

Taxonomic status of *Sterictiphora sorbi* Kontuniemi (Hymenoptera: Argidae)

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This article describes several diagnostic characters to positively distinguish *Sterictiphora sorbi* Kontuniemi, 1966 from *S. geminata* (Gmelin, 1790) and from *S. longicornis* Chevin, 1982. *S. sorbi* is removed from synonymy with *S. geminata*.

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1. Introduction

Sterictiphora Billberg, 1820, is a Holarctic argid genus, which contains ca. 30 Palaearctic and six Nearctic species. The taxonomy of the Palaearctic species was revised by Koch (1988). Since then, Wen *et al.* (1998) and Wen & Wei (1998) have described ten new species.

Kontuniemi (1966) reported *S. sorbi*, reared from larvae, found feeding on *Sorbus aucuparia* in northern Finland. Koch (1988) considered this species a junior synonym of *S. geminata* (Gmelin, 1790) with minor reservations, after having examined the male allotype of *S. sorbi*. Liston (1995) agreed with this conclusion.

Viitasaari (1990) was not familiar with the paper of Koch. He considered *S. sorbi* a distinct species and discussed the diagnostic differences of *S. sorbi* and *S. geminata*. The paper included illustrations of the head of both sexes in anterior view, the lancets and the male genitalia. Six *S. sorbi* specimens, all of them from Finland, were listed. Unfortunately, Viitasaari's paper was in Finnish.

One exceptionally large female specimen of the genus *Sterictiphora* was captured in Nilsjä, Finland, 11 June 1994 by the author JN (Nuorteva & Nuorteva 2003). Its diagnostic characters are identical with the holotype specimen of *S. sorbi*, and it is distinctly different from the specimens of *S. geminata* available to the authors. This finding inspired the process of clarifying the taxonomy of these species.

2. Material and methods

The descriptions are based on the examination of the following specimens.

Sterictiphora sorbi (all specimens from Finland). Holotype female in coll. M. Viitasaari (Helsinki): Ks, Kuusamo, e larva 10 October 1960, Sorbus, leg. T. Kontuniemi. Allotype male in coll. Finnish Museum of Natural History (FMNH): Kuusamo, 15.5.1961, leg. Kontuniemi; Allotypus, sp. n. det. Kontuniemi 1965. Mus. Zool H:fors. Spec.typ. No 5630 *Sterictiphora sorbi* Kont.; *Sterictiphora geminata* (Gmelin) det. F. Koch 87. Paratype male in coll. E. Kangas in Dept. Applied Biology, University of Helsinki (DABUH): U: Oulunkylä, 21 May 1945, leg. I. Kangas. One female PH: Keuruu, 17 June 1945, leg.

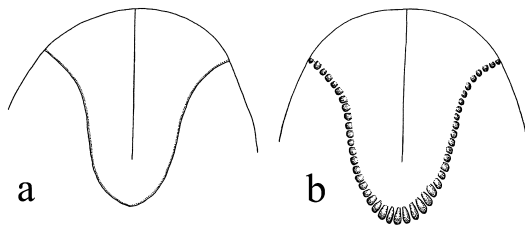


Fig. 1. The groove between median and lateral mesocutal lobes. — a. *S. sorbi*. — b. *S. geminata*.

M. Pohjola in coll DABUH. One female PS: Nilsii, Syvärinranta (63°19'N, 27°59'E) 11 June 1994 leg. Jouko Nuorteva, in coll. J. Nuorteva.

S. geminata. Specimens from Finland: two females in coll. FMNH. 13 females and 4 males in coll. DABUH. One female and one male in coll. E. Kangas. One female in coll. M. Viitasaari. Five females and two males in coll. MN and JN.

From England, one male in coll. British Museum: BM Type Hym. 1. 556. BM type *Cryptus pallipes* (Leach, 1817). London Coombe Wood. Leach coll. type of *pallipes*. *Sterictiphora geminata* (Gmelin) male, det. F. Koch.

Sterictiphora longicornis Chevin, 1982. All specimens from Germany in coll. German Entomologic Institute (Eberswalde): Three females, D: Baden-Württemberg, 1 May 1987, leg. Hilpert & Schmidt, det. S. M. Blank. One male, D: Thür: Südharz, 27–31 May 1996, leg. A. & M. Taeger, det. A. Taeger. Two males, Germania, G.D.R. Nordhausen, 11 and 27 May 1980, leg. A. Taeger, det. F. Koch and M.S. Blank.

Structural terminology follows Viitasaari (2002).

3. Results

3.1. *S. sorbi*

The malar space is longer; the length is equal to the lateral ocellus diameter. Punctures of mesepisternum are smaller and shallower, not crater-like. The vertex area is rather flat and polished with scarce punctures. The groove between median and lateral mesocutal lobes is without distinct punctures (Fig. 1a). The sutures of lancet are more slanting; their ventral end is often distinctly bent (Fig. 2a). The serrulae are without distinct denticles. Fig. 3a shows the penis valve of the male genitalia.

The host plant of *S. sorbi* is *Sorbus aucuparia* (Kontuniemi 1966).

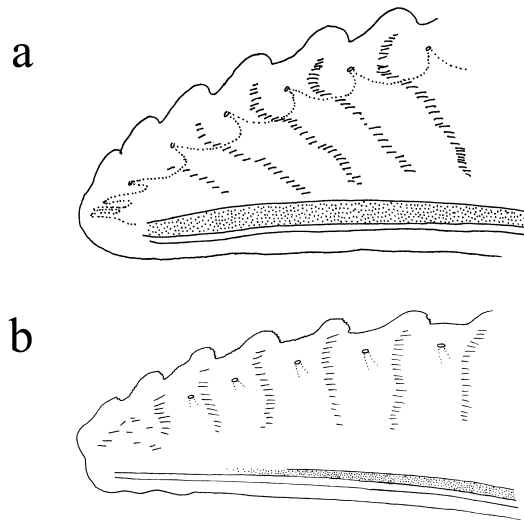


Fig. 2. The apex of the lancet, holotype specimen. — a. *S. sorbi*. — b. *S. geminata*.

3.2. *S. geminata*

The malar space is shorter, being approx. half of the diameter of the lateral ocellus. Punctures of mesepisternum are larger and crater-like. The vertex area is more convex; the area from the lateral ocelli towards compound eyes are wrinkled or densely punctured. The groove between median and lateral mesocutal lobes contains a row of distinct punctures (Fig. 1b). The sutures of lancet are rather straight; their ventral end is not distinctly bent (see Fig. 2b). The serrulae contain distinct denticles. Fig. 3b shows the penis valve of the male genitalia.

The host plant of *S. geminata* is *Rosa* (Kontuniemi 1960, Liston 1995).

3.3. *S. longicornis*

S. longicornis is one of the three black *Sterictiphora* species in Europe. The most distinct difference, compared to the two above-mentioned species, is the shiny mesepisternum with very small punctures. The length of the malar space is shorter than the diameter of the lateral ocellus. The vertex area from the lateral ocellus towards

compound eyes is wrinkled or densely punctured. The groove between median and lateral mesoscutal lobes is smooth.

4. Discussion

The material of *S. geminata*, examined by Koch (1988), included three specimens with the punctured and pubescent mesepisternum; Koch recognized also intermediate forms. Therefore, contrary to Kontuniemi (1966), he did not accept the punctuation and pubescence on the lower part of mesepisternum as a diagnostic character for *S. sorbi*. Coll. DABUH includes one male specimen (EH: Pälkäne, ex larva on *Rosa* sp. cult. 1990/1989 by J. Kangas) with a higher amount of hairs than normally detected in *S. geminata*. Hence, it can be concluded that punctured and pubescent mesepisternum are unreliable characters to distinguish *S. sorbi* and *S. geminata*.

According to Koch (1988), also *Hylotoma costata* Fallén is a synonym to *S. geminata*. He has examined the holotype female in the University of Uppsala. Unfortunately, we did not receive that specimen, and neither the specimen of *Cyphona geminata* var. *alpina* Strobl., 1895 from Stiftsmuseum Admont.

The female of *S. sorbi* closely resembles *S. aurihirsuta* Togashi, which is described from Japan (Togashi 1968). Koch (1988) examined two females of *S. aurihirsuta*, including the holotype. According to Koch's description, the structures of lancets resemble each other, but in *aurihirsuta* the ventral parts of suturae are strongly bent and the anterior margins of serrulae are with small, saw-like denticles. In *S. aurihirsuta*, there is a clear extension in the posterior margin of the mesoscutellum, but in *S. sorbi* the margin is simply curved.

We conclude that we found several diagnostic characters to safely distinguish *Sterictiphora sorbi* from *S. geminata* as a distinct species.

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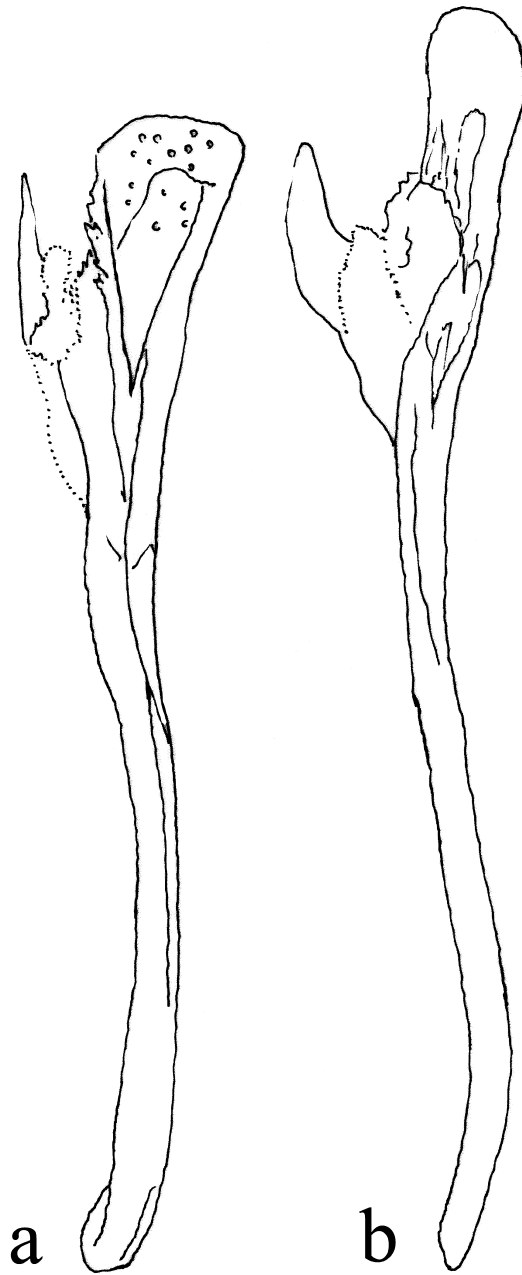


Fig 3. Penis valve. — a. *S. sorbi*. — b. *S. geminata*. Modified from Viitasaari (1990).

specimens of their collections. We are grateful to Andreas Taeger for sending material of *S. longicornis* and for his valuable comments on the manuscript. We also thank Matti

Viitasaari for lending us the type specimen of *S. sorbi* and pictures of male genitalia, and for his help in translating this paper.

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