

A new species of *Torymus* Dalman, 1820 (Hymenoptera: Torymidae), with additions and corrections to the revision of the European species

M.J. Gijswijt

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M.J. Gijswijt, Wessel ten Damstraat 2, 1244 RA Ankeveen, The Netherlands.

Key words: Chalcidoidea; Torymidae; *Torymus*; new species, Portugal.

Torymus interruptus spec. nov. from southern Portugal is described. A list of additions and corrections to the revision to the European species (Graham & Gijswijt, 1998) is added. The form of *Torymus tipulariarum* (Zetterstedt, 1838) and the "species indet." as mentioned in the key to females, are synonymized with typical *T. tipulariarum* and the species is redescribed with the use of annotations by the late M. de Vere Graham.

Introduction

Recently, the genus *Torymus* Dalman, 1820 (Hymenoptera: Chalcidoidea: Torymidae) has been revised (Graham & Gijswijt, 1998). Some additions and corrections has been accumulated, which are given in this paper together with the description of a new species from Portugal. In addition, *Torymus tipulariarum* (Zetterstedt, 1838) is redefined and redescribed. For the terminology and abbreviations, see Graham & Gijswijt (1998).

Torymus interruptus spec. nov.

Material.— Holotype, ♀, (RMNH): "Portugal: Algarve, Azinhal, 10 km N. Castro Marim; on *Quercus ilex*, 7.iv.1999, M.J. Gijswijt". Paratypes (2 ♀♀, MJG): 1 ♀, "Portugal: Algarve, between Loulé and Salir, 9.iv.1999, M.J. Gijswijt"; 1 ♀, id., but collected "on *Cachrys trifida*".

Description of female.— Head in dorsal view 1.9-2.0 times as broad as long, temples 0.3 times apparent length of eye, rounded; POL 2.3 times OOL, OOL 1.25 times OD. Vertex with fine, nearly alutaceous sculpture, scattered with small punctures. In frontal view mouth 2.1 times as long as malar space, and malar space 0.4 times as long as eye. Clypeus broadly truncate; genae straight. Lower face 0.7-0.75 times upper face; Antenna (fig. 2) with scape 3-3.5 times as long as broad, not reaching anterior ocellus; pedicellus plus flagellum 1.15 times breadth of head, F1 1.25 times as broad as pedicellus, clava about 1.6 times as broad as F1, F1 quadrate or slightly longer than broad, F2-F7 gradually more transverse: F7 0.7-0.8 times broader than long.

Length of mesosoma 1.6 times its width. Mesoscutum about 1.5 times as broad as long, very finely rippled with scattered punctures, posterior fifth alutaceous. Scutellum 1.2 times longer than broad, sculptured as posterior part of mesoscutum, propodeum as long as or longer than frenum. Mesepimeron 1.5 times as long as broad, 0.9 times length of mid coxa. Hind coxa about 2.5 times as long as broad, bare on basal half dorsally. Forewing 2.4 times longer than broad. Costal cell:M:PM:ST=10:4.3:1.8:0.9; row of setae on underside of costal cell interrupted.

Metasoma slightly compressed; hypopygium extending 0.8 length of gaster, bare. Ovipositor sheaths as long as metasoma plus mesosoma, index 2.9-3.0. Length 1.9-2.0 mm.

Colour.- Head and mesosoma green, strongly fiery, in the holotype the green colour on mesosoma is hardly visible. Metasoma dark with golden reflections. Antenna, including scape black. Legs black with reddish reflections on hind coxa and slight greenish reflections on the rest of the legs, three basal tarsal segments of all legs are white or slightly brownish. Forewing slightly infumate.

Male.— Unknown.

Biology.— Unknown.

Distribution.— Portugal (Algarve).

Notes.— In the key to females (Graham & Gijswijt, 1998) *T. interruptus* spec. nov. runs to *T. gracilior* Graham 1994, but differs in having a slightly longer ovipositor (oi 2.9-3.0 instead of 2.3-2.8), and the mesosoma is 1.6 times as long as broad (in *T. gracilior* 1.9 times). The propodeum is as long as or slightly longer than frenum. In *T. gracilior* the scape is mainly testaceous while the funicle segments (fig. 1) are at least quadrate, *T. interruptus* has the whole scape black and F2-F7 are transverse; *T. interruptus* has a green head while the mesosoma has (sometimes strong) golden reflections, *T. gracilior* is blue-green, violet in places. The posterior part of the mesoscutum is strongly rippled in *T. gracilior* and alutaceous in *T. interruptus*, the row of setae on the underside of the costal cell is complete in *T. gracilior*, interrupted in the new species.

Torymus tipulariarum Zetterstedt, 1838

In the key to females in the couplets 67 and 69 on page 27 of Graham & Gijswijt (1998), two species are inserted but not named. The first is suggested to be a "form of *T. tipulariarum* Zetterstedt". This form exists all over Europe.

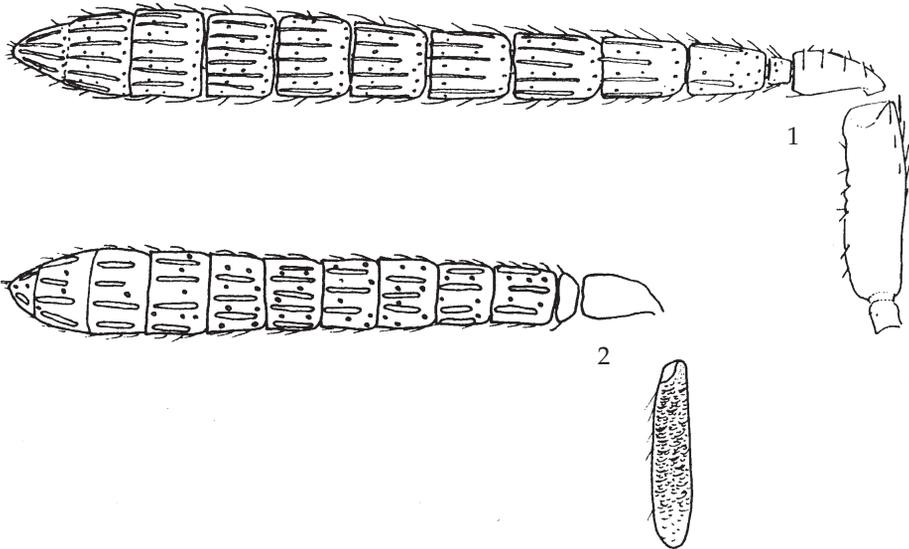


Fig. 1, *T. gracilis* Graham; fig. 2, *T. interruptus* spec. nov.; 1-2, antenna.

The second was called "spec. indet." by Graham. The specimen(?) of the latter were swept from *Salix purpurea* presumably in Southern France.

The identity of the "spec. indet." is not sure: Graham's specimens cannot be found in his collection. However, in my collection is a female, which he labeled "?sp. indet. couplet 63". This couplet is the number 69 in the final version of the key to females. In Greece I collected a series of specimens from *Salix purpurea* which are identical with that specimen. All these specimens belong to the "form of *tipulariarum*".

I have seen series of specimens of that species, reared from *Rabdophaga salicis* galls which were collected in the Czech Republic, The Netherlands, Bulgaria and Germany. Zetterstedt reared his *Torymus tipulariarum* from galls in branches of a *Salix* species: a note on the label attached to the lectotype says "c tuberculi ramulor Salix 26 maj 1819". This is most probably *Rabdophaga salicis* (Schrank, 1803).

The only difference between Zetterstedt's *Torymus tipulariarum* and the specimens mentioned in our key is the relative length of the ovipositor. The so-called "form of" has a rather short ovipositor, with an index ranging from 1.4-1.7. *T. tipulariarum* has an index 1.95-2.25. Differences like this do occur in other species as well (for instance: *T. galii* Boheman, 1834).

Therefore, I consider the specimens in our key, couplets 67 and 69, called "form of *T. tipulariarum*" and "spec. indet" as one species: *Torymus tipulariarum* Zetterstedt, 1838.

In the key to females on page 27 in the third line "Maybe" should be omitted, and in couplet 69 - "spec. indet." should be altered in: form of *T. tipulariarum* Zetterstedt.

The following is a short redescription of the types after annotations made by Graham in 1957.

Female.— Head frontally: width 77, height 66, distance between eyes 43.2, length of eyes 40.2, mouth 32.5, malar space 14.5. Inner orbits diverging slightly towards mouth. Cheeks slightly curved, strongly convergent. Face ? not conspicuously hairy. Antenna with scape 27 × 8.3, reaching middle of ocellus. Pedicellus plus flagellum 94. Flagellum only slightly clavate, moderately thick (proximally distinctly thicker than pedicellus in profile); funicle segments nearly quadrate (the first perhaps a shade elongate, also second-fourth, the sixth a shade transverse).

Punctures of mesoscutum small (the interspaces somewhat broader than the punctures), those of scutellum very small. Hind coxa bare dorsally. Shorter spur of hind tibia about 3/4th longer one: metatarsus 34, longer spur 14. Mesepimeron as in *chloromerus*. Costal cell of forewing with nearly complete row of hairs (slightly broken medially?). Basal vein with about 4 hairs.

Hypopygium reaching fully 3/4 metasoma, pubescent all along. Metasoma 12, terebra 20.

Colour: bright green; metasoma more blue-green on sides: apices of first and second tergites blue violet. First tergite faintly reddish on disc (also in ♂!).

Legs (including tips of fore & mid coxae) yellow, hind femur mainly metallic, fore femur with metallic gloss, but only faintly infuscate (in basal part).

Corrections and additions to the revision of European *Torymus* s.l.

The following lists the major errors found in Graham & Gijswijt (1998):
page 14 couplet 10: read fig. 206 instead of "fig. 106"

- page 21 couplet 33: read mesosoma instead of "thorax"
- page 26 couplet 66: omit "(fig. 38)"
- page 36 line 13: for "139" read 138
couplet 145: for "Palpi yellow" read: Palpi dark brown
- page 39 couplet 171: change "F1" in F7 and change "F7" in F1. Omit the two sentences dealing with relative lengths of malar space
- page 50 line 8: for "MBNH" read BMNH
- page 58 line 4: for "Partitt" read Parfitt
- page 79 line 9: for "hind wing" read forewing; in "comments": After (in *ruschkai* 1.9) insert stop. Omit the rest of the sentence from "the mouth " till "and respectively"
- page 86 line 13 from below instead "Vollelhoven" read Vollenhoven
- page 88 line 12 from below for "t959" read 1959
- page 91 line 6: read: (fig. 248)
line 15: "1.75" instead of 1 75
- page 96 line 12 from below for "[*Torvmus*" read [*Torymus*
- page 102 under *Torymus galeobdolonis*: instead "Holotype, ♀, (RMNH)," read Holotype, ♀, (BMNH),
- page 111 line 24: for "asm" read: as
- page 119 line 10 instead "apler" read paler
- page 128 line 6 instead "BHNH" read BMNH
- page 129 line 22: for "Mesepimeron 0.6-0.65 " read: 0.9-1.0
line 31: for "open below" read: partly open below.
last line: add France (Drôme).
- page 139 Under *Torymus pygmaeus*, type material: for paratypes read paralectotypes
- page 147 line 25: instead "larval" read tarsal
- page 152 under *Torymus tipulariarum*: "paratypes" should be paralectotypes
- page 154 line 9 from bottom: instead "(Houard nr 155)", read (Houard nr 135)
- page 182 fig 129 add: reticulation on funicle segments indicated on F1 only
- page 201 after "*Helicomylia saliciperda*" insert in third column: *chlorocopes*.
- page 202 line 7 from below: "*cupreus*" should be placed in third column.

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Reference

- Graham, M.W.R. de Vere & M.J. Gijswijt, 1998. Revision of the European species of *Torymus* Dalman (s. lat.) (Hymenoptera: Torymidae).— Zool. Verh. Leiden 317: 1-202, figs 1-266.

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