

THE OCCURRENCE OF THE GENUS *SPILOMENA*  
SHUCKARD IN JAPAN, WITH DESCRIPTIONS  
OF TWO NEW SPECIES  
(Hymenoptera, Sphegidae)<sup>1)</sup>

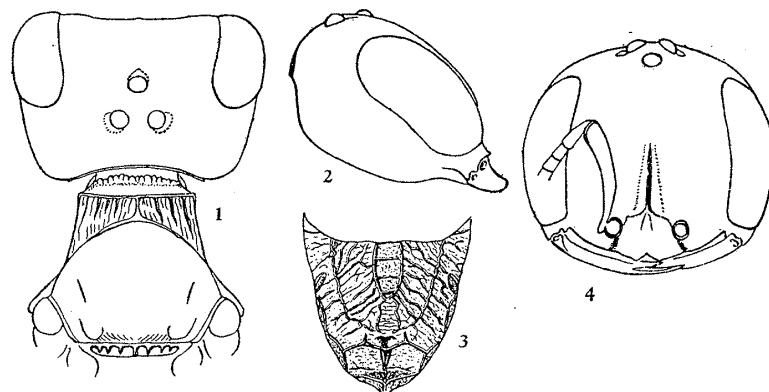
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The wasp belonging to the genus *Spilomena* Shuckard has not so far been recorded from Eastern Asia with the exception of the Ussuri region. During his study of the Pemphredonine wasps of Eastern Asia the writer could find two species of small wasps belonging to the present genus in his collection which were apparently new to science:

1. *Spilomena laeviceps* sp. nov.

♀. Length 2.7 mm. Black and shining, almost entirely glabrous. Clypeus on anterior margin adorned with a row of long hairs, mandibles with scattered long hairs, end segment of abdomen sparsely covered with short whitish pubescence. Mandibles, antennae, humeral angles posteriorly, wingveins and greater part of legs dark testaceous; trochanters, base and apex of tibiae and tarsi of all legs much paler, rather yellowish. Head and thorax seen from above: Fig. 1, comparatively thick, with ratio of width to length 11:7, vertex gently convex, with ocelli located in an equilateral triangle, ocellar impressions lunate, rather distinctly outlined on outer margin in postocelli, frontal impressions or opaque areas lacking, OOD:POD:OCD = 5:2:3, upper front not well-developed, gradually inclined toward anterior front. Head seen in front: Fig. 4, anterior front very gently concave, with median longitudinal elevation on lower portion which is carinated in middle, the distance between sockets of antennae slightly larger than the distance between socket and eye (ratio 9:7), mandibles bifid at apex, with outer tooth longer than inner tooth, clypeus in middle raised, nearly bell-shaped, with surface flattened (constant?), with anterior margin in middle triangularly incised, the sides of the incision slightly produced, lateral portions of clypeus narrow, distinctly depressed as compared with the medial portion, with outer margin gently rounded. Antennae with joint 1 as long as 7 following joints united, joint 3 nearly half the length of 2, only slightly more than as long as wide, joints 4, 5, 6 each as long as 3 and slightly longer than wide (in the lateral view as long as wide). Head seen in profile: Fig. 2. Pronotum comparatively long (Fig. 1), mesonotum without longitudinal furrows anteriorly, parapsidal grooves feeble, scutellum convex, with costate transverse furrow at base, mesopleuron convex, without enclosed triangular area, propodeum with dorsal surface medianly at apex feebly tuberculate, its immediate posterior portion slightly hollowed, posterior surface gently roundly inclined.

1) Contribution No. 12, from the Biological Laboratory, Fukui University, Japan.

Figs. 1~4. *Spilomena laeviceps* sp. nov.

Vertex, upper front, temples, mesopleuron and abdomen smooth and polished, lower front and clypeus shining but the surface microscopically coriaceous, pronotum with a few strong longitudinal carinae, intervals more feebly and finely somewhat closely striate, the striae obsolete posteriorly, lateral surfaces of pronotum similarly carinated and margined with a strong longitudinal carina on lower border, mesonotum similar in surface condition to lower front, but the sculpture somewhat more marked anteriorly and rather obsolete latero-anteriorly, on posterior margin feebly crenate, the surface of the disc scattered with sparse, somewhat large, less well outlined punctures. Sculpture of propodeum: Fig. 3, posterior surface medianly longitudinally feebly carinate and provided with a few transverse carinae toward apex, lateral portions coarsely reticulate, sides of propodeum anteriorly polished, posteriorly obliquely, finely closely striate.

♂. Unknown.

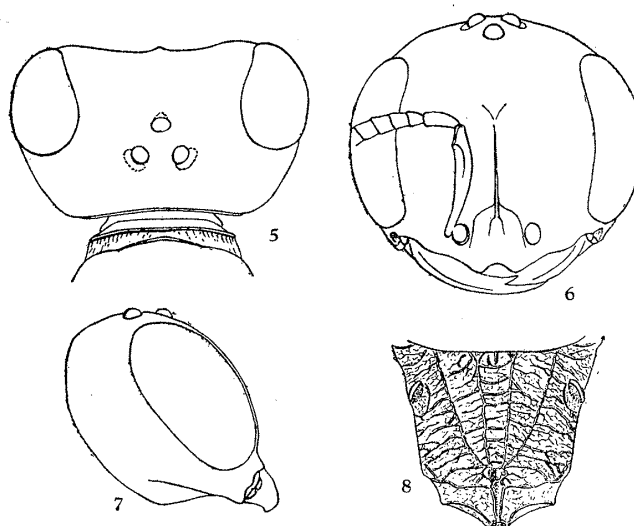
Holotype: ♀, Koike, Fukui Pref., 28. VII. 1954 (K. Tsuneki leg. and in his coll.).

Remarks. This species is very distinct in the form of the head and pronotum and in the sculpture of the head and thorax and easily separable from any of the known species of the genus.

## 2. *Spilomena japonica* sp. nov.

♀. Length 3.2 mm. Head, thorax and abdominal tergites 5 and 6 rather closely covered with short whitish pubescence, anterior margin of clypeus and outer face of mandibles provided with long brownish hairs. Black, with somewhat coppery effulgence on vertex and front. Scapes and pedicels of antennae, tegulae of wings, legs wholly except basal half of coxae lustering yellow. Antennal flagella, terminal tarsal joints of all legs dark brown; mandibles black, with somewhat brownish tint. Head seen from above: Fig. 5, ratio of width to length 13:4, vertex gently convex, ocelli nearly in an equilateral triangle, OOD:POD:OCD=5:2:4, the impressions outside postocelli distinct, lunate, without frontal opaque areas, upper front gradually inclined toward lower front. Head seen in front: Fig. 6, median longitudinal carina distinct but rather short, not accompanied with the surface elevation; clypeus medianly bell-shaped, strikingly elevated,

with surface convex, its anterior margin triangularly incised, lateral portion depressed, narrow and rounded on the outer margin. Head seen in profile: Fig. 7. Antennal joint 1 as long as 5 following joints taken together, joint 2 one and a half times as long as 3, joints 3-11 subequal in length to one another and each as long as wide at apex, apical joint only slightly less than as long as 2 preceding joints combined. Pronotum short (Fig. 5), anterior margin



Figs. 5~8. *Spilomena japonica* sp. nov.

carinated, the carina gently convex forward, mesonotum without anterior longitudinal furrows, parapsidal furrows represented by two lustering lines, scutellum at base with transverse furrow which is incompletely (anteriorly only) crenate. Mesopleuron with episternal suture fine, crenate, with the lower end distinctly roundly excavated. Propodeum with spiracles markedly swollen, on dorsal surface medianly at apex slightly tubercularly produced, with immediate posterior area shallowly hollowed; posterior surface rather flattened, its lateral margins provided with a short tooth respectively near middle. Pygidial area long, narrow and finely grooved, its lateral view only slightly convex upward.

Upper front finely, moderately closely punctured, remaining portions of head microscopically coriaceous, occiput and lateral portions of lower front further with somewhat large scattered punctures, pronotum finely, irregularly and very weakly reticulate, its lateral surfaces longitudinally striate and with lower border carinated; mesonotum, scutellum and postscutellum finely, very closely punctulate. Mesopleuron smooth and polished with scattered fine puncturings. Sculpture on propodeum: Fig. 8, on posterior surface just behind the medial hollow runs a distinct transverse carina, the surface irregularly, rather feebly reticulate, sides of the segment posteriorly and upward somewhat coarsely reticulate, anteriorly smooth and shining. Abdomen polished, tergite 4 very delicately coriaceous, 5 and 6 minutely and rather closely punctulate.

Holotype: ♀, Tyuzendzi, Nikko, 2. VIII. 1954 (E. Tanaka leg. and in the writer's coll.).

♂. Unknown.

Remarks. Among the known representatives, this species is most closely allied to *S. troglodytes* Van der Linden occurring in Europe. But it can easily be distinguished from it by the following differences:

1. Head seen in front more rounded. Width to length (from apex of clypeus to middle between postocelli) in the ratio of about 50:41 in *japonica*, while in *troglydtes* 45:41.

2. Head seen from above with posterior margin less strongly emarginate than in the compared species.

3. Pronotum with anterior transverse carina (seen from above) rather gently rounded anteriorly, not in a broad V-shape as in *troglydtes*.

4. Pygidial area in the lateral view much less strongly curved upward.

5. Mandibles wholly blackish and legs except coxae light testaceous, in *troglydtes* mandibles testaceous, legs with femora largely blackish.

The writer expresses his sincere appreciation to Mr. E. Tanaka.

#### Addendum

After the manuscript was sent, the writer was able to obtain some specimens of both the species above described together with some knowledge concerning the biology of one them:

1. *S. laeviceps* m. 1 ♀, Hatogayu, Fukui Pref., 27. VII. 1955 (the writer leg.). The specimen was alighting on a wooden post of a house situated under the deep shade of a wood.

2. *S. japonica* m. 5 ♀♀, Shobugahama, Nikko, 9. VIII. 1955 (E. Tanaka and the writer leg.). *Biology*. The specimens were captured at the entrances to their nests which were opened on the decayed trunk of a dead tree standing in a dense wood. One of them, when captured, was carrying a prey. After being put in a bottle she carried it about on the glass wall, grasping it by one end of the body with her mandibles and holding it longitudinally beneath her breast. It was, without doubt, a larva of the thrips. Unfortunately, however, it was accidentally lost before being identified. *Remarks*. Examination of the specimens revealed the presence of the following variations of characters as compared with the holotype: 1) Coloration. Femora of all legs more or less darkened in most of the specimens, especially deeply so on hind legs. 2) Form of pronotum seen from above. This character is fairly variable with the individual. Anterior margin sometimes straightened, sometimes slightly curved anteriorly and sometimes medially gently emarginated. Latero-anterior corners in some specimens rounded, in others angulated or shortly pointed. 3) Mesonotum. Posterior margin crenate or crenulate in a varying degree in most of the specimens. 4) Propodeum. The slight protuberance at medio-posterior corner of dorsal surface and the small hollow just behind it are not well-defined in some specimens. Sometimes posterior surface gently convex and without angles toward middle of lateral margins.