Studies on the Syrphidae 5. Two new Japanese species presented by Dr. C. Okawa

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1. *Graptomyza okawai* sp. nov. (Fig. 1)

Male. Head as wide as the thorax, nearly 1.8 times as wide as long or 1.3 times as wide as high. Frons hardly broadened forward, with the straight lateral margins, a little narrower than an eye, shining deep black, with a pair of dull yellow triangular lateral spots about the middle of the lateral margins, the apico-lateral borders rather transversely dull yellowish, on the surface there is a rather dense erect brownish pubescence; lunula brownish black, strongly shining, with a distinct median longitudinal sulcus; ocellar triangle nearly half as wide as the vertex, the ocelli placed on equidistant. Face almost parallel-sided, as wide as the eye, moderately produced below the eye, waxy yellowish, with a shining black median longitudinal streak which becomes distinctly narrowed on the upper half, and the more or less dull coloured epistoma, in profile distinctly hollowed about the upper two-fifths, the remaining portion produced forward nearly perpendicularly with the lower angle more or less right-angled, the produced portion narrowly black along the anterior margin, on this black streak there are some black conspicuous erect setae; cheeks comparatively narrow, yellowish, with a brown long-triangular streak from just before the lower angle of eye to near the apex of facial cone, the lower margin almost straight and furnished with rather sparse blackish setae; genae yellowish, pale pubescent, more or less swollen. Back of the head slightly convex below, deep black, furnished with a white dense erect pubescence, along the orbits there are some black somewhat bristly hairs (occipital row of bristles). Eyes comparatively large, in profile nearly perpendicular, oval, with the anterior margin strongly convex and the posterior margin more or less sinuate on the lower half, the upper angle larger than the lower angle, nearly 1.7 times as high as wide, bare from pubescence. Antennae not reaching the epistoma; first segment deep black, more or less cylindrical, as long as wide; second segment blackish with the apical half yellowish brown, with a conspicuously long black median bristle; third
segment black with the basal and ventral portions reddish yellow, whitish pruinose, fully 2.5 times as long as wide, the dorsal margin nearly straight but slightly concave just before the tip which is narrowly rounded, and the ventral margin strongly convex, on the inside there are some three small grnules near the base of arista; arista rather shortly plumose about the apical half, where it is quite black but the remaining portion dull yellow.

Thorax shining deep black, yellowish pubescent, yellowish coloured on the following portions: humeral calli, notopleural calli, postalar calli prothorax, the posterior one-third of mesopleura, and a small spot just below the wing-bases. Scutellum shining deep black, with the depression occupying on the apical three-fourths, on where there are a dense depressed brown pubescence; the marginal area furnished with abundant black bristly hairs, and with two conspicuously long apical marginal bristles.

Fig. 1. *Graptomyza okawai* sp. nov.

1. Head in profile (× 2).
2. Head in front view (× 3).
3. Antennae from inside (× 5).
4. Hind leg from outside (× 3).

(× = Magnifying ratio).

Mesonotum as long as wide, furnished with many long black bristly hairs along the posterior margin, with 1 notopleural and 2 : 2 supraalar bristles distinct, especially the inner one of the posterior supraalar long.

Abdomen comparatively broad, fully 1.3 times as long as wide, a little longer than the thorax, light reddish yellow, with the first and second (except the posterior margin) segments ivory yellowish, brownish pubescent, the black fasciae as in
the text figure but the median one of the fourth tergite distinctly divided into two on the posterior end as in *ishikawai* SHIRAKI, this portion does not seen from above; ventre light ivory yellow, with the apical half more or less reddish yellow and the three posterior sternites more or less blackish.

Wings shorter than the body, fully 2.5 times as long as wide, more or less whitish subhyaline, the blackish fasciae as in the text figure; vena spuria very faintly traceable at r-m, first anal vein very slightly developed only at its base.

Legs (first pair destroyed) ivory yellowish, with nearly apical half of femora, tibiae (except the basal portion), and three apical segments of tarsi, black, and two basal segments of tarsi and the knees yellowish brown.

Wings shorter than the body, fully 2.5 times as long as wide, more or less whitish subhyaline, the blackish fasciae as in the text figure; vena spuria very faintly traceable at r-m, first anal vein very slightly developed only at its base.

**Length:** body 6 mm, wings 5.2 mm.

Only one male collected by Dr. C. OKAWA at Yahata, Isshi-Gun, Mie Prefecture, on the 10th of October 1954. Holotype preserved in the Entomological Museum of the National Institute of Agricultural Sciences, Tokyo, Japan.

The present species is very near to *ishikawai*, but it differs in the relatively short abdomen, the wing-pattern and the shape of third antennal segment.

2. *Chamaesyphus japonicus* sp. nov. (Fig. 2)

Female. Head black, distinctly wider than the thorax, half as long as wide or a little wider than high. Frons nearly two-thirds as wide as the eye, distinctly broadened forward with the very slightly convex eye-margins, rather densely blackish pubescent, with the anterior border distinctly white tomentose; ocellar triangle very large, fully occupying more than half as wide as the blackish pilose vertex, with the comparatively small ocelli which are equidistant. Face microscopically pubescent, in profile distinctly produced forward and downward, with a rather slight median elevation which becomes somewhat brownish on the middle portion, conspicuously white tomentose leaving the anterior lower half and the posterior rather broad portion; in front view very slightly broadened beneath with the straight lateral margins; the orbits rather broad, quite obscured by a white tomentum, on the lower half there is a light yellowish elongate callus; cheeks rather narrow, more or less brownish, whitish tomentose, on the posterior corner there are whitish piles; back of the head quite hollowed, with very narrow eye-margin greyish tomentose. Eyes quite bare, comparatively large, in profile oval, with the posterior margin slightly convex, the lower angle slightly narrower than the upper angle. Antennae inserted at just above the middle of eye; the two basal segments black, the second segment nearly twice as long as the first one, with a short but distinct median bristle, the inner side somewhat quadrately produced; third segment orbicular, comparatively large, nearly twice as long as the two basal segments united together, reddish brown with the dorsal and apical borders black; arista just after the middle of the dorsal margin, black, a little longer than the third segment.

Mesonotum shining greenish black, brownish pubescent, very slightly longer than wide, the lateral margins from the humeral calli to the wing-bases more or less greyish tomentose; humeral calli conspicuously covered with a greyish
tomentum and sparsely brownish pubescent, on the apico-lateral borders there are some whitish piles; scutellum shining greenish black, nearly 1.8 times as wide as long, the pubescence rather sparser than on the notum. Pleura black, with the prothorax more or less brownish, entirely covered with a greyish tomentum and rather sparsely white pubescent. All the bristles black; notopleural 1, supraalar 1:2, scutellar 1, and mesopleural 1.

Abdomen slender, nearly parallel-sided, approximately 1.4 times as long as the head and thorax united together, rather flat, shining black, with a pair of faint large yellowish grey tomentose latero-basal spots on each the second to fourth tergites, the pubescence black, but the piles on the lateral borders white and long and also directed laterad, these piles becoming shorter toward the posterior three tergites and on the posterior half of each the tergites directing obliquely hindwards; first tergite entirely obscured by a yellowish grey tomentum, on the latero-basal portions there are some 8 irregular transverse grooves, the lateral piles conspicuously long; the ventre strongly hollowed, more or less brownish, brownish pubescent.

Wings distinctly shorter than the body, nearly one-third as wide as long, glass-hyaline, with blackish veins and yellowish brown pterostigma, the veins becoming more or less yellowish towards the wing-base; subcostal vein ending

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Fig. 2. *Chamaessyrphus japonicus* sp. nov.

1. Head in profile (×3). 2. Head in front view (×3).
3. Antenna from inside (×5). 4. Hind leg from outside (×3).

(× = Magnifying ratio)
nearly the middle of wing; \( r_1 \) nearly straight; \( r_{2+3} \) well-arcuate, ending about the middle between the tips of \( r_1 \) and \( r_{1+2} \); \( r_{1+2} \) more or less straight, ending at the wing-tip; \( m \) distinctly curved below at the apical portion; \( r-m \) sinuate, below the tip of \( s_a \), or very near to the base of discoidal cell, oblique, nearly as long as \( m-cu \); subapical cross-vein moderately s-like, curved, ending far before the wing-tip, nearly twice as long as the lower marginal cross-vein which is distinctly concave; vena spuria traceable; \( 1a \) rather distinct. Halteres dirty yellowish, with comparatively large paler head.

Legs brown, with the both ends of femora yellowish, the pubescence rather yellowish, the front legs paler than the remainings.

Length: body 5.8 mm, wings 5 mm.

Only one female collected by Dr. C. ŌKAWA, at Suga-Jima, Mie Prefecture, on the 8th of April 1953. Holotype preserved in the Entomological Museum of the National Institute of Agricultural Sciences, Tokyo, Japan.

The present species is quite distinguished by the abdomen without a characteristic light coloured pattern from the known species of *Chamaesyrphus*. 