei Cavalieri; eventDate: V.2008; individualCount: 1; sex: female; recordedBy: A. Chiocchio; identifiedBy: F. Di Giovanni; dateIdentified: 2011; institutionCode: MZUR

Distribution: Europe, North Africa and Middle East.

Notes: New for Italy. The tribe Zimmeriini is recorded for the first time for the Italian fauna (Fig. 12).



Figure 12.

Cotitheresiarches dirus (Wesmael, 1853), female.

Subfamily Lycorininae Cushman & Rohwer, 1920

Lycorina triangulifera Holmgren, 1859



Figure 13.

Lycorina triangulifera Holmgren, 1859, male.

Material

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Cessalto, Santa Maria di Campagna, bosco San Marco; verbatimElevation: 0 m; verbatimLatitude: 45°42'21.22"N; verbatimLongitude: 12°34'42.45"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR

Distribution: Palaearctic.

Notes: Already recorded for Sardinia. It is new for the Italian mainland (Fig. 13).

Subfamily Mesochorinae Förster, 1869***Astiphromma aggressor* (Fabricius, 1804)****Materials**

- a. country: Italy; stateProvince: Lombardy; verbatimLocality: Mantova, Marmiolo, Bosco della Fontana; verbatimElevation: 35 m; verbatimLatitude: 45°12'00.16"N; verbatimLongitude: 10°44'38.78"E; samplingProtocol: Malaise trap; eventDate: 15-29.IV.2008; individualCount: 1; sex: female; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR
- b. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, Muzzana del Turgnano, Selva di Avronchi; verbatimElevation: 10 m; verbatimLatitude: 45°47'28.76"N; verbatimLongitude: 13°07'04.44"E; samplingProtocol: Malaise trap; eventDate: 21.VII-03.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR

Distribution: Europe.

Notes: New for Italy.

Astiphromma albitarse* (Brischke, 1880)*Materials**

- a. country: Italy; stateProvince: Lombardy; verbatimLocality: Mantova, Marmiolo, Bosco della Fontana; verbatimElevation: 35 m; verbatimLatitude: 45°12'00.16"N; verbatimLongitude: 10°44'38.78"E; samplingProtocol: Malaise trap; eventDate: 15-29.IV.2008; individualCount: 10; sex: 9 males, 1 female; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR
- b. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, San Giorgio di Nogaro, bosco Ronchi di Sass; verbatimElevation: 5 m; verbatimLatitude: 45°48'21.10"N; verbatimLongitude: 13°14'27.08"E; samplingProtocol: Malaise trap; eventDate: 08-18.V.2013; individualCount: 1; sex: male; recordedBy: F. Di Giovanni; identifiedBy: M. Riedel; dateIdentified: 2014; institutionCode: MR

Distribution: Europe.

Notes: New for Italy.

Subfamily Metopiinae Förster, 1869***Stethoncus sulcator* Aubert, 1963****Material**

- a. country: Italy; stateProvince: Lombardy; verbatimLocality: Mantova, Marmirolo, Bosco della Fontana; verbatimElevation: 35 m; verbatimLatitude: 45° 12'00.16"N; verbatimLongitude: 10° 44'38.78"E; samplingProtocol: Malaise trap; eventDate: 05-19.VIII.2008; individualCount: 1; sex: female; identifiedBy: F. Di Giovanni; dateIdentified: 2012; institutionCode: MZUR

Distribution: Palaearctic.

Notes: New for Italy.

Subfamily Orthocentrinae Förster, 1869***Batakomacrus flaviceps* (Gravenhorst, 1829)****Material**

- a. country: Italy; stateProvince: Sardinia; verbatimLocality: Iglesias, dintorni colonia Beneck; verbatimElevation: 636 m; verbatimLatitude: 39° 20'51.45"N; verbatimLongitude: 8° 33'55.40"E; samplingProtocol: Malaise trap; eventDate: 18.IV-02.V.2006; individualCount: 1; sex: female; recordedBy: G. Chessa; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy (Sardinia).

Subfamily Pimplinae Wesmael, 1845**Tribe Ephialtini Hellén, 1915*****Polysphincta longa* Kasparyan, 1976****Material**

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Treviso, Gorgo al Monticano, frazione di Cavalier, bosco di Cavalier; verbatimElevation: 20 m; verbatimLatitude: 45° 45'50.54"N; verbatimLongitude: 12° 33'03.95"E; samplingProtocol: Malaise trap; eventDate: 23.VII-05.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR

Distribution: Palaearctic.

Notes: The species can be distinguished by closely related *P. boops* Tschek, 1869 by the greater number of antennal flagellomeres and the relatively dense pubescence of the mesoscutum (Fritzén and Shaw 2014). It is new for Italy.

Zatypota picticollis (Thomson, 1888)

Material

- a. country: Italy; stateProvince: Friuli-Venezia Giulia; verbatimLocality: Udine, San Giorgio di Nogaro, frazione di Zellina, bosco Boscat; verbatimElevation: 10 m; verbatimLatitude: 45°49'59.51"N; verbatimLongitude: 13°10'03.50"E; samplingProtocol: Malaise trap; eventDate: 21.VII-03.VIII.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy (Fig. 14).



Figure 14.

Zatypota picticollis (Thomson, 1888), female.

Subfamily Poemeniinae Narayanan & Lal, 1953

Tribe Poemeniini Narayanan & Lal, 1953

Poemenia collaris (Haupt, 1917)

Material

- a. country: Italy; stateProvince: Veneto; verbatimLocality: Venezia, Mestre, bosco di Carpenedo; verbatimElevation: 10 m; verbatimLatitude: 45°30'40.61"N; verbatimLongitude: 12°14'46.92"E; samplingProtocol: Malaise trap; eventDate:

09-21.VI.2013; individualCount: 1; sex: female; recordedBy: F. Di Giovanni; identifiedBy: F. Di Giovanni; dateIdentified: 2013; institutionCode: MZUR

Distribution: Europe.

Notes: New for Italy (Fig. 15).



Figure 15.

Poemenia collaris (Haupt, 1917), female.

Tribe Pseudorhyssini Wahl & Gauld, 1998

Pseudorhyssa nigricornis (Ratzeburg, 1852)

Materials

- a. country: Italy; stateProvince: Piedmont; verbatimLocality: Cuneo, Valle Stura, Sambuco; verbatimElevation: 1200 m; eventDate: 23.VII.1986; individualCount: 1; sex: female; recordedBy: A. Vigna Taglianti; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR
- b. country: Italy; stateProvince: Veneto; verbatimLocality: Belluno, Canale d'Agordo; verbatimElevation: 1000-2000 m; eventDate: 01-26.VII.1995; individualCount: 1; sex: female; recordedBy: M. Mei; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR
- c. country: Italy; stateProvince: Emilia-Romagna; verbatimLocality: Bologna, Rifugio Cavone, Corno alle Scale; verbatimElevation: 1600 m; eventDate: 01.VII.2010; individualCount: 1; sex: female; recordedBy: L. Colacurcio; identifiedBy: F. Di Giovanni; dateIdentified: 2014; institutionCode: MZUR

Distribution: Holarctic.

Notes: New for Italy. The tribe Pseudorhyssini is recorded for the first time for the Italian fauna.

Subfamily Tryphoninae Shuckard, 1840

Tribe Tryphonini Shuckard, 1840

Ctenochira meridionator Aubert, 1969

Material

- a. country: Italy; stateProvince: Sardinia; verbatimLocality: Iglesias, dintorni colonia Beneck; verbatimElevation: 636 m; verbatimLatitude: 39°20'51.45"N; verbatimLongitude: 8°33'55.40"E; samplingProtocol: Malaise trap; eventDate: 02-16.V.2006; individualCount: 1; sex: female; recordedBy: G. Chessa; identifiedBy: A. Reshchikov; dateIdentified: 2015; institutionCode: MR

Distribution: Palaearctic.

Notes: Already recorded for Italy. It is new for Sardinia.

Discussion

Most of the data in the present work refer to ichneumonid species that are widespread in Europe or in the Palaearctic region. Besides widespread species, we record some taxa whose geographic ranges are probably confined to the Mediterranean Basin (e.g. *Chirotica rubrotincta*, *Barichneumon montgator*) and others that were previously known only from one or few localities (e.g. *Baranisobas hibericus*, *Agrothereutes monticola*, *Phobetres nigriventris*, *Mesoleius tibiator*). For some species (e. g. *Diplazon parvus*, *Dicaelotus morosator*, *Polysphincta longa*), the known distribution should be carefully evaluated, because of possible confusions occurred in the past with morphological similar species (see Aubert 1969, Fritzén and Shaw 2014, Klopstein 2014).

The present study increases the number of ichneumonids in Italy to more than 2,260 species. Albeit it is a significant improvement over the checklist of 1995 (Scaramozzino 1995), the comparison with up-to-date checklists of neighbour countries indicates that the list is still largely incomplete: for example, more than 4,000 species have been recorded for Germany, about 3,000 for France and more than 2,500 species for Austria (Yu et al. 2012). In particular, lower attention has been given to the faunistic knowledge of the ichneumonid fauna of southern Italy and its major islands (Scaramozzino 1995). Less than 300 species of ichneumonids are known for Sicily (Turrisi et al. 2007, Riedel and Turrisi 2013, Zwakhals and Turrisi 2014) and only about 150 for Sardinia, a very low number if compared to the about 500 species known for Corsica (Yu et al. 2012).

These data, together with the environmental heterogeneity, resulting from complex orography and latitudinal extension, and the central location of Italy in the Mediterranean region (Minelli et al. 2005), suggest that the real number of ichneumonids in Italy is much higher than that known today.

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References

- Achterberg Cv, Zwakhals K (2004) Fauna Europaea: Ichneumonoidea. 2.4. URL: <http://www.faunaeur.org/>
- Aubert JF (1958) Ichneumoninae Cyclopnestique d'un genre nouveau, espèce nouvelle, capturée sur le rivage méditerranéen. Bulletin de la Société Entomologique de Mulhouse (1958): 64-65.
- Aubert JF (1965) Révision provisoire du genre *Stethoncus* Townes, avec description d'une espèce nouvelle (Hymenoptera: Ichneumonidae). Beiträge zur Entomologie 15: 77-82.
- Aubert JF (1969) Deuxième travail sur les Ichneumonides de Corse (Hymenoptera). Veröffentlichungen der Zoologischen Staatssammlung (München) 13: 27-70.
- Aubert JF (1978) Les ichneumonides ouest-paléarctiques et leurs hôtes 2. Banchinae et suppl. aux Pimplinae. Laboratoire d'Évolution des Êtres Organisés & É.D.I.F.A.T.-O.P.I.D.A., Paris & Echauffour, 318 pp.
- Bauer R (1961) Ichneumoniden aus Franken, Teil II (Hymenoptera, Ichneumonidae). Beiträge zur Entomologie 11: 732-792.
- Broad GR (2010) Status of *Batakamacrus* Kolarov (Hymenoptera: Ichneumonidae: Orthocentrinae), with new generic combinations and description of a new species. Zootaxa 2394: 51-68.
- Di Giovanni F, Cerretti P, Mason F, Minari E, Marini L (2014) Vertical stratification of ichneumonid wasp communities: the effects of forest structure and life-history traits. Insect Science n/a: n/a-n/a. DOI: [10.1111/1744-7917.12153](https://doi.org/10.1111/1744-7917.12153)
- Diller E, Shaw MR (2014) Western Palaearctic Oedicephalini and Phaeogenini (Hymenoptera: Ichneumonidae, Ichneumoninae) in the National Museums of Scotland, with distributional data including 28 species new to Britain, rearing records, and descriptions of two new species of *Aethecerus* Wesmael and one of *Diadromus* Wesmael. Entomologist's Gazette 65: 109-129.
- Donovan E (1810) The natural history of British insects. 14. printed for the author, and for F. C. and J. Rivington, London, 90 pp.

- Förster A (1871) Uebersicht der Gattungen und Arten der Familie der Plectiscoiden. Verhandlungen des Naturhistorischen Vereins der Preussischen Rheinlande und Westfalens 28: 71-123.
- Fritzén NR, Shaw MR (2014) On the spider parasitoids *Polysphincta longa* Kasparyan and *P. boops* Tschek (Hymenoptera, Ichneumonidae, Pimplinae), with the first host records of *P. longa* . Journal of Hymenoptera Research 39: 71-82. DOI: [10.3897/JHR.39.7591](https://doi.org/10.3897/JHR.39.7591)
- Gravenhorst JLC (1829) Ichneumonologia Europaea. Pars II. Vratislaviae, 989 pp.
- Gürbüz MF, Kolarov J (2006) A review of the Collyriinae (Hymenoptera: Ichneumonidae). Entomologica Fennica 17: 118-122.
- Habermehl H (1935) Neue und wenig bekannte paläarktische Ichneumoniden (Hym.). VI Nachtrag. Deutsche Entomologische Zeitschrift (1935): 97-111.
- Heinrich GH (1972) Zur Systematik der Ichneumoninae Stenopneusticae IX. Eine Spätlese (Hymenoptera, Ichneumonidae). Mitteilungen Münchener Entomologischer Gesellschaft 60: 80-101.
- Hinz R (1986) Die paläarktischen Arten der Gattung *Trematopygus* Holmgren (Hymenoptera, Ichneumonidae). Spixiana 8 (3): 265-276.
- Hinz R (1991) Die palaearktischen Arten der Gattung *Sympherta* Förster (Hymenoptera, Ichneumonidae). Spixiana 14: 27-43.
- Hinz R, Horstmann K (1998) Holarctic species of *Trematopygodes* Aubert (Insecta Hymenoptera, Ichneumonidae, Ctenopelmatinae). Spixiana 21 (3): 241-251.
- Horstmann K (1983) Die westpaläarktischen Arten der Gattung *Chirotica* Förster, 1869 (Hymenoptera, Ichneumonidae). Entomofauna 4 (1): 1-33.
- Horstmann K (1990) Neubesreibungen einiger Schlupfwespen-Arten aus den Gattungen *Mastrus* Förster, *Odontoneura* Förster und *Zoophthorus* Förster (Hymenoptera, Ichneumonidae, Cryptinae). Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen 42: 1-14.
- Horstmann K (2009) Revision of the western Palearctic species of *Dusona* Cameron (Hymenoptera, Ichneumonidae, Campopleginae). Spixiana 32 (1): 45-110.
- Inclán DJ, Cerretti P, Marini L (2014) Interactive effects of area and connectivity on the diversity of tachinid parasitoids in highly fragmented landscapes. Landscape Ecology 29 (5): 879-889. DOI: [10.1007/s10980-014-0024-0](https://doi.org/10.1007/s10980-014-0024-0)
- Kasparyan DR (1973) Fauna of USSR. Insecta Hymenoptera. Vol. III. Number 1. Ichneumonidae. Subfamily Tryphoninae. Tribe Tryphonini . Nauka, Leningrad, 414 pp. [In Russian].
- Kasparyan DR (1981) Keys to the insects of the European part of the URSS. Vol. III. Hymenoptera. Third part. 129. Nauka, Leningrad, 688 pp. [In Russian].
- Kasparyan DR (1990) Fauna of URSS. Insecta Hymenoptera. Vol. III. Number 2. Ichneumonidae. Subfamily Tryphoninae: tribe Exenterini. Subfamily Adelognathinae . 141. Nauka, Leningrad, 341 pp. [In Russian].
- Kasparyan DR (2000) Palaeartic ichneumonid wasps of the genus *Mesoleius* Holmgren (s. str.) (Hymenoptera, Ichneumonidae). I. Entomologicheskoe Obozrenie 79 (1): 150-179. [In Russian].
- Kasparyan DR (2001) Palaeartic ichneumonid wasps of the genus *Mesoleius* Holmgren (s. str.) (Hymenoptera, Ichneumonidae). II. Entomologicheskoe Obozrenie 80 (3): 706-733. [In Russian].

- Kasparyan DR (2004) Nomenclatural notes on some Ctenopelmatinae from Dutch and Hungarian museums (Hymenoptera: Ichneumonidae). *Zoosystematica Rossica* 13 (1): 47-48.
- Kasparyan DR (2011) Review of the Palaearctic species of the genus *Hadrodactylus* Förster (Hymenoptera, Ichneumonidae, Ctenopelmatinae) with description of 5 new species. *Entomologicheskoe Obozrenie* 90 (2): 388-415. [In Russian]. DOI: [10.1134/s0013873811070086](https://doi.org/10.1134/s0013873811070086)
- Kasparyan DR (2014) Review of the western Palaearctic ichneumon-flies of the genus *Rhorus* Förster, 1869 (Hymenoptera, Ichneumonidae: Ctenopelmatinae). II. The species of the *punctus*, *longicornis*, *chrysopygus*, and *substitutor* groups, the species with the black metasoma and some others. *Entomologicheskoe Obozrenie* 93 (1): 186-237. [In Russian]. DOI: [10.1134/s0013873814050078](https://doi.org/10.1134/s0013873814050078)
- Klopffstein S (2014) Revision of the Western Palaearctic Diplazontinae (Hymenoptera, Ichneumonidae). *Zootaxa* 3801 (1): 1-143. DOI: [10.11646/zootaxa.3801.1.1](https://doi.org/10.11646/zootaxa.3801.1.1)
- Kolarov JA (1997) Hymenoptera, Ichneumonidae. Part I. Pimplinae, Xoridinae, Acaenitinae, Collyriinae. *Fauna Bulgarica*, 25. Pensoft, Sofia, 322 pp. [In Bulgarian].
- Kuslitzky WS (1973) Ichneumon-flies of the genera *Teleutaea* Foerst., *Cephaloglypta* Obrt. and *Zygoglypta* Mom. (Hymenoptera, Ichneumonidae) in the Soviet fauna. *Entomologicheskoe Obozrenie* 52 (4): 886-898. [In Russian].
- Minelli A, Ruffo S, Vigna-Taglianti A (2005) Le province faunistiche italiane. In: Ruffo S, Stoch F (Eds) Checklist e distribuzione della fauna italiana. 10.000 specie terrestri e delle acque interne. Memorie del Museo Civico di Storia Naturale di Verona, 2a serie, Sezione Scienze della Vita, 16. Verona, 308 pp.
- Nardi G, Whitmore D, Bardiani M, Birtele D, Mason F, Spada L, Cerretti P (2011) Biodiversity of Marganai and Montimannu (Sardinia). Research in the framework of the ICP Forests network. *Conservazione Habitat Invertebrati*, 5. Cierre Edizioni, Sommacampagna, Verona, 896 pp.
- Oehlke J (1966) Die westpalaearktischen Arten der Tribus Poemeniini (Hymenoptera: Ichneumonidae). *Beiträge zur Entomologie* 15: 881-892.
- Reshchikov A (2013) Two new species of *Lathrolestes* (Hymenoptera, Ichneumonidae) from Norway, northern Russia and Finland with a key to western Palaearctic species. *Zootaxa* 3681 (1): 59-72. DOI: [10.11646/zootaxa.3681.1.3](https://doi.org/10.11646/zootaxa.3681.1.3)
- Riedel M, Turrisi GF (2013) Contribution to the knowledge of Ichneumonidae from Sicily. II. Ichneumoninae (Hymenoptera). *Bollettino della Società Entomologica Italiana* 145 (2): 59-68. DOI: [10.4081/BollettinoSEI.2013.59](https://doi.org/10.4081/BollettinoSEI.2013.59)
- Scaramozzino PL (1995) Hymenoptera Ichneumonidae. In: Minelli A, Ruffo S, La Posta S (Eds) Checklist delle specie della fauna italiana. 94. Calderini, Bologna.
- Schwenke W (1999) Revision of the European Mesochorinae (Hymenoptera, Ichneumonoidea, Ichneumonidae). *Spixiana* (supplement) 26: 1-124.
- Selfa J, Anento JL (1996) *Barichneumon montgator* n. sp. from Spain (Hymenoptera, Ichneumonidae). *Fragmenta Entomologica* 28 (1): 149-155.
- Selfa J, Diller E (1995) Contribution to the knowledge of genus *Herpestomus* Wesmael, [1845], in Europe (Hymenoptera, Ichneumonidae, Ichneumoninae, Phaeogenini). *Entomofauna* 16 (24): 429-436.
- Tereshkin AM (2009) Illustrated key to the tribes of subfamilia Ichneumoninae and genera of the tribe Platylabini of world fauna (Hymenoptera, Ichneumonidae). *Linzer Biologische Beiträge* 41 (2): 1317-1608.

- Townes HK (1983) Revisions of twenty genera of Gelini (Ichneumonidae). 35. Memoirs of the American Entomological Institute, 281 pp.
- Turrisi GF, Schönitzer K, Diller E (2007) Ichneumon flies from Sicily, with descriptions of new taxa (Hymenoptera, Ichneumonidae: Ichneumoninae: Phaeogenini and Diplazontinae). *Mitteilungen der Münchner Entomologischen Gesellschaft* 97: 115-126.
- Varga A (2013) A review of the subfamily Acaenitinae Förster, 1869 (Hymenoptera, Ichneumonidae) from Ukrainian Carpathians. *Biodiversity Data Journal* 1: 1-19. DOI: [10.3897/BDJ.1.e1008](https://doi.org/10.3897/BDJ.1.e1008)
- Yu DS, Achterberg Cv, Horstmann K (2012) Taxapad 2012, Ichneumonoidea 2011. Database on flash-drive. Ottawa, Ontario, Canada. URL: www.taxapad.com
- Zwakhals K (2006) The European species of the genera *Zatypota* and *Sinarachna* (Hymenoptera: Ichneumonidae, Pimplinae, Polysphinctini). *Entomologische Berichten* 66 (2): 34-37.
- Zwakhals K, Turrisi GF (2014) Contribution to the knowledge of Ichneumonidae from Sicily. III. Pimplinae and Poemeniinae (Hymenoptera). *Bollettino della Società Entomologica Italiana* 146 (1): 41-46.