Review of Giraud's types of the species of *Synergus* Hartig, 1840 (Hymenoptera, Cynipidae)

Juli Pujade-Villar & Palmira Ros-Farré
University of Barcelona, Department of Animal Biology, 645, Diagonal Avenue, E-08028 Barcelona (Espagne)
pujade@porthos.bio.ub.es
palmira@porthos.bio.ub.es

KEY WORDS

ABSTRACT
In this work the typical series of the remaining *Synergus* species described by Giraud are studied. The lectotypes of each one are designated. *Synergus consobrinus* is redescribed, *S. variabilis* Mayr, 1872 (= *S. cerridis* n.syn.) (= *S. conformis* n.syn.) and *S. diaphanus* are characterized. The respective synonymies for the rest of the studied species are established. Finally, biological data of some of the species are given and the distribution area of some of them is widened.

Résumé
INTRODUCTION

Joseph-Étienne Giraud (1808-1877) was one of the greatest cynipidologists of the last century. His Cynipidae studies, though few in number (Giraud 1859, 1866, 1868a, b, 1871; Darboux & Houard 1907; Laboulbène 1877), greatly lead to the recognition of a large number of cynipid gall-forming species. He described more than forty species as well as the new genus Dryocosmus. A part of the author’s research was compiled in an unpublished manuscript deposited in the Muséum national d’Histoire naturelle, Paris (MNHN). Houard (1911) published a version of Giraud’s manuscript. In this publication eleven new Synergus species are described: S. apertus, S. cerridis, S. clavatus, S. conformis, S. consobrinus, S. diaphanus, S. hartigi, S. inflatus, S. longiventris, S. subterraneus and S. vesiculosus. The study also contains descriptions of four new cynipids not belonging to the Synergus species.

The only species of Synergus that has previously been examined is S. apertus, which was synonymized with Saphonecrus undulatus (Mayr 1872) by Pujade-Villar & Nieves-Aldrey (1990).

Giraud’s material was drawn largely from Central Europe. In his manuscript there is no mention of the origin of specimens. The study of the Synergus species type material is especially interesting in the Palaearctic zone, since some doubt has been cast on thirty-one of the fifty-nine species described.

LIST OF SPECIES

Giraud’s nominal species described in Synergus genus by Houard (1911) are dealt with below. The heading for each species treatment is the currently accepted name. For each species the lectotypes are designated. The synonymous names, hosts, distribution and information concerning type material are given. The main taxonomic aspects are discussed. Giraud’s accepted species and S. variabilis Mayr are characterized and differentiated from the closely related species using a taxonomical key.

**Saphonecrus haimi** (Mayr, 1872)


*Synergus clavatus* Giraud *(in* Houard 1911: 333), n.syn.


**TYPE MATERIAL.** — Lectotype ☒, and paralectotypes: 1 ♂ and 4 ♀ of *Saphonecrus haimi* have been designated *in* Pujade-Villar & Nieves-Aldrey (1990). Lectotype ☒ of *Synergus clavatus* Giraud, here designated, mounted on micro-pin; paralectotypes, 32 ♂ and 5 ♀, all of them mounted on micro-pins.

**DISTRIBUTION.** — Central Europe and Israel in Cynipid galls of Quercus cerris and Q. ithaburensis.

**HOSTS.** — Hymenoptera, Cynipidae, Cynipini: Chilaspis nitidus (Giraud, 1859) ḍ, Neuroterus lanuginosus (Giraud, 1859) ḍ, N. salticus (Kollar, 1857) ḍ and N. minutus (Giraud, 1859) ḍ. Diptera., Cecidomyiidae: Janetia cerris (Kollar, 1850).”

**COMMENTS**

This species and *Saphonecrus undulatus* (Mayr, 1872) are close to *Synergus* genus because they have pronotal carina as do most of the species of *Synergus* Pujade-Villar & Nieves-Aldrey (1990). The *Neuroterus minutus* galls is a new host record of *Saphonecrus haimi*. The pictures of *S. variabilis* were obtained by gold coating of one of the dissected *S. cerridis* specimens.
**Synergus variabilis** Mayr, 1872
(Figs 1-3)


_Synergus cerridis_ Giraud (in Houard, 1911: 331-332), n.syn.


**TYPE MATERIAL.** — The paralectotypes of _Synergus variabilis_ Mayr (1♂ and 2♀♀), mounted on micro-pins, have been examined. Lectotype ♂ of _Synergus cerridis_ Giraud, here designated, mounted on micro-pin; paralectotypes: 15♂♂ and 26♀♀, all of them mounted on micro-pins. Lectotype ♂ of _Synergus conformis_ Giraud, here designated, mounted on micro-pin; paralectotypes: 17♂♂ and 16♀♀, mounted on micro-pins; 1♀, on card.

**DISTRIBUTION.** — Central Europe and Israel in Cynipid galls of _Quercus cerris_ and _Q. ithaburensis_.

**HOSTS.** — Hymenoptera, Cynipidae, Cynipini: _Andricus grossulariae_ Giraud, 1859 ♂, _Aphelonyx cerricola_ (Giraud, 1859) ♂, _Chilaspis nitidus_ (Giraud, 1859) ♂, _Dryocosmus cerriphilus_ Giraud, 1859 ♂, _Neuroterus lanuginosus_ (Giraud, 1859) ♂ and _N. macropterus_ (Hartig, 1843) ♂; Syrphidini: _Synophorus politus_ Hartig, 1843. Diptera, Cecidomyiidae: _Dryomyia circinnans_ (Giraud, 1861) and _Janetia cerris_ (Kollar, 1850).

**COMMENTS**

This species is a cynipid galls inquiline in _Q. cerris_ belonging to Section II of _Synergus_. Kieffer (1902) differentiated four chromatic variations. Quinlan (1978) redescribed this species but he made a number of errors. Firstly, the tarsal claws are not simple, rather they have a small tooth, not pointed and usually hidden by the arolium; secondly, and more importantly: all type material examined does not have a pronotal carina (Fig. 1A) although when viewed dorsally the pronotum is angular at the lateral corners (Fig. 1B). Only the species _Synergus plagiotrochi_ does not have a lateral pronotal carina. This species is typical in the Mediterranean region on cynipid-galls of _Plagiotrochus_. This species is closely related to _S. apicalis_ and _S. rotundiventris_.

In order to distinguish these morphologically closely related species a dichotomic key is provided:

1. Lateral pronotal carina present. Punctures on upper face usually distinct. Inquilines frequently associated with shoots _Quercus_, usually deciduous _Quercus_ .................. *

2. Lateral pronotal carina absent. Punctures on upper face usually obsolete ........... 2

2. Radial cell open on margin. In dorsal view lateral pronotum is rotund. Punctuation on upper face and frontal carina always obsolete. Inquiline in galls of species of _Plagiotrochus_ genus on evergreen oaks _Q. ilex_ and _Q. coccifera_ ..................

3. Radial cell closed. In dorsal vision the pronotum is angular in the lateral corners. Punctuation on upper face and frontal carina present in larger specimens. Inquiline in several galls of _Neuroterus_ associated to _Q. cerris_, mainly _N. macropterus_ and _N. lanuginosus_ ...................... _S. variabilis_ Mayr, 1872

* A complex of two closely related species: _S. apicalis_ Hartig, 1841 and _S. rotundiventris_ Mayr, 1872, that cannot be satisfactorily distinguished by external morphological characteristics. The intraspecific variation is great and the limits are not clear.

Other notable features include: vertex not punctuated in small specimens (Fig. 2A) and with weak punctuation in large specimens (Fig. 2B); lateral frontal carinae present but not very clear (Fig. 2); second antennomere very long in large specimens, always longer than they are broad and larger than third antennomere; male with first flagellomere weakly expanded basally and apically (Fig. 3); mesonotum with interrupted, sharp and widely-spaced transverse rugae
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(Fig. 1); notauli shallow and short, faint or absent at least in anterior one third of mesoscutum; notauli shallow and short, faint or absent at least in the anterior third of mesoscutum, and medial impression very short or absent (Fig. 1B); mesopleuron usually ventrally smooth and shiny (Fig. 1A); radial cell closed on margin.

The material of Giraud belonging to *S. cerridis* and *S. conformis* is the same as that belonging to *S. variabilis*. This series has all of the chromatic variations described by Kieffer (1902). Even though the type series of *Synergus cerricolus* Vassileva-Samnalieva were not examined, after the examination of the type material of *S. variabilis* Mayr, 1872 and Giraud's type series as well as the original description of the former species, we conclude that *Synergus cerricolus* is a junior synonym of *S. variabilis*.

The mention of *Neuroterus saliens* and *Janetia cerris* as a *Synergus variabilis* host is interesting because they are new for *S. variabilis*. Finally, the specimens of *S. variabilis* collected in *Janetia cerris*, deposited in Giraud's collection, are important as this species was mentioned in Cecidomyiidae galls (*Dryomyia circinnans* Giraud, 1861, by Mayr, 1872) and it has been considered dubious as it has not been confirmed by subsequent authors.

**Synergus thaumacerus** (Dalman, 1823)

*Cynips thaumacera* Dalman, 1823. *Analecta Ent.*: 96. Location of types unknown.


*Synergus vesiculosus* Giraud (in Houard 1911: 323-324), n.syn.

*Synergus inflatus* Giraud (in Houard 1911: 324-325), n.syn.

**TYPE MATERIAL.** — Giraud's collection. Lectotype ♀ of *Synergus vesiculosus* Giraud, here designated, mounted on micro-pin; paralectotypes: 5 ♀ ♂ and 10 ♀ ♀, all of them mounted on micro-pins. Lectotype ♀ of *Synergus inflatus* Giraud, here designated, mounted on micro-pin; paralectotypes: 22 ♀ ♂ and 27 ♀ ♀, all of them mounted on micro-pins.

**DISTRIBUTION.** — Western Palaearctic in Cynipid galls of *Quercus cerris, Q. faginea, Q. humilis, Q. petraea, Q. pyrenaica* and *Q. robur*.

pennis Hartig, 1841) ♀. Trygonaspis megaperta (Panzer, 1801) ♂ ♀, T. megaperta (= renum Hartig, 1840) ♂, T. mendesi Tavares, 1901 ♂ and T. synapsis (Hartig, 1841) ♂ ♀, Synophrus politus Hartig, 1843.

COMMENTS
The characters for recognizing S. thaumacerus are described in Nieves-Aldrey & Pujade-Villar (1986). Giraud’s material of S. vesiculosus and S. inflatus do not differ from that of S. thaumacerus. The hosts Andricus gallactinctoriae and Dryocosmus cerriphilus and Synophrus politus are new to S. thaumacerus.

**Synergus subterraneus** Giraud (in Houard, 1911: 335)


**TYPE MATERIAL.** — Of Giraud’s collection. Lectotype ♂, here designated, mounted on micro-pin; paralectotypes: 8 ♀ ♀ mounted on micro-pins; 3 ♂ ♀ on carts.

**DISTRIBUTION AND HOSTS.** — Only Cynipini: Spain in Andricus sieboldi (Hartig, 1843) ♀ on Quercus pyrenaica and in central Europe (country unknown) in Andricus rhyzomae (plant-host unknow, probably Q. humilis (= pubescens) because Giraud (in Houard, 1911) collected A. rhyzomae in Q. humilis).

**COMMENTS**
The width of the head in frontal vision is a very specific character of this species, since the trans-

facial line is at least twice as long as the height of the compound eye. The biology is associated with subterraneous galls of *Andricus*.

**Synergus albipes** Hartig, 1841


**TYPE MATERIAL.** — Of Giraud’s collection. Lectotype ♂, here designated, mounted on micro-pin; paralectotypes: 10 ♂ ♂ and 11 ♀ ♀, all of them mounted on micro-pins.

**DISTRIBUTION.** — West Palaearctic in Cynipid galls of Quercus cerris, Q. canariensis, Q. faginea, Q. humilis, Q. petraea, Q. pyrenaica, Q. suber and Q. robur.
which are agamic in form. Nevertheless, it seems
This species has a large number of hosts, most of
them. The first flagellomere segment (of all the
saliens = fumipennis Hartig, 1841) q,
sventris = laeviculus Hartig, 1840) q,
slongiventris Hartig, 1840) q,
slongiventris Hartig, 1840) q,
squerusramuli (L., 1761) q,
squerusfollis L., 1758 q,
Neuroterus albipes (Olivier, 1791) q,
A. albinervis (Hartig, 1840) 6,
A. clementinae Giraud, 1859) q,
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A. quercusradicis (Fabricius, 1798) ő, A. quercusradicis (= trilineatus Hartig, 1840) ő ő, A. quercusradkis (Linnaeus, 1761) ő ő, A. quercusradkis (= autumnalis Hartig, 1792) ő, A. seminationis (Giraud, 1859) ő, A. solitarius (Boyer de Fonscolombe, 1832) ő, A. sieboldi (Hartig,) ő, Callirhytis glandium (Giraud, 1859) ő, Cynips disticha Hartig, 1840 ő, C. divisa Hartig, 1840 ő, C. longiventer Hartig, 1840 ő, C. quercusfolii Linnaeus, 1758 ő, C. quercusfolii (= taschenbergi Selechendal, 1870) ő ő, Neuroterus albipes (Schenck, 1863) ő, Neuroterus luteus (Schenck, 1863) ő, N. luteus Giraud, 1859 ő, N. numismalis (Fourcroy, 1785) ő N. quercusbaccharum (Linnaeus, 1758) ő ő, N. quercusbaccharum (= lenticularis Olivier, 1791) ő, N. tricolor (Hartig, 1841) ő ő, N. tricolor (= fumipennis Hartig, 1841) ő, Trygonaspis megaptera (Panzer, 1801), T. megaptera (= rennum Hartig, 1840) ő, and T. synaspis (Hartig, 1841) ő ő.

COMMENTS

This species has a very large number of hosts, most of them belong to the agamic form. Nevertheless, it seems not to be a specificity in some gall models. Moreover, this species shows a major morphological variability. Giraud described S. longiventer according to gaster length. Certainly, Giraud was right, but the males and females (without gaster) are the same as the largest specimens of S. gallaepomiformis. For this reason, we believe that gaster length is a new variable caracter of this species. Furthermore, all the hosts of S. longiventer mentioned by Giraud have been cited in S. gallaepomiformis.

Synergus diaphanus Giraud
(in Houard, 1911: 317-318)

TYPE MATERIAL — Giraud’s collection. Lectotype ő, here designated, mounted on micro-pin; paralectotypes: 2 ő and 7 ő ő, all of them mounted on micro-pins.

DISTRIBUTION AND HOSTS. — Only Cynipini: in Central Europe (country unknown) in Andricus gallaetinctoriae (Olivier, 1791) ő (Quercus caducifolius host unknown; Giraud (in Houard 1911) mentioned that A. gallaetinctoriae was collected in Q. petraea, Q. robur and Q. humilis).

COMMENTS

Section I species with the medial mesoscutal impression are easy to differentiate. Synergus diaphanus is closely related to S. ibericus because it has the same morphology and similar ecology; S. ibericus is a species inquiline of A. kollari ő and S. diaphanus to A. gallaetinctoriae, both host species make spherical galls (10-20 mm) with superficial protuberances (sometimes absent in A. kollari) but the galls of A. gallaetinctoriae are harder. Probably they are sister species. In order to distinguish these species the following characters may be used:

1. Radial cell 3.0 times longer than wide; R2 vein straight line. Antenna light, orange; last flagellomere segments almost 2 x 1. Inquiline in galls of Andricus kollari (in Iberian Peninsula) ................................................... S. ibericus Tavares, 1920

— Radial cell shorter, 2.5 to 2.7 times longer than wide; R2 vein curved. Antenna colour dark, brown; last flagellomere segments shorter, almost 1.5 times longer than wide. Inquiline in galls of Andricus gallaetinctoriae (not present in Iberian Peninsula) ................................................... S. diaphanus Giraud (in Houard 1911)

Synergus consobrinus Giraud
(in Houard 1911)

TYPE MATERIAL. — Giraud’s collection. Lectotype ő, here designated, mounted on micro-pin; paralectotypes: 1 ő and 9 ő ő, all of them mounted on micro-pins.

DISTRIBUTION AND HOSTS. — Only Cynipini: in Central Europe (country unknown) in Andricus gossulariae Giraud, 1859 probably in Q. cerris according to Giraud, 1859.

REDESCRIPTION

Male

Length 1.5-2.1 mm. Head with a yellow coloration more or less expanded; vertex black and
Fig. 4. — *Synergus consobrinus* Giraud, dorsal view. A, head; B, thorax. FC, facial carinae. Scale bars: A, 200 μm; B, 500 μm.
cheeks from yellow to red; thorax black; gaster red; legs light between yellow and brown; wing venation light brown. Head, in dorsal view, about two times broader than long; in frontal view, triangular and slightly broader than long; face radiating striate with striae to the toruli; front coriaceous without punctures in small specimens and with punctures in large specimens; lateral frontal carinae strong and not branched near ocelli (Fig. 4); vertex coriaceous-rugose not punctuated or with scattered shallow punctures without subparallel carinae running transversely between posterior ocelli; the diameter of the lateral ocelli is 2 and POL: OOL: OCO relation is 6: 3: 3; antenna with fifteen antennomeres (4: 2: 7: 4: 4: 4: 4: 3,5: 3: 3: 3: 3: 3: 3: 3); A2 is longer than broad; A3 is strongly expanded apically (Fig. 5B); those from A7 to A15 are thicker. Pronotum with coriaceous sculpture and some longitudinal striae laterally; lateral pronotal carinae present; mesoscutum with coriaceous sculpture; notauli (Fig. 4B) percurrent, not very deep and posteriorly not very broad; medial mesocutal impression short; scutellar foveae ovate and sculptured with blurred posterior margins; meso-pleuron longitudinally striate; parallel propodeal carinae, pubescent area between them. Radial cell of forewing closed, length from 2.5 to 2.7 times breadth. Gaster without punctuation, one smaller than thorax; abdominal terga 3 + 4 without pictures posteriorly or limited to an apical dorsal patch. Tarsal claws with a tooth.

**Female**

Differs from male as follows: length 1.5-2.5 mm; antenna with fourteen segments (5: 3: 7: 6: 6: 5: 5: 4: 4: 3: 3: 3: 5); A2 longer than broad (Fig. 5A); A3 not modified. Face black and yellowish around mouth.

After examining the typical series of this species, we concluded that it is related closely to the *S. pallicornis, S. albipes* and *S. nervosus* group. Moreover, *S. consobrinus* is a cynipid-host in galls of *Andricus grossulariae*. Not one species of this species group has this host. *Andricus grossulariae* forms galls in catkins on *Q. cerris* (in Europe except the Iberian Peninsula) or on *Q. suber*.

We summarize the morphological differences of this group of species in the following dichotomical key to identification:
1. Lateral frontal carinae strong and often much branched near ocelli; subparallel carinae running transversely between posterior ocelli, and obliquely from each posterior ocellus to margin of occiput. First flagellomere long in both sexes; in females at least 1.5 times longer than second; in males curved in the middle and weakly expanded distally. Face always black

\[ S. \text{ pallicornis} \text{ Hartig 1841} \]

— Lateral frontal carinae weak (where strong the face is not black) and branched or not near ocelli; vertex comatus, usually without subparallel carinae running transversely between posterior ocelli. First flagellomere relatively shorter; in females less than 1.5 times longer than second; in males slightly expanded apically or curved in the middle and not expanded (where it is weakly expanded distally the face is yellow or yellowish red)

\[ S. \text{ albipes} \text{ Hartig, 1841 and S. nervosus Hartig, 1840} \]

2. Lateral frontal carinae strong and complete. Males with first flagellomere weakly expanded distally. Face in males yellowish color and red in females. Inquilines in galls of \[ \text{Andricus grossulariae} \] in \[ Q. \text{ cerris} \].

\[ S. \text{ consobrinus} \text{ Giraud (in Houard, 1911)} \]

— Lateral frontal carinae weak. Males with the first flagellomere segment different and face black. Females with the face black. Inquilines in a large number of Cynipid galls in \[ Q. \text{ caducifolius} \].

\[ S. \text{ albipes} \text{ Hartig, 1841 and S. nervosus Hartig, 1840} \]

TAXONOMICAL SUMMARY AFTER THE GIRAUD'S TYPES REVIEW OF Synergus

SYNERGINI

Saphonecrus Dalla Torre et Kieffer, 1910

\[ S. \text{ haimi} \text{ (Mayr, 1872)} \]

\[ S. \text{ clavatus} \text{ Giraud (in Houard 1911) n.syn.} \]

\[ S. \text{ haymi} \text{ (Mayr); Pujade-Villar et Nieves-Aldrey, 1990; (misspelling), n.syn.} \]

S. undulatus (Mayr, 1872)

\[ S. \text{ apertus} \text{ Giraud (in Houard 1911)} \]  

\[ S. \text{ giraudi} \text{ Pujade-Villar, 1985} \]

Synergus Hartig, 1840

\[ S. \text{ albipes} \text{ Hartig, 1841} \]

\[ S. \text{ hartigi} \text{ Giraud (in Houard 1911) n.syn.} \]

\[ S. \text{ consobrinus} \text{ Giraud (in Houard 1911)} \]  

\[ S. \text{ diaphanus} \text{ Giraud (in Houard 1911)} \]  

\[ S. \text{ gallaepomiformis} \text{ Fonscolombe, 1832} \]  

\[ S. \text{ longiventris} \text{ Giraud (in Houard 1911) n.syn.} \]

S. subterraneus Giraud (in Houard, 1911)

\[ S. \text{ latifrons} \text{ Nieves-Aldrey et Martin-Chicote, 1985 n.syn.} \]

S. thaumacerus (Dalman, 1823)

\[ S. \text{ inflatus} \text{ Giraud (in Houard 1911) n.syn.} \]

\[ S. \text{ vesiculosus} \text{ Giraud (in Houard 1911) n.syn.} \]

\[ S. \text{ variabilis} \text{ Mayr, 1872} \]

\[ S. \text{ cerridis} \text{ Giraud (in Houard 1911) n.syn.} \]

\[ S. \text{ conformis} \text{ Giraud (in Houard 1911) n.syn.} \]

\[ S. \text{ cerricolus} \text{ Vassileva-Samnalieva, 1986 n.syn.} \]

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REFERENCES


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