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DESCRIPTIONS OF THREE NEW SPECIES
OF *APHIDIUS* PARASITIC ON SOME APHIDS
OF CONIFEROUS TREES*

(TAXONOMIC NOTES ON *APHIDIIDAE* OF JAPAN, III**)

By

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(With two Textfigures)

Aphidius kônoi sp. nov.

♂. Black; mouth-parts and prothorax beneath fusco-testaceous; antennae dark brown. Wings hyaline, slightly infumated towards the apex; tegulae fusco-testaceous; stigma and vein brown. Legs fusco-testaceous; hind coxae fuscous basally. Abdomen black, with the 1st and 2nd sutures and the lateral margins of the 2nd tergite pale brown.

Head transverse, smooth and shining, with white pubescence; antennae longer than the body, 31-jointed. Thorax smooth and shining; parapsidal furrows strongly impressed, almost smooth. Propodeum reticulate-rugulose, declivous at the strong transverse carina, the anterior face with a median longitudinal carina which extends from the anterior margin to the transverse carina, and the posterior face broadly excavated medially, with two widely separated longitudinal carinae extending from the transverse carinae to the posterior margin and bordering the excavation. The outlines of the stigma and nervures in the apical half of the fore wing weakly defined, not so sharp as those of nervures in the basal half. Stigma 3 times as long as broad; 1st abscissa of the radius as long as the stub of the 2nd; intercubitus two-thirds the length of the 2nd abscissa of the radius; nervulus postfurcal by its own length. Abdomen clavate, a little longer than the head and thorax united; 1st tergite convex, finely rugulose, linear to beyond the tubercles which are situated anterior to the middle, from the tubercles the lateral sides gradually widened towards the apex, 2 times as long as broad at the apex; 2nd and following tergites

*The writer wishes to express his cordial gratitude to the Foundation for Promotion of Science and Industrial Research of Japan (Nippon Gakujutsu Shinkôkai) for their financial assistance.

**II: Ins. Mats., XV, pp. 53-56 (1940).

smooth and shining. Length, 4.5–5 mm.

♀. Unknown.

Host: *Cinara longipennis* (MATSUMURA).*

This species has been reared at Sapporo by Dr. H. Kôno from *Cinara longipennis* infesting *Abies sachalinensis*.

Holotype (♂): Sapporo, 2. VII, 1937, H. Kôno leg., deposited in the Entomological Institute of the Hokkaido Imperial University, Sapporo. **Paratypes**: 1 ♂, Sapporo, 30. VI, 1937 and 1 ♂, Sapporo, 2. VII, 1937, H. Kôno leg.

Habitat: Hokkaido (Sapporo).

Remarks: This species resembles *Aphidius grossus* (FAHRINGER)**, a parasite of *Cinara cecconii* DEL GUERICIO in Europe, but is easily distinguishable from the latter by the colour of the body and by the structure of the propodeum.

***Aphidius inouyei* sp. nov.**

♀. Head and thorax dark brown to black; face and mouth-parts fusco-testaceous; antennae dark brown, the two basal joints fusco-testaceous. Prothorax more or less fusco-testaceous. Wings slightly infumated, especially towards the apex, below the stigma and along the basal nervure; tegulae fusco-testaceous; stigma and veins brown, the intercubitus colourless. Legs fusco-testaceous, the middle pair more or less infusate in the femora and tibiae; hind legs still darker, the femora at the apex, the tibiae except the base and the tarsi fuscous. Abdomen fusco-testaceous, the basal tergites fuscous, paler on each suture. Ovipositor-sheath black.

Head transverse, smooth and shining, with white pubescence; antennae shorter than the body, 22- to 24-jointed. Thorax almost smooth and shining; mesonotum more or less rugulose, the parapsidal furrows obsolete. Propodeum almost smooth and shining, hollowed out at the base of the 1st abdominal segment, the excavation bordered in front and at the sides by sharp carinae, the median transverse carina forming the anterior border of the excavation, and the median longitudinal carina extending from the anterior margin to the transverse carina. Stigma 3 times as long as broad; metacarpus a little longer than the length of the stigma; 1st abscissa of the radius curved inwardly, as long as the stub of the 2nd, which is 3 times the length of the intercubitus; nervulus slightly postfurcal; nervus parallelus interstitial with the medial nervure. Abdomen lanceolate, longer than the head and thorax united; 1st tergite weakly rugulose, deeply excavated basally, linear to beyond the tubercles, which are

*Jour. Coll. Agr., Tohoku Imp. Univ., VII, p. 379 (1917) (as *Lachnus longipennis*).

**Festschrift 60. Geburtst. Prof. Dr. E. STRAND, III, p. 244, ♀ ♂ (1937) (as *Coelonotus grossus*).

situated at the middle, from the tubercles the lateral sides gradually widened towards the apex, 2.5 times as long as broad at the apex; 2nd and following tergites smooth and shining; ovipositor slightly exerted, the sheath compressed, stout, somewhat curved upwards at the apex. Length, 3.5-4 mm.

♂. Closely resembles the female in general structure and colour, but differs from the latter as follows:

Antennae 25- or 26-jointed; 1st tergite stout, not so apparently widened towards the apex as in the female. Length, 3-3.5 mm.

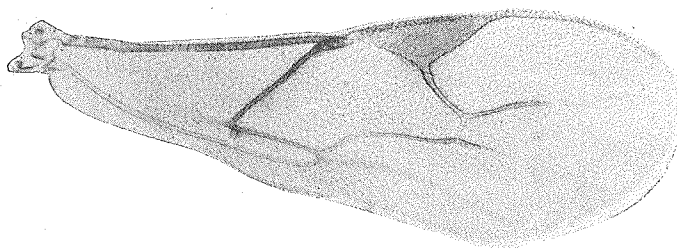


Fig. 1.

Fore wing of *Aphidius inouyei* sp. nov. (♀). ca. × 30

Host: *Cinara todocolus* (INOUE).*

This species has been reared at Nopporo by Mr. M. INOUE from *Cinara todocolus* infesting *Abies sachalinensis*.

Holotype (♀) and **Allotype** (♂): Nopporo, 26. VII, 1938, M. INOUE leg., and deposited in the Entomological Institute of the Hokkaido Imperial University, Sapporo. **Paratypes**: 4 ♀ ♀, 1 ♂, 22. VI, 1937, 4 ♀ ♀, 4 ♂ ♂, IX, 1937, 9 ♀ ♀, 3 ♂ ♂, 26. VI, 1938, Nopporo, M. INOUE leg.

Habitat: Hokkaido (Nopporo).

Remarks: This species comes near *Aphidius pictus* HALIDAY**, from which is easily distinguished by the structure of the 1st tergite, by the colour of the thorax and by the transparency of the wings.

***Aphidius jezoensis* sp. nov.**

♀. Head and thorax dark brown; face, mouth-parts, two basal joints of the antennae and prothorax always fusco-testaceous; mesothorax sometimes

*Ins. Mats., X, p. 131 (1936) (as *Tuberolachnus todocolus*).

**Ent. Mag., II, p. 95, ♀ (1934): MARSHALL, Trans. Ent. Soc. London, p. 38, ♀ (1899).

fusco-testaceous beneath. Abdomen fusco-testaceous, somewhat infuscated dorsally. Wings hyaline; tegulae fusco-testaceous; stigma and veins fuscous. Legs fusco-testaceous; hind pair slightly infuscate. Ovipositor-sheath black.

Head transverse, smooth and shining, with white pubescence; antennae shorter than the body, 18- or 19-jointed. Thorax smooth and shining; mesonotum more or less punctate, the parapsidal furrows slightly impressed posteriorly. Propodeum smooth and shining, somewhat rugulose laterally, hollowed out at the base of the 1st abdominal segment, the excavation narrower than that of the preceding species, *Aphidius inouyei*, bordered in front and at the sides by sharp carinae; the median longitudinal carina extending from the anterior margin

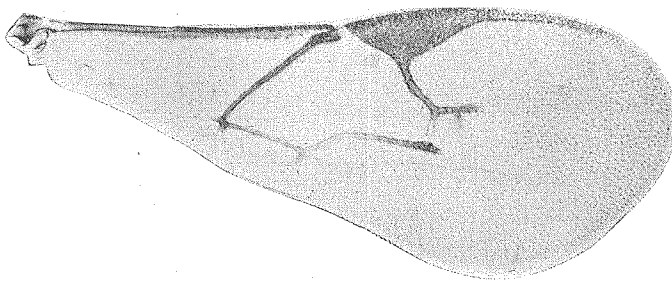


Fig. 2.

Fore wing of *Aphidius jezoensis* sp. nov. (♀). ca. × 35

to the transverse carina which forms the anterior border of the excavation. Stigma 2.5 times as long as broad; metacarpus a little shorter than the length of the stigma; 1st abscissa of the radius a little longer than the stub of the 2nd, which is nearly equal to the intercubitus in length; nervulus interstitial or slightly postfurcal; nervus parallelus interstitial with the medial nervure. Abdomen lanceolate, longer than the head and thorax united; 1st tergite slightly convex, closely reticulate-rugulose, deeply excavated at the base, more or less widened towards the apex, 3 times as long as broad at the apex, the tubercles scarcely discernible; 2nd and following tergites smooth and shining; ovipositor subexserted, the sheath compressed, slender, rather acute at the apex, and straight. Length, 2.5-3.5 mm.

♂. Similar to the female, but differs from the latter in the following respects:—

Body and legs darker in colour; wings whitish hyaline; abdomen fuscous above, with a luteous patch in the middle; antennae more slender than in the

female, 20- to 22-jointed; 1st tergite fusco-testaceous, not at all widened towards the apex. Length, 2-3 mm.

Host: *Cinara nopporensis* INOUE*; *Lachniella costata* (ZETTERSTEDT).**

This species has been reared at Sapporo by Dr. H. KÔNO from *Cinara nopporensis* infesting *Picea jezoensis* and *Picea Glehni* and at Nopporo by Mr. M. INOUE from the same aphid. It has been also reared at Sapporo by Dr. H. KÔNO from *Lachniella costata* infesting *Picea Glehni* and *Picea jezoensis*.

Holotype (♀): Sapporo, 6. VII, 1937, and **Allotype** (♂): Sapporo, 10. VII, 1937, reared from *Cinara nopporensis* by Dr. H. KÔNO, and deposited in the Entomological Institute of the Hokkaido Imperial University, Sapporo. **Paratypes**: 1 ♂, 25. VI, 1937, 1 ♂, 30. VI, 1937, 3 ♀ ♀, 2 ♂ ♂, 3. VII, 1937, Sapporo, reared from *Lachniella costata* by H. KÔNO; 1 ♂, 27. VI, 1937, 2 ♀ ♀, 6. VII, 1937, 1 ♂, 10. VII, 1937, 1 ♂, 12. VII, 1937, Sapporo, reared from *Cinara nopporensis* by H. KÔNO; 2 ♀ ♀, 5 ♂ ♂, 27. VII, 1938, Nopporo, reared from *Cinara nopporensis* by M. INOUE.

Habitat: Hokkaido (Sapporo and Nopporo).

Remarks: This species closely resembles the preceding species, *Aphidius inouyei*, but is easily distinguished from the latter by the number of the antennal joints, by the venation and transparency of the wings, by the carination of the propodeum and by the structure of the 1st tergite and the ovipositor-sheath.

Aphidius pini HALIDAY (1834)

This species is somewhat variable in colour, particularly of the mesonotum of the female. In a series of one male and two females reared from *Cinara pineti* (KOCH), the male agrees perfectly with the writer's redescription[‡] based on a series of specimens from *Cinara larcicolus* (MATSUMURA), while the females differs from it as follows:—

♀. Head excepting the vertex, prothorax entirely and mesopleura on the posterior half fusco-testaceous; mesonotum fusco-testaceous with a large fuscous spot on each lobe.

Further, in the present series the antennae are 22-jointed (♀) and 25-jointed (♂).

Host: *Cinara pineti* (KOCH).

The present specimens were reared at Sapporo by Dr. H. KÔNO from *Cinara pineti* (KOCH) infesting *Pinus densiflora*.

*Ins. Mats., XI, p. 100 (1937).

**Fn. Ins. Lapp., I, p. 157 (1832) (as *Aphis costata*); INOUE, Ins. Mats., XI, p. 105 (1937) (as *Lachniella costata*).

‡Ins. Mats., XV, p. 54 (1940).

Habitat: Hokkaido (Sapporo, 2 ♀ ♀, 1 ♂, 8. VII, 1937, H. Kôno leg.).

Here the writer's acknowledgment must be expressed to Dr. HIROMICHI Kôno and Mr. MOTONORI INOUE for the interesting material supplied by them.

摘 要

本邦産アブラバチ科の分類學的研究の第2報並びに第3報にて針葉樹を喰害するオホアブラ族 (*Lachnini*) の蚜蟲類に寄生する5種のアブラバチを記録した。而してそれ等のアブラバチ及び寄主たるアブラムシは次の如くである。

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|--|------------------|
| 1. <i>Aphidius pini</i> HALIDAY | マツオホアブラバチ (新稱) |
| 寄主 <i>Cinara laricicolus</i> (MATSUMURA) | カラマツオホアブラ |
| <i>Cinara fineti</i> (KOCH) | クロマツオホアブラ |
| 2. <i>Aphidius laricis</i> HALIDAY | カラマツオホアブラバチ (新稱) |
| 寄主 <i>Cinara laricicolus</i> (MATSUMURA) | カラマツオホアブラ |
| 3. <i>Aphidius kônoi</i> WATANABE (sp. nov.) | ハネナガオホアブラバチ (新稱) |
| 寄主 <i>Cinara longipennis</i> (MATSUMURA) | ハネナガオホアブラ |
| 4. <i>Aphidius inouyei</i> WATANABE (sp. nov.) | キバラオホアブラバチ (新稱) |
| 寄主 <i>Cinara todocolus</i> (INOUE) | トドマツオホアブラ |
| 5. <i>Aphidius jezoensis</i> WATANABE (sp. nov.) | エゾオホアブラバチ (新稱) |
| 寄主 <i>Cinara nopporensis</i> (INOUE) | エゾアメイロアブラ |
| <i>Lachniella costata</i> (ZETTERSTAEDT) | コナフキトビイロオホアブラ |

終りに研究費の一部を援助せられたる日本學術振興會に對し、又貴重なる標本を提供せられたる河野廣道博士並びに井上元則氏に對し深謝の意を表する次第である。