



Title	Sawflies of the Kurile Islands (1)
Author(s)	Takeuchi, Kichizo
Citation	Insecta matsumurana, 19(1-2), 9-22
Issue Date	1955-06
Doc URL	http://hdl.handle.net/2115/9554
Type	bulletin (article)
File Information	19(1-2)_p9-22.pdf



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SAWFLIES OF THE KURILE ISLANDS (I)

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Through the courtesy of Professor TOICHI UCHIDA and Dr. CHIHISA WATANABE, I have had the opportunity to examine a large collection of sawflies, Hymenoptera Symphyta, from the Kurile Islands, in the Entomological Institute of the Hokkaido University. With the exception of some undetermined specimens, this collection consists of about 560 specimens representing 73 species and 13 subspecies or varieties, among which 13 are new to science and 54 are new to the fauna of the islands. They were mostly collected by Prof. TOICHI UCHIDA and Mr. YUZO SUGIHARA from the islands of Shikotan, Kunashiri, Uruppu and Etorofu during the summers of 1935 and 1936. Unless otherwise stated, all the specimens recorded in the present paper are preserved in the collection of the above-mentioned institute.

I have already published three papers* on the sawfly fauna of the islands, in which I recorded a total of 36 species or varieties from the islands, but the following 11 are not represented in the present collection: *Arge fuscipes expansa* KLUG (= *A. kobayashii* TAKEUCHI), *Arge jonasi* KIRBY, *Cimbex femorata uchidai* TAKEUCHI, *Strongylogaster lineata* CHRIST, *Tenthredella limbata* KLUG, *Tenthredella stulta* JAKOVLEV, *Pachyprotasis tenebrosa bergmani* MALAISE, *Conaspidia hyalina* SATO, *Hemichroa paramushirensis* TAKEUCHI, *Pachynematus penegalensis* ENSLIN and *P. umbripennis* EVERSMAAN.

Before proceeding further, I wish to express my heartiest thanks to Professor TOICHI UCHIDA and Dr. CHIHISA WATANABE for their kindness in placing this valuable collection at my disposal, and to Mr. T. KISHII for the care and time spent in drawing figures contained in this paper.

Family Cephidae

1. *Cephus camtschatcalis* ENSLIN, 1927

Kunashiri: Yambetsu, 1♀ 5♂, 22-25, VII, 1935. Etorofu: Porosu, 2♂, 14-

- * 1) Some sawflies from the island of Shikotan in the southern Kuriles. Trans. Kansai Ent. Soc., 2 : 30-34, 1931.
2) Four species of sawflies from the northern Kuriles. Bull. Biogeogr. Soc. Japan, 4 (2) : 86-90, 1933 (in Japanese).
3) Sawflies of the Kurile Islands. Trans. Kansai Ent. Soc., 5 : 17-24, 1934 (in Japanese).

15, VII, 1936; Seseki, 1 ♀, 16-18, VII, 1936.

Distr.: Kuriles, Saghaliën, Kamtchatka.

2. *Hartigia etorofensis* sp. nov.

Closely allied to *H. agilis* from Japan, but may be easily separated from that species by the dull head, with strong coriaceous sculpture, and the long pronotum, as well as the coloration of head and hind tibiae.

♀. Length 16 mm. Colour black with the following parts yellow: mandibles except apices, two spots on inner orbits (lower one fairly large), a side mark on the 3rd and 4th abdominal tergites, and front legs below apices of femora; four hind tibiae and tarsi dark brown. Wings hyaline. nervures dark brown, costa and extreme base of stigma yellow.

Head dull, strongly coriaceous and covered with dense fuscous hairs, seen from above slightly transverse and slightly constricted behind eyes. Supraclypeal area feebly convex. Median fovea of frons shallowly indicated. Ocellar basin practically absent. Area between lateral ocelli shining and with sparse punctures. Postocellar, ocellocular and ocelloccipital lines as 6 : 8 : 23. Eye in dorsal view about as long as postocular area. Malar space about twice as long as antennal pedicel. Antenna 30-segmented, slightly longer than head and thorax

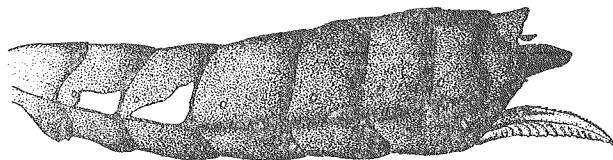


Fig. 1. *Hartigia etorofensis* sp. nov. ♀. Abdomen (1st segment omitted) in lateral view.

combined and slightly swollen medially; pedicel about as long as wide; 3rd segment slightly longer than the 4th. Thorax dull, strongly and finely coriaceous almost uniformly, except scutellum which is smooth posteriorly. Hind tibiae with one preapical spur. Claws with a large tooth near the apices. Abdomen strongly compressed and about twice as long as head and thorax combined.

♂. Length 14 mm. Similar to the female, but clypeus and supraclypeal area also yellow, and the latter with a black spot on the middle of front.

Habitat: Kuriles (Etorofu Is.).

Holotype: ♀, Shana, Etorofu, 11-20, VII, 1935, Y. SUGIHARA leg. Allotype: ♂, same data as the holotype. Paratypes: 1 ♀ 7 ♂, same data as the above; 1 ♀, same locality, 10, VII, 1927, K. DOI leg.

Family Pamphiliidae

3. *Cephalcia alpina* (KLUG, 1808)

Shikotan: Matakotan, 26 ♂, 27-30, VII, 1935; Shakotan, 1 ♀ 2 ♂, 27-31, VII,

Etorofu: Rubetsu, 5 ♀, 2-10, VII, 1935; Shana, 1 ♀, 11-20, VII, 1936.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Korea, Siberia, Europe.

Lyda sachalinensis MATSUMURA may be a synonym of this species, although T. UCHIDA (1949) regarded the former as a synonym of *C. abietis* (LINNÉ). These two, *alpina* and *abietis*, are very confusable species, but can be separated by the shape of head.

4. *Cephalcia arvensis* PANZER, 1805

Kunashiri: Yambetsu, 1 ♀, 22-25, VII, 1935.

Distr.: Kuriles, Saghalien, Siberia, Europe.

5. *Neurotoma iridescence* (ANDRÉ, 1882)

Kunashiri: Furukamappu, 1 ♀, 2-3, VII, 1935.

Distr.: Japan (Hokkaido, Honshu, Shikoku), Kuriles, E. Siberia.

6. *Neurotoma sibirica* GUSSAKOVSKII, 1935

Shikotan: Shakotan, 1 ♀ 1 ♂, 23-27, VI, 1935.

Distr.: Japan (Hokkaido), Kuriles, Shghalien, Korea, E. Siberia.

7. *Pamphilius hortorum* (KLUG, 1808)

Shikotan: Shakotan, 1 ♀, 23-27, VII, 1935.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Europe.

8. *Pamphilius stramineipes* (HARTIG, 1837)

Etorofu: Shana, 3 ♀, 11-20, VII, 1935; Porosu, 1 ♂, 14-15, VII, 1936.

Distr.: Kuriles, Siberia, Europe.

9. *Pamphilius varius* (LEPELETIER, 1823)

Kunashiri: Yambetsu, 1 ♀, 22-25, VII, 1935. Etorofu: Naiho, 1 ♀, 23, VII, 1927.

Distr.: Kuriles, Saghalien, Siberia, Europe.

Family **Blasticotomidae**

10. *Blasticotoma fiticeti pacifica* MALAISE, 1931

Etorofu: Shana, 1 ♀, 11-20, VII, 1935.

Distr.: Japan (Hokkaido, Honshu), Kuriles, E. Siberia.

Family **Argidae**

11. *Arge gracilicornis* (KLUG, 1812)

Kunashiri: Nikishiro, 1 ♀, 17-22, VII, 1935; Maruyama, 1 ♀, VII, 1935.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Korea, Siberia, Caucasus, Europe.

12. *Arge nipponensis* ROHWER, 1910

Kunashiri: Yambetsu, 1 ♀, 22-25, VII, 1935. Etorofu: Noido, 1 ♂, 7, VII, 1935.

Distr.: Japan, Kuriles, Saghalien, Korea, China.

Family Cimbicidae

13. *Trichiosoma tibiale* STEPHENS, 1835 ?
Kunashiri: Nikishiro, 1 ♂, 17-22, VII, 1935; Yambetsu, 2 ♂, 22-25, VII, 1935.
Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Siberia, Europe.
14. *CimbeX femorata* (LINNÉ, 1758)
Etorofu: Porosu, 1 ♀, 14-15, VII, 1936; Shana, 1 ♂, 22-25, VII, 1936.
Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Korea, Mongolia, Siberia, Caucasus, Europe.
15. *CimbeX femorata silvarum* (FABRICIUS, 1793)
Kunashiri: Maruyama, 1 ♂, 26, VII, 1935
Distr.: Same as the above.
16. *CimbeX japonica* KIRBY, 1882
Kunashiri: Nikishiro, 1 ♀, 17-22, VII, 1935. Etorofu: Seseki, 1 ♀, 16-18, VII, 1936.
Distr.: Japan (Hokkaido), Kuriles, Saghalien, E. Siberia (after GUSSAKOVSKI).

Family Tenthredinidae

Subfamily Selandriinae

17. *Pseudotaxonus secundus humeralis* var. nov.
♀ ♂. Similar in size and structure to typical form. Differs in colour as follows: tegulae and posterior margin of pronotum yellow, and bases of hind tibiae broadly whitish.
Habitat: Japan (Honshu), Kuriles.
Holotype: ♀, Yugashima, Izu, 26, IV, 1954, K. TAKEUCHI leg. Allotype: ♂, same data as the holotype. Paratypes: 1 ♀, Ogino, Sagami, 26, IV, 1951, M. ISHII leg.; 1 ♂, Hoppo-onsen, Shinano, 10, VI, 1939, K. TAKEUCHI leg.; 1 ♂, Shama-be, Etorofu, 19-20, VII, 1936, Y. SUGIHARA leg.
This seems to be a northern form of *P. secundus*.
18. *Hemitaxonus struthiopteridis* (FORSIUS, 1910)
Kunashiri: Nikishiro, 1 ♀, 17-22, VII, 1935; Maruyama, 1 ♀, 26, VII, 1935.
Distr.: Japan (Hokkaido, Honshu), Kuriles, E. Siberia, Europe (Finland).
19. *Stromboceros Koebelei* ROHWER, 1910.
Shikotan: Shakotan, 1 ♀, 23-27, VII, 1935; Matakotan, 1 ♂, 27-30, VII, 1935.
Kunashiri: Nikishiro, 1 ♂, 17-22, VII, 1935; Maruyama, 2 ♂, 26, VII, 1935.
Distr.: Japan, Kuriles, Saghalien, Korea.
R. MALAISE (1944) established a new genus, *Arbusia*, for this species, but it appears to be identical with *Stromboceros*.

20. *Nesoselandria nipponica* TAKEUCHI, 1929

Etorofu: Horobetsu, 1 ♂, 4, VII, 1935; Shana, 1 ♀ 2 ♂, 11-20, VII, 1935; 2 ♂, 22-25, VII, 1936; Yanketo, 2 ♀ 4 ♂, 23, VII, 1936.

Distr.: Japan (Honshu, Shikoku, Kyushu), Kuriles.

Subfamily Dolerinae

21. *Loderus genucincta* (ZADDACH, 1859)

Shikotan: Shakotan, 1 ♀, 23-27, VII, 1935; Matakotan, 1 ♂, 27-30, VII, 1935. Kunashiri: Seseiki, 1 ♂, 27-28, VII, 1935.

Distr.: Japan (Hokkaido), Kuriles, Saghalien, Siberia, Europe.

22. *Dolerus armillatus* KONOW, 1896

Etorofu: Rubetsu, 1 ♀ 2 ♂, 2-10, VII, 1935. Kunashiri: Nikishiro, 1 ♂, 17-22, VII, 1935; Yambetsu, 2 ♂, 22-25, VII, 1935; Maruyama, 1 ♂, 26, VII, 1935.

Distr.: Japan (Hokkaido), Kuriles, Saghalien, Korea, Siberia.

23. *Dolerus ephippiatus* SMITH, 1874

Shikotan: Shakotan, 2 ♀ 2 ♂, 23-27, VII, 1935. Kunashiri: Yambetsu, 1 ♀, 22-25, VII, 1935; Furukamapu, 1 ♀, 29, VII, 1935.

24. *Dolerus aeneus* HARTIG, 1837

Paramushiru: Kujirawan, 1 ♂, 3, VII, 1926; Murakamiwan, 1 ♂, 25, VII, 1926.

Distr.: Japan (Hokkaido), Kuriles, Europe.

Subfamily Tenthredininae

25. *Tenthredella fulva adusta* (MOTSCHULSKY, 1866)

Kunashiri: Yambetsu, 2 ♂, 22-25, VII, 1935; Maruyama, 1 ♀, 26, VII, 1935; Nikishiro, 11 ♀ 6 ♂, 17-22, VII, 1935; Furukamapu, 1 ♀, 29, VII, 1935. Uruppu: Tokotan, 1 ♀ 2 ♂, 9-23, VIII, 1936.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Korea, China, Siberia.

26. *Tenthredella kurilensis* TAKEUCHI, 1931

Shikotan: Shakotan, 4 ♀ 5 ♂, 27-31, VII, 1936. Kunashiri: Yambetsu, 1 ♀, 22-25, VII, 1935; Maruyama, 2 ♂, 26, VII, 1935. Etorofu: Shana, 2 ♀, 19, VII, 1927; 3 ♀, 11-20, VII, 1935.

Distr.: Japan (Hokkaido), Kuriles.

27. *Tenthredella jozana* (MATSUMURA, 1912)

Uruppu: Tokotan, 1 ♀, 9-23, VIII, 1936.

Distr.: Japan (Hokkaido, Honshu, Shikoku), Kuriles, Saghalien, E. Siberia.

28. *Tenthredella tamamiki* TAKEUCHI, 1936

Kunashiri: Nikishiro, 1 ♀, 17-22, VII, 1935; Seseiki, 1 ♂, 27-28, VII, 1935. Etorofu: Betobu, 1 ♂, 16-18, VII, 1936. Uruppu: Tokotan, 1 ♀, 9-23, VIII, 1936.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien.

29. *Tenthredella emphytiformis* (MALAISE, 1931)

Uruppu: Tokotan, 2♀ 1♂, 9-23, VIII, 1936.

Distr.: Japan (Hokkaido, Honshu, Shikoku), Kuriles, China, E. Siberia.

30. *Tenthredella fagi facigera* (KONOW, 1899)

Etorofu: Shana, 1♀, 11-20, VII, 1935; Porosu, 1♀, 14-15, VII, 1936. Uruppu: Tokotan, 2♀ 2♂, 9-23, VII, 1936. Kunashiri: Yambetsu, 2♀, 22-25, VII, 1935.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, China, Siberia.

31. *Tenthredella nigerrima* FORSIUS, 1918

Etorofu: Shamanbe, 1♀, 19-20, VII, 1936; Seseki, 2♂, 16-18, VII, 1936. Uruppu: Tokotan, 1♀, 9-23, VIII, 1936.

Distr.: Japan (Hokkaido, Honshu, Shikoku), Kuriles, Siberia, Europe.

32. *Tenthredella colon eburneifrons* (KIRBY, 1882)

Kunashiri: Maruyama, 1♂, 26, VII, 1935. Etorofu: Bettobu, 1♀, 11-13, VII, 1936; Shana, 1♀, 11-20, VII, 1935, 1♂, 22-25, VII, 1936; Seseki, 1♂, 16-18, VII, Shamanbe, 2♂, 19-20, VII, 1936. Uruppu: Tokotan, 2♂, 9-23, VIII, 1936.

Distr.: Kuriles, Saghalien, E. Siberia.

33. *Tenthredella sortitor* (MALAISE, 1938)

Kunashiri: Yambetsu, 3♀, 22-25, VII, 1935; Nikishiro, 7♀ 1♂, 17-22, VII, 1935; Maruyama, 1♀ 1♂, 26, VII, 1935. Etorofu: Rubetsu, 3♀, 2-10, VII, 1935; Porosu, 4♀, 14-15, VII, 1936; Bettobu, 2♀, 11-13, VII, 1936; Shana, 2♀, 11-20, VII, 1935 and 22-25, VII, 1936; Yanketo, 1♀, 23, VII, 1936.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Korea.

34. *Tenthredella mitsuhashii* (MATSUMURA, 1912)

Kunashiri: Yambetsu, 6♀, 22-25, VII, 1935; Nikishiro, 2♀, 17-22, VII, 1935; Maruyama, 1♀, 26, VII, 1935.

Distr.: Japan (Hokkaido), Kuriles, Saghalien.

35. *Tenthredella flavomandibulata* (MATSUMURA, 1912)

Kunashiri: Nikishiro, 5♀, 17-22, VII, 1935. Etorofu: Rubetsu, 1♀ 1♂, 2-10, VII, 1935; Bettobu, 1♀, 11-13, VII, 1936; Shana, 1♀, 11-20, VII, 1935.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien.

36. *Tenthredella fuscicornis forsi* (KONOW, 1908)

Shumushu: Murakamisaki, 1♀, 13, VII, 1926. Paramushiru: Ruisan, 1♀, 18, VII, 1926; Kujirawan, 1♀, 3, VII, 1926; Arakawa, 1♀, 6, VII, 1926; Nasauki, 1♀, 9, VII, 1926.

Distr.: Kuriles, E. Siberia.

37. *Tenthredella ferruginea* (SCHRANK, 1776)

Kunashiri: Nikishiro, 1♀, 17-22, VII, 1935; Yambetsu, 2♀, 22-25, VII,

1935. Etorofu: Bettobu, 3♀, 11-13, VII, 1936; Shana, 1♂, 11-20, VII, 1935.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, China, Siberia, Europe.

38. *Tenthredella velox nigrofemorata* subsp. nov.

Similar to *T. velox bisignata* KONOW from E. Siberia, but differing in the coloration of legs and abdomen.

♀. Length 10-12 mm. Colour black, with the following parts yellow or white: clypeus, labrum, mandibles except apices, metepisternum, sides of propodeum, antennae beneath (except two basal segments) and four apical segments (apical ones usually infuscate), and front legs below apices of femora in front; four hind tibiae (except apices), most of middle tarsi, apical segment of hind tarsi and spurs ferruginous. Wings slightly infuscate, nervures and stigma dark brown, costa usually ferruginous.

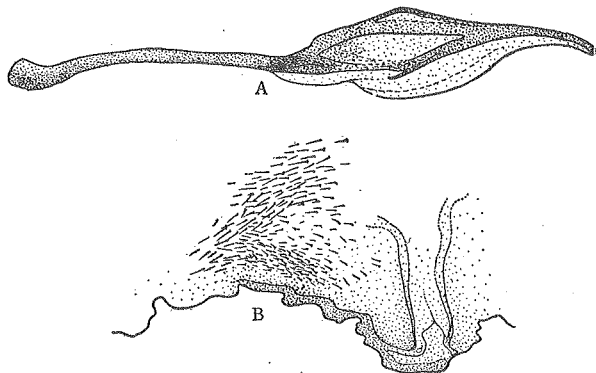


Fig. 2. *Tenthredella velox nigrofemorata* subsp. nov.

A: penis valve ($\times 40$).

B: 11th tooth from apex of saw ($\times 400$).

♂. Length 9-10 mm. Similar to the female, but the four hind legs mainly black, and the abdomen sometimes with some middle segments reddish. Penis valve as shown in fig. 2.

Habitat: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Korea.

Holotype: ♀, Mt. Shirouma, Shinano, 1, VIII, 1932, K. TAKEUCHI leg.

Allotype: ♂, same data as the holotype. Paratypes: 2♀ 1♂, same data as the above; 1♀ 1♂, Mt. Yari, Shinano, 17, VIII, 1936, K. TAKEUCHI leg.; 1♀, Tateyama, Ecchu, 23, VII, 1938, S. TAKEUCHI leg.; 4♀, Hakusan, Kaga, 24, VII, 1937, K. TAKEUCHI leg.; 1♀, Mt. Chokai, Uzen, 29, VII, 1948, K. SHIRAHATA leg.; 1♀, Shikaribetsu, Hokkaido, 25, VII, 1939, K. TAKEUCHI leg.; Mt. Daisetsu, Hokkaido, 2♀, 4, VIII, 1952, K. TSUNEKI leg.; 1♂, 19, VII, 1930, K. TAKEUCHI leg.; 1♀, 13, VII, 1931, K. KOBAYASHI leg.; Kunashiri Is., Kuriles, 1♀, Nikishiro, 17-22, VII, 1935, T. UCHIDA leg.; 1♀ 1♂, Yambetsu, 22-25, VII, 1935, T. UCHIDA leg.;

3 ♀, Takinosawa, Saghalien, 8, VII, 1930, K. TAKEUCHI leg.; 5 ♀ 3 ♂, Tōnai, N. Korea, 23, VII, 1935, K. TAKEUCHI leg.; Hakugan, N. Korea, 3 ♀, 24, VII, 1935, 1 ♀, 13, VI, 1936, K. TAKEUCHI leg.

All the types, except 2 paratypes from the Kuriles, are preserved in the Takeuchi Entomological Laboratory.

39. *Tenthredella pseudolivacea omega* TAKEUCHI, 1936

Kunashiri: Yambetsu, 1 ♀, 22-25, VII, 1935.

Distr.: Japan (Hokkaido, Honshu, Shikoku), Kuriles, Saghalien.

40. *Tenthredella olivacea takedae* (MATSUMURA, 1912)

Paramushiru: Reisan, 1 ♂, 18, VII, 1926; Suribachi, 1 ♀ 2 ♂, 23, VII, 1935, 1 ♂, 12, VII, 1926; Atoyajiri-dake, 1 ♀, 4, VIII, 1935; Musashi-wan, 1 ♀, 23, VII, 1935.

Distr.: Japan (Hokkaido, Honshu), Kuriles, Saghalien, Korea.

41. *Tenthredella subolivacea* sp. nov.

Closely allied to *T. olivacea*, but may be easily separated from that species by the following features: antennae wholly black (not pale beneath), scutellum and mesepisternum more strongly convex, and conformation of penis valve (fig. 3).

♀. Length 11-12 mm. Colour quite similar to *olivacea*, except the black antennae and yellow occiput.

Head more or less dull, feebly coriaceous, seen from above slightly transverse and slightly dilated behind eyes. Clypeus shallowly and arcuately emarginate. Supraclypeal area almost flat. Suprantennal tubercles well prominent (more strongly prominent than that of *olivacea*) and subparallel, space between them about three-fourths length of their height. Postocellar area slightly narrowed in front and about as long as wide. Ocellocular and ocelloccipital lines about

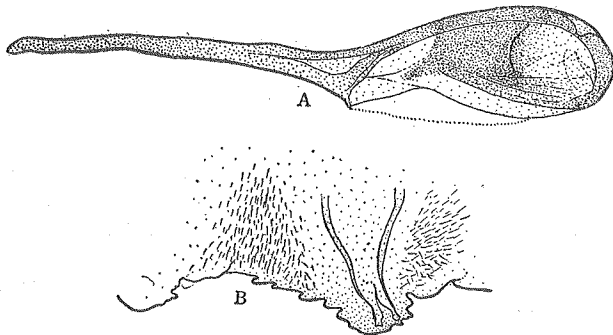


Fig. 3. *Tenthredella subolivacea* sp. nov.

A: penis valve ($\times 40$).

B: 12th tooth from apex of saw ($\times 400$).

equal in length. Eye in dorsal view about 1.3 times as long as postocular area. Malar space longer than ocellar diameter. Antenna slightly longer than head and thorax combined, relative length of segments about 4.5 : 3 : 11.5 : 8.5 : 7 : 5 : 4.5 : 4 : 4 ; pedicel longer than wide ; penultimate segment about twice as long as wide. Mesonotum dull, finely coriaceous ; scutellum gently pyramidal ; posttergite more or less shining and with some large punctures. Metascutellum shining and practically impunctate. Mesepisternum dull, finely coriaceous, with a rather sharp tubercle. Abdomen finely and feebly coriaceous. Pubescence on head and thorax mainly fuscous above and whitish below.

♂. Length 10-11 mm. Similar to the female. Penis valve as shown in fig. 3.

Habitat : Japan (Hokkaido, Honshu), Kuriles, Saghalien.

Holotype : ♀, Daisen, Hoki, 12, VII, 1950, K. TAKEUCHI leg. Allotype : ♂, Mt. Odai, Yamato, 5, VII, 1932, C. TERANISHI leg. Paratypes : 1 ♀, Akanko, Hokkaido, 27, VII, 1939, K. TAKEUCHI leg. ; 1 ♀ 1 ♂, Shikaribetsu, Hokkaido, 25, VII, 1939, K. TAKEUCHI leg. ; 1 ♂, Tsutaonsen, Mutsu, 8, VII, 1932, K. TAKEUCHI leg. ; 1 ♀, Mt. Zao, Rikuzen, 25, VII, 1936, K. SHIRAHATA leg. ; 1 ♀, Mt. Hakkoda, Mutsu, 10, VII, 1932, K. TAKEUCHI leg. ; 1 ♂, Mt. Shirouma, Shinano, 1, VIII, 1932, K. TAKEUCHI leg. ; 1 ♀, Kamikochi, Shinano, 9, VI, 1929, K. TAKEUCHI leg. ; 1 ♂, Mt. Koma, Shinano, 15, VIII, 1924, K. TAKEUCHI leg. ; 1 ♀ 1 ♂, Hakone, Sagami, 21, VI, 1937, K. TAKEUCHI leg. ; 2 ♀, Mt. Myoko, Echigo, 17, VII, 1927, K. TAKEUCHI leg. ; 1 ♀ 1 ♂, same data as the allotype ; 1 ♀, same data as the holotype ; 1 ♀, Mt. Odai, Yamato, 2, VIII, 1953, T. NAKANE leg. ; 1 ♀, Yambetsu, Kunashiri Is., 22-25, VII, T. UCHIDA leg. ; 1 ♂, Mt. Suzuya, Saghalien, 11, VII, 1930, K. TAKEUCHI leg.

All the types, except some paratypes, are in Takeuchi Entomological Laboratory.

42. *Tenthredella convergenata* sp. nov.

Belongs to *T. mesomelas*-group, and most closely related to *T. mioceras*,* but may be easily separated from that species by the narrow postocellar area, and the peculiar conformation of penis valve (fig. 4).

♀. Length 11-13 mm. Colour similar to *T. mioceras*. Mesosternum usually with a black marking.

Head dull, irregularly and rugosely punctate, seen from above transverse (much narrower than that of *mioceras*), and slightly dilated behind eyes. Suprantennal tubercles less prominent and converge below, maximum distance between them about 1.5 times as long as their height. Postocellar area slightly narrowed in front, with lateral margin almost straight and about three-fourths as long as front margin. Ocellular and ocellocapital lines as 10 : 7. Eye in dorsal view about 1.3 times as long as postocular area. Malar space about as

* This species has not hitherto been known from outside Europe, but I have taken a female at Hakugan, N. Korea on July 24, 1935, which agrees quite well with a European specimen determined by R. B. BENSON.

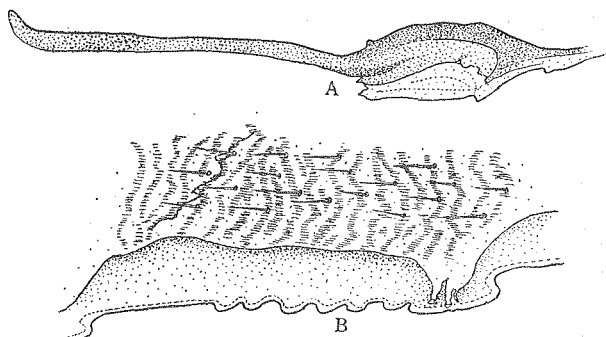


Fig. 4. *Tenthredella convergenata* sp. nov.

A: penis valve ($\times 40$).

B: 10th tooth from apex of saw ($\times 600$).

long as ocellar diameter. Antenna (distinctly longer and stouter than that of *mioceras*) more or less compressed apically, slightly longer than head and thorax combined, relative length of segments about 7 : 3.5 : 15 : 10 : 9 : 7 : 5.5 : 5 : 5 ; penultimate segment about twice as long as wide. Inner spur of hind tibia almost straight and about half length of hind basitarsus. Saw-sheath comparatively short, hardly reaching to abdominal apex. Pubescence on head and pronotum mainly silvery, and on mesonotum and antennal scape mainly fuscous.

δ . Length 11-12 mm. Similar to the female excepting the usual sexual differences. Penis valve very peculiar among the group, with a spine-like apical projection (fig. 4).

Habitat: Japan (Hokkaido, Honshu, Shikoku), Kuriles.

Holotype: ♀, Kibune near Kyoto, 13, V, 1950, K. TAKEUCHI leg. Allotype: ♂, same data as the holotype. Paratypes: 3 ♀ 3 ♂, Tokachi, Hokkaido, 12-14, VII, 1953, S. ITO leg.; 2 ♀ 1 ♂, Soukkyo, Hokkaido, 16, VII, 1930, K. TAKEUCHI leg.; 1 ♀ 1 ♂, Kuroyu, Ugo, 16, VI, 1951, S. ITO leg.; 1 ♀ 4 ♂, Kamikochi, Shinano, 7-9, VI, 1929, K. TAKEUCHI leg.; 1 ♂, Tobira-Kosen, Shinano, 17, V, 1953, KODAMA leg.; 1 ♂, Mt. Buna, Omi, 3, VII, 1939, K. TAKEUCHI leg.; 2 ♂, Yuge-mura, Tanba, 25, V, 1934, K. TAKEUCHI leg.; Mt. Atago near Kyoto, 26, VI, 1932, K. TAKEUCHI leg.; 1 ♂, Hachotaira near Kyoto, 26, V, 1940, S. TAKEUCHI leg.; 1 ♀, Kurama near Kyoto, 19, V, 1940, K. TAKEUCHI leg.; 4 ♀ 2 ♂, same data as the holotype; 1 ♀ 1 ♂, Mt. Hachifuse, Tajima, 28, V, 1953, K. TAKEUCHI leg.; 1 ♂, Yoshino, Yamato, 2, VI, 1916, K. TAKEUCHI leg.; 1 ♂, Mt. Odai, Yamato, 5, VII, 1932, C. TERANISHI leg.; 1 ♀, Sandankyo, Aki, 4, VI, 1953, S. ITO leg.; 2 ♀ 3 ♂, Mt. Tsurugi, Awa, 3, VI, 1930, K. TAKEUCHI leg.; 4 ♀ 1 ♂, Nikishiro, Kunashiri Is., Kuriles, 17-22, VII, 1935, T. UCHIDA leg.; 1 ♀, Shana, Etorofu Is., Kuriles, 11-20, VII, 1935, Y. SUGIHARA leg.

All the types, except some paratypes from the Kuriles, are preserved in the Takeuchi Entomological Laboratory.

43. *Tenthredella tenuivaginata* sp. nov.

Closely allied to *T. mesomelas*, but may be easily separated from that species by the narrow head and postocellar area, as well as the long and slender sheath (fig. 5).

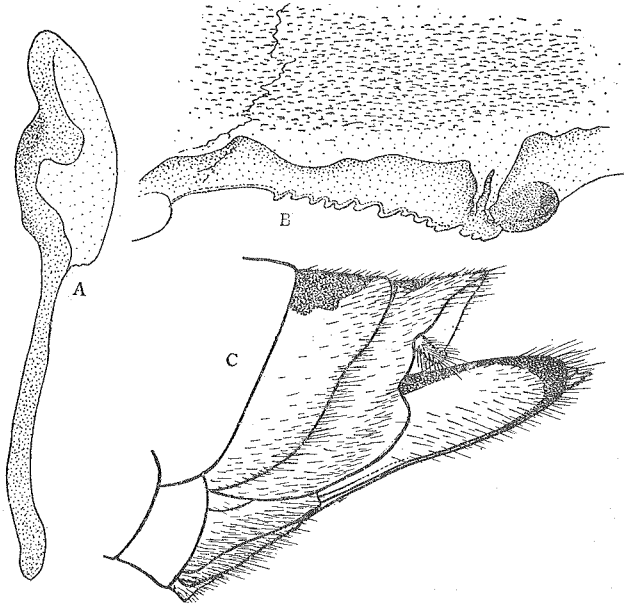


Fig. 5. *Tenthredella tenuivaginata* sp. nov.

A: penis valve ($\times 40$). B: 10th tooth from apex of saw ($\times 400$).
C: apical portion of ♀ abdomen in lateral view.

♀. Length 10-12 mm. Colour similar to *T. mesomelas*, but the yellow coloration of cheeks usually enlarging to temples, and the extent of black on abdominal tergite are usually somewhat decreased.

Head shining, only with very sparse sculpture, seen from above transverse (distinctly narrower than that of *mesomelas*), and not dilated behind eyes. Suprantennal tubercles well prominent and subparallel, space between them about two-thirds length of their height. Postocellar area almost parallel-sided, distinctly transverse, about 8 : 5. Ocellocular and ocellocipital lines as 8 : 5.5. Eye in dorsal view about 1.6 times as long as postocular area. Malar space slightly longer than ocellar diameter. Antenna rather slender and slightly longer than head and thorax combined, relative length of segments about 3.5 : 2.5 : 11 : 8 : 7 : 5 : 4 : 3.5 : 3.5; pedicel about as long as wide; penultimate segment less than twice as long as wide. Mesepisternum more or less shining, rather feebly coriaceous. Inner spur of hind tibia slightly curved, and a little longer than

half length of hind basitarsus. Saw-sheath (fig. 5) rather long and slender, distinctly beyond the apex of abdomen. Pubescence on head, pro- and mesonotum, and antennal scape mainly silvery.

♂. Length 10-11 mm. Similar to the female, but the head strongly narrowed behind eyes and the surface sculpture usually stronger than that of female. Penis valve (fig. 5) somewhat similar to *mesomelas*.

Habitat: Japan (Honshu), Kuriles.

Holotype: ♀, Shikotan Is, Kuriles, 2, VIII, 1931, K. KOBAYASHI leg. Allotype: ♂, Matakotan, Shikotan, Is, Kuriles, 27-30, VII, 1935, Y. SUGIHARA leg. Paratypes: 2♂, same data as the allotype; 6♀ 2♂, Shakotan, Shikotan Is., 23-27, VII, 1935, Y. SUGIHARA leg.; 16♀ 5♂, Tokotan, Uruppu Is., Kuriles, 9-23, VIII, 1936, Y. SUGIHARA leg.; 14♀ 18♂, Etorofu Is., Kuriles, VII, 1935-1936, Y. SUGIHARA leg.; 3♀ 2♂, Kunashiri Is., Kuriles, 17-25, VII, 1935, T. UCHIDA leg.; 2♀, Mt. Shirouma, Shinano, 1, VIII, 1932, K. TAKEUCHI leg.

Holotype and some paratypes are preserved in the Takeuchi Entomological Laboratory.

44. *Tenthredella nitidiceps* sp. nov.

Closely allied to *T. mesomelas*, but may be separated from that species by the highly polished head, narrow postocellar area, and much larger size.

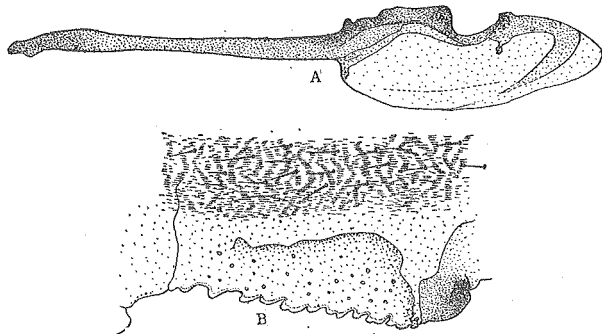


Fig. 6. *Tenthredella nitidiceps* sp. nov.

A: penis valve ($\times 40$)

B: 12th tooth from apex of saw ($\times 600$).

♀. Length 13-16 mm. Colour similar to *mesomelas*, but usually with an additional yellow mark on the posterior margin of mesoscutum and lateral margin of praescutum.

Head strongly shining, usually with no surface sculpture, seen from above transverse (narrower than that of *mesomelas*), and slightly dilated behind eyes. Suprantennal tubercles well prominent and subparallel, space between them about two-thirds length of their height. Postocellar area distinctly transverse,

about 7 : 5, and lateral margin slightly curved. Ocellocular and ocelloccipital lines as 7 : 5.5. Eye in dorsal view about 1.2 times as long as postocular area. Malar space about as long as ocellar diameter. Antenna slightly longer than head and thorax combined, relative length of segments about 6 : 4 : 15 : 11 : 9.5 : 7 : 6 : 6 : 5 ; pedicel about as long as wide ; penultimate segment about twice as long as wide. Scutellum in frontal view with apex rather broadly flat. Inner spur of hind tibia about half length of hind basitarsus, Saw-sheath of usual type. Pubescence on head above and mesonotum mainly fuscous, and on pronotum mainly silvery.

♂. Length 12-14 mm. Similar to the female excepting the usual sexual differences. Penis valve rather similar to that of *mesomelas* as shown in fig. 6.

Habitat : Japan (Hokkaido, Honshu), Kuriles.

Holotype : ♀, Daisen, Hoki, 13, VII, 1917, K. TAKEUCHI leg. Allotype : ♂, Daisen, Hoki, 12, VII, 1950, K. TAKEUCHI leg. Paratypes : 2♂, Daisen, Hoki, 7, VI, 1933, K. TAKEUCHI leg. ; 1♀, Ikaho-onsen, Kozuke, 19, VII, 1927, K. TAKEUCHI leg. ; 1♀, Kazawa-onsen, Shinano, 3, VIII, 1929, K. TAKEUCHI leg. ; 1♀ 2♂, Kose near Karuizawa, Shinano, 26, VII, 1929, K. TAKEUCHI leg. ; Kamikochi, Shinano, 1♀, 10, VII, 1915, K. SATO leg. ; 1♀, 1, VIII, 1931, K. TAKEUCHI leg. ; 1♀, Iwanadome near Kamikochi, 24, VII, 1952, S. ITO leg. ; 2♀, Tamagawa, Ugo, 18, VI, 1951, S. ISSIKI leg. ; 1♀, Obihiro, Hokkaido, 11, VII, 1953, S. ITO leg. ; 1♀, Nikishiro, Kunashiri Is., Kuriles, 17-22, VII, 1935, T. UCHIDA leg. ; 2♀, Tokotan, Uruppu Is., Kuriles, 9-23, VIII, 1936, Y. SUGIHARA leg. ; Etorofu Is., Kuriles, 1♀ 2♂, Horobetsu, 4, VII, 1935, 4♀ 1♂, Rubetsu, 2-10, VII, 1935, Y. SUGIHARA leg.

All the types, except some paratypes, are preserved in the Takeuchi Entomological Laboratory.

45. *Tenthredella opaciceps* sp. nov.

Closely allied to *T. tenuivaginata* described above, but may be separated by the dull head (strongly coriaceous) and short saw-sheath. In having the narrow postocellar area this species may be readily recognized from the other members of *mesomelas*-group.

♀. Length 11-12 mm. Colour similar to *mesomelas*, but the yellow coloration of cheeks usually enlarged to temples (fig. 7), and the extent of the black on the abdominal tergites somewhat decreased.

Head dull, with coriaceous sculpture, seen from above transverse and not dilated behind eyes. Suprantennal tubercles rather less prominent, and subparallel, space between them about as long as their height. Postocellar area narrow and almost parallel-sided, about twice as wide as long. Ocellocular and ocelloccipital lines as 5 : 3. Eye in dorsal view about 1.5 times as long as postocular area. Malar space about as long as ocellar diameter. Antenna comparatively short, about as long as head and thorax combined, and subcylindrical, relative length of segments about 3.5 : 2 : 10 : 7 : 6 : 4.5 : 3.5 : 3 : 3 ; penultimate segment less than twice as wide as long. Mesepisternum rather feebly coriaceous. Inner spur of hind tibia about half length of hind basitarsus. Pubescence on

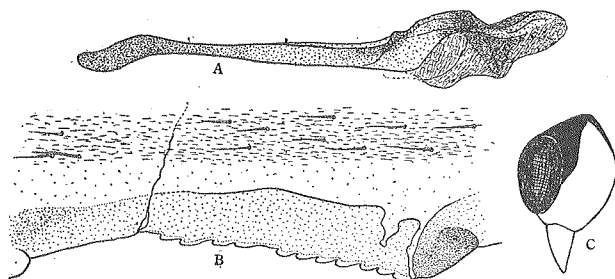


Fig. 7. *Tenthredella opaciceps* sp. nov.

A: penis valve ($\times 40$).

B: 11th tooth from apex of saw ($\times 600$).

C: ♀ head in lateral view.

head above and mesonotum mainly fuscous, and on pronotum whitish.

♂. Length 10-11 mm. Similar to the female. Penis valve (fig. 7) similar to *mesomelas*.

Habitat: Japan (Hokkaido, Honshu), Kuriles.

Holotype: ♀, Mt. Shirouma, Shinano, 1, VIII, 1932, K. TAKEUCHI leg. Allotype: same data as the holotype. Paratypes: 4 ♀ 1 ♂, same data as the above; 1 ♀ 1 ♂, Mt. Yari, Shinano, 17, VIII, 1936, K. TAKEUCHI leg.; 1 ♀, Mt. Tateyama, Echū, 23, VII, 1938, S. TAKEUCHI leg.; 1 ♂, Mt. Hakusan, Kaga, 24, VII, 1937, K. TAKEUCHI leg.; 1 ♀ 1 ♂, Mt. Yubari, Hokkaido, 7, VII, 1931, C. WATANABE leg.; 2 ♂, Mitsumata, Tokachi, Hokkaido, 14, VII, 1953, S. ITO leg.; 1 ♀ ♂, Sounkyo, Hokkaido, 5, VIII, 1931, K. KOBAYASHI leg.; 1 ♀, Mt. Daisetsu, Hokkaido, 4, VIII, 1952, K. TSUNEKI leg.; 1 ♀, Kunashiri Is., Kuriles, 22-25, VII, 1935, T. UCHIDA leg.

All the types, except a paratype from the Kuriles, are preserved in the Takeuchi Entomological Laboratory.

(To be continued.)