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Contribution to the knowledge of Ichneumonidae (Hymenoptera) in Italy

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A b s t r a c t: New records on 23 ichneumonids (Hymenoptera, Ichneumonidae) from Italy are provided. Of these, 19 species are new records for Italy, three species are new for Sardinia and one species is recorded for the first time for Italian mainland. The subfamily Poemeniinae is recorded for the first time for Sardinia.

Key words: Ichneumonidae, Italy, checklist, Italian mainland, Sardinia.

Introduction

The family Ichneumonidae is one of the largest families of Hymenoptera but still one of the less studied group of insects in Italy. To date, the "starting point" to the study of the diversity and distribution of the ichneumonid species in Italy is still represented by the Checklist of the Italian Fauna (SCARAMOZZINO 1995). This list can be updated with the data provided by the Fauna Europaea project (ACHTERBERG & ZWAKHALS 2004) and by the Taxapad database (YU et al. 2012). More recent studies gave further improvement to the knowledge of ichneumonids in Italy, increasing the number of species for this family in the country to more than 2,260 (TURRISI et al. 2007; RIEDEL & TURRISI 2013; ZWAKHALS & TURRISI 2014; DI GIOVANNI et al. 2015a; 2015b).

The environmental heterogeneity of Italy (MINELLI et al. 2005) and the comparison with up-to-date checklists from neighbour countries (DI GIOVANNI et al. 2015b) suggest that the list of species of this group of parasitoid wasps in Italy and islands is still much higher than what it is known to date.

The present study reports 19 new species of ichneumonids for the Italian fauna, one new record for Italian mainland and 3 new records for Sardinia, including the first record of the subfamily Poemeniinae for the island.

Material and methods

Most of the records originate from samplings in north-eastern Italy aimed at investigating the parasitoid community composition in fragmented landscapes (DI GIOVANNI et al. 2015a; 2015b) and from Sardinian CONECOFOR project, carried out by the Italian Forestry Service in the island (NARDI et al. 2011).

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 follow the Catalogue of World Ichneumonidae (YU et al. 2012) and the Fauna Europaea website (ACHTERBERG & ZWAKHALS 2004).

The material cited in the paper is deposited in the following collections:

MZUR..... Museo di Zoologia, Università degli Studi di Roma "Sapienza" in Rome, Italy
 NRM Naturhistoriska Riksmuseet in Stockholm, Sweden
 NHM Natural History Museum in London, UK

Results and discussion

Subfamily Adelognathinae

Adelognathus pallipes (GRAVENHORST, 1829) – new record for Italy

Material: Italy, Veneto: Venezia, Concordia Sagittaria, frazione Sindacale, Bosco delle Lame, 45°41'44"N, 12°52'10"E, 21.vii-03.viii.2013, 2♀♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

Notes: This is the seventh species of the subfamily known for Italy (SCARAMOZZINO 1995; DI GIOVANNI et al. 2015b). So far, all the species of Adelognathinae known for the country have been collected in northern Italy (ROSSEM 1990; KASPARYAN 1990) with the sole exception of *Adelognathus maculosus* KASPARYAN, 1990 recently recorded for Sardinia, that represented the first record of the subfamily for the island (DI GIOVANNI et al. 2015b).

Diagnosis: Prepectal carina developed only laterally and absent ventrally, hind tibiae swollen, face and clypeus smooth and shining (KASPARYAN 1990).

Distribution: Holarctic.

Subfamily Anomaloninae

Tribe Gravenhorstini

Habronyx (Camposcopus) nigricornis (WESMAEL, 1849) – new record for Italy

Material: Italy, Veneto: Verona, dintorni Monte, Stramonte, 45°34'N, 10°49'E, 05.v.2014, ~500m, 1♂, P. Cerretti, F. Di Giovanni, G. Lo Giudice leg., F. Di Giovanni det., MZUR.

Notes: In the past, most of the authors synonymised *H. nigricornis* WESMAEL, 1849 with *Anomalon canaliculatum* RATZEBURG, 1844 (= *Agrypon canaliculatum*), the type of which was lost (HORSTMANN 1972; GAULD & MITCHELL 1977). The nomenclature was then clarified by SCHNEE (1993), who selected a neotype for *Anomalon canaliculatum* and separated the two species. Also, in the Checklist of the Italian Fauna (SCARAMOZZINO 1995), *Anomalon nigricornis* was erroneously synonymised with *Agrypon clandestinum* (GRAVENHORST, 1829). This should be considered the first verified record of *H. nigricornis* for Italy.

D i a g n o s i s : Discoidella present but not joining nervellus, hind tibial spurs about as long as the width of tibial apex, vertex entirely black (GAULD & MITCHELL 1977).

D i s t r i b u t i o n : Palaearctic.

***Erigorgus villosus* (GRAVENHORST, 1829) – new record for Italy**

M a t e r i a l : Italy, Calabria: Cosenza, Monte Pollino, Belvedere, 17.v.1998, 1500-1600m, 1♀, P. Cerretti, M. Mei leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Long dense brown pubescence on head and thorax, clypeus toothed, cheeks short, epicnemial carina poorly developed, mesonotum densely punctuated; face almost entirely black, hind femora red (ATANASOV 1975; NUZHNA 2012).

D i s t r i b u t i o n : Palaearctic.

Subfamily B a n c h i n a e

Tribe A t r o p h i n i

***Cryptopimpla arvicola* (WESMAEL, 1849) – new record for Italy**

M a t e r i a l : Italy, Friuli-Venezia Giulia: Udine, Carlino, Bosco Bolderatis, 45°47'15''N, 13°12'27''E, 21.vii-03.viii.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., NHM; Italy, Friuli-Venezia Giulia: Udine, S. Giorgio di Nogaro, Bosco Ronchi di Sass, 45°48'21''N, 13°14'27''E, 21.vii-03.viii.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

N o t e s : In this species, the nervellus is clearly intercepted in the middle and not near its end, as reported in the description of the genus *Cryptopimpla* by TOWNES (1970).

D i a g n o s i s : Propodeum without lateral longitudinal carinae and apical transverse carina; abdominal tergites brown-black with reddish-yellow margin at least on tergites I/II (KASPARYAN 1981; SCHWARZ 2003).

D i s t r i b u t i o n : Europe.

***Lissonota (Lissonota) biguttata* HOLMGREN, 1860 – new record for Italy**

M a t e r i a l : Italy, Friuli-Venezia Giulia: Udine, Carlino, Bosco Prà Quain e Venchiaratis, 45°47'06''N, 13°12'55''E, 09-21.vi.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Claw longer than pulvillus, fore wing with areolet present and radius straight, subdiscoideus intercepting postnervulus of brachial cell at the middle, eyes globular; abdomen black, tergites with narrow red margin, finely coriaceous; ovipositor in the female about the length of the body (AUBERT 1978; REY DEL CASTILLO 1989).

D i s t r i b u t i o n : Europe and Middle East.

***Lissonota (Lissonota) palpalis* THOMSON, 1889 – new record for Italy**

M a t e r i a l : Italy, Friuli-Venezia Giulia: Udine, Palazzolo dello Stella, Nogali Braide, Bosco Brussa, 45°45'54''N, 13°04'52''E, 21.vii-03.viii.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

N o t e s : In the Checklist of the Italian Fauna (SCARAMOZZINO 1995), this species was

tentatively synonymised with *Lissonota (Lissonota) clypearis* A. COSTA, 1886. The synonymy is not confirmed in the Catalogue of World Ichneumonidae (YU et al. 2012). The record in the checklist of *L. palpalis* for Sardinia should be referred rather to *L. clypearis*. Therefore, this should be considered the first verified record of *L. palpalis* for Italy.

D i a g n o s i s : Claws short, fore wing with areolet present and radius straight, tergites II/III longer than wide, coriaceous and finely striated; head and thorax black, inner orbits, clypeus, front margin and hind corner of pronotum, front corners of mesonotum, scutellum laterally and coxae I/II yellow; ovipositor in the female as long as the body (AUBERT 1978).

D i s t r i b u t i o n : Europe.

***Lissonota (Lissonota) picticoxis* SCHMIEDEKNECHT, 1900 – new record for Italy**

M a t e r i a l : Italy, Veneto: Treviso, Cessalto, Bosco Olmè, 45°41'56''N, 12°37'09''E, 23.vii-05.viii.2013, 1 ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Claws short, fore wing with areolet and radius straight, tergites II/III of the abdomen wide, coriaceous and without punctures; small spots on meso- and metapleura, apex of scutellum, hind margin of tergites red; vertex, tegulae and coxae I/II yellowish-white (AUBERT 1978; REY DEL CASTILLO 1989).

D i s t r i b u t i o n : Europe.

***Syzeuctus decoratus* (A. COSTA, 1890) – new record for Italy**

M a t e r i a l : Italy, Apulia: Foggia, Manfredonia, SS89 zona industriale, 41°35'49''N, 15°50'24''E, 27.v.2011, 80m, 1 ♂, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Frons without tubercles, propodeum with lateral and apical transverse carinae present, fore wings without dark spots, abdominal tergites almost squared; thorax black with extensive yellow markings, abdominal tergites red with central spots and yellow margin (KASPARYAN 1981).

D i s t r i b u t i o n : Europe, North Africa and Middle East.

Subfamily C a m p o p l e g i n a e

***Eriborus terebrator* AUBERT, 1960 – new record for Italy**

M a t e r i a l : Italy, Lombardy: Mantova, Mamirolo, Bosco della Fontana, 45°12'00''N, 10°44'39''E, 13-27.v.2008, 25m, 1 ♀, Malaise trap, F. Di Giovanni det., MZUR; Italy, Veneto: Treviso, Bosco Olmè, 45°41'56''N, 12°37'09''E, 23.vii-05.viii.2008, 1 ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Veneto: Venezia, Portogruaro, frazione Lison, Bosco del Merlo, 45°44'48''N, 12°44'30''E, 23.vii-05.viii.2013, 1 ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Veneto: Padova, Arzergrande, Scolo Schilla, 45°15'23''N, 12°03'18''E, 11-21.v.2013, 1 ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Friuli-Venezia Giulia: Udine, Porpetto, Bosco Sgobitta, 45°51'14''N, 13°11'45''E, 08-18.v.2013, 1 ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Occipital carina complete, claws pectinate to the apex, petiole laterally smooth; in the female, ovipositor as long as petiole; abdominal tergite II black with red margin, the following tergites entirely red (HORSTMANN 1987).

D i s t r i b u t i o n : Previously known only from France and Bulgaria.

***Leptocampoplex cremastoides* (HOLMGREN, 1860) – new record for Italy**

M a t e r i a l : Italy, Friuli-Venezia Giulia: Udine, Precenicco, Bosco Bando, 45°46'43''N, 13°03'46''E, 21.vii-03.viii.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Friuli-Venezia Giulia: Udine, Carlino, proprietà Villabruna, 45°46'35''N, 13°11'15''E, 21.vii-03.viii.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Friuli-Venezia Giulia: Udine, Carlino, proprietà Villabruna, 45°46'54''N, 13°12'07''E, 21.vii-03.viii.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : This is the only known species of the genus and can be separated by the other European Campopleginae genera in having cheeks short, glymma present, area superomedia of propodeum more or less pentagonal and ovipositor in the female thin and as long as the abdomen (HORSTMANN 1970).

D i s t r i b u t i o n : Holarctic.

***Tranosema rostrale* (BRISCHKE, 1880) – new record for Italy**

M a t e r i a l : Italy, Lombardy: Mantova, Mamirolo, Bosco della Fontana, 45°12'00''N, 10°44'39''E, 10-24.vi.2008, 25m, 1♀, Malaise trap, F. Di Giovanni det., MZUR.

D i a g n o s i s : Glymma deep, mesopleura with speculum mat, only basal transverse carina well-developed; hind tibia reddish-brown, not darkened apically (HORSTMANN 1978).

D i s t r i b u t i o n : Holarctic.

Subfamily C r y p t i n a e**Tribe C r y p t i n i*****Nematopodius (Nematopodius) debilis* (RATZEBURG, 1852) – new record for Italy**

M a t e r i a l : Italy, Friuli-Venezia Giulia: Udine, Porpetto, Bosco Sgobitta, 45°51'14''N, 13°11'45''E, 09-21.vi.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Pronotum dorsolaterally without white margin, dorsomedially with transversal sulcus with small longitudinal wrinkles, hind wing with nervellus intercepted near the middle; propodeum almost entirely black (HORSTMANN 1989).

D i s t r i b u t i o n : Europe.

Subfamily I c h n e u m o n i n a e**Tribe P h a e o g e n i n i*****Auberteterus alternecoloratus* (CUSHMAN, 1929) – new record for Italy**

M a t e r i a l : Italy, Latium: Roma, Ladispoli, località Torre Flavia, 30.x.1994, 1♀, G. Pace leg., F. Di Giovanni det., coll. Pace; Italy, Latium: Roma, Ladispoli, località Torre Flavia, 19.ii.1995, 2♀, G. Pace leg., F. Di Giovanni det., coll. Pace/MZUR.

D i a g n o s i s : The genus is monospecific and can be recognized amongst Phaeogenini in having clypeus with two blunt teeth, mandibles broad and thyridae present at the base of the tergites II (SELFA & DILLER 1994).

D i s t r i b u t i o n : France, central Russia, India and China.

Subfamily **M e t o p i n a e**

***Chorinaeus brevicar* THOMSON, 1887 – new record for Italy**

M a t e r i a l : Italy, Abruzzo: L'Aquila, Monte Velino, Ovindoli, S. Iona, 20.vi.2009, ~900m, 1 ♂, F. Di Giovanni, G. Lo Giudice, M. Mei leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Tergites II/III with median longitudinal carina, mesopleural suture weak; male with penis valves glabrous; hind femur black, hind tibia yellowish, darkened on the external apical part, face yellow (AESCHLIMANN 1975).

D i s t r i b u t i o n : Palaearctic.

***Triclistus squalidus* (HOLMGREN, 1858) – new record for Italy**

M a t e r i a l : Italy, Veneto: Treviso, Meolo, 45°36'25"N, 12°27'25"E, 23.vii-05.viii.2013, 1 ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Abdomen with dense pubescence, subapical spine on inner side of last article of hind tarsi not developed, propodeum with costulae clearly present and with longitudinal carinae divergent posteriorly; coxae and legs red, hind tibia not clearly darkened apically (AESCHLIMANN 1973).

D i s t r i b u t i o n : Palaearctic.

***Triclistus yponomeutae* AESCHLIMANN, 1973 – new record for Italy**

M a t e r i a l : Italy, Veneto: Venezia, Mirano, frazione Villamagno, Bosco del Parauro, 45°30'21"N, 12°06'50"E, 22.vii-04.viii.2013, 1 ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Friuli-Venezia Giulia: Udine, Porpetto, Bosco Sgobitta, 45°51'14"N, 13°11'45"E, 21.vii-03.viii.2013, 3 ♀ ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Abdomen with dense pubescence, strong subapical spine on inner side of last article of hind tarsi, costulae of propodeum absent, subgenital plate strongly notched in the middle; coxae and legs yellowish-red, hind tibia not darkened apically (AESCHLIMANN 1973).

D i s t r i b u t i o n : Europe.

Subfamily **O r t h o p e l m a t i n a e**

***Orthopelma brevicorne* MORLEY, 1907 – new record for Italy (Sardinia)**

M a t e r i a l : Italy, Sardinia: Sassari, Villanova Monteleone, Sa Serra, 02.iv.2008, ex galla *Diplolepis rosae*, 1 ♀, P. Niolu leg. F. Di Giovanni det., MZUR.

N o t e s : The other European species, *Orthopelma mediator* (THUNBERG, 1822) was recorded from North Italy (ROBERTI et al. 1965), South Italy (GRIBODO 1881) and Sicily (DE STEFANI 1895).

D i a g n o s i s : *O. brevicorne* can be distinguished from *O. mediator* in having shorter antennae, less than 0.5 times as fore wing (with about 14 flagellomeres) and female with shorter ovipositor (GAULD & MITCHELL 1977).

D i s t r i b u t i o n : Europe.

Subfamily Poemeniinae**Subfamily Poemeniini*****Podoschistus scutellaris* (DESIGNES, 1856) – new record for Sardinia**

Material: Italy, Sardinia: Carbonia-Iglesias, Iglesias, dintorni colonia Beneck, 39°20'51''N, 08°33'55''E, 18.iv-02.v.2006, 640m, 2 ♀♀, Malaise trap, G. Chessa leg., F. Di Giovanni det., MZUR.

Notes: Recently recorded for the first time in Italy (DI GIOVANNI et al. 2015a). See also note under *Poemenia collaris* (HAUPT, 1917).

Diagnosis: The genus includes a single European species, which can be identified by temples and postgenae wrinkled, all the claws with bifurcated apical tooth; scutellum and postscutellum with yellow spot (OEHLKE 1966).

Distribution: Europe and India.

***Poemenia collaris* (HAUPT, 1917) – new record for Sardinia**

Material: Italy, Sardinia: Carbonia-Iglesias, Iglesias, dintorni colonia Beneck, 39°20'51''N, 08°33'55''E, 18.iv-02.v.2006, 640m, 1 ♀, Malaise trap, G. Chessa leg., F. Di Giovanni det., MZUR.

Notes: Recently recorded for the first time in Italy (DI GIOVANNI et al. 2015b). *Podoschistus scutellaris* and *Poemenia collaris* represent the first records of the subfamily Poemeniinae for Sardinia.

Diagnosis: Fore wings with areolet, mesopleurae regularly punctuated, ovipositor in the female slightly shorter the fore wing; pronotum with yellow stripe, coxae I/II yellowish-white (OEHLKE 1966).

Distribution: Europe.

Subfamily Tryphoninae**Subfamily Eclytini*****Eclytus (Zapedias) exornatus* (GRAVENHORST, 1829) – new for Italian mainland**

Material: Italy, Veneto: Treviso, Meolo, 45°36'25''N, 12°27'25''E, 09-19.v.2013, 3 ♀♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Veneto: Treviso, Cessalto, S. Maria di Campagna, Bosco S. Marco, 45°42'21''N, 12°34'42''E, 09-19.v.2013, 4 ♂♂ 1 ♀, Malaise trap, F. Di Giovanni leg., A. Reshchikov/F. Di Giovanni det., NHR/MZUR; Italy, Friuli-Venezia Giulia: Udine, Precenicco, Bosco Bando, 45°46'43''N, 13°03'46''E, 08-18.v.2013, 1 ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

Notes: Previously known in Italy only from Sardinia (KASPARYAN & TOLKANITZ 1999).

Diagnosis: Fore wings with areolet, ovipositor in the female slightly bent downwards; tibiae I/II not darkened at the base (KASPARYAN & TOLKANITZ 1999).

Distribution: Palearctic.

Tribe T r y p h o n i n i

Ctenochira genalis (THOMSON, 1883) – new record for Italy

M a t e r i a l : Italy, Veneto: Venezia, Mestre, Bosco di Carpenedo, 45°30'41''N, 12°14'47''E, 09-21.vi.2013, 1♂, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Veneto: Treviso, Gaiarine, località Produttiva Francenigo, Bosco Otello, 45°51'38''N, 12°29'32''E, 10-22.vi.2013, 2♀ ♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Veneto: Venezia, Portogruaro, frazione Lison, Bosco del Merlo, 45°44'48''N, 12°44'30''E, 23.vii-05.viii.2013, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Apulia: Foggia, Biccari, Vado del Tufo, 41°22'44''N, 15°09'29''E, 13-20.vi.2015, 880m, 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Clypeal foveae small and not pubescent, hypostomal carina lobate, tarsal claws pectinate, fore wing with areolet; face entirely yellow, thorax and abdominal tergites black (KASPARYAN 1973).

D i s t r i b u t i o n : Palaearctic.

Ctenochira pectinata (BAUER, 1958) – new record for Italy

M a t e r i a l : Italy, Veneto: Venezia, Portogruaro, frazione Lison, Bosco del Merlo, 45°44'48''N, 12°44'30''E, 23.vii-05.viii.2013, 1♂, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR; Italy, Veneto: Treviso, Gaiarine, località Produttiva Francenigo, Bosco Otello, 45°51'38''N, 12°29'32''E, 23.vii-05.viii.2013, 1♂ 1♀, Malaise trap, F. Di Giovanni leg., F. Di Giovanni det., MZUR.

D i a g n o s i s : Clypeal foveae large and densely pubescent, occipital carina obsolescent near mandibles, hind wings with nervellus intercepted in the middle; hind femur red (KASPARYAN 1973).

D i s t r i b u t i o n : Palaearctic.

Subfamily X o r i d i n a e

Xorides csikii CLÉMENT, 1938 – new record for Sardinia

M a t e r i a l : Italy, Sardinia: Carbonia-Iglesias, Iglesias, dintorni colonia Beneck, 39°20'51''N, 08°33'55''E, 18.iv-02.v.2006, 640m, 1♀, Malaise trap, G. Chessa leg., F. Di Giovanni det., MZUR.

N o t e s : According to the Checklist of the Italian Fauna (SCARAMOZZINO 1995), this is the second species of the subfamily Xoridinae recorded for Sardinia, after *Xorides annulator* (FABRICIUS, 1804).

D i a g n o s i s : Vertex polished, clearly punctuated, first tergite stout, in the female, flagellum with white ring, subapical flagellomeres with 4-6 erect setae; base of first tergite black, the rest of the abdomen red (VARGA 2014).

D i s t r i b u t i o n : Europe.

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Zusammenfassung

Vorliegende Arbeit behandelt 23 Schlupfwespen nachweise (Hymenoptera, Ichneumonidae) aus Italien. Davon sind 19 Arten neu für Italien, drei Arten neu für Sardinien. Die Unterfamilie Poemeniinae wird erstmals für Sardinien genannt.

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