Review of *Amphithectus* Hartig, 1840 (Hymenoptera: Cynipoidea: Figitidae: Figitinae), with description of *Amphithectus coriaceus* n. sp.

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ABSTRACT
The genus *Amphithectus* Hartig, 1840 is reviewed and differentiated from *Sarothrus* Hartig, 1840. The type species *Amphithectus areolatus* Hartig, 1840 is redescribed and a new species, *Amphithectus coriaceus* n. sp., is described. This new species is the first *Amphithectus* species described since the description of the type species in 1840. *Amphithectus coriaceus* n. sp. is characterised by having fine coriaceous sculpture in the head and mesoscutum. Both species are fully illustrated with SEM pictures.

KEY WORDS
Apmhithectus, Figitinae, Figitidae, Hymenoptera, new species.

RÉSUMÉ
Révision du genre Amphithectus *Hartig, 1840 (Hymenoptera: Cynipoidea: Figitidae: Figitinae), avec la description de* Amphithectus coriaceus *n. sp.*
Le genre *Amphithectus* Hartig, 1840 est révisé et différencié de *Sarothrus* Hartig, 1840. L'espèce type *Amphithectus areolatus* Hartig, 1840 est redécrite et *Amphithectus coriaceus* n. sp. est décrite. Cette nouvelle espèce est la première depuis la description de l'espèce type en 1840. *Amphithectus coriaceus* n. sp. est caractérisée par de fines sculptures présentes sur la tête et le mésoscutum. Les deux espèces sont entièrement illustrées par des images obtenues par Microscope Électronique à Balayage.

MOTS CLÉS
Apmhithectus, Figitinae, Figitidae, Hymenoptera, nouvelle espèce.

INTRODUCTION

The Figitinae Thomson, 1862 are a cosmopolitan subfamily of Figitidae Thomson, 1862 (Hymenoptera: Cynipoidea) that, when known, are parasitoids of schizophoran Diptera in exposed habitats (Weld 1952; Buffington *et al.* 2007). Historically, the taxonomy of figitines has been difficult: the Figitinae lack any synapomorphy defining the entire group (Ronquist 1999) and the included genera do not have clear diagnostic characters but are defined by a combination of characters present in two or more genera. As a result, some genera have been synonymised and removed from synonymy several times by different authors (Dalla Torre & Kieffer 1910; Weld 1952; Ronquist 1999). In addition of the 14 genera included in the Figitinae (Paretas-Martínez *et al.* 2012), seven are known only from the type species, as it happens with *Amphithectus* Hartig, 1840.

Amphithectus was erected by Hartig (1840) together with the genus *Sarothrus* Hartig, 1840. Hartig (1840: 187) separated these two genera on the basis that *Amphithectus dahlbomi* Hartig, 1840 has the metasoma strongly compressed (Fig. 1A). *Amphithectus* included a single species (*A. dahlbomi*), while *Sarothrus* included three species: *Sarothrus areolatus* Hartig, 1840 (only male known), *Sarothrus canaliculatus* Hartig, 1840 (male and female) and *Sarothrus laevigatus* Hartig, 1840 (male).

Amphithectus was synonymised with *Sarothrus* after *A. dahlbomi* was synonymised with *S. areolatus* by Reinhard (1860), but: i) Reinhard did not include all *Sarothrus* species (*S. laevigatus* was not included) and ii) due to this, we cannot consider *S. areolatus* as type species of *Sarothrus* (Reinhard did not designate formally *S. areolatus* as the type species of *Sarothrus*). Nevertheless, according to article 24.2 of the International Code of Zoological Nomenclature, he established the precedence of *S. areolatus* over the simultaneously published *S. dahlbomi* by choosing *S. areolatus* as valid name after considering *A. dahlbomi* a synonymy of *S. areolatus*. The type species of *Sarothrus* is *S. canaliculatus*, designated by Förster (1869: 367). Ashmead (1903: 9) designated *S. areolatus* as the type species following the order in which the three *Sarothrus* species were originally described by Hartig (1840), but this act is not justified according to the International Code of Zoological Nomenclature (ICZN). All this caused great confusion in later studies of these two genera. Kieffer (1902), Dalla Torre & Kieffer (1910), Weld (1952), and Fergusson (1986) maintained *Amphithectus* as synonym of *Sarothrus*. However, Ronquist (1999) enlisted *Amphithectus* as a valid genus of Figitinae (without further comments), and this was followed by later works (Buffington *et al.* 2007; Paretas-Martínez *et al.* 2012).

Sarothrus canaliculatus was synonymised with *Sarothrus tibialis* (Zetterstedt, 1838) by Dalla Torre (1889: 209, 210). Thus, the current valid name for this species is *S. tibialis*, but in order to compare *Amphithectus* to *Sarothrus* we'll refer to the name *S. canaliculatus*, which is the type species of *Sarothrus*.

After our study of the type material of the type species of *Amphithectus* (*A. dahlbomi*) and *Sarothrus* (*S. canaliculatus*), we conclude that *Amphithectus* is a valid genus following morphological characters given and discussed below. We redescribe *A. areolatus* (Hartig, 1840) (= *A. dahlbomi* Hartig, 1840), and give the description of *Amphithectus coriaceus* n. sp. This is the second known species of *Amphithectus* and the first species described since the type species in 1840. *Amphithectus coriaceus* n. sp. is characterised by having fine coriaceous sculpture in the head and mesoscutum.

MATERIAL AND METHODS

Abbreviations

Institutions

MNHN	Muséum national d'Histoire naturelle, Paris;
ZSM	Zoologische Staatssammlung München, Munich.

Technology

SEM	Scanning electron micrographs;
MEB	Microscopie électronique à balayage.

The specimen used to describe the new species was loaned and has been deposited in the MNHN. The type material of *A. dahlbomi* was loaned from the ZSM. Additional non-type specimens of *A. dahlbomi* were loaned from the MNHN. We have also studied the type material of *S. canaliculatus* (deposited in

ZSM) (= *S. tibialis*), some additional non-type specimens of *S. tibialis* (deposited in MNHN), the type material of *S. areolatus* (deposited in ZSM) and the type material of *Melanips fumipennis* Giraud, 1860 (deposited in MNHN).

Species descriptions refer only to characters diagnostic for each species. Remaining body parts are described in the *Amphithectus* generic description, and are present in both species.

SEM pictures were obtained without any coating with the FEI Quanta 200 Environmental SEM at 15 KV, and with the Leica Stereoscan S-360 SEM (Cambridge Instruments) at 700-850 V, in order not to damage the specimen. The terminology for morphological structures follows Ronquist & Nordlander (1989) and the sculpture terminology follows Harris (1979). Measurements and abbreviations in the descriptions include: F1-F12, first and following flagellomeres; T2-T4, second to fourth abdominal tergites. Antennal formula is given with the length (width) ratio of each segment.

SYSTEMATICS

Family Figitidae Thomson, 1862
Subfamily Figitinae Thomson, 1862

Genus *Amphithectus* Hartig, 1840
(Figs 1A, C; 2; 3; 4A, C)

Amphithectus Hartig, 1840: 203.

Amphitectus — Dahlbom 1842: 6, unjustified emendation.

Type species. — *Amphithectus dahlbomi* Hartig, 1840. (original spelling *dahlbohmii*, see below)

Distribution. — Europe.

Diagnosis. — Characters between parantheses refer to other figitine genera to which *Amphithectus* is compared. *Amphithectus* can be distinguished from *Sarothrus* and all other genera of Figitinae having metasoma very large, longer than head+mesosoma (Fig. 2E), and very compressed, thinner than mesosoma (Fig. 1A); seventh sternite – hypopygium – is also very large and protruded (Fig. 1C). *Sarothrus* and other figitine genera have metasoma not as long neither as compressed (Fig. 1B), and seventh sternite is never as large nor protruded (Fig. 1D). Other characters to distinguish *Amphithectus* from *Sarothrus* are (both sexes): *Amphithectus* has brown wings (Fig. 4C) while *Sarothrus* has wings completely hyaline (Fig. 4D); *Amphithectus* has lateral areas of lower face slightly coriaceous with a wide stronger coriaceous band on malar space (Figs 2A, 3A, 4A), while *Sarothrus* has lateral areas of lower face smooth with anterior half of malar space – next to mouth area – with a sulcus (Fig. 4B).

Description

Amphithectus females can be easily distinguished from other genera of Figitinae by metasomal morphology explained above. Furthermore, *Amphithectus* can be distinguished from *Neralsia* Cameron, 1883, *Xyalophora* Kieffer, 1901, and *Xyalophoroides* Jiménez & Pujade-Villar, 2008, lacking scutellar spine (these genera have scutellar spine); from *Figites* Latreille, 1802, *Foersthomorus* Pujade-Villar & Petersen-Silva, 2012 (= *Homorus* Förster, 1869), *Seitneria* Tavares, 1928, *Trischiza* Förster, 1869, *Zygosis* Förster, 1869, having two lateral patches of setae at base of T3 (glabrous in these genera); from *Paraschiza* Weld, 1944, having scutellar disk dull, carinate (smooth); from *Sarothrioides* Belizin, 1961 having female antenna 13-segmented (14-segmented) and face not striate (striate); from *Lonchidia* Thomson, 1962, having radial cell closed (open), scutellum with two distinct foveae (one large), female antenna with distal segments not enlarged (enlarged); from *Sarothrus*, having wing hyaline and facial sculpture (Fig. 4A-D); from *Nebulovena* Pujade-Villar & Paretas Martinez, 2012 and *Ferpereira* Pujade-Villar, 2013 having head oval in anterior view (subtriangular) (for all these characters, see Pujade-Villar *et al.* 2013: figs 6-8).

Some specimens of *Sarothrus* and *Amphitectus* are very similar morphologically to *Melanips* Haliday, 1835. After Buffington *et al.* (2007) the genus *Melanips* is included in the Aspicerinae (previously placed in the Figitinae); however, this placement is controversial because *Melanips* does not have any of the two morphological synapormorphies of the Aspicerinae before mentioned. Thus, the Aspicerinae (Aspicerinae + *Melanips*) is supported genetically (Buffington *et al.* 2007, 2012) but not morphologically; we refer to this group as Aspicerinae "*sensu lato*" in front of the Aspicerinae "*sensu stricto*" (Aspicerinae without *Melanips*) according to Ros-Farré & Pujade-Villar (2013).

Length
Female: 3.75-4.6 mm. Male: 3.3-3.5 mm.

Coloration
Head and mesosoma black, metasoma brown-reddish. Legs brown; antenna dark brown to black.

Head (Figs 2A, C; 3A)
Oval in anterior view, sculpture coriaceus (Fig. 2A, C) or smooth with piliferous points (Fig. 3A) in females, males coriaceous, with uniformly distributed or sparse setae. Compound eyes without setae. Transfacial line subequal to distance from anterior ocellus to tentorial pits. Face without carinae or strigae; small wrinkled area below each torulus present (Fig. 2A) or absent (Fig. 3A). Tentorial pits small. Inferior margin of clypeus undulate; clypeopleurostomal lines clearly seen, deep and strong (Fig. 2A), or marked (Fig. 3A) by a change of curvature. Malar space with coriaceous band, lacking malar sulcus. Occiput and genae without carinae.

Antenna
Female: 13-segmented. Male: 14-segmented, F1 very slightly curved or not (Fig. 3C).

Mesosoma (Fig. 2B-E; 3B, D)
Coriaceus (Fig. 2B, D) or smooth (Fig. 3B). Mesoscutum+pronotum with uniformly distributed short setae or sparse, but never densely.

Pronotum: Pronotal carinae extending to dorsal pronotal margin, forming a slightly upraised plate; lateral areas of without carinae. Mesoscutum: Coriaceus (Fig. 2B, D) or smooth with piliferous points (Fig. 3B); notauli complete (Fig. 2B) or incomplete (Fig. 3B); parascutal sulcus wide only in basal half; parapsidal, antero-admedian lines present superficially (Fig. 2B) or absent (Fig. 3B); median mesoscutal impression present (Fig. 2B) or absent (Fig. 3B). Scutellum (Figs 2B, 3B): Scutellar foveae rounded, clearly delimited on all margins, smooth inside; entire scutellum disk behind foveae irregularly carinate; circumscutellar carina absent. Mesopleuron (Fig. 2E): Mesopleural triangle clearly visible, with very short setae, not dense; lower half with longitudinal furrows/carinae curving upwards in anterior area; upper half smooth, not coriaceous. Propodeum (Fig. 3D): Propodeal carinae straight, each carina dividing in two at posterior end forming two carinae, one towards centre and one towards posterolateral area.

Forewing (Figs 3E, 4C)
Darkened (Fig. 4C). Uniformly distributed short setae present on wing surface and margins. Radial cell closed (Fig. 3E), around 2.5-2.7 times longer than wide; veins brown; R1 vein short, R2 almost straight, Rs completely straight, M and Rs+M veins very hyaline but visible. Areola visible, sometimes spectral.

Legs
Metatibia with two short spurs sub-equal in length, much shorter than one-third length of tarsomere 1. Tarsal claws simple.

Metasoma (Figs 1A; 1C; 2E; 3D,F)
Female. Metasoma longer than head+mesosoma (Fig. 2E), and very compressed, thinner than mesosoma (Fig. 1A). T2 very short, with very weak longitudinal strigae (Fig. 3F); T3 with two short latero-dorsal patches of setae at base (Fig. 3F); T3+T4 covering anterior half of metasoma; remaining tergites short, telescoped within T4; seventh sternite very large laterally covering the distal part of 9th and the third valvifer (Figs 1C; 2E). Ventral spine short (Figs 1C; 2E).

Male (Fig. 3D). Metasoma shorter than head+mesosoma, not compressed. T2 long, longitudinally striate; T3 with two lateral patches of setae at base; T3+T4 covering anterior two thirds of metasoma; remaining tergites short, telescoped within T4.

Biology
Attacks larvae of schizophoran. Fergusson (1986) mentioned as host Anthomyiidae.

Remarks
Hartig's (1840) original spelling is *Amphithectus*. It was spelled "*Amphitectus*" by Dahlbom (1842). Hartig (1843: 419) spelled this genus both *Amphithectus* and *Amphitectus*. The Dahlbom spelling

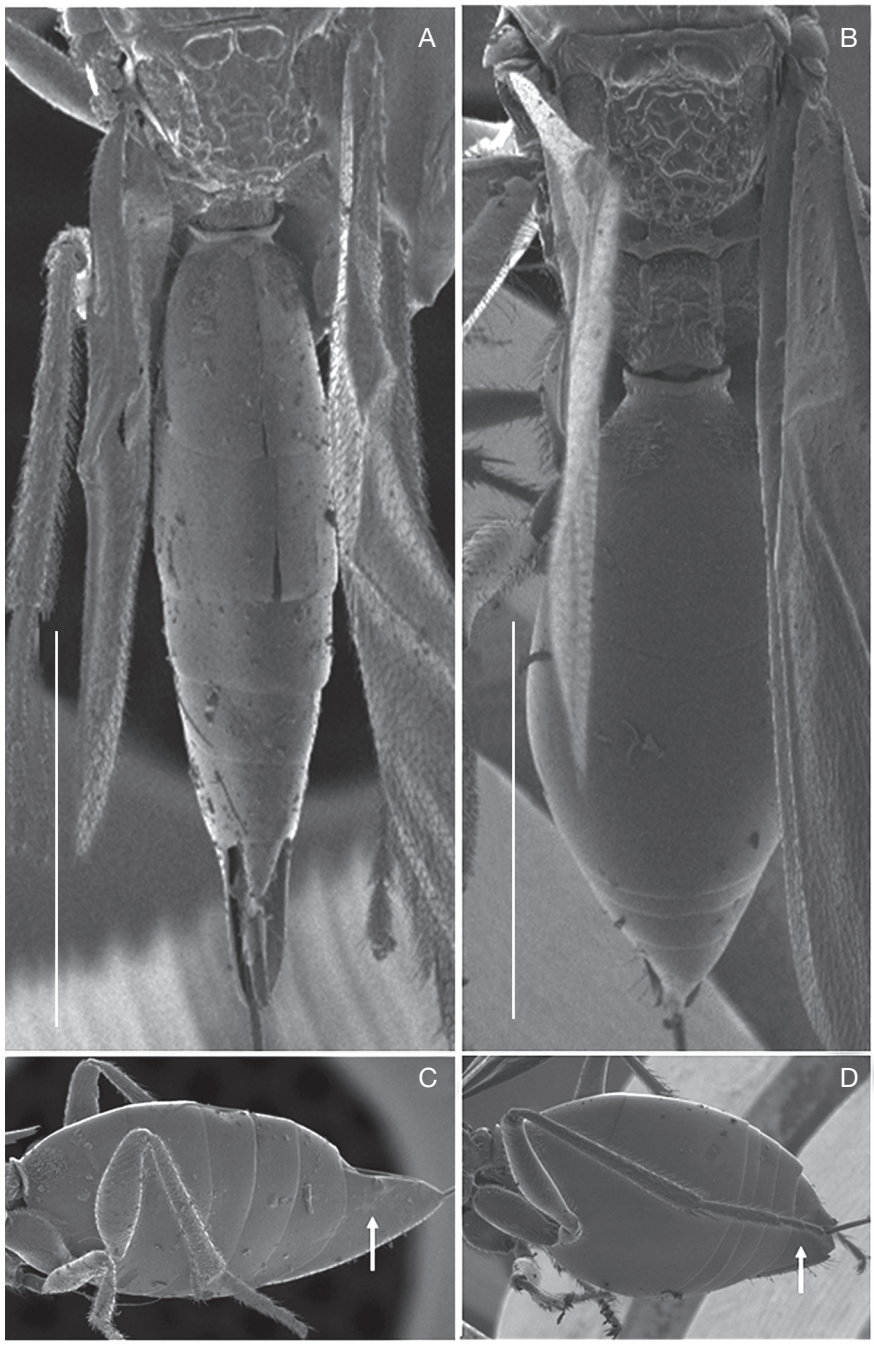

Fig. 1. — Metasomal morphology of females of *Amphithectus* Hartig, 1840 and *Sarothrus* Hartig, 1840: **A**, lectotype of *A. dahlbomi* Hartig, 1840 ♀, dorsal view of scutellum+metasoma; **B**, *S. tibialis* (Zetterstedt, 1838) ♀, dorsal view of scutellum+metasoma; **C**, lateral view of metasoma of *A. areolatus* Hartig, 1840 ♀; **D**, lateral view of metasoma of *S. tibialis* ♀. Scale bars: A, B: 1 mm. Arrows in C, D indicate seventh sternite.

was followed by Giraud (1860), Thomson (1862), Ronquist (1999), and Paretas-Martínez *et al.* (2012), among others. Nevertheless, Hartig's original spelling must be respected according to ICZN articles 32.5.1.

Amphithectus coriaceus n. sp.
(Fig. 2)

Type material. — Holotype ♀ (MNHN) with the following labels: "Reichenau, 1 juill." (handwritten), "Muséum Paris, *Amphitectus dahlbomii* Coll. Giraud" (white label), "Holotype *Amphithectus coriaceus* ♀ Paretas-Martínez & Pujade-Villar n. sp. design. JP-V-2012" (red label).

Etymology. — The specific name *coriaceus* (Latin) refers to the diagnostic character of this new species, the fine coriaceous sculpture in the head and mesoscutum.

Distribution. — Germany.

Diagnosis. — *Amphithectus coriaceus* n. sp. is distinguished from *A. areolatus* having coriaceous sculpture on head and mesoscutum (Fig. 2A-D), notauli completely defined and deep (wider in basal half; see Fig. 2B), and interfoveal carina long, extending till half scutellum (arrow in Fig. 2B).

Description

Length

Female: 3.75 mm. Male: unknown.

Head (Fig. 2A, C)

Surface coriaceous (Fig. 2A, C). Short setae uniformly distributed on frons, vertex and occiput, sparse on face. Area below each torulus clearly wrinkled. Clypeopleurostomal lines deep, strongly marked.

Antenna

Female 13-segmented; antennal formula: 6: 3(3): 6.5(x 2): 5.5(x 2.3): 5.5(x 2.6): 5: 5: 5: 5: 5: 5: 4.5: 4.5: 8. Placoid sensilla beginning on F3.

Forewings

Radial cell 2.5 times as long as wide.

Mesosoma (Fig. 2B-E)

Pubescence: all mesosoma covered with uniformly distributed short setae, but not densely. Pronotum: lateral areas of pronotum coriaceus, without carinae. Mesoscutum: completely coriaceus; notauli complete, deeper and wider in basal half; parapsidal lines clearly seen but superficial; antero-admedian lines clearly seen but superficial, reaching anterior one-third of mesoscutum; median mesoscutal impression deep but short, not reaching basal one-third of mesoscutum. Scutellum: interfoveal carina long, extending till half scutellum.

Biology

Unknown.

Remarks

One specimen collected by Giraud in Reichenau (Germany) and determined as *A. dahlbomi* (Giraud 1860: 53) is the holotype of *A. coriaceus* n. sp.; the other three specimens are true *A. areolatus*.

Amphithectus areolatus (Hartig, 1840)
(Fig. 3)

Sarothrus areolatus Hartig, 1840: 203, male.

Amphithectus dahlbohmii Hartig, 1840: 203, female, specific name misspelling (species dedicated to Dahlbom, not Dahlbohm), *lapsus calami*. Synonymised by Reinhard (1860: 227).

Amphitectus piceus – Dahlbom 1842: 6 *nomen nudum*.

Amphitectus dahlbomi – Giraud 1860: 53.

Amphithectus dahlbomii – Reinhard 1860: 227. Incorrect subsequent spelling.

Melanips fumipennis Giraud, 1860: 43, male. — Synonymised by Reinhard 1860: 227.

Type material. — *Sarothrus areolatus* Hartig, 1840: lectotype ♀ (deposited in ZSM) with the following labels: "201", "Golden triangle", "1", "leg. Prof. Leunis Hildesheim" (handwritten), "Lectotype *Sarothrus areolatus* Hartig, 1840, det. 1980 M. Sotherlung" (red label), "Lectotype" (round label blue in margin), "Lectotype of *Sarothrus areolatus*, det. N. D. M. Fergusson, 1983" (white label), *Amphitectus areolatus* Hartig, 1840, Paretas-Martínez & Pujade-Villar det-2012" (white label). *Amphitectus dahlbomi* Hartig, 1840: lectotype ♀ (deposited in ZSM) with the following labels: "Golden triangle", "Weld, 1931" (red label), "Voralpe und Steiermark, leg. Karsch" (handwritten), "4", "Lectotype" (round label blue in margin), "Lectotype of *Amphitectus dahlbomii*, det.

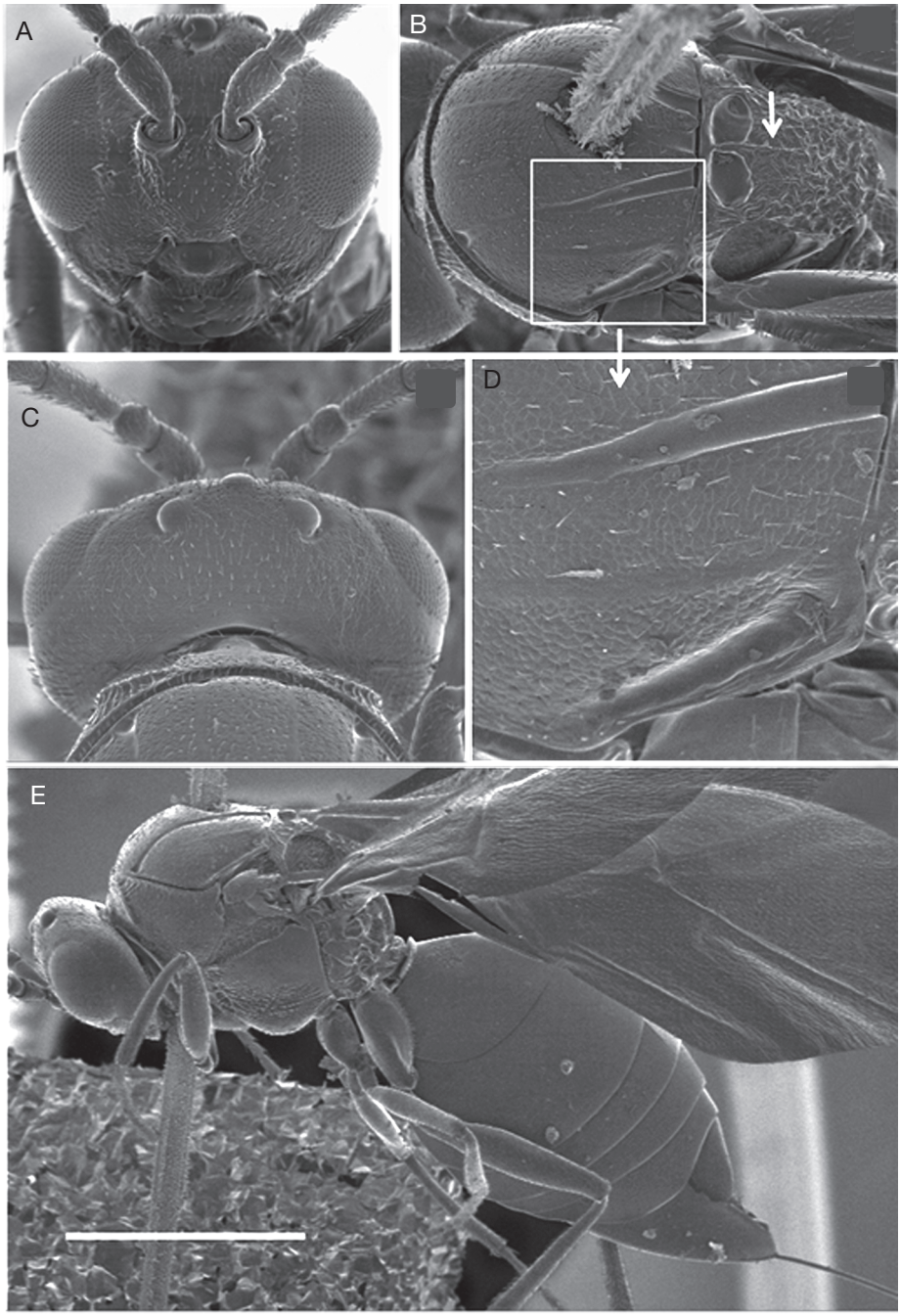

Fig. 2. — *Amphithectus coriaceus* n. sp.: **A**, head, anterior view; **B**, mesosoma, dorsal view (arrow indicates long interfoveal carina); **C**, head posterior view, and pronotal plate dorsal view; **D**, mesoscutum, detail of coriaceous sculpture; **E**, habitus ♀. Scale bar: 1 mm.

N. D. M. Fergusson, 1983" (white label), "=*Sarothrus areolatus*, det. N. D. M. Fergusson, 1983" (white label), "*Amphitectus areolatus* Hartig, 1840, Paretas-Martínez & Pujade-Villar det-2012" (white label). Paralectotype ♀ (deposited in ZSM, non conspecific) with the following labels: "*Amphitectus dahlbohmii* Hart." (handwritten), "Paralectotype" (round blue label in margin), "*Amphitectus dahlbomii*" = *Sarothrus areolatus*, det. N. D. M. Fergusson, 1983, Paralectotype" (white label), "*Amphitectus* sp, Paretas-Martínez det-2012" (white label).
Melanips fumipennis Giraud, 1860: holotype ♂ (deposited in MNHN) with the following labels: "Salzb." (handwritten), "*Saroth. areolatus* ♀ H." (handwritten), "*Melanips fumipennis*, Gir., ♂, *A. dalbomii*" (handwritten), "Muséum Paris, *Amphitectus dahlbomi* Coll. Giraud" (white label), "Holotype ♂ *Melanips fummipennis* Giraud, 1860" (red label), "*Amphithectus areolatus* ♂ Hartig, 1840, Pujade-Villar det-2012" (white label).

Additional material. — 1♂, 3♀: 1♀ "Reichenau" (handwritten), "*Saroth. areolatus* ♀ H." (handwritten), "Muséum Paris, *Amphitectus dahlbomi* Coll. Giraud" (white label), "*Amphithectus areolatus* ♀ Hartig, Paretas-Martínez & Pujade-Villar det-2012" (white label); 1♀ "Muséum Paris, *Amphitectus dahlbomi* Coll. Giraud" (white label), "*Amphithectus areolatus* ♀ Hartig, Paretas-Martínez & Pujade-Villar det-2012"; 1♂ & ♀ "gust." (handwritten), "Muséum Paris, *Amphitectus dahlbomi* Coll. Giraud" (white label), "*Amphithectus areolatus* Hartig, Paretas-Martínez & Pujade-Villar det-2012" (white label).

Distribution. — **Austria** (Hartig 1843: 419; Giraud 1860: 43). — **Finland** (Hellén 1958: 58). — **France** (Reinhard 1860: 228). — **Germany** (Hartig 1840: 203; Giraud 1860: 53; Reinhard 1860: 228). — **Holland and Switzerland** (Hellén 1958: 58). — **Poland** (Hartig 1843: 419). — **Russia** (Belizin 1928: 3). — **Scandinavia** (Dahlbom 1842: 6). — **Sweden** (Thomson 1862: 417). — **United Kingdom** (Cameron 1890: 168; Ferguson 1986: 27).

Diagnosis. — *Amphithectus areolatus* Hartig, 1840 is distinguished from *A. coriaceus* n. sp. lacking coriaceous sculpture (Fig. 3A, B), having notauli not completely defined, only clearly seen superficially in basal half (Fig. 3B), and interfoveal carina not extending till half scutellum (Fig. 3B).

Note

According to the article 33.3.1 of the ICZN for "Incorrect subsequent spellings" and 33.4 for "Use of *-i* for *-ii* and vice versa", after corrections of Reinhard (1960) – *dahlbomii* – and Giraud (1960) – *dahlbomi* – and following authors spelling (*dahlbomi* as Thomson [1862]; Cameron [1890]; Kieffer [1902], among others), the correct name of *Amphithectus dahlbohmii* is *Amphithectus dahlbomi*.

Redescription

Length

Female: 4.4-4.6 mm. Male: 3.3-3.5 mm.

Head (Fig. 3A)

Surface smooth, with uniformly distributed short setae on all areas. Area below each torulus not wrinkled or if so, very slightly. Clypeopleurostomal lines not strong, but clearly marked by a change of curvature on surface.

Antenna

Female: 13-segmented, antennal formula: 9: 2.5(x 2): 5.5(x 1.5): 4.5(x 2): 4.5: 4.5: 4.5: 4.5: 4: 4: 4: 4: 8. Placoid sensilla beginning on F2. Male: 14-segmented, antennal formula: 5: 2(x 2): 6.5(x 2.4): 5.5: 6: 6: 6: 6: 5: 5: 5. 5. 5. 9. Placoid sensilla beginning on F1. F1 very few modified, weakly excavate (Fig. 3C).

Forewings

Radial cell 2.5 times as long as wide.

Mesosoma (Fig. 3B)

Pubescence: pronotum and propodeum with uniformly distributed short setae, but not densely; mesoscutum with sparse setae. Pronotum: lateral areas smooth, without carinae. Mesoscutum: smooth, with piliferous points; notauli incomplete, only superficially seen in basal half; parapsidal and antero-admedian lines absent; median mesoscutal impression only slightly marked. Scutellum: interfoveal carina not extending till half scutellum.

Biology

According to Ferguson (1986: 27) the hosts are *Pegohylemyia gnava* (Meigen, 1826) and *Pegohylemyia sonchi* (Hardy, 1872) (Diptera: Anthomyiidae). Previously, Reinhard (1860: 228) comments: "in July and August both sexes are often collected together on Umbelliferae".

Remarks

The paralectotype of *A. dahlbomi* (♀, ZSM) lacks the head. This specimen may belong to a different

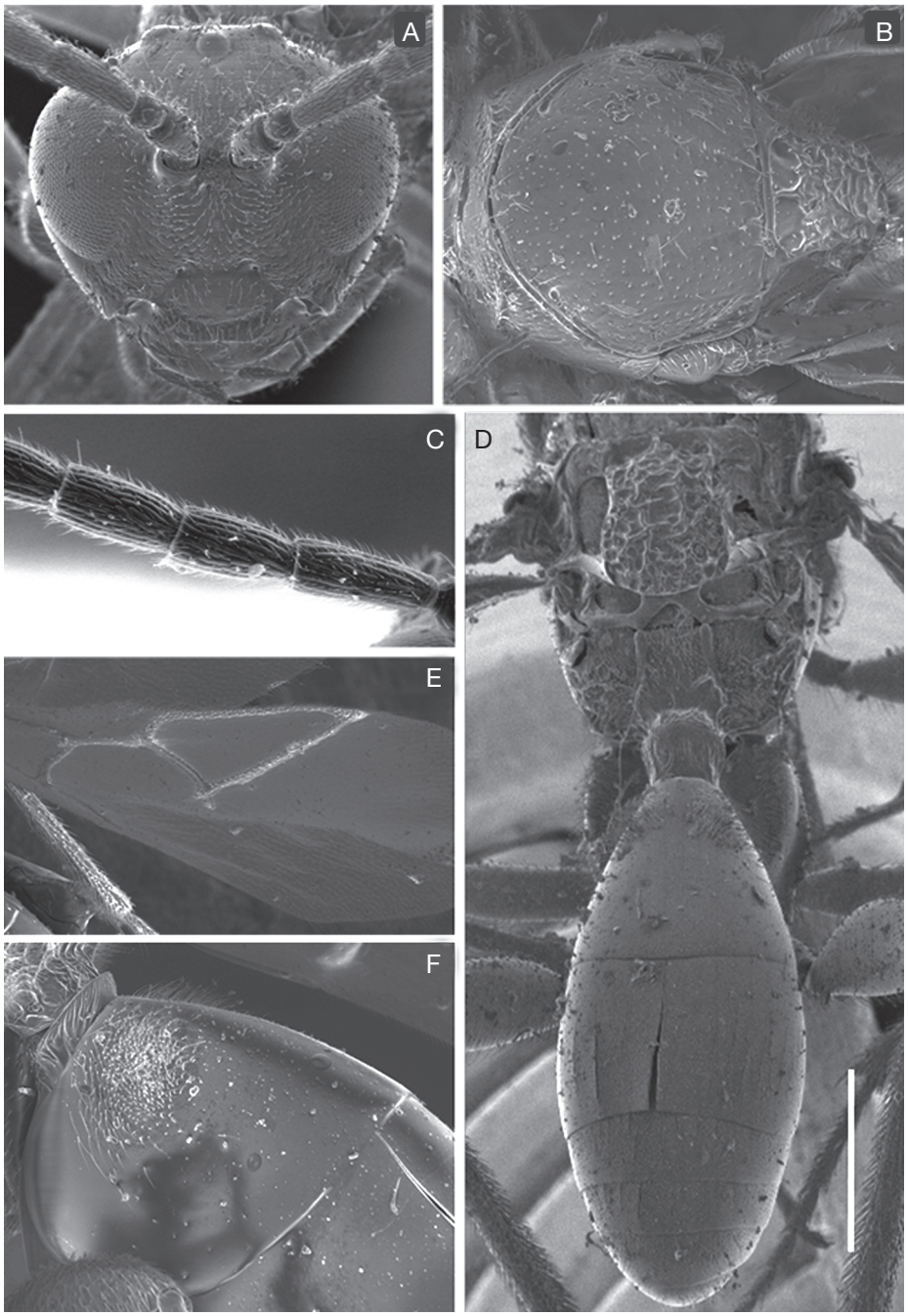

Fig. 3. — *Amphithectus areolatus* Hartig, 1840 (= *A. dahlbomi* Hartig). **A**, head, anterior view; **B**, mesosoma, dorsal view; **C**, F1-F3 ♂, dorsal view; **D**, ♂, dorsal view of scutellum+metasoma; **E**, forewing and radial cell; **F**, T2-T3 ♀, lateral view. Scale bar: 1 mm.

species than the lectotype, because notauli are completely defined and more complete. We consider this specimen not belonging to *A. coriaceus*, because the mesoscutum is smooth with piliferous points (not coriaceous) neither belonging to *A. areolatus* because the notauli are complete (Fig. 4F), but we cannot describe a new species without the head (Fig. 4E).

Discussion

As for many small-bodied Hymenoptera, cynipoid biodiversity is certainly under-estimated, and much remains to be learned of their systematics. This lack of knowledge is particularly acute in several figitid subfamilies, among them the Figitinae with several genera known only from the type species. Until now, *Amphithectus* was only known from the type species *A. areolatus*. Here we redescribe *A. areolatus*, and describe *A. coriaceus* n. sp., which is characterised by having fine coriaceous sculpture. This new species has the same female metasomal morphology as *A. areolatus*. The female metasoma of *Amphithectus* is very different from that of *Sarothrus*, genus to which *Amphithectus* has been previously considered as synonym (Reinhard 1860; Kieffer 1902; Dalla Torre & Kieffer 1910; Weld 1952; Fergusson 1986). Metasomal morphology is a very important character within Figitidae in order to distinguish different genera and even different subfamilies. Among Figitidae, two species of a same genus always have the same metasomal morphology. Nevertheless, in *Trybliographa* Förster, 1869 (Figitinae: Eucoilinae) is one particular species-group, the "*melanoptera* group" has a similar hypertrophy of the female metasoma as *Amphithectus* has (Forshage pers. com.). The shape in *Amphithectus* could be an apomorphic hypertrophy (probably to facilitate housing a much longer ovipositor, or possibly to be able to insert the entire metasoma into some narrow space during oviposition) derived from a more plesiomorphic state in other *Sarothrus* (Forshage pers. com.). However, Forshage (pers. com.) considers that this character is important enough to consider *Amphithectus* as a valid genus separated from *Sarothrus* because both genera can also be distinguished by the wing coloration and the facial sculpture (these characters useful in both sexes).

According to Pujade-Villar *et al.* (2013), the morphological revisions of *Amphithectus* and *Sarothrus* (in process) are needed to make a phylogenetic study of the Figitinae + Aspicerinae including all genera of both subfamilies in order to elucidate the placement and relationships of genera with very "particular" morphology like *Lonchidia*, *Melanips*, *Nebulovena*, *Ferpereira*, *Amphithectus* and *Sarothrus*.

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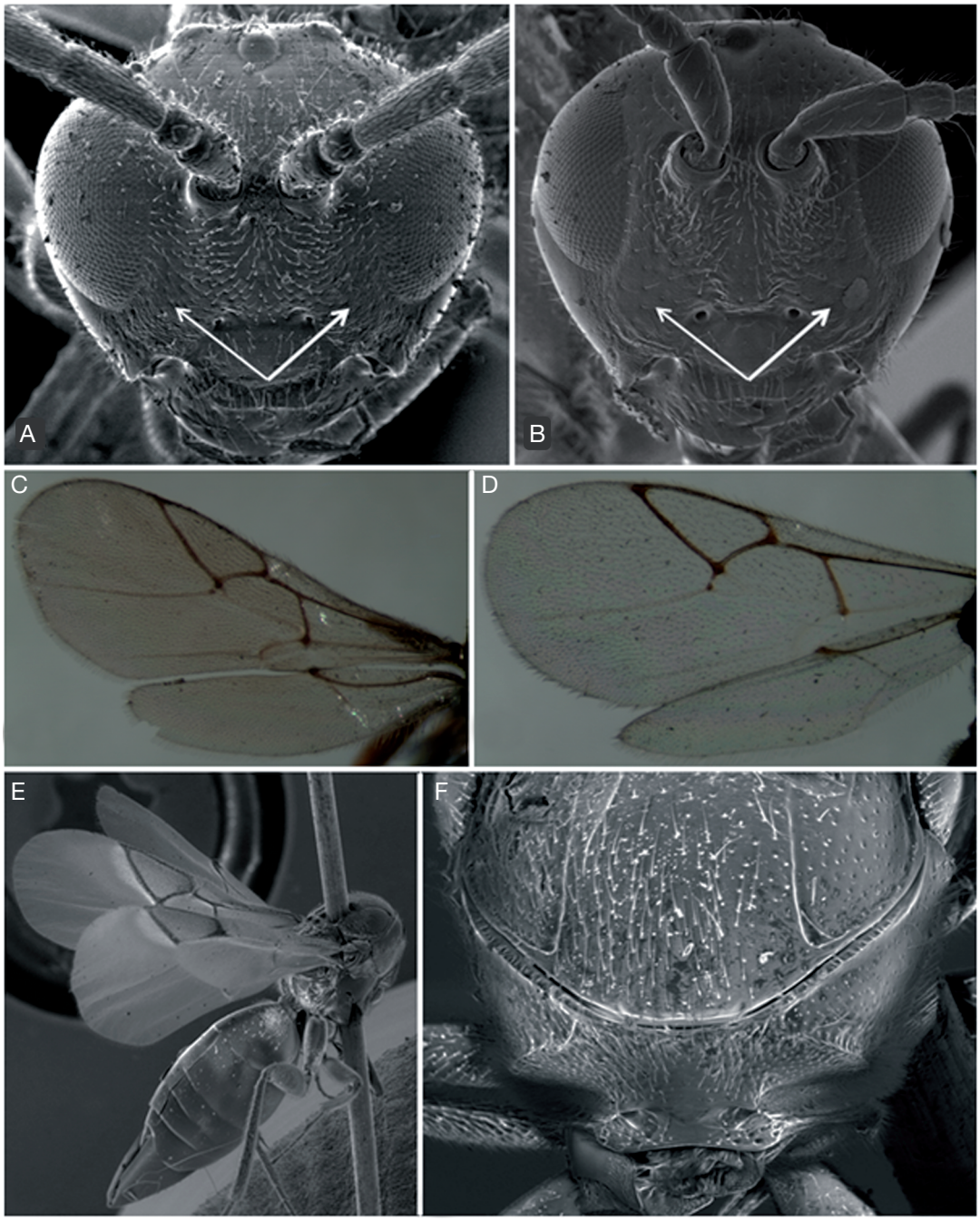

Fig. 4. — Diagnostic characters of *Amphithectus* and *Sarothrus* (**A**-**D**) and paralectotype not conspecific of *A. dahlbomi* (**E**,**F**): **A**, head in anterior view of *A. areolatus*; **B**, head in anterior view of *S. tibialis*; **C**, forewing of *A. areolatus*; **D**, forewing of *S. tibialis*; **E**, habitus of paralectotype not conspecific of *A. areolatus* (= A. *dahlbomi* Hartig); **F**, detail of anterior part of mesosoma of paralectotype not conspecific of *A. areolatus.*

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