Studies on the species of Fanniinae (Diptera: Muscidae)
from Japan. IV
Five new and two newly recorded species
of genus Fannia from Japan

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Abstract: Five new species belonging to the genus Fannia from Japan are
described, and the genital structure of each species is represented in this paper.

Fannia barbata (STEIN) and F. speciosa (VILLENUEVE) are newly recorded from Japan.
The first instar larvae were found in the ovipositor of two specimens of Fannia fulgida
sp. nov.

Fannia fulgida sp. nov.

(Japanese name: Kuro-gane-hime-iebae)

Male. Head. Eyes with short and sparse
but distinct hairs; twice as deep as long.
Frons at narrow point as wide as ocellar
triangle. Frontal setae 10–15, with some
short and fine interstitials. Ground color of
parafacialia, parafrontalia and frontal vitta
black. Parafrontalia narrow; silvery pollinose,
but its upper half brownish gray pollinose.
Frontal vitta wide, brownish gray pollinose.
Parafacialia bare; wide, at the
level of lunula slightly narrower than width
of 3rd antennal segment; silvery pollinose.
Ocellars long, directed forward. Occipital
setae short and regular in length, but near
vertex longer. Postoccipital setae sparse.
Antennae black; 2nd segment with a long
seta among a few minute setulae; 3rd
segment twice as long as wide. Arista long,
twice as long as 3rd antennal segment;
conspicuously thickened on basal fourth;
entirely black or slightly pale on basal
fourth in some specimens. Proboscis black;
theca pollinose, not slender. Palpi filiform,
longer than theca.

Thorax. Ground color black; non-vittate;
thinly grayish pollinose on dorsum and ash
gray pollinose on humerus and notopleuron.

Prest acr biserial; post acr triserial, the setae
strong but median row weaker and sparse.

Pra single, long and strong. De 2+3, h 2,
ph 2, ia 2, sa 1, pa 2. Propleural depression
bare; 2 setae on ridge beneath. Two or three
strong prostigmatic setae present among
many fine and long setulae. Sipl 1: 1, with
a number of fine and long setulae between
them. Sternopleuron without ventral spine.

Hypopleuron and pteropleuron bare. Scutel-
lum black. One pair of strong laterals and
apicals present.

Legs. Entirely black including knees.

Fore femur with a row of pd, pluriserial p,
a row of pv; with ad, a and av not devel-
oped. Fore tibia with a preapical d, 2–3
indistinct and suberect ad, and 1 preapical
d. Mid coxa without ventral spine. Mid
femur weakly constricted preapically; with
a row of a, stronger apical, especially 4–5
setae on apical fourth strong and curved;
with a row of 9–12 long av on basal two-
thirds, and short and closer-set setae on
apical third, and biserial and irregular on
middle; with a row of long p, of which 4–
6 setae on apical fourth very strong and the
other setae fine; pv uniserial on basal
third, and then biserial on median third, the setae of inner row weaker, and becoming triserial on apical third. Mid tibia slightly dilated on apical fourth; with the ventral mat of the erect hairs, the setae shorter than diameter of tibia; with 2–3 ad, 3 (sometimes 4–5) pd and 1 preapical d. Mid metatarsus without ventral tooth at the base. Hind coxa haired on inner posterior margin. Hind femur with 4–5 long av on apical third; with a row of a, this row turning dorsad; with 1 preapical d and 1 preapical pd; erect hairs present on posterior surface; with a full row of long and wide-spaced pv, the setae about equal to femoral depth. Hind tibia with 2–4 av, 5–8 ad, 1 d and 1 preapical d.


Abdomen. Ground color black, bluish gray pollinose. Second, 3rd and 4th tergites each with a triangular black marking. Fifth tergite with a median stripe. Fifth sternite rather wider than long, with many short spinose setae on posterior margin. Cercal plate with hairs at the base, swollen sub-apically and strongly bifurcated apically. Bacilliform process spiraled. Surstylus long, strongly modified, expanded inward medially (Figs. 7–9).

Female. Head. Eyes with short and sparse but distinct hairs. Frons at vertex about equal to or slightly broader than width of an eye. Ground color of parafacialia, parafrontalia and frontal vitta black. Parafacialia glossy, but in lower part near outer margin silvery pollinose, about 4 times as long as broad. Frontal setae 6–8, with some short and fine interstitials. Lower orbitals slightly close to inner margin of parafacialia. Parafacialia silvery pollinose, bare. Parafrontal setae irregularly uniserial. Frontal vitta brownish gray pollinose, at narrowest point as wide as parafrontalia. Occipital setae short and regular in length. Several irregular rows of postoccipital setae present, uppermost row complete. Proboscis

Figs. 1–3 Fannia speciosa (Villeneuve)
1. Hypopygium, caudo-ventral aspect. 2. Ditto, lateral aspect.
3. 5th sternite.

Figs. 4–6 Fannia glauca sp. nov.
6. 5th sternite.
black; theca thinly pollinose, one-third as wide as long. Palpi weakly spatulated, and flattened laterally. Arista at basal fifth faintly paler, basal segment entirely darkened.

**Thorax.** Prostigmatic setae fewer then those of male, otherwise similar as in male.

**Legs.** Mid femur with a row of \( a \), preapical 3–4 setae strong; a row of \( p \), preapical 3–4 setae strong and curved apical, other setae fine; \( pv \) short and fine. Mid tibia with 1 \( av \), 2 \( ad \), 3–4 \( pd \) and 1 preapical \( d \). Hind coxa without hairs on inner posterior margin. Hind femur with a row of \( ad \) on basal two-thirds, and 7 strong \( ad \) on apical one-third; 4 strong \( av \) on spical one-third; 1 preapical \( d \) and 1 \( pd \). Hind tibia with 2–4 \( av \), 4–5 \( ad \), 1 \( d \) and 1 preapical \( d \).

**Wings.** Clear. Veins yellow, paler apical. Squamae pale yellow, lower one projecting. Halteres yellow.

**Abdomen.** Entirely black. Shining.

**Ovipositor.** Subanal plate longer than broad, sparsely but distinctly haired. Ninth, 8th and 7th tergites concaved at middle of anterior margins. Ninth sternite divided into a pair of small setulose plates. Eighth and 7th sternites longer than broad, with several setulae on posterior margin. Seventh spiracle situated at the anterior margin of seventh tergite. Sixth spiracle opened near the posterior margin of the seventh tergite. Spermathecae two, subcylindrical, the apex indented, surface ringed (Figs. 19 and 20).

**Length.** \( \delta : 5.5–6.9 \) mm. \( \varphi : 4.8–6.4 \) mm.

**Holotype.** \( \delta \). Minamitama, Tokyo, Japan, 20 Apr. 1974 (K. Nishida); \( \varphi \). Mt. Kuragatake, Ishikawa, Japan, 13 Apr. 1969 (H. Kurahashi); 9 \( \delta \), Minamitama, Tokyo, Japan, 19 Apr. 1974 (S. Shinonaga & K. Nishida); 4 \( \delta \), the same data as holotype; 1 \( \varphi \), Minamitama, the same data as holotype, 2 \( \varphi \), Mt. Bukozan, Chichibu, Saitama, Japan, 11 May 1974 (S. Shinonaga). Two male paratypes are presented to the British Museum (Natural History), London. Type specimen is preserved in the National Science Museum (Natural History), Tokyo.

**Distribution.** Japan (Honshu).

**Remarks.** This new species is very closely allied to *Fannia norvegica* Ringdahl, but it can be distinguished from the latter species by the following respects: the second post-occipital setae present; fore tibia with 2–3 indistinct and suberect \( ad \); hind tibia with 5–8 \( ad \); abdomen more pollinose; wings darker.

And in female the present species is very similar to *F. carbonaria* (Meigen), but differs from it by the following respects: palpi weakly spatulated; lower part of parafrontalia pollinose near outer margin (Figs. 21 and 22); frontal vitta as wide as parafrontalia; postoccipital setae arranged in several irregular rows; spermatheca semispherical.

When the ovipositors of two specimens were dissected, a first stage larva was found in it respectively. It is supposed that this is ovoviviparous species.

**Fannia ardua** sp. nov.

[Japanese name: Hikage-hime-iebae]

**Male.** **Head.** Eyes bare, twice as long as deep. Frons very narrow, at narrowest point somewhat narrower than diameter of anterior ocellus. Parafrontal squama silvery pollinose, but its upper half grayish brown pollinose. Frontal setae 6; upper half of parafrontalia bare. Ground color of parafrontalia black and silvery pollinose, very narrow and bare. Frontal vitta linear, but distinct throughout, grayish brown pollinose, black in ground color. Ocellars longer than frontal setae, directed forward. Occipital setae short and regular in length. Postoccipital setae absent. Antennae black; 2nd segment with a long seta among a few minute setulae. Arista 2.5 times as long as 3rd antennal segment, conspicuously thickened on basal one-fifth, subpubescent. Proboscis black, thinly pollinose. Palpi long, compressed laterally; with some long hairs.

**Thorax.** Ground color black; thinly grayish brown pollinose. Non-vittate. Acrid biserial throughout Pra 2; dc 2+3; h 2, standing among a some short setulae; ph 2; sa 1; pa 2; npl 2. The accessory setulae on dorum short and sparse. Propleural depression bare; with 2 setae on the ridge beneath. Prostigmatic setae 2. Stpl 1:1, with a some short and fine setulae between them. Sternopleuron without ventral spine. Pteropleuron and hypopleuron bare. Scutellum black, bare on sides and beneath.
Strong pairs of apicals and laterals present. Ancillary setulae on dorsum sparse.

**Legs.** Black, including knees. Fore femur with rows of pd, p and pv; pv widely situated, longer apicad; with ad, a and av not developed. Fore tibia with a preapical d. Mid coxa without ventral spine-like setae. Mid femur constricted preapically; with a row of a (preapical 4–5 setae stronger and curved apicad); with 7 long and wide-spaced av on basal two-thirds, and then several short and closer-set setae, following them bare on the constriction, and a few minute setae preapically; with a row of closer-set p (stronger apicad, preapical one situated apart from the other setae); with a row of wide-spaced 5 pv on basal half and several closer-set and irregular biserial setae, and then short break of setae, and following it some short setae and then again break of setae on the constriction, and a few short setulae preapically. Mid tibia somewhat thickened on apical half; with the ventral mat of hairs, the hairs slightly shorter than basal diameter of tibia; with 1 ad, 1 pd and 1 preapical d. Mid metatarsus with a small ventral crest. Hind coxa without hairs on inner posterior margin. Hind femur with a long av preapically, 3 ad, 1 preapical d and 1 preapical pd; with 5 pv on apical half, stronger and longer apicad; bare on ventral surface. Hind tibia with 1 av, 1 ad, 1 d and 1 preapical d.

**Wings.** Membrane infuscated. Veins brown. Squamae infuscated, with brown fringe; lower one lobated. Halteres yellowish brown.

**Abdomen.** Black, grayish brown pollinose. Second, 3rd and 4th tergites each with a triangular marking, and 5th tergite with a median stripe. Fifth sternite twice as long as broad, with numerous spinose setae on posterior part. Cercal plate long, broadened medially and then constricted, and with a small disc at apex; in lateral aspect one pair of small projection on posterior surface.
medially, with some minute hairs on posterior surface. Bacilliform process distinct and spiraled. Surstylus long, slender, hooked apically (Figs. 10-12).

**Female**: Unknown.

**Length.** $\delta$: about 4.3 mm.

**Holotype.** $\delta$, Sapporo, Hokkaidō, Japan, 11 May 1951 (S. Suwa). Only one specimen is available. Type specimen is preserved in the Entomological Institute, Faculty of Agriculture, Hokkaidō University, Sapporo, Japan.

**Distribution.** Japan (Hokkaidō).

**Remarks.** *Fannia umbratica* COLLIN, 1939 is very closely allied to this new species, but can be distinguished from it by the following respects: $pv$ on hind femur of uniform length; halteres very dark; $pv$ on hind femur longer; genital structure quite differs.

**Fannia jezoensis** sp. nov.

[Japanese name: Ezo-hime-iebae]

**Male. Head.** Eyes with dense hairs, the hairs longer than the diameter of anterior ocellus; about twice as deep as long. Frons at narrowest point narrower than the width of ocellar triangle. Parafrontalia silvery pollinose, but its upper one-third grayish brown pollinose. Frontal setae 12-15, with some fine and long interstitials. Parafacialia silvery pollinose, bare, at lunula about equal to width of 3rd antennal segment. Frontal vitta distinct throughout. Ocellars long and directed. Occipital setae long and irregular in length. Postoccipital setae arranged on an irregular row near vertex, but becoming pluriserial toward ventral part. Antennae black; 2nd segment with a long seta among a few minute setulæ; 3rd segment twice as long as wide. Ground color of parafacialia, parafrontalia and frontal vitta black. Arista black, twice as long as 3rd antennal segment, on basal one-third conspicuously thickened. Proboscis black; theca distinctly pollinose. Palpi black, longer than theca, slightly spatulated at apex.

Figs. 13-15 *Fannia jezoensis* sp. nov.
15. 5th sternite.

Figs. 16-18 *Fannia perplexa* sp. nov.
18. 5th sternite.
Thorax. Ground color black, with grayish brown pollen thinly, non-vittate. *Prest acr* biserial, but in front of suture triserial; *post acr* triserial, and becoming quadriserial toward scutellum, median row irregular. *Pra* 2-3; h 2, standing among many fine and long setulae; ph 2; dc 2+3; ia 2; sa 1; pa 2. Propleural depression bare; with 2 setae on the ridge beneath. One strong prostigmatic seta present among long and fine setulae. *Stipl* 1:1, with many long and fine setulae between them. Sternopleuron without ventral spine. Hypopleuron and pteropleuron bare. Scutellum black, bare on sides and beneath.

Legs. Black, including knees. Fore femur with rows of *pd*, *p* and *pv*; *p* and *pv* long, *pc* longer than femoral depth; with *av* not developed. Fore tibia with 1 preapical *d*. Mid coxa without ventral spine. Mid femur thinned preapically; with 6-8 long and wide-spaced *av* on basal two-thirds, and then short and closer-set setae on basal one-third in a preapical comb, and partially biserial; with a row of *a*, stronger toward apex, of which preapical 3-4 setae long and curved apicad; with a row of long and closer-set *p*, stronger apicad; the setae on basal half hair-like and curled, and straight on apical half; *pv* stronger basad and biserial, a inner row weak and short. Mid tibia gradually thickened on basal half, twice as wide as basal diameter; with ventral mat of hairs on apical half, the hairs shorter than longest tibial diameter; with 2-3 *ad*, 2-3 *pd*, and 1 preapical *d*. Mid metatarsus without ventral crest at the base. Hind coxa without hairs on inner posterior margin. Hind femur with a row of *av*, of which 4-6 setae on apical one-third long; with a row of short *a*, 7-8 long *ad* on apical one-third, 1 preapical *d*, and 2-3 *pd*; with a row of long *pv* on basal two-thirds, and with fine and short setae on inner side, and 4 long and wide-spaced *pv* on apical one-third; ventral surface setulose on basal half. Hind tibia with 1 *av*, 2-4 *ad*, 1 *d* and 1 preapical *d*.

Wings. Smoky. Veins brown. Squamae infuscated, the fringe darker, the hairs of fringe long; lower one lobated. Halteres dark brown.

Abdomen. Black, subshining, with brownish gray pollinose. Second, 3rd and 4th tergites each with a triangular marking, and 5th tergite with a median stripe. Fifth sternite broader than long, with spinose setae on posterior margin. Cercal plate short; with median button; with tongue-like projection rolled inward, and forming two ridges, these ridges with some minute projections; without bacilliform process. Surstylus with long and slender inner process; outer process longer and stronger, with weak expansion preapically (Figs. 13-15).

Female: Unknown.

Length. ♂: 5.5-5.6 mm.

Holotype. ♂, Sapporo, Hokkaido, Japan, 27 May 1968 (M. Suwa); paratype. 1 ♀, the same data as holotype. Type specimen is preserved in the Entomological Institute, Faculty of Agriculture, Hokkaido University, Sapporo, Japan.

Distribution. Japan (Hokkaido).

Remarks. It is difficult to find the closely related species to the present new species. In the point of the chaetotaxy this species shows to be allied to *Fannia atra* (STEIN), but the genitalic structure does not resemble to that of *F. atra*, and its affinities. Of course the other species are not similar to species in the point of chaetotaxy and genitalia. To conclude, this species is comparatively closely allied to *F. atra*, and differs from the latter species by the following characters: eyes haired; parafacialia not so narrow; *acr* triserial; halteres dark brown; mid tibia with 2-3 *pd*; hind tibia with 1 *av*, 2-4 *ad*, and no *pd*; genital structure quite differs.

*Fannia glauca* sp. nov.

[Japanese name: Hos-hai-iro-hime-iebae]
 dossier segment. Frontal vitta distinct throughout. Ocellars short and fine, directed forward. Occipital setae short and regular in length. Several sparse and irregular rows of postoccipital setae present. Antennae black; 2nd antennal segment with a long seta among some minute setulae; 3rd antennal segment twice as long as wide. Arista subpubescent, 2.5 times as long as 3rd antennal segment, at basal one-sixth abruptly thickened. Proboscis black; theca pollinose. Palpi longer than theca, compressed laterally.

Thorax. Ground color black; ash gray pollinose on dorsum, notopleuron and humerus; with four black stripes. Pra 1, long and fine, not set apart from other accessory setulae. Propleural depression bare; with 2 setae on ridge beneath. Two strong prostigmatal setae present among several fine and short setulae. Front ac triserial, median row weak and irregular; post ac triserial and quadriserial toward scutellum. Stpt 1:1, with many fine and short setulae between them. Sternopleuron without ventral spine. Dc 2+3; h 2, standing amongst short and fine setulae; ia 2; sa 1; pa 2. Hypopleuron and pteropleuron bare. Scutellum black, grayish pollinose. One pair of strong laterals and apicals present. Many accessory setulae present on the disc.

Legs. Black, but fore knee reddish brown. Fore coxa without ventral spine. Fore femur with a row of hair-like av on whole length, shorter apicad; with many ventral hairs on basal half; with rows of pv, p and pd, pv longer than femoral depth. Fore tibia with 1 or 2 inconspicuous and suberect ad, 1–2 pv, and 1 preapical d. Mid coxa without ventral spine. Mid femur with a row of a, but at distal one-third interrupted, of which preapical 3 or 4 setae and curved; with a row of 6 long and wide-spaced av on basal two-thirds and a row of short and closely situated setae in a preapical comb; with pv, becoming biserial, the setae of inner row weaker, shorter toward apex, following them a clump of minute setulae preapically; with a row of straight p, finer basad. Mid tibia with ventral mat of hairs on apical half, the hairs as long as basal diameter of tibia; with 1 ad and 1 pd. Mid metatarsus without ventral crest. Hind coxa haired on inner posterior margin. Hind femur with a row of long av, stronger on apical half, with some short and fine setae preapically; a row of ad regular on basal half, and then 5–6 ad irregular and strong; with 3 preapical d and 1 pd; with long hairs on posteroventral surface, longer on apical one-third; ventral surface hairy on basal half. Hind tibia with long setae forming a ventral cover on median two-thirds, stronger basad; a row of av on median one-third; a row of 5–6 ad on median one-third, and the setae at apical one-third stronger; with 1 d and 1 preapical d.

Wings. Clear. Veins with pale yellow fringe; lower one larger than upper one. Halteres yellow.

Abdomen. Slender, narrower than thorax, with ash gray pollen. Second, 3rd and 4th tergites each with a narrow triangular marking, and 5th tergite with a black stripe. Fifth sternite wider than long, with many setae on the plate. Cercal plate short, wide at the base. Bacilliform process well developed and spiraled. Surstylus long, expanded at the base (Figs. 4–6).

Female. Unknown.

Length. ♂: about 6.5 mm.

Holotype. ♂, the Usui Pass, Gunma, Japan, 23 Jul. 1971 (S. Shionaga). Two male specimens were collected, but the other was broken. That data is as follows: 1 ♂, Lake Yamanaka, Yamanashi, 17 Jun. 1971 (R. Kano). Type specimen is preserved in the National Science Museum, Tokyo.

Distribution. Japan (Honshū).

Remarks. This new species is very closely allied to Fannia incisurata (Zetterstedt, 1838), but it can be distinguished from the latter by the following respects: eyes with distinct hairs; with black vittae on dorsum; knees of fore and hind legs black; fore femur with hairs on basal half; fore tibia with 2 pv; av on mid femur longer; the hairs of ventral mat on mid tibia longer; hind femur with long hairs on ventral and posteroventral surfaces; hind tibia with ventral hairs; ad, av and pv on hind tibia numerous in number; abdomen slender.
Fannia perplexa sp. nov.

[Japanese name: Mori-hime-iebae]

Male. Head. Eyes with sparse but distinct hairs, the hairs as long as diameter of anterior ocellus; twice as deep as long. Frons arched, at narrowest point about equal to width of ocellar triangle. Parafrontalia and parafacialia silvery pollinose, frontal vitta silvery gray pollinose. Ground color of parafacialia and parafrontalia black. Ground color of frontal vitta black, sometimes genae and frontal vitta near lunula reddish yellow. Parafrontalia wide and almost contiguous. Frontal setae 13, with some fine and long interstitials. Parafacialia wide, somewhat wider than width of 3rd antennal segment. Ocellars long and directed forward. Occipital setae long, especially the setae near vertex very long; irregular in length. Postoccipital setae near vertex biserial, and then becoming pluriserial. Antennae black; 2nd segment with a long seta among a few minute setulae; 3rd segment slightly more than twice as wide as long. Arista bare; twice as long as 3rd antennal segment, thickened on basal one-fourth. Proboscis black; theca glossy, not swollen. Palpi filiform, longer than theca.

Thorax. Ground color black; with brownish vittae along the acr row and outside of dc rows. Humerus and notopleuron grayish Pollinose. Prest acr biserial; post acr triserial, median row irregular. Pra 3, strong; h 2, standing amongst many long setulae; ph 2; dc 2+3; sa 1; pa 2. Propleural depression bare; with 2 setae on the ridge beneath. One strong prostigmatal setae developed among number of fine and long setulae. Stpl 1:1, with a number of fine and long setulae between them. Sternopleuron without ventral spine. Hypopleuron and pteropleuron bare. Accessory setulae on dorsum long and fine. Scutellum black in ground color, grayish brown pollinose; bare on sides and beneath; with several long and fine setulae on the disc.

Legs. Entirely black, including knees. Fore femur with av, a and ad not developed; with rows of long pd, p and pv, pv longer than femoral depth. Fore tibia 1-2 in-

distinct ad, and 1 preapical d. Mid coxa without ventral spine. Mid femur constricted on apical one-fourth ventrally; with a row of 10-11 long and wide-spaced av on basal two-thirds, and then short and closer-set setae in an irregular row, followed them a short break, and several minute setulae in a preapical comb; with a row of a, and 3-4 preapical setae curled over; with a row of long p, the setae longer than femoral diameter, 1 stronger preapical p present apart from the other p; with two rows of long pv on basal half (the setae of inner row weaker), and short and dense setae on distal one-third, followed them a short break, and then several minute setulae in a preapical comb. Mid tibia gradually thickened basad; with 2 ad, 2-3 pd and 1 preapical d; with a ventral mat of erect and long hairs on apical half, the hairs as long as longest diameter of tibia. Mid metatarsus without ventral crest. Hind coxa haired on inner posterior margin. Hind femur with a row of av, preapical 2 setae longer; with a row of a; with 1-2 ad, 1 d and 1 preapical pd; ventral surface on basal one-third and anteroventral surface setulose; with long and fine hairs on posterior surface on basal half. Hind tibia with 1-2 av, 1 ad, 1 d and 1 preapical d, and a few erect posterior setulae medially.

Abdomen. Long oval. Black in ground color, grayish pollinose thickly. A black triangular marking present on each of 2nd, 3rd and 4th tergite, and with a black stripe on 5th tergite. Fifth sternite broader than long, with many short spinose setae on posterior margin, concave posteriorly. Ninth tergite well developed and rounded. Cercal plate complex in structure; with a small swelling at the base medially; with a main process behind the swelling and with a small process behind the main process, each of processes bifurcated (but sometimes main process bifurcated only at the apex); on lateral side with 2 processes, one thick, another slender. Bacilliform process long, thick and blunt. Surstylus very wide in lateral aspect; bifurcated at apex, inner process turned inward (Figs. 16-18).

Holotype. ♂, Mt. Takao, Japan, 15 Apr. 1971 (S. Shinonaga); paratypes. 1 ♂, Mt.
Asama, Nagano, Japan, 29 Apr. 1973 (R. Kano); 1 ♀, Mt. Takao, Tokyo, 20 Apr. 1971 (S. Shinonaga); 1 ♀, Shiomine-Jinja, Yoshida, Saitama, 12 May 1974 (K. Hara). The holotype is preserved in the National Science Museum (Natural History), Tokyo.

Remarks. This species is closely allied to F. edentula NISHIDA, but it differs from the latter by the following respects: prest acr biserial and post acr triserial; pra 3; hind coxa haired on inner posterior margin; and genital structure quite different.

Fannia speciosa (VILLENEUVE, 1898)

[Japanese name: Koshi-aki-hime-iebae]


Fannia speciosa, STEIN, Kat. pal. Dipt. 3: 665.

Type and type locality. Type in "Muséum National d'Histoire Naturelle, Paris". Saint-Germain-en Laye and Hautil (Seine-et-Oise), France.

Male. Head. Eyes bare, twice as deep as long. Frons at narrowest point as wide as ocellar triangle. Parafrontalia, parafacialia and frontal vitta silvery pollinose. Frontal setae 7-8, with a few interstitials. Parafrontalia separated by frontal vitta. Ground color of frontal vitta black. Parafacialia bare and wide, at the level of the lunula about equal to width of 3rd antennal segment. Occipital setae short and regular in length. Postoccipital setae absent in upper one-third. Antennae black; 2nd antennal segment with a long seta among a some minute setulae; 3rd antennal segment about twice as long as wide. Aristia 2.5 times as long as 3rd antennal segment. Proboscis black; theca thinly pollinose. Palpi filiform, longer than theca.

Thorax. Black in ground color; scutum with grayish brown vittate along the dc and acr rows. Humerus and notopleuron ash gray pollinose. Pra 1-2. Prest acr triserial, but sometimes median row very sparse; post acr triserial, and becoming quadriserial toward scutellum, the setae of median rows weaker. Propleural depression bare, 2 setae on ridge beneath. Prostigmatal setae only 2. Spl 1:1, with a some short and fine setulae between them. Hypopleuron and pteropleuron bare. Accessory setulae on dorsum sparsely present. Scutellum black, with grayish brown pollinose. One pair of strong laterals and strong apicals present.

Legs. Black, except for reddish yellow fore knee. Fore femur with rows of long pv, p and pd, the setae of p and pd shorter than depth of femur; many short setulae present on basal one-third of ventral surface. Fore tibia with 1 suberect ad (sometimes inconspicuous) and 1 preapical d. Mid femur gradually thinner apicad; with a row of a; with the uniserial av on basal one-third and biserial av on median one-third, and then a row of short and closely situated setae in a preapical comb on apical one-third; with short and fine setulae on ventral surface on basal one-third; with several rows of pc, the setae closely situated and numerous; with a row of p on apical two-thirds, the setae stronger apicad, preapical 4-5 setae especially strong and curved apicad. Mid tibia with a ventral mat of black hairs on whole length, the hairs as long as basal diameter of tibia, of uniform length; with 1 ad, 1 pd and 1 preapical d. Hind coxa haired on inner posterior margin. Hind femur with a long and strong ad on apical half, 1 preapical d and 1 preapical pd; with a row of wide-spaced and long av, and following them preapically a row of short and fine av; on ventral and anteroventral surfaces with numerous long and fine setae densely, forming the covering. Hing tibia with suberect black hairs on ventral surface, and with 2 av, 1-2 ad, 1 d, 1 preapical d and 1 pd.

Wings. Slightly infuscated. Veins yellowish brown, paler basad. Squamae whitish, with pale yellow margin; lower one lobated. Halteres deep yellow.

Abdomen. Thinly pollinose. Second and third tergites reddish yellow, and each with a median black T-shaped marking. Fourth and 5th tergites entirely black, subshining. Fifth sternite about 1.5 times as wide as long; with short setulae on posterior and median part; posterior margin concave. Cercal plate V-shaped, with a few long hairs at the base. Surstylus with the inner main process, the process long and slender, weakly hooked at the apex; with a ventro-
lateral process developed, with a clump of short setae apically. Bacilliform process absent (Figs. 1–3).

**Female.** unknown.

*Length.* \( \delta : 6.9–7.4 \text{ mm} \).

*Records.* 1 \( \delta \), Nisshō-Tōge, Hidaka, Hokkaidō, Japan, 14 Aug. 1971 (S. Shinonaga); 1 \( \delta \), Mt. Ontake, Nagano, Japan, 28 Jul. 1971 (S. Shinonaga); 1 \( \delta \), Mt. Habusan, Karisaka-Tōge, Saitama, Japan, 19 Aug. 1973 (K. Hara); 1 \( \delta \), Mt. Ō-yama, Jūmonji-Tōge, Saisama, 2 Aug. 1974 (K. Hara).

*Distribution.* Japan (Hokkaidō and Honshū), France, Germany, Hungary, Sweden and England.

*Remarks.* Japanese *F. speciosa* somewhat differs from European (England) specimens by having the following respects: *pra* 1–2; the ventral hairs on mid tibia entirely black; hind tibia with 1 *pd*; the stripes on 2nd and 3rd tergites broadened toward posterior margin, and clear.

**Fannia barbata** (Stein, 1892)

[Japanese name: Ke-zune-hime-iebae]


*Type and type locality.* Type in the “Zoológischen Museum”, Berlin. Genthin, Germany.


*Thorax.* Ground color black, grayish brown pollinose, non-vittate. *Pra* 1, long. *Acr* biserial, the setae long. Accessory setulae on dorsum long. Propleural depression bare, with 2 setae on the ridge beneath. One strong prostigmatal setae present among numerous long setulae. Sternopleuron with several strong setae ventrally.

*Legs.* Black, including knees. Fore femur with a row of long and fine *pv*. Fore tibia with a preapical *d*. First segment of fore metatarsus with long ventral hairs on whole length. Mid coxa without ventral spine. Mid femur on ventral surface constricted strongly preapically; with a row of long and wide-spaced *av* on basal two-thirds, and then a clump of short setae, following them short break of setae, and some short setae preapically; with long and pluriserial *pv* on basal two-thirds, and then a clump of short setae, following them break, and preapically some short setae. Mid tibia somewhat modified on ventral surface, glossy on basal one-third ventrally; with 2–3 *ad*, 2 *pd* and 1 preapical *d*; with ventral mat of long hairs. Mid metatarsus with strong crest at the base ventrally. Hind coxa haired on inner posterior margin. Hind femur with 7–8 *ad* on apical half, 3 *d* on apical one-third, 2 *pd* preapically, and 3 strong *av*; posteroventral surface setulose. Hind tibia with 1 *av*, 1 *ad*, 1 *d* and 1 preapical *d*.

*Abdomen.* Ground color black, grayish pollinose. Second, 3rd and 4th tergites each with a triangular marking, and 5th tergite with a black median stripe.

*Wings.* Slightly infuscated. Veins brown. Squamae pale yellow, with yellow fringe;
lower one lobated. Halteres deep yellow.

**Female.** Unknown.

**Length.** $\delta$: about 6.1 mm.

**Record:** 1 $\delta$, Shôdo-Shima Is., Kagawa, 25 Mar. 1971 (M. Suwa).

**Distribution.** Japan (Shôdo-shima Is.), Finland, Germany, Austria, Baikal Lake, and Corsica.

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**REFERENCES**


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日本産ヒメイバイ属に関する研究. IV. 
ヒメイバイの5新種，および日本新記録種の2種について

日本産のヒメイバイ属（Genus *Fannia*) の5新種を記載した。
また，日本新記録種の *Fannia barbata* (Stein) と，
*F. speciosa* (Villeneuve) の2種を報告した。