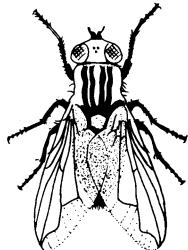


# *Fannia stigi* n.sp. from Scandinavia (Diptera: Fanniidae)

KNUT ROGNES

Ent. scand.



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*Fannia stigi* n.sp. is described from the subalpine region of SW Norway and northern Sweden. It belongs to the *spathiophora* subgroup of the *postica* species-group. It is compared with western Palaearctic members of this subgroup. A lectotype is designated for *F. bisetosa* Ringdahl, 1926, whose synonymy with *F. aethiops* Malloch, 1913 is confirmed.

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During a brief interval of sunshine on an otherwise rainy and cold day I recently netted a male specimen of *Fannia* Robineau-Desvoidy, 1830 which was sitting on a large boulder in an area of several large stones covering a brook in the subalpine region of the mountains N of Lysefjorden, SW Norway. Subsequently I was able to study two male specimens captured at Abisko in northern Sweden, at the opposite end of the Scandinavian mountain range and almost 10° further to the north, which are clearly conspecific with the Norwegian specimen. All specimens belong to a new species which is described and compared with western Palaearctic relatives below.

## *Fannia stigi* n.sp. Figs. 1–19.

*Type locality:* Norway, Rogaland fylke, Strand kommune, at Husafjellet 1 km E of Prekestolhytta, 420 m a.s.l., in subalpine birch forest mixed with a few *Pinus sylvestris* and *Populus tremula*.

*Type material: Holotype:* ♂ labelled (1) "N:Ry:Strand, mot Prekestolen, UTM: 32V LL 366 427, 7.VI.1981, 420 moh, Knut Rognes leg." (2) (red label) "Fannia stigi n.sp. ♂ Holotypus K. Rognes det. 1981". In author's collection. — *Paratypes:* 2 ♂♂ labelled (1) "Abiskojojk NE of Turiststation" (2) "North Sweden, Torne Lappmark, Abisko, 1.VIII.1970, A.C. and B. Pont" (3) "Fannia ?aethiops Mall. ♂ A.C. Pont det. 1972" (4) (red label) "Fannia stigi n.sp. ♂ Paratypus 1 (or 2) K. Rognes det. 1981". Paratypus 1 has been dissected and carries an additional label (5) "Genitalprep. 52, K. Rognes 3.IX.81". The dissected parts are stored in glycerol in a glass microvial on a separate pin labelled (1) (red label) "Fannia stigi n.sp.

♂ Paratypus 1 K. Rognes det. 1981" (2) "Genitalprep. 52, K. Rognes 3.IX.81". In BMNH.

*Derivation of name:* After my youngest son Stig.

*Diagnosis:* Belongs to the *spathiophora* subgroup of the *postica* group of *Fannia* as defined by Chillcott (1961) with the following diagnostic combination of characters: Front tibia without setae or setulose hairs on shaft; ventral pubescence of apical half of mid tibia 3/4 to fully as long as tibial diameter; mid metatarsus at base with distinct tooth-like crest ventrally, as high as or higher than metatarsus at base; apical half of hind femur with 6–8 *pv* setae which are uniserial, 1.5× as long as femoral diameter apically, and becoming gradually shorter and more posterior in position basad; fifth sternite, cercal plate, surstyli, hypandrium and bacilliform process of unique structure. The species is immediately recognizable by the shape of the apex of the cercal plate (Figs. 15–17).

## Description

### Male

*Head.* Frons at narrowest point 2× as broad as anterior ocellus. Eyes bare. Ocellars as strong and long as strongest *ori* (Fig. 1). Postocular setae fine, at vertex 2/3×–3/4× as long as ocellars. Occiput bare in upper part. Parafrontals with thick silvery dusting in front half, golden brownish in posterior half. 7–8 *ori*. Between uppermost *ori* and anterior ocellus a short gap. Parafrontalia outside *ori* bare. Interfrontal stripe black, bare, appearing greyish yellow dusted in front view; on middle 1/3 of frons reduced to linear dimensions because of touching parafrontalia. Parafacialia bare, with thick silvery polli-

nosity; opposite base of antennal segment 2 about half as broad as antennal segment 3, tapering downwards to hardly  $1.5 \times$  the width of the base of arista (opposite tip of antennal segment 3). Antennal segment 3  $1.8 \times$  as long as wide measured along medial surface. Arista  $2 \times$  as long as antennal segment 3. Palpi black, as long as antennal segment 3 (latter measured along inner surface), slightly dilated apically, with rather long hairs.

**Thorax.** Shining brownish black; seen from in front very thinly and evenly brownish dusted. No vittae discernible from any angle. Humerus, notopleuron, lateral parts of suture, postalar callus, area just in front of scutellum, and apex of scutellum with somewhat thicker brown pollinosity clearly visible from behind. Pleura more greyish, especially around propleural depression. *Acr* setae biserial; a short middle row of 2 small *acr* setae present far behind suture; distance between *acr* rows in front of suture less than distance between *acr* and *dc* rows. 2 *pra* on left side, anterior one is  $0.4 \times$  as long as posterior *npl* seta, posterior one shorter and weaker than anterior one. A single *pra* seta (the anterior one) on right side. 2 propleural setae, front one shorter; 2 substigmatical (prostigmatal) setae, lower one shorter. *Npl* setae equal in length, front one stronger. Sternopleuron without spines. Scutellum with a single pair of fine preapical discal setae on disc and 3–4 short setulose hairs at each basal corner.

**Legs.** Ground colour mainly black. Fore coxa without spines. Fore tibia with basal  $1/4$  yellow; without setae or setulose hairs on shaft. Mid coxa without spines. Mid femur as in Figs. 2–5; *a* surface with a full row of 14–16 setae (not shown in the figures) which are shorter than femoral diameter and become slightly stronger apically. Mid tibia in dorsal aspect gently curved backwards in basal half, which is twisted and has the polished and flattened *v* surface facing anteromedially (tibia imagined in vertical position); distal dilated half with diameter at least  $2 \times$

that of basal part at narrowest point; its *v* surface with erect, pluriserial pubescence as shown in Figs. 6–7; single *ad* and *pd* setae present; a single *d* preapical seta present which is displaced slightly forwards. Mid metatarsus with a strong *v* crest at extreme base shaped as in Figs. 6–7. Hind coxa bare behind. Hind femur as in Figs. 8–10; otherwise *v* surface, lower  $2/3$  of *p* surface above *pv* setae, and *a* surface above *av* seta completely bare; *p* surface also with semi-erect setulae in a row along upper margin. Hind tibia as shown in Figs. 8–9; no *pv* apical seta differentiated.

**Wings.** To the naked eye membrane smoky on the area anterior to *m<sub>1</sub>* and beyond *sc. r-m* at a level opposite middle of costal sector between exit of *sc* and *r<sub>1</sub>*. Section of *m<sub>1</sub>* between *r-m* and *m-m*  $1.5 \times$  longer than *m-m*. Shape of squamae as in Fig. 11. Upper squama yellowish brown, like basal part of wing membrane. Lower squama brown with dark brown rim. Haltere brownish yellow with dark brown patches on knob; base of stalk brown.

**Abdomen.** Wholly black in ground colour. Each of tergites 1+2, 3 and 4 brownish grey dusted with very narrow spots as shown in Fig. 12; tergite 5 somewhat contrasting ash grey dusted from certain points of view, without trace of black spot. Sternite 1 with 4–5 rather long setulae on each side.

**Terminalia.** As shown in Figs. 13, 15–19.

Size. Total length 5 mm.

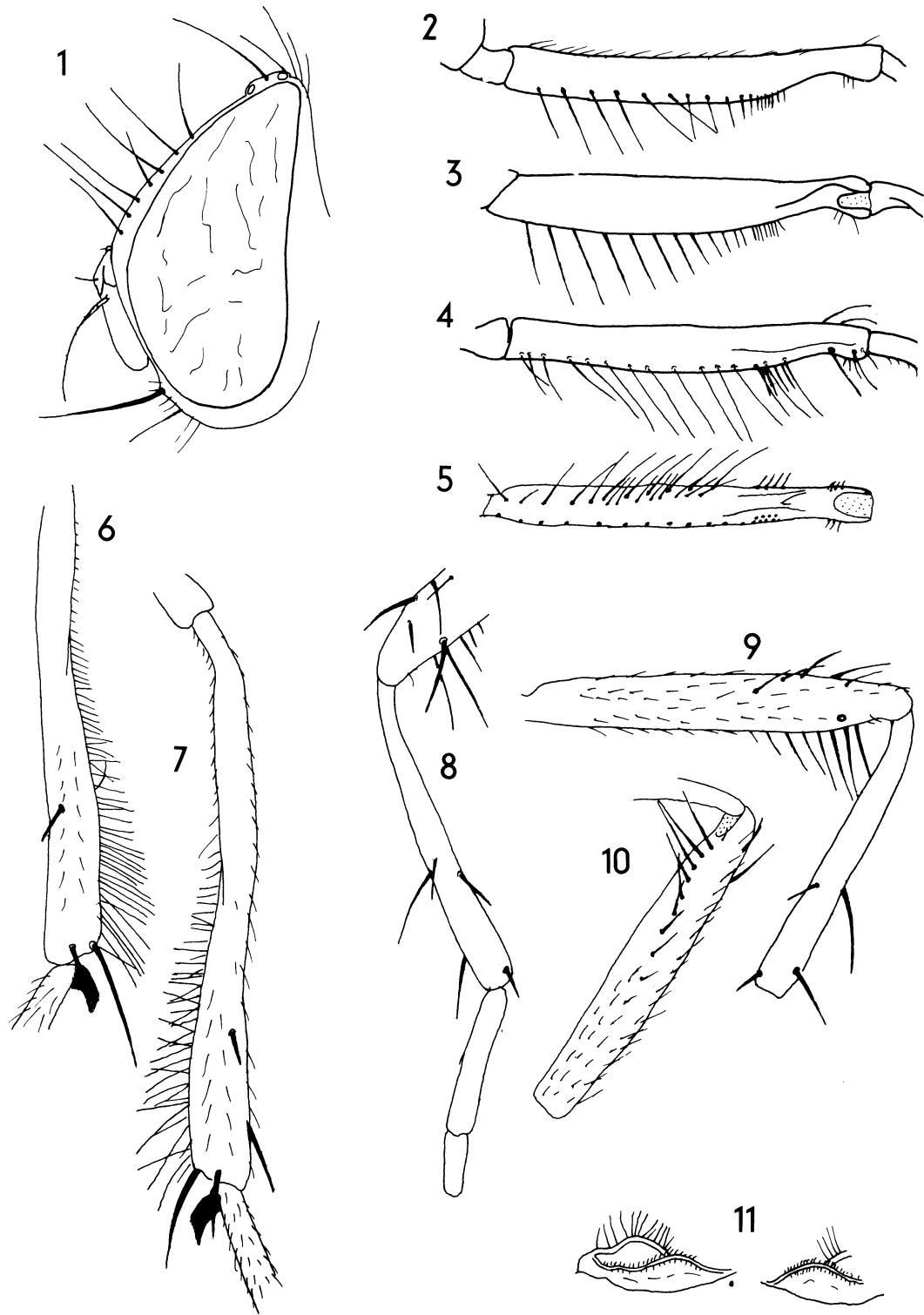
#### Variations

The description above is based on the holotype. The paratypes differ mainly as follows.

**Head.** Occiput on each side with 2–3 small setulae in upper part (paratype 2). Parafrontals pure white dusted, at most slightly greyish and less glistening in upper half (both paratypes). Interfrontal stripe appearing pure white dusted in front view (both paratypes). **Thorax.** Thin grey pollinosity on scutum in front of scutellum when

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Figs. 1–11. *Fannia stigi* n.sp. Holotype. — 1. Head in profile. — 2. Left mid femur, anterior view, *av* setae. — 3–5. Right mid femur. — 3. Posteroventral view, *av* setae. — 4. Posterodorsal view, *p* setae. — 5. Ventral view, *pv* setae. — 6. Left mid tibia and base of metatarsus, posterior view. — 7. Right mid tibia and base of metatarsus, posterior view. — 8. Right hind femur, apical part, right hind tibia and base of tarsus, anterior view. — 9. Left hind femur and tibia, anterior view. — 10. Left hind femur, posteroventral view, *pv* setae. — 11. Squamae, left (left) and right, from below.



seen from behind (paratype 1); scutum subshining black in front of scutellum when seen from behind (paratype 2). 2 *pra* setae on right side (paratype 1); 1 *pra* seta (the posterior one) on right side (paratype 2). *Legs.* Ground colour brown translucent, sometimes rather dark (both paratypes). *Wings.* Membrane paler than in holotype (both paratypes). Lower squama projecting as much as upper (paratype 1). Upper and lower squamae yellow (both paratypes). Haltere yellow with brown patches (both paratypes). *Abdomen.* Tergites 1+2, 3 and 4 ash grey dusted (both paratypes); spots on tergites 1+2, 3 and 4 indistinctly delimited, broader than in holotype (both paratypes); tergite 4 very thinly dusted and tergite 5 almost not dusted, subshining (paratype 2). Colour of dusting on tergite 5 not contrasting with that on other tergites (paratype 1). *Terminalia.* Sternite 5 (Fig. 14) with no single seta conspicuously stronger than other ones in the external row of stronger setae along each lobe (both paratypes).

Female. Unknown.

#### Comparison with related species

Of the known Palaearctic members of the *postica* group, *F. postica* (Stein, 1895) and *F. ringdahiana* Collin, 1939 have two or more *av* setae on the hind femur and therefore belong to Chillcott's (1961:44) *postica* subgroup. Note that Chillcott himself (1961: 222) misplaced *ringdahiana* in the *spathiophora* subgroup. *F. aethiops* Malloch, 1913, *F. spathiophora* Malloch, 1918, *F. umbratica* Collin, 1939 and *F. umbrosa* (Stein, 1895) have only one such seta and belong to Chillcott's (1961:44) *spathiophora* subgroup, which must also be the case with *F. ardua* Nishida, 1976: 135 from Japan. It is probable that *F. gotlandica* Ringdahl, 1926 from Sweden and Great Britain (Collin 1958: 89) and *F. coculea* Nishida, 1975: 368 from Taiwan also belong to this subgroup, but I will not take them into account in the following. The western Palaearctic members of the *spathiophora* subgroup will now be compared with *F. stigi* n.sp.

*Fannia aethiops* was only tentatively synonymized with *F. bisetosa* Ringdahl, 1926 by Chillcott (1961: 120) as he had not seen Ringdahl's own material. After having examined the syntypic series and other material of Ringdahl's

species I have designated a lectotype for *F. bisetosa* (see below) and can confirm its synonymy with *F. aethiops*.

*F. aethiops* differs from *F. stigi* n.sp. in the following respects.

*Head.* No gap between uppermost *ori* and ocellar triangle. Parafrontalia rather broad. Parafacialia also rather broad, opposite base of antennal segment 2 3/4 to fully as wide as antennal segment 3, at lower end (opposite tip of antennal segment 3) about 0.5× as broad as the latter. (In Eastern Nearctic material the parafrontalia and parafacialia are narrower than indicated.) *Legs.* *av* setae at basal 2/3 of mid femur shorter than in *stigi*, about as long as femoral diameter. Pubescence on *v* surface of distal half of mid tibia 1/2–2/3 as long as tibial diameter. Crest at base of mid metatarsus very weak or non-existent, at most 1/3× as high as metatarsus at base. Hind femur with 2–6 *pv* setae in apical half. Hind tibia with a distinct *pv* apical seta. *Terminalia.* As shown by Chillcott (1961). Bacilliform process (not figured by Chillcott) as shown in Fig. 20.

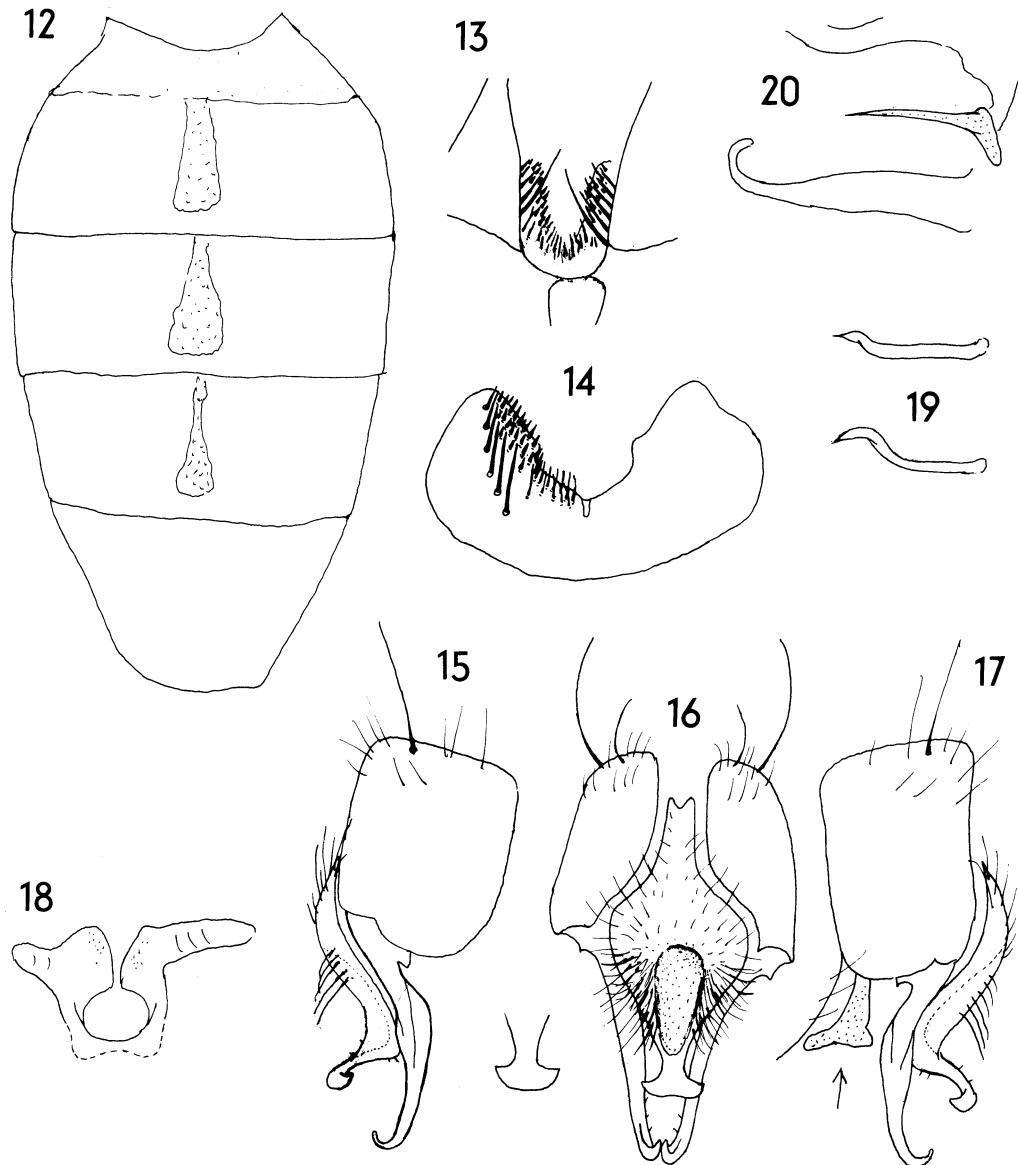
*Fannia spathiophora* differs from *F. stigi* n.sp. in the following respects.

*Legs.* Fore tibia with long fine *pv* setae in apical 1/2–2/3. Mid tibia in basal half with a node-like projection on *pv* side; pubescence on *v* surface of apical half 2/3× as long as tibial diameter; long *v* apical setae present which are curled over at tips; crest at base of mid metatarsus fine, conical and needle-like, as long as height of metatarsus at base. *Terminalia.* As shown by Hennig (1955, as *nodulosa* Ringd.) and Chillcott (1961).

*Fannia umbratica* differs from *F. stigi* n.sp. in the following respects.

*Head.* No gap between uppermost *ori* and ocellar triangle. *Legs.* Crest at base of mid metatarsus smaller than in *stigi*. Hind femur with 10–11 *pv* setae in a single row over slightly more than apical half. Hind tibia with or without a *pv* apical seta. *Wings.* Knob of haltere very dark brown. *Terminalia.* As figured by Collin (1939: 145) and Fonseca (1968).

*Note.* Both Collin and Fonseca give the number of *pv* setae on hind femur as 5–6. This may apply to the male from Aviemore, Scotland (26.V.1934, Collin leg.) which I have not seen, and on which Collin (1939: 145) says that his description was based.



Figs. 12–20. — 12–13, 15–19. *Fannia stigi* n.sp. Holotype. — 14. *F. stigi* n.sp. Paratype 1. — 20. *F. bisetosa* Lectotype. — 12. Abdomen, dorsal view. — 13–14. Sternite 5, ventral view — 13. In situ. — 14. Glycerol preparation. — 15–17. Epandrium, surstyli and cercal plate. — 15. Right lateral view. — 16. Ventral view. Inset: apex of cercal plate, posteroventral view. — 17. Ditto, and hypandrium (arrow), left lateral view. — 18. Hypandrium, anterior view (cf. arrow in Fig. 17). — 19. Bacilliform processes. — 20. Right bacilliform process (stippled).

*Fannia umbrosa* differs from *F. stigi* n.sp. in the following respects.

**Legs.** av setae in basal half of mid femur of even length, shorter than in *stigi*, about as long

as femoral diameter; *p* setae conspicuously bent over at tips. Hind femur with a row of 10–14 *pv* setae in apical half, those in basal half of row biserial, those in distal half uniserial, setae about

as long as femoral diameter, of even length, and with no tendency to becoming posterior in position basad. Hind tibia with *pv* apical seta. *Wings.* Lower squama rather large, projecting as much as or beyond upper squama. *Terminalia.* As figured by Collin (1939: 143), Hennig (1955) and Fonseca (1968). Hypandrium laterally with a small ventrally directed pointed process close to apex of each bacilliform process (not figured by above authors).

#### *Material examined for comparative purposes*

*Fannia aethiops* Malloch, 1913. U.S.A. (Alaska) 3♂♂ 3♀♀; Canada (Yukon Territory, Quebec) 4♂♂ 4♀♀. In my own collection. Sweden (Torne Lappmark) 2♂♂ 3♀♀. In CNC. *Fannia bisetosa* Ringdahl, 1926. Syntypic series: Sweden, Torne Lappmark, Abisko 2♂♂ 30.VI.1918 1♂ 2.VII.1918 (O. Ringdahl.) One of the males from 30.VI. has been dissected by me. This specimen is labelled and hereby designated as lectotype, and the other two males as paralectotypes. The lectotype carries the following labels: (1) "Abisko 30.6-18" (2) "Typ" (in Ringdahl's handwriting) (3) "1981 676" (4) "Genitalprep. 51 K. Rognes prep. 12.VIII.81" (5) (red label) "Fannia bisetosa Ringd., 1926 Lectotypus K. Rognes 7.XI.1981". The dissected parts are stored in glycerol in a glass microvial on a separate pin labelled (1) "Fannia bisetosa Ringd. ♂ Abisko 30.VI.1918" (2) "Genitalprep. 51 K. Rognes prep. 12.VIII.1981" (3) (red label) "Fannia bisetosa Ringd., 1926 Lectotypus K. Rognes 7.XI.1981".

Other material: Sweden, Jämtland, Vallbo 1♂ 27.VI.1935 (O. Ringdahl). All Museum of Zoology, Lund, Sweden. *Fannia spathiphora* Malloch, 1918. Canada (Alberta) 1♂. Austria (Tirol) 1♂. In BMNH. *Fannia umbratica* Collin, 1939. Scotland, Inverness-shire, Loch Garten 2♂♂ 21.V.1934 (C. J. Wainwright). Labelled as forming part of the syntypic series of three specimens. In BMNH. *Fannia umbrosa* (Stein, 1895).

Norway (Vest-Agder, Rogaland) 5♂♂. In my own collection.

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