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# NEW SPECIES OF THE ECONOMIC SYRPHIDAE OF JAPAN

By

Prof. **Shonen Matsumura**

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Since I have published the Japanese economic Syrphidae with Mr. JIRO ADACHI in the Entomological Magazine Japan, Vol. II, Pt. 1, 2 and 3, 1916, I have got 54 more new species and 4 new genera, so I shall describe them in this occasion. In this paper I have described also some sex of the known species, which were not described before.

## 1. *Chrysotoxum hirayamae* \* n. sp.

Somewhat resembles *C. intermedium* FALL.

♀. Body fuscous. Face fulvous, with a black central stripe, front and vertex fuscous, with a purplish shade, in each side before the vertex with a grayish pruinous spot. Antennae fulvous, the 3rd joint fuscous, with fulvous arista. Thorax with 2 grayish stripes. Scutellum fulvous, with pale fulvous hairs, mingling a few fuscous ones. Wings hyaline, costa and stigma pale yellowish, veins pale brownish. Halteres brownish, stems yellow. Calypteres pale yellowish. Abdomen with 3 curved yellowish bands, all being narrowly interrupted in the middle, the hind margin of each segment narrowly yellowish, those of the 3rd and 4th segments each being triangularly produced in the middle, the 5th segment entirely yellow, with  $\Delta$ -shaped fuscous mark. Venter shining brownish, with 2 yellowish bands, the posterior one of which being interrupted in the middle. Legs yellow, coxae infuscated.

Length—♀ 11 mm.

Hab.—Honshu (Harima); one female specimen collected by Mr. SUU-  
JIRO HIRAYAMA.

Nom. Jap.—*Hirayama-higenaga-hanaabu*.

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\* The type specimens are preserved in the Entomological Laboratory of the Hokkaido Imperial University.

## 2. *Pipiza familiaris* n. sp.

♂. Black. Face with pale fulvous and a few fuscous hairs, front fuscous, vertex fulvous, pubescent. Antennae and arista brown, the 3rd joint beneath yellowish. Compound eyes fulvous pubescent. Thorax and scutellum with long fulvous hairs. Wings hyaline, with a fuscous shade, veins black, stigma fulvous. Calypteres grayish, halteres pale yellowish. Abdomen black, lacking any spot, whitish pubescent. Legs black, apices of the femora, both ends of the tibiae, the tarsi, except the apices, yellowish, the hind legs largely black, tarsus with short golden hairs.

♀. Differs from the male as follows:

Front pale fulvous, vertex, except the hind margin, fuscous pubescent. Compound eyes whitish pubescent. Abdomen dark brown. Calypteres and halteres whitish.

Length—♂ ♀ 5.5—6 mm.

Hab.—Hokkaido (Sapporo); 3 (1 ♂, 2 ♀) specimens collected by the author (28. V, 1916).

Nom. Jap.—*Chibi-kohirataabu*.

Somewhat resembles *P. anthracina* MEIG. from Europe.

## 3. *Pipiza flavimaculata* n. sp.

♀. Aeneous black. Face whitish, antennal-process black, front fulvous pubescent. Antennae black, the 3rd joint with the arista brownish. Compound eyes whitish pubescent. Thorax and scutellum fulvous pubescent. Calypteres grayish white, halteres fulvous. Wings hyaline, veins and stigma brownish. Abdomen bluish black, the 2nd segment with 2 orange-yellow, wedge-shaped spots, which being situated obliquely. Venter fuscous, at the basal half fulvous. Legs black, knees, both ends of tibiae and the tarsi, except apices, yellow.

Length—♀ 9.5 mm.

Hab.—Honshu (Iwate); one female specimen collected by Mr. TEIZO OGASAWARA.

Nom. Jap.—*Kiboshi-kohirataabu*.

**1. Pipizopsis** n. g. (Pl. I, fig. 3, a, b, c).

Much resembles *Pipiza* FALL., but differs from it in the following points:

Antennal-process not projected, the 3rd joint long, nearly 4 times as long as its breadth, somewhat twice as long as the 1st and 2nd joints taken together; arista fine, naked, near the base on its back.

Wings broad, somewhat longer than the abdomen, first posterior cell at the apex with much incurved cross-vein, having a small stump of vein, the anterior angle of the 2nd posterior cell obtuse. Legs short, the hind femur not thickened, as broad as the same tibia.

Genotype—*Pipiza biglumis* MATS.

**4. Pipizopsis biglumis** MATS.

*Pipiza biglumis* MATS. Ent. Mag. Jap. Vol. 11, pt. I, p. 14, pl. 1, fig. 9, ♀ (1916).

Formerly I have placed this species under the genus *Pipiza* FALL., but afterwards I have found that the venation of this insect differs much.

**5. Melithreptus kuwayamae** n. sp.

Much resembles *M. taeniatus* MEIG., but differs from the latter in the following points:

♀. Body much broader. Frontal stripe down to the antennae fusiform, at the apex nearly pointed, front brownish pubescent. Oral-margin not fuscous. The 3rd antennal joint on its back fuscous, arista yellowish brown. Scutellum entirely fuscous pubescent. Spurious vein of the wing reaches to the cross-vein of the 2nd posterior cell. Abdomen similarly marked, but all the bands broader, the 5th segment on each side with 2 large fuscous spots, the hind margin and a central stripe broadly fuscous, the hind margin not being fuscous, the 6th segment very short and of a fuscous color. Venter marked nearly the same as dorsum. The hind femur at the apex, both ends of the same tibia, as well as the same tarsus, fuscous.

Length—♀ 8.5 mm.

Hab.—Hokkaido (Hakodate); one female specimen collected by the late S. KUWAYAMA.

Nom. Jap.—*Kuwayama-himehirataabu*.

. **Melithreptus harimensis** n. sp.

Much resembles *M. kuwayamae* MARS., but it may differ from the later in the following characters:

♀. Body distinctly broader. Frontal fuscous stripe down to the antennae much broadly fusiform. The 3rd antennal joint fuscous, on its lower half yellowish, arista fuscous. Wings nearly the same, but the spurial vein far not reaching to the cross-vein of the 2nd posterior cell, the latter being quite strongly incurved at the base. Calypteres grayish, at the margin infuscated, halteres pale yellowish. Abdomen nearly the same, but the hind margin of the 5th segment broadly fuscous. Venter at the basal half pale yellowish, pellucid, the rest marked nearly the same as above.

Length—♀ 8 mm.

Hab.—Honshu (Harima); one female specimen collected by the author.

Nom. Jap.—*Harima-himehirataabu*.

7. **Xanthogramma bambusae** n. sp.

Allied to *X. sapporensis* MARS., but much smaller and it may easily be distinguished from the latter in the following characters:

♂. Oral-margin, except the apex, fuscous. Scutellum brownish and fulvous pubescent. The 3rd yellowish spot to the abdomen not touching the lateral sides; the 3rd and 4th ventral segments at each hind margin broadly fuscous, the 5th in the middle with a fuscous spot.

♀. Nearly the same as the male, only the 2nd and 3rd abdominal segments each at the hind margin in the middle incised, the hind fuscous margin of the 4th segment posteriorly somewhat incised, all the bands reaching to the lateral margins. Hind femur at the tip, the same tibia, except the middle part, and the same tarsus entirely, brownish. The fuscous bands of the 3rd and 4th ventral segments paler.

Length—♂ ♀ 8.5–9 mm.

Hab.—Hokkaido (Sapporo); 3 (1 ♂, 2 ♀) specimens collected by the author among *Sasa paniculata*.

Nom. Jap.—*Sasa-kiberihirutaabu*.

**8. *Xanthogramma okunii* n. sp.**

Closely allied to *X. sapporensis* MATS., but differs from the latter in the following characters:

♀. Front fulvous pubescent, along the black stripe with a few fuscous short hairs. Abdomen in the middle broader, in the middle of the black hind margins of the 2nd and 3rd segments each with a brownish transverse spot, the 5th segment yellow, with black  $\Lambda$ -shaped marking. Venter yellow, the first segment, except the hind margin, a heart-shaped spot in the middle of the 2nd to 5th, fuscous. The hind tibia at the basal half brownish.

Length—♀ 12 mm.

Hab.—Hokkaido (Sapporo); 4 female specimens collected by Mr. T. OKUNI and the author.

Nom. Jap.—*Akamon-kiberihirataabu*.

**9. *Xanthogramma sapporensis* MATS.**

*Xanthogramma citrofasciatum* MATS. (nec. DEGEER), Ent. Mag.

Jap. Vol. II, pt. 1, p. 28 (1916).

The species which I have thought to be *X. citrofasciatum* DEG. was synonym with *X. sapporensis* MATS. and it was not true *citrofasciatum* of DEGEER.

**10. *Xanthogramma kuccharensis* n. sp.**

Closely allied to *X. okunii* MATS., but differs from the latter in the following points:

♀. Front olivaceous, with a central brownish stripe, pale fulvous pubescent, lacking fuscous hairs. The 3rd antennal joint on its back narrowly fuscous. Scutellum long fulvous and quite short fuscous pubescent. Wings hyaline, lacking any tinge of fulvous, stigma pale fulvous. Abdomen much broader, brownish fascia of the 2nd segment at the hind margin longer and

at the middle interrupted, that of the 3rd segment much longer and at the anterior margin somewhat incised, the fuscous band of the 3rd segment at the middle interrupted. Venter yellow, 2nd to 5th segments each with a central heart-shaped fuscous spot. The hind tibia in the middle somewhat whitish and distinctly curved.

Length—♀ 12 mm.

Hab.—Hokkaido (Kushiro); one female specimen collected by the author, at the lake-region of Kuccharo.

Nom. Jap.—*Kuccharo-kiberihirataabu*.

### 11. *Xanthogramma fusoclavatum* n. sp.

♂. Much resembles *X. sapporeuse* MATS., but differs from the latter in the following points:

Body much narrower and smaller. Front brownish and fulvous pubescent. Scutellum brownish, at the extreme hind margin yellowish, brownish pubescent, mixing a few yellowish hairs. Wings hyaline, more fulvous, the first posterior cell lacking any stump of vein. Halteres fulvous, at the head fuscous. Abdomen narrower, in the middle somewhat broader; 3 ventral fuscous spots gradually becoming smaller towards the cauda, the 4th spot being reduced to a small spot.

Length—♀ 11–12 mm.

Hab.—Hokkaido (Sapporo); one male specimen collected by the author.

Nom. Jap.—*Zuguro-kiberihirataabu*.

### 12. *Xanthogramma moiwanum* n. sp.

Closely allied to *X. fusoclavatum* MATS., but differs from it in the following points:

♀. Body much smaller. Front fuscous pubescent, not mixing fulvous hairs. Scutellum at the posterior one third yellowish. The first posterior cell of the wing with a short stump of vein, with a light fulvous shade. Halteres entirely yellow.

♀. Differs from the male as follows:

Front fulvous pubescent, on the black part of the vertex with fuscous hairs, the middle stripe reaching to the middle of the front. Face pale fulvous pubescent, mixing no fuscous hairs. Scutellum pale brownish pubescent. Abdomen much broader than the thorax, the 3rd and 4th segments each with one uninterrupted yellowish band as the other species.

Length—♂ ♀ 10-10.5 mm.

Hab.—Hokkaido (Sapporo); 3 specimens (2 ♂, 1 ♀) collected by the author on Mt. Moiwa.

Nom. Jap.—*Moiwa-kiberihirataabu*.

### 13. *Xanthogramma minor* n. sp.

♀. Closely allied to *X. moiwanum* MATS., but much smaller and in the following points it may well be distinguished from the latter:

♀. Front citron-yellow, fuscous pubescent, frontal stripe nearly reaches to the antennal basis. Antennae ochre-yellow, arista fuscous, at the extreme base yellowish. Scutellum brownish pubescent, mixing a few fulvous hairs. Interrupted yellow band to the 2nd abdominal segment much broader than the following uninterrupted bands; venter on each lateral side with 3 black spots.

Length—♀ 8 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author.

Nom. Jap.—*Ko-kiberi-hirataabu*.

### 14. *Xanthogramma jozanum* n. sp.

Somewhat resembles *X. minor* MATS.

♀. Face citron-yellow, pale fulvous pubescent, oral-margin entirely yellow; front fulvous pubescent, central fuscous stripe very narrow, far not reaching to the antennal basis, vertex fuscous pubescent. Antennae ochraceous, arista at the apex fuscous. Scutellum yellow, at the base fuscous, with long fulvous and short fuscous hairs. Wings scarcely with a fulvous tinge.



Halteres yellow, the stems somewhat brownish. Abdomen nearly twice as broad as the thorax, black, with 3 yellowish bands, the first band being narrowly interrupted in the middle, the hind black margins of the 2nd and 3rd segment in the middle each with a brownish fascia, the 4th segment at the extreme hind margin narrowly yellowish, the 5th yellow, in the middle with an interrupted fuscous band; venter yellow, the 2nd to 5th segments each with a large semicircular black spot, on each lateral side with 3 large fuscous spots. Legs yellow, coxae and trochanter fuscous, the hind femur, except the middle spot, and the same tarsus, yellowish brown.

Length—♀ 8 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at Jozankei.

Nom. Jap.—*Jozan-kiberi-hirataabu*.

**15. *Xanthogramma shibechanum* n. sp.**

♂. Aeneous black. Face yellowish, pale fulvous pubescent, on the front mingling a few fuscous hairs. Antennae ochraceous, arista fuscous, at the base yellowish. Compound eyes brownish pubescent. Lateral stripes to the thorax pale yellow.

Scutellum yellow, at the basal half brownish, fulvous pubescent, mingling some short fuscous hairs. Wings hyaline, with a light fulvous tinge, stigma fulvous, first and 2nd posterior cells each with a very short stump of vein. Abdomen somewhat broader than the thorax, the 2nd segment on each side with a oval yellowish spot, the 3rd and 4th segments each with a yellowish band, which being incised at the hind margin, the 4th at the extreme hind margin yellowish, the 5th yellowish, with a fuscous  $\Lambda$ -shaped marking. Venter pale yellowish, the 2nd to 4th each with 2 and on each lateral margin with 3 black spots. Legs yellowish, coxae and trochanter fuscous.

Length—♂ 9 mm.

Hab.—Hokkaido (Kushiro); one male specimen collected by the author at Shibechea.

Nom. Jap.—*Shibechea-kiberi-hirataabu*.

**16. *Xanthogramma?* *nakamurae* n. sp.**

♂. Aeneous black. Front near the antennal basis with a brownish spot, fuscous pubescent. Face pale citron-yellow, with a bluish tinge, pale fulvous pubescent. Antennae ochraceous, the 3rd joint on its back broadly fuscous, arista yellowish, at the apical half fuscous. Compound eyes bare. Thorax strongly metallic shining, fulvous pubescent, yellow stripe reaches entirely to the scutellum. Scutellum entirely yellow, fuscous pubescent. Calypteres grayish, at the margin yellowish, near the base somewhat infuscated, halteres yellow. (Wings broken off). Abdomen somewhat broader than the thorax, black, with 3 yellowish bands, the first band being scarcely interrupted at the middle, the first segment on the sides, the 3rd to 5th segments each on its anterior angle yellowish, the 5th segment yellow, with an inverted T-shaped black spot. Venter pale yellow, the dorsal black bands being visible through, hypopygium shining black. Legs yellow, coxae at the bases somewhat infuscated, apex of the hind femur, both ends of the same tibia and the upper part of the same tarsus, fuscous.

Length—♂ 8 mm.

Hab.—Honshu (Echigo); one male specimen collected by Mr. MASAO NAKAMURA at Kashiwazaki.

Nom. Jap.—*Nakamura-kiberihirataabu*.

This species belongs probably to a new genus, but lacking the wings I can not describe now; it may stand between *Xanthogramma* SCHIN. and *Melithreptus* SCHIN.

**2. *Karasyrphus* n. g. (Pl. t. fig. 2, a, b, c).**

Closely allied to *Syrphus* F., but differs from the latter in the following points:

♀. Vertical-triangle small. Abdominal markings whitish. Antennae longer, the first joint longer than the 2nd, the 3rd nearly circular, shorter than the preceding 2 joints combined, with long haired arista near the base. Abdomen somewhat broader than the thorax, at the base much more constricted, above being much vaulted.

Genotype—*Karasyrphus miyakei* MATS.

**17. *Karasyrphus miyakei* MATS.**

*Chamaesyrrhus* (nec *Chaemosyrphus*) *miyakei* MATS. Jour. coll.

Agr. Tohoku Imp. Univ. Sapporo, Vol. IV, pt. 1, p. 77, ♀  
(1911).

♀. Black, not shining. Head dirty-yellow, vertex and front with a fuscous stripe, which becoming broader towards the antennae, antennal-process black and shining. Antennae black, the 3rd joint with the arista dark brown. Compound eyes grayish pubescent. Proboscis dark brown. Thorax somewhat velvety black, fulvous pubescent, scutellum pale yellowish, with concolorous hairs. Calypteres pale testaceous, halteres yellow. Wings hyaline, with a light fuscous tinge, veins brown, stigma fuscous. Abdomen black, with 3 bluish gray bands, that of the 2nd segment being the broadest, those of the 3rd and 4th nearly in the same breadth, and which being incised at the hind margins. Venter fuscous, with 2 whitish bands, the basal segment being also whitish. Legs yellowish, coxae, trochanter, and the basal halves of the femora (the hind femur being black except the knee), black.

Length—♀ 11-12 mm.

Hab.—Saghalien (Shiska, Korsakoff), Honshu (Yatsugadake); 4 ♀ specimens collected by MESSRS. TSUTOMU MIYAKE, JIRO ADACHI, SHUICHI ISSHIKI in Saghalien and by AKIO NOHIRA at Mt. Yatsugadake.

Nom. Jap.—*Miyake-Iwataabu*.

**18. *Karasyrphus sachalinensis* n. sp.** (Pl. 1, fig. 2, a, b, c).

*Chaemosyrphus miyakei* MATS. (part.), Jour. Coll. Agr. Tohoku Imp. Univ., Vol. IV, part. 1, p. 77, ♂ (1911).

Much resembles *K. miyakei* MATS., but differs from the latter as follows:

♀. Face grayish white, with a fuscous stripe, white pubescent. Antennae black. Thorax fuscous pubescent, humerus whitish pruinous and pubescent. Scutellum black, with whitish hairs. The 2nd abdominal segment

with a broad, in the middle scarcely interrupted whitish band; venter at the basal half pale testaceous, the 4th segment with a bluish white band. Legs black, only the knees and bases of the tibiae of 4 anterior legs, yellowish.

Length—♀ 10 mm.

Hab.—Saghalien (Ōdomari, Mauka, Motodomari); 5 female specimens were collected by Messrs. MAMORU OGUMA, JIRO ADACHI and SHUCHI ISSHIKI.

Nom. Jap.—*Karafuto-rurimon-hirataabu*.

When I have described this species (l. c.), I thought it to be the male of *K. miyakei*, but after studying thoroughly I have found that the specimen was not male and truly a female belonging to other different species.

### 3. *Conosyrphus* n. g. (Pl. 1, fig. 1, a, b, c).

Much resembles *Dideopsis* MATS., but differs from the latter in the following points:

♀. Vertex distinctly broader than half the length of the front between the antennae. Antennal-process much higher, antennae rather longer, the first and 2nd joints only  $\frac{2}{3}$  length of the 3rd, the 3rd joint oblong, flat. Cheeks much broader. Compound eyes pubescent. Proboscis robust, with broad sucking-surface, palpi filiform. Wings hyaline, without fuscous band, stigma black, the 3rd longitudinal vein opening exactly at the apex, 1st posterior cell with a distinct stump of vein.

Genotype—*Conosyrphus okunii* MATS.

### 19. *Conosyrphus okunii* n. sp. (Pl. 1, fig. 1, a, b, c).

♀. Aeneous black. Face orange-yellow, with a shining central black stripe, which being attenuated near the base of the antennae, fulvous pubescent. Antennae and arista black, front on each side with a grayish pruinous spot. Cheeks and oral-margin fuscous. Proboscis fuscous, sucking-surface and palpi fulvous. Thorax fulvous pubescent. Scutellum yellowish, fuscous pubescent, mixing some fulvous hairs on the margins. Wings hyaline, at the base and costa fulvous, stigma black. Calypteres grayish white, at the margin

yellowish, halteres yellow. Abdomen much broader than the thorax, with 2 yellowish bands, the first band broader, not interrupted and at the hind margin triangularly incised, the 2nd band in the middle scarcely interrupted, the 2nd segment on each side with a fusiform, transverse, yellow spot, the 5th on each lateral margin at the base with a triangular yellowish spot; venter yellowish, with 4 fuscous bands. Legs yellow, coxae, trochanter and the bases of the femora, fuscous.

Length—♀ 10 mm.

Hab.—Hokkaido (Sapporo); 2 female specimens collected by Mr. TOKU OKUNI and the author.

Nom. Jap.—*Kuromon-hirataabu*.

#### 20. *Episyrphus hirayamae* n. sp.

Closely allied to *E. cincellus* ZETT., but differs from the latter in the following points:

♀. Body much smaller. Face fulvous pruinous, with a broad fuscous stripe. Antennae fuscous, the 3rd joint beneath at the base fulvous, arista brownish. Scutellum fuscous pubescent. Wings hyaline, with a light fuscous tinge, veins fuscous, stigma fulvous. Calypteres pale testaceous, halteres yellowish. Abdomen somewhat broader than the thorax. Legs yellow, each spot near the base of the anterior and middle femora, and the entire hind legs, fuscous.

Length—♀ 11 mm.

Hab.—Honshu (Tokyo); one female specimen collected by Mr. SHUJIRO HIRAYAMA at Komaba.

Nom. Jap.—*Hirayama-hosohirataabu*.

#### 21. *Stenosyrphus nikkoensis* n. sp.

Much resembles *S. lasiophthalmus* ZETT., but differs from it in the following characters:

♂. Body black. Scutellum pale fulvous pubescent (in *motodomariensis* being fuscous pubescent). Wings with more fulvous tinge. The first abdomi-

nal spots not reaching to the lateral sides, the 3rd spots narrower; venter black, with 3 pale yellowish spots, gradually decreasing the size, the last spot being very small, on each side with 3 yellowish spots.

Length—♂ 9.5 mm.

Hab.—Honshu (Nikko); one male specimen collected by the author.

Nom. Jap.—*Nikko-hosohirataabu*.

**22. *Stenosyrphus ezoensis* n. sp.**

♂. Aeneous black. Face yellow, brownish pubescent, with a fuscous stripe, which far not reaching to the antennae, oral-margin fuscous. Antennae black, the 3rd joint brownish, beneath yellowish, arista black. Compound eyes brownish pubescent. Thorax fulvous pubescent; scutellum yellow, fuscous and fulvous pubescent. Wings hyaline, veins brown, spurial vein reaches beyond the 2nd posterior cell. Calypteres and halteres pale yellowish. Abdomen somewhat narrower than the thorax, with 3 pairs of yellowish spots, the 5th segment on each lateral side with a small yellowish spot, the hind margin of the 4th and 5th being fulvous. Venter yellowish-brown, at the basal half yellowish. Legs fuscous, knees, 2 anterior pairs of tibiae (in the middle with a fuscous spot) and base of the hind tibia, yellowish.

Length—♂ 10 mm.

Hab.—Hokkaido (Sapporo); one male specimen collected by the author.

Nom. Jap.—*Yezo-hosohirataabu*.

**23. *Stenosyrphus sapporensis* n. sp.**

♀. Aeneous black. Vertex and antennal-process black, shining, front fulvous pruinous and fuscous pubescent; face yellow, with a fuscous stripe, cheeks fuscous. Antennae brownish, all the joints beneath and arista, fulvous. Compound eyes bare. Scutellum fuscous pubescent. Wings hyaline, spurial vein far not reaching to the tip of the 2nd posterior cell, stigma dirty-yellow. Calypteres and halteres pale yellowish. Abdomen in the middle broader than the thorax, with 3 interrupted pale yellowish bands, the hind margin of the

4th segment yellowish; venter pale yellowish, the 3rd, 4th and 5th segments each with a fuscous band. Legs fuscous, knees and 2 anterior pairs of tibiae (except a fuscous middle spot), yellowish.

Length—♀ 7 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author.

Nom. Jap.—*Sapporo-hosohirataabu*.

#### 24. *Mesosyrphus abietis* n. sp.

Closely allied to *M. constrictus* MATS., but differs from the latter as follows:

♀. Cheeks entirely fuscous. Halteres citron-yellow. Abdominal spots greenish, spots much broader towards the lateral margins and obliquely truncated. The 2nd ventral segment in the middle broadly black, the anterior and posterior margins yellowish green, both of an equal breadth, while in *constrictus* the black band is narrower and the anterior yellowish green part much broader than that of the posterior margin. The anterior pairs of tibiae each in the middle with a broader, conspicuous, black spot.

Length—♀ 9-10 mm.

Hab.—Hokkaido (Sapporo); 5 female specimens collected by the author in the middle part of October on *Abies sachalinensis*, sucking the juices, which secreted by an Aphid (*Mindarus abietinus*.)

Nom. Jap.—*Todo-ashiguro-hirataabu*.

#### 25. *Catabomba excavata* n. sp.

♀. Aeneous. Face citron-yellow, with a broad-fusiform, fuscous spot, oral-margin and a spot between the cheeks, fuscous. Antennae black, the 3rd joint fuscous, arista at the base brownish; frontal spot and vertex shining black, front fulvous pruinous. Compound eyes grayish pubescent. Thorax with 3 fuscous stripes, black pubescent, scutellum brownish, with a bluish luster, black pubescent. Wings hyaline, stigma black, spurial vein far not reaching to the tip of the 2nd posterior cell. Calypteres pale testaceous, hal-

teres citron-yellow. Abdomen black, with 3 pairs of greenish transverse spots, each being deeply sinuated at the hind margin, the first pair not reaching to the lateral margins, the 5th segment of each lateral side with a small triangular greenish spot, the hind margins of the 4th and 5th segments greenish. Venter olivaceous, each segment with a black triangular spot, on each lateral side with 3 fuscous spots. Legs yellowish, coxae, trochanter, bases of the femora, the hind tibia, except both ends, and tarsal tips, brownish.

Length—♀ 15 mm.

Hab.—Hokkaido (Sapporo), Honshu (Tokyo); 3 female specimens collected by the author on *Abies sachalinensis*, sucking the juices, which were secreted by an Aphid (*Mindarus abietinus*) at his garden and also by SHIUIIRO HIRAYAMA at Komaba.

Nom. Jap.—*Eguri-hirataabu*.

#### 4. *Eristalosyrphus* n. g. (Pl. 1, fig. 4, a, b, c).

Much resembles *Catabomba* Osr. SACK., but differs from the latter as follows:

♀. Face broader; vertical-triangle much broader, ocelli separated much more from each other. The 3rd antennal joint narrower, distinctly longer than the preceding 2 joints taken together. Compound eyes bare. Wings narrower and shorter. Abdomen rather resembles more that of the *Eristalis* LATR., much vaulted, scarcely broader than the thorax, with pale bluish gray bands, 8 segments being well visible and pointed at the apex.

Genotype—*Eristalosyrphus griseofasciatus* MATS.

#### 26. *Eristalosyrphus griseofasciatus* n. sp. (Pl. 1, fig. 4, a, b, c).

♀. Thorax brownish, scutellum dark fulvous, abdomen black. Face grayish, pale fulvous pubescent, mingling some fuscous hairs, tubercle shining fuscous, frontal triangle and vertex fuscous, both being connected by a fuscous stripe. Antennae with the arista fuscous. Thorax fulvous pubescent, with 3 fuscous stripes, scutellum fuscous pubescent, on the margins with pale fulvous hairs. Wings hyaline, with a fulvous tinge, stigma fuscous, spirial



vein far not reaching to the tip of the 2nd posterior cell. Calypteres testaceous, halteres whitish. Abdomen with 3 narrow, pale bluish gray bands, and a concoloured, longitudinal stripe to the 2nd segment. Venter entirely black. Legs fulvous, coxae, trochanter, basal halves of the femora, more or less extended, and the hind tarsus, as well as the apical half of the same tibia, fuscous; the hind femur with long black stiff hairs in the middle.

Length—♀ 13 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected on the 18th, October, 1917, by the author upon the leaves of *Abies sachalinensis*, feeding on the juices secreted by *Mindarus abietinus*.

It has much resemblance to the flies belonging to the Syrphid genus *Eristalis*.

Nom. Jap.—*Nora-hirataabu*.

**27. *Metasyrphus shirakii* n. sp.**

♂. Aeneous. Face pale yellowish, short pale fulvous and front fuscous, pubescent, with 2 fuscous spots near the antennal basis; vertex fuscous and fulvous pubescent. Antennae fulvous, on its back somewhat brownish, arista fulvous. Scutellum with fulvous hairs, mingling a few fuscous ones. Wings hyaline, stigma fulvous. Calypteres pale testaceous, halteres fulvous. Abdomen oblong, with 3 yellowish bands, the first band being broadly interrupted, the 2nd and 3rd bands at each hind margin shallowly incised, not reaching to the lateral margins, the 5th on the sides, the 4th and the 5th at the hind margins, fulvous. Venter pale fulvous, each segment with a transverse fuscous spot, the dorsal marking being visible through. Legs fulvous, coxae, trochanter and bases of the femora, more or less extended, fuscous.

Length—♂ 7.5 mm.

Hab.—Hokkaido (Sapporo); one male specimen collected by Dr. TOKUICHI SHIRAKI at Jozankei (11. Sept. 1916).

Nom. Jap.—*Shiraki-hoshihirataabu*.

**28. *Metasyrphus misomapensis* n. sp.**

Closely allied to *M. frequens* MATS., but differs from the latter in the following characters:

♀. Face lacks fuscous stripe; front entirely fulvous, lacking fuscous spots. Antennae fulvous, the 3rd joint on its back somewhat brownish. Scutellum fulvous pubescent, mingling 2 or 3 brownish hairs. Wings with more fulvous tinge, stigma brownish, at the base fulvous. Abdominal bands much broader, the 2nd and 3rd bands each at the hind margin twice shallowly incised and reaching to the lateral sides. Venter reddish yellow, a spot in the middle of the 2nd segment very small. Coxae, trochanter and the bases of the femora, black, the hind femur beneath somewhat infuscated.

Length—♀ 10.5 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at Misomap.

Nom. Jap.—*Misomap-hoshikirataabu*.

**29. *Metasyrphus medius* n. sp.**

Also resembles much *M. frequens* MATS., differs from it as follows:

♀. Face pale fulvous, tubercle and the upper oral-margin, fuscous; front with a fuscous stripe. Halteres whitish. Three yellowish bands to the abdomen all interrupted and reaching to the lateral margins, the 3rd and 4th segments mixing short fulvous hairs, the 4th segment at the hind margin not fulvous. Ventral fuscous spots much larger, but that of the 2nd segment being much smaller.

Length—♀ 9 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at his garden.

Nom. Jap.—*Chugata-hoshikirataabu*.

**30. *Metasyrphus candidus* n. sp.**

Also resembles *M. frequens* MATS., differs from the latter as follows:

♀. Body much smaller. Oral-margin and facial tubercle fuscous. An-

tennae fulvous, the 3rd joint on its back brownish. Front above the antennae lacking fuscous spots, face with fulvous and fuscous hairs. The 2nd and 3rd abdominal bands each at the hind margin shallowly incised. The first ventral fuscous band long, at both ends broader, nearly reaching to the lateral sides. Hind femur at the extreme apex fulvous, the same tibia in the middle with a fuscous spot.

Length—♀ 8 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at the Botanical Garden of the Hokkaido Imperial University.

Nom. Jap.—*Maga-hoshihirataaba*.

### 31. *Metasyrphus ishiyamensis* n. sp.

Closely allied to *M. misomapensis* MATS., but it may well be distinguished from the latter in the following characters:

♀. Body much smaller. Facial tubercle fuscous. Front at the base with a fuscous crescent spot. Arista at the apical third fuscous. Vertex black, lacking a bluish tinge. Scutellum pale fulvous pubescent, mixing no fuscous hairs. Yellowish bands to the abdomen much narrower, the 2nd and 3rd bands at each hind margin deeply excavated, that of the 3rd being nearly interrupted, all touching the lateral margin at a point; 3rd and 4th ventral fuscous spots rectangular, nearly reaching to the sides. Legs nearly the same as those of *misomapensis*, but the basal fuscous parts of the femora much more extended.

Length—♀ 9 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at Ishiyama.

Nom. Jap.—*Ishiyama-hoshihirataabu*.

### 32. *Metasyrphus indistinctus* n. sp.

♀. Much resembles *M. corollae* F., but differs from the latter as follows: Body distinctly smaller. Arista at the base fuscous. Calypteres and

halteres whitish. . Abdominal spots smaller, the first spots touch the lateral sides with the whole surface of the upturned apex, the 2nd spots touch the sides at a point with the upturned apex, the 3rd not reaching to the sides. Basal one third of each femur fuscous, in the hind femur the fuscous part being more extended.

Length—♀ 8 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author.

Nom. Jap.—*Ko-futahoshihirataabu*.

### 33. *Metasyrphus aino* n. sp.

Much resembles *M. ishiyamensis* MARS., but differs from the latter as follows:

♀. Front without fuscous crescent spot. Thorax with a bluish tinge, on the sides fulvous pubescent. Scutellum mixing some fuscous hairs. Abdominal bands much broader, the first band scarcely interrupted in the middle, the 2nd band nearly and the 3rd entirely touching the anterior margin, both being incurved at the hind margin. Venter with 2 fuscous bands respectively at the 3rd and 4th segments, and in the middle of each of the same segments being somewhat infuscated. Legs fulvous, coxae, trochanter and bases of the femora (except the last femur), fuscous.

Length—♀ 8 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author.

Nom. Jap.—*Aino-hoshihirataabu*.

### 34. *Metasyrphus fallax* n. sp.

Much resemble *M. kawaguchii* MARS.

♀. Aeneous black. Face pale fulvous, central stripe and upper oral-margin, fuscous, whitish pubescent. Front with x-shaped fuscous marking, at the bases of the antennae with 2 fuscous spots, fuscous pubescent; vertex black, with a bluish tinge. Antennae fuscous, each joint beneath fulvous.

Thorax pale fulvous pubescent, at the sides with fulvous hairs. Wings hyaline, stigma very pale fulvous, spurial vein far not reaching to the tip of the 2nd posterior cell. Calypteres whitish, at the margin testaceous, halteres yellow. Abdomen with 3 pairs of yellowish crescent spots, all touching the lateral sides, and that of the middle one being connected by a narrow bar, all the spots being pale fulvous pubescent, mixing no fuscous hairs. Venter pale yellowish, with 4 small indistinct fuscous spots of an equal size, on the sides not spotted. Legs fulvous, coxae, trochanter and basal halves of the femora (being more extended on the hind femora), fuscous.

Length—♀ 9 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author.

Nom. Jap.—*Modo-hoshihirataabu*.

Differs from *kawaguchii* especially by the abdominal markings, which touching the lateral sides.

### 35. *Metasyrphus diminutus* n. sp.

Much resembles *M. aino* MATS., but differs from the latter as follows:

♀. Body much smaller. Scutellum fulvous pubescent, mingling no brownish hairs. Spurial vein reaching beyond the tip of the 2nd posterior cell. The first yellowish band to the abdomen widely interrupted, the 2nd and 3rd bands not reaching to the lateral sides. The 3rd and 4th ventral segments each with a distinct fuscous spot. Legs nearly the same, but the bases of the hind femora black.

Length—♀ 7 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at Maruyama.

Nom. Jap.—*Hime-hoshihirataabu*.

### 36. *Metasyrphus spurius* n. sp.

Much resembles *M. corollae* F., but differs from the latter as follows:

♀. Face pale fulvous, broadest between the facial tubercle, while in

*corollae* being broadest between the antennae. Two spots at the bases of the antennae and Y-shaped marking to the front, fuscous. Scutellum fuscous pubescent, at the margins with fulvous hairs. Spurial vein much shorter. Halteres grayish white. Abdominal bands much narrower and paler, all not reaching to the lateral sides, the 2nd and 3rd bands being scarcely interrupted in the middle. Venter pale fulvous, with 4 fuscous spots, of which the middle ones being much larger. Legs fulvous, coxae, trochanter and the basal halves of the femora (the fuscous part of the hind femur extending nearly to the apex), fuscous.

Length—♀ 9 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author.

Nom. Jap.—*Ni-hoshihirataabu*.

### 37. *Metasyrphus komabensis* n. sp.

♀. Aeneous. Face pale fulvous, tubercle and upper oral-margin, 2 spots at the bases of the antennae and an indistinct crescent marking at the posterior part of the front, fuscous; vertex black, with a light aeneous tinge. Antennae fuscous, the 3rd joint beneath at the base fulvous, arista fuscous. Thorax and scutellum pale fulvous pubescent. Wings hyaline, stigma dirty yellow, spurial vein reaches scarcely beyond the tip of the 2nd posterior cell. Abdomen with 3 pairs of pale yellowish crescent spots, all far not reaching to the lateral sides, those of the 2nd and 3rd spots on the inner sides being much dilated and rounded, the 5th segment on each side with a triangular yellowish spot, the hind margins of the 4th and 5th segments narrowly fulvous. Venter fulvous, with 4 oblong (longitudinally situated), fuscous spots. Legs fulvous, coxae, trochanter and the bases of the femora (the fuscous part of the hind femur extending nearly to the tip) and the tarsi, fuscous.

Length—♀ 9 mm.

Hab.—Honshu (Tokyo); one female specimen collected at Komaba by Mr. SHIJIRO HIRAYAMA.

Nom. Jap.—*Komaba-monhirataabu*.

**38. *Syrphus (Macrosyrphus) sasayamanus* n. sp.**

♂. Aeneous. Face grayish white, with a fuscous central stripe; front fulvous, at the base of the antennae with a shining fuscous spot, fulvous pubescent, mixing a few fuscous hairs. Antennae fuscous, the first joint at the base fulvous. Thorax and scutellum fulvous pubescent, the latter mixing a few fuscous hairs. Wings with a light fulvous tinge, stigma fulvous, spurial vein scarcely reaches to the tip of the 2nd posterior cell. Calypteres and halteres yellow. Abdomen yellow, fulvous pubescent, with 3 narrow, fuscous bands, respectively near the hind margins of the 2nd, 3rd and 4th segment, the fuscous parts being concolorous pubescent; venter pale fulvous, only on each lateral side with 3 fuscous spots. Legs yellowish, the hind femur at the apical half, the same tibia and tarsus, fuscous; the hind femur with short fuscous hairs only at the apical half.

Length—♂ 12 mm.

Hab.—Shikoku (Mt. Sasa in Tosa); one male specimen collected by the author.

Nom. Jap.—*Sasayama-obihirataabu*.

**39. *Syrphus (Macrosyrphus) beppuensis* n. sp.**

♀. Aeneous. Face fulvous, pale fulvous pubescent; front golden pruinous, fuscous pubescent, at the base of the antennae with 2 fuscous spots, in the middle with a narrow fuscous stripe, which being dilated at the tip and of Y-shaped; vertex fuscous, with a purplish tinge. Antennae fulvous, the 3rd joint, except the lower part, fuscous, arista fulvous, at the apical half fuscous. Thorax at the sides somewhat fulvous, fulvous pubescent. Scutellum fuscous pubescent, at the margins with fulvous hairs. Calypteres and halteres pale testaceous. Wings hyaline, stigma dark fulvous, spurial vein far not reaching to the tip of the 2nd posterior cell. Abdomen dark brown, with 3 broad yellow bands, the first band fulvous and the other two fuscous short pubescent. Venter pale fulvous, the 3rd segment with a fuscous band, the

2nd and 3rd segments on each side with a black spot. Legs fulvous, coxae brownish, hind femur at the apical two thirds with short fuscous hairs.

Length—13 mm.

Hab.—Kiushiu (Oita); one female specimen collected by the author at Beppu.

Nom. Jap.—*Beppu-ōbihirataabu*.

**40. *Syrphus (Macrosyrphus) hakiensis* MATS.**

*Syrphus hakiensis* MATS., Ent. Mag. Jap. Vol. III, pt. p. 29, ♂, 1917.

♀. Differs from the male as follows:

Front in the middle with a narrow fuscous stripe, which being much dilated at the tip, above the antennae with a fuscous spot, concolorous pubescent. The first yellowish band to the abdomen not incised at the anterior margin.

Hab.—Shikoku (Mt. Sasayama in Tosa); one female specimen collected by the author.

Nom. Jap.—*Haki-obihirataabu*.

**41. *Syrphus (Macrosyrphus) agitatus* n. sp.**

Much resembles *S. (Macrosyrphus) aino* MATS., but differs from the latter as follows:

♂. Head smaller. Front fuscous, pubescent, frontal callosity above the antennal-basis fuscous. Arista fulvous, at the apex fuscous. Tempora fulvous pubescent, while in *aino* whitish pubescent. Spurial vein of the wing reaches to the tip of the 2nd posterior cell. Halteres grayish. Yellowish bands of the abdomen narrower, so that the fuscous parts being more conspicuous, the fuscous parts of the 2nd and 3rd segments concolorous and that of the 4th fulvous, pubescent. Venter with 3 indistinct fuscous spots. Legs yellow, coxae, trochanter and bases of the femora, fuscous.

Length—♂ 10 mm.

Hab.—Hokkaido (Sapporo); one male specimen collected by the author at the Botanical Garden of the Hokkaido Imperial University.



Nom. Jap.—*Hoso-obihirataabu*.

**42. *Syrphus (Macrosyrphus) riukuensis* n. sp.**

Much resembles *S. (Macrosyrphus) okinawae* MATS., but differs from the latter as follows:

♂. Frontal spot at the base of the antennae more or less fuscous. Antennae on the back brownish, arista at the apical half fuscous. Abdomen much shorter, conical in shape, yellowish bands much narrower, the first band at the middle constricted, all the bands long, fulvous pubescent, while in *okinawae* the 4th segment short fuscous pubescent; the lateral margins fuscous and fulvous pubescent.

Length—♂ 13-14 mm.

Hab.—Okinawa (Riuku); 2 male specimens collected by Mr. KO KUROIWA at Naha.

Nom. Jap.—*Riuku-obihirataabu*.

**43. *Syrphus (Macrosyrphus) isshikii* n. sp.**

Also much resembles *S. okinawae* MATS., but differs from the latter as follows:

♂. Head much smaller. Abdomen much shorter, nearly as long as the head and thorax taken together, the 2nd segment broadly fuscous at the anterior margin, so that the band is much narrower, the 3rd and 4th segments much more fuscous pubescent. Venter with 2 fuscous bands.

Length—♂ 13 mm.

Hab.—Honshu (Wakayama); one male specimen collected by Mr. SHUCHI ISSHIKI.

Nom. Jap.—*Isshiki-obihirataabu*.

**44. *Syrphus (Macrosyrphus) nakajimensis* n. sp.**

♀. Aeneous black. Face pale fulvous, brownish and pale fulvous pubescent, tubercle and cheeks, broadly extended, fuscous. Front fulvous pruinous, frontal callosity and vertex, fuscous, concolorous pubescent. Antennae brown, the 3rd joint beneath fulvous, arista fulvous. Compound eyes slightly

brownish pubescent. Scutellum long fuscous pubescent. Claypteres pale testaceous, halteres fulvous. Wings hyaline, stigma fuscous, spurial vein far not reaching to the tip of the 2nd posterior cell. Abdomen black, much constricted at the base, broadest at the 3rd segment, with 3 yellowish bands, the first band being widely interrupted, those of the 3rd and 4th segments narrower than that of the 2nd, the hind margin of the 4th yellow, with a triangular fulvous spot on each side of the 5th, fulvous pubescent, the black part being concolorous pubescent. Venter fulvous, with 2 fuscous bands, on each side of the 2nd segment fuscous spotted. Legs fulvous, coxae, trochanter, the basal halves of femora and the hind legs, except knees, fuscous.

Length—10 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at Nakajima Park.

Nom. Jap.—*Nakajima-kuchiguro-hirataabu*.

**45. *Syrphus (Syrphus) velox* n. sp.**

Much resembles *S. vitripennis* MEIG., but differ from the latter in the following points:

Vertex broader, black, lacking any bluish tinge. Antennae longer, the 3rd joint and arista entirely fulvous. The 2nd and 3rd yellowish abdominal bands not incised at each hind margin. The hind femur at the extreme base fuscous, short fuscous pubescent from the apex to beyond the middle, the middle spot of the same tibia fuscous.

Length—♀ 9 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author on the 2nd of June, 1916.

Nom. Jap.—*Haya-hirataabu*.

**46. *Syrphus (Syrphus) kitakawae* n. sp.**

Closely allied to *S. ribesii* F., but differs from the latter as follows:

♀. Front fulvous, at the base of antennae with a small fuscous V-shaped marking. Scutellum fuscous pubescent, mingling, especially at the anterior margin, fulvous hairs. Spurial vein shorter, far not reaching to the tip of the

2nd posterior cell. Abdomen much less fulvous and fuscous pubescent, the black part of the 4th segment concolorous pubescent; venter with 2 fuscous bands. The hind femur at the basal half beneath fuscous, entirely fulvous pubescent, mixing no fuscous hairs at the tip.

Length—♀ 10 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by Mr. KAKUYA KITAKAWA at the Botanical Garden of the Hokkaido Imperial University.

Nom. Jap.—*Kitakawa-hirataabu*.

**47. *Syrphus (Syrphus) palliventralis* n. sp.**

♂. Aeneous black, with a purplish shade. Face fulvous, pale fulvous pubescent, frontal callosity scarcely infuscated, fuscous pubescent. Antennae fulvous, on its back brownish, arista fuscous brown. Thorax fulvous, scutellum fuscous pubescent. Calypteres and halteres pale testaceous. Wings hyaline, stigma pale fulvous, spurial vein far not reaching to the tip of the 2nd posterior cell. Abdomen scarcely broader than the thorax, nearly lineal, with 3 yellowish bands, that of the 2nd segment being broadly interrupted, the 2nd and 3rd bands on each hind margin triangularly incised, the hind margins of the 4th and 5th segments narrowly fulvous. Venter entirely pale fulvous, without any marking, long pale fulvous pubescent. Legs fulvous, coxae, trochanter, bases of the femur, the hind femora, except the knees, fuscous, the hind femur fulvous pubescent at the apex.

♀. Differs from the male in having an indistinct, fuscous, triangular spot to the front and the 2nd and 3rd abdominal bands, which being not deeply incised at the hind margins.

Length—♂ 8–8.5 mm.

Hab.—Hokkaido (Sapporo); 5 (2 ♂, 3 ♀) specimens collected by the author at the college farm of the Hokkaido Imperial University.

Nom. Jap.—*Harausu-hirataabu*.

**48. *Syrphus (Syrphus) tenuis* n. sp.**

Aeneous black. Face fulvous, pale fulvous pubescent, cheeks with an

indistinct fuscous spot. Front at the base of antennae with a fuscous fork-shaped fuscous marking, fuscous pubescent. Antennae fulvous, the 3rd joint on its back brownish. Scutellum fuscous pubescent. Calypteres and halteres pale testaceous. Wings hyaline, stigma fulvous, spurial vein reaches nearly to the tip of the 2nd posterior cell. Abdomen fuscous, with 3 yellowish bands, the first band widely interrupted, the 2nd and 3rd narrower than the first, nearly entire, each reaching to the lateral margin with its upturned apex, the lateral triangular spot of the 5th segment and the narrow hind margins of the 4th, 5th and 6th segments, fulvous, short fulvous and fuscous pubescent. Venter whitish, with 3 small fuscous spots in a longitudinal row, whitish pubescent. Legs fulvous, coxae, trochanter, extreme bases of the femora, fuscous, the middle and hind tarsi brownish, the hind femora at the apical half fuscous pubescent.

Length—♀ 9.5 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at the college farm of the Hokkaido Imperial University.

Nom. Jap.—*Hosogata-hirataabu*.

**49. *Syrphus (Syrphus) okadensis* n. sp.**

Near *S. vitripennis* MEIG., but differs from it as follows:

♀. Face brownish and pale fulvous pubescent, frontal callosity at the base of antennae broadly shining black, vertex black, lacking a bluish shade. Wings with a fulvous shade, stigma dark fulvous. Abdominal band, especially the first band, much narrower, the 2nd and 3rd bands each at the hind margin triangularly sharp incised; venter in the middle with an interrupted brownish stripe. Legs fulvous, coxae, trochanter and the basal halves of the femora (in the hind femur the fuscous part being extended nearly to the tip), fuscous, the hind femur at the tip short fuscous pubescent.

Length—♀ 8 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at Okada Park.

Nom. Jap.—*Okada-hirataabu*.

**50. *Syrphus (Syrphus) dubius* n. sp.**

♀. Aeneous black. Face pale fulvous, at the upper part fuscous pubescent; frontal-triangle grayish, anteriorly bordered by a W-shaped fuscous marking. Antennae dark brown, beneath fulvous, arista fuscous. Scutellum fuscous pubescent. Wings hyaline, stigma fulvous. Calypteres and halteres testaceous. Abdomen black, with 3 yellowish bands, the first band broadly interrupted, the 2nd and 3rd bands at each hind margin triangularly incised, reaching to the lateral sides with their upturned apices, the 4th and 5th segments at each hind margin fulvous, the black part fulvous and fuscous pubescent. Venter pale fulvous, the 2nd and 3rd segments each with an indistinct small fuscous spot. Legs fulvous, coxae, trochanter, bases of the femora (in the hind femur the fuscous part being extended nearly to the tip), and the middle part or the apical half of the hind tibia, fuscous.

Length—♂ 10 mm.

Hab.—Hokkaido (Saporo); one male specimen collected by the author at Nakajima Park.

Nom. Jap.—*Magai-hirataabu*.

Superficially much resembles *Metasyrphus frequens* MATS.

**51. *Syrphus (Syrphus) conspicuus* n. sp.**

Much resembles *S. ribesii* F., but differs from the latter in the following points:

♀. Face in the middle short fuscous pubescent. Antennae dark brown, beneath fulvous. Scutellum at the base fulvous pubescent. The 2nd and 3rd abdominal bands at each hind margin shallowly incised and fuscous short pubescent. Basal one third of the femora (in the hind femur the fuscous part nearly extending to the apex), the hind tibia, except the base, and the same tarsus, fuscous, at the apex of the hind femur fulvous hairs being predominated.

Length—♀ 11 mm.

Hab.—Hokkaido (Sapporo); 2 female specimens collected by the author at the college farm of the Hokkaido Imperial University.

Nom. Jap.—*Momoguro-ōhirataabu*.

**52. *Syrphus (Syrphus) maculifer* n. sp.**

♀. Closely allied to *S. ribesii* F., but differs from the latter as follows:

Body much smaller. The 3rd abdominal band touches the lateral sides with its nearly whole breadth. The hind femur and tibia each near the middle with a small fuscous spot.

Length—♀ 9 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at the college farm of the Hokkaido Imperial University.

Nom. Jap.—*Ashimon-hirataabu*.

**53. *Syrphus (Syrphus) teshikaganus* n. sp.**

Closely allied to *S. ribesii* F., but differs from the latter as follows:

♀. Vertex and front, except the basal part of the antennae, fuscous, frontal-triangle lacking fork-shaped fuscous marking. Scutellum fulvous pubescent, with a few long fuscous hairs on the posterior part. Abdomen much shorter pubescent, the 3rd band touching the lateral sides with its nearly whole breadth. Venter only on each lateral side with 3 fuscous spots, long pale fulvous pubescent. Legs fulvous, coxae, trochanter, and the hind femur at the extreme base, fuscous.

Length—♀ 11 mm.

Hab.—Hokkaido (Kushiro); one female specimen collected by the author at Teshikaga.

Nom. Jap.—*Teshikaga-ōhirataabu*.

**54. *Syrphus (Syrphus) kuccharensis* n. sp.**

Near to *S. teshikaganus* MATS., but differs from the latter as follows:

♀. Frontal callosity at the base of the antenna shining fuscous, lacking a triangular fuscous spot. Scutellum fuscous pubescent, at the basal half with fulvous hairs. The 2nd and 3rd yellowish abdominal bands short fuscous pubescent. Venter paler, the 2nd and 3rd segments each with an indistinct fuscous spot. Legs fulvous, coxae, trochanter, basal one third of the femora

(in the hind femur the fuscous part being extended nearly to the tip), the hind tibia, except the apex, and the same tarsus, fuscous; the hind femur fulvous and at the extreme apex short fuscous, pubescent.

Length—♀ 11 mm.

Hab.—Hokkaido (Kushiro); one female specimen collected by the author at the lake-region of Kuccharo.

Nom. Jap.—*Kuccharo-hirataabu*.

**55. *Syrphus (Syrphus) campestris* n. sp.**

♀. Aeneous black. Frontal callosity fuscous, in the middle of the front with an indistinct fuscous triangular spot; face pale fulvous, front and vertex fuscous pubescent. Scutellum fuscous pubescent. Antennae fulvous, its back and arista brownish, spurial vein of the wing far not reaching to the tip of the 2nd posterior cell. Abdomen black, with 3 yellowish bands, the first band being broadly interrupted, the 2nd and 3rd bands at each hind margin obtuse-angularly incised, with fulvous hairs, the 4th and 5th segments at each hind margin and a triangular lateral spot to the 5th segment, fulvous. Venter dark fulvous, the 4th segment in the middle with a fuscous spot. Legs fulvous, coxae, trochanter, basal one third of femora (in the hind femur the fuscous part extending nearly to the apex) and tarsi, fuscous, the hind femur fulvous pubescent:

Length—♀ 7 mm.

Hab.—Hokkaido (Sapporo); one female specimen collected by the author at the college farm of the Hokkaido Imperial University.

Nom. Jap.—*Nohara-hirataabu*.

**56. *Syrphus (Syrphus) kushirensis* n. sp.**

♀. Much resembles *S. campestris* MATS., but differs from the latter as follows:

Frontal-triangle fuscous. Antennae brown, beneath fulvous, arista brown, at the basal half fulvous. Scutellum fuscous pubescent, at the base with fulvous hairs. Spurial vein of the wing much longer, nearly reaching

to the tip of the 2nd posterior cell. The incisions of the 2nd and 3rd abdominal segments at the hind margins not angular. The 2nd ventral segment with a fuscous spot, venter at each lateral margin with 3 fuscous spots. Legs nearly the same, but the hind tibia, except the apex, fuscous, the hind femur at the apex fuscous pubescent.

Length—♀: 7.5 mm.

Hab.—Hokkaido (Kushiro); one female specimen collected by the author at the lake-region of Kuccharo.

Nom. Jap.—*Ko-kuccharo-hirataabu*.

**57. *Syrphus (Syrphus) shibechensis* n. sp.**

Closely allied also to *S. campestris* MATS.

♀. Body much smaller. Frontal-triangle fuscous. Antennae fulvous, the 3rd joint short, on its back narrowly fuscous, arista brownish. Scutellum fulvous pubescent, at the hind margin with a few fuscous hairs. Spurial vein of the wing nearly reaching to the tip of the 2nd posterior cell, stigma pale fulvous. Abdominal band nearly the same, but the 3rd band touching the lateral sides nearly with its whole breadth. Venter lacking markings, only the fuscous bands of the dorsum being visible through.

Length—♀ 6.5 mm.

Hab.—Hokkaido (Kushiro); one female specimen collected by the author on the road from Shibecha to Teshikaga.

Nom. Jap.—*Shibecha-hirataabu*.

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## Plate I

1. *Conosyrphus okunii* n. sp.
  - 1 a Head.
  - 1 b Antenna.
  - 1 c Wing.
  
2. *Karasyrphus sachalinensis* Mats.
  - 2 a Head.
  - 2 b Antenna.
  - 2 c Wing.
  
3. *Pipizopsis biglumis* Mats.
  - 3 a Head.
  - 3 b Antenna.
  - 3 c Wing.
  
4. *Eristalosyrphus griseofasciata* n. sp.
  - 4 a Head.
  - 4 b Antenna.
  - 4 c Wing.

