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NOTES ON CHLOROPIDAE OF JAPAN, WITH
SPECIAL REFERENCE TO THE SPECIES
OF THE GENUS *ELACHIPTERA* MACQUART

(Diptera, Chloropidae)

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The present short communication relating to Japanese Chloropids of the genus *Elachiptera* MACQUART is based on the material which is accumulated for the Entomological Institute of Hokkaido University by many entomologists, submitted to me by Mr. S. KATO for examination or collected by myself. Two species of this genus have hitherto been credited to our fauna and three additional species are represented in this paper, one being new to science and the others new to Japan.

Before going further, I wish to express my sincere gratitude to Professor T. UCHIDA and Dr. C. WATANABE for their kind guidance.

Genus *Elachiptera* MACQUART

Elachiptera MACQUART, Histoire naturelle des insectes, Diptères, 2, 621 (1835); BECKER, Wien. Ent. Ztg., 23, 91 (1909); DUDA, Die Flieg. der Palaearkt. Reg., 64, 21 (1932); SABROSKY, Ann. Ent. Soc. Amer., 34 (4), 752 (1914), Jour. Wash. Acad. Sci., 38, 366 (1948).

Genotype: *Chlorops brevipennis* MEIGEN, 1830, (Monobasic).

This genus is widely distributed over the world and its outstanding features are as follows: (1) arista broadened, or virtually so, due to the arrangement of dense pubescence, (2) scutellum more or less trapezoidal in outline, the disk strongly rugulose and (3) scutellar bristles standing on the distinct marginal tubercles. The Japanese species may be distinguishable by the following key.

Key to the Japanese species

1. Frontal triangle and pleura entirely black. 2
- Frontal triangle and pleura reddish yellow. 4
2. Frontal triangle reaching just to the anterior margin of front. Interfrontal bristles arranged inside along the frontal triangle. Mesonotum pollinose on the whole area. Apical scutellar tubercles prominent, more than twice as long as broad, the bristles being much shorter than scutellum. *E. tuberculifera* (CORTI)
- Frontal triangle ending before the anterior margin of front. Interfrontal

- bristles arranged outside along the frontal triangle. Mesonotum pollinose on the dorsocentral row. Apical scutellar tubercles relatively small, the bristles being equal or slightly longer than scutellum. 3
3. Frontal triangle ending four-fifths the length of front. Scutellar tubercles moderate in size. Wings tinged with brown. *E. japonica* NISHIJIMA
- Frontal triangle reaching to five-sixths the length of front. Scutellar tubercles extremely small. Wings hyaline. *E. biculiminata* sp. nov.
4. Mesonotum entirely pollinose. Scutellum with prominent tubercles as in *E. tuberculifera*, the apical bristles being much shorter than scutellum. *E. sibirica* (LOEW)
- Mesonotum with two stripes of white pollen in dorsocentral row. Scutellum with small tubercles, the apical bristles being as long as scutellum. *E. insignis* (THOMSON)

***Elachiptera tuberculifera* (CORTI)**

Elachiptera tuberculifera CORTI, Bull. Soc. Ent. Ital., 1909, 132 (1909). [*Crassisetia*]; DUDA, Die Flieg. der Palaearkt. Reg., 64, 32 (1932).

Specimens examined: 1♂, Sapporo, Hokkaido, 14, VIII, 1949, reared from the decayed stem of *Allium victorialis platyphyllum* HULTÉN, 6♀♀, 3♂♂, Ibid., 3, V, 1950, 1♂, 26, VII, 1952, 2♀♀, Ibid., 21, V, 1954, 3♂♂, Mt. Meakan, Hokkaido, 16, VII, 1952, 4♀♀, Jyozankei, Hokkaido, 19, VII, 1953, 1♂, Mt. Tokachi, Hokkaido, 18, VII, 1954, Y. NISHIJIMA leg.; 1♂, 1♀, Nopporo, Hokkaido, 2, VI, 1954, T. KUMATA leg.

Distribution: Japan (Hokkaido), Ussuri, South China, Europe.

Remarks: This species which is new to Japan, is characterized by the arrangement of interfrontal bristles, entirely pollinose mesonotum and three pairs of well developed scutellar tubercles. It seems to be closely related to *E. costata* (LOEW) of the Nearctic region in most respects. Judging from the literature (BECKER, 1912; SABROSKY, 1948), however, it may be distinct from the latter by the length of scutellum and the infuscation of tibiae.

***Elachiptera japonica* NISHIJIMA**

Elachiptera japonica NISHIJIMA, Ins. Mats., 20 (1/2), 19 (1956).

Specimens examined: 17♂♂, 12♀♀, in Hokkaido and 1♂, in Honshu.

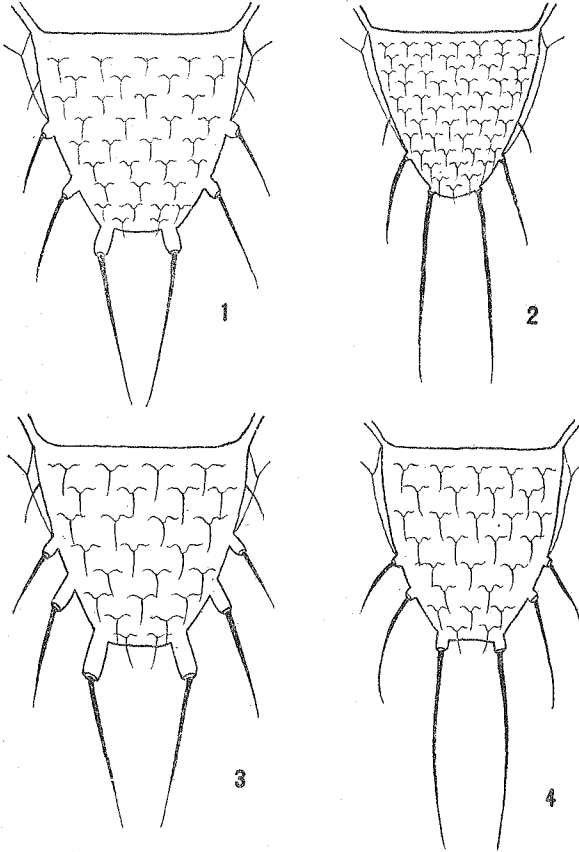
Distribution: Japan (Hokkaido, Honshu).

Remarks: As stated in the key, this species is quite distinct from any other species in having the brownish wing. The larva is found in the stem of *Carex* spp.

***Elachiptera biculiminata* sp. nov.**

Male and female: Head as wide as thorax. Front orange yellow to brown, nearly square, with yellowish pubescence, the anterior margin not projected toward compound eyes. Frontal triangle flattened, as long as broad, glistening black with the apex sometimes pale, the posterior corners and ocellar spot more or less pollinose, both lateral margins gently rounded, the apical corner ending approximately at four-fifths the length of front. Ocellar spot dull black and

strongly convexed. Compound eyes with sparse white pubescence. Outer vertical bristles strong, as long as postvertical bristles. Inner vertical bristles weakly visible, much shorter than ocellar bristles. Two pairs of fronto-orbital bristles outstanding, with the posterior one as long as the ocellar bristles. Interfrontal bristles arranged outside along the frontal triangle. Antennae orange yellow



Dorsal aspect of scutellum.

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|-------------------------------------|------------------------------------|
| 1. <i>E. sibirica</i> (LOEW). | 2. <i>E. biculiminata</i> sp. nov. |
| 3. <i>E. tuberculifera</i> (CORTI). | 4. <i>E. insignis</i> (THOMSON). |

with the dorsum somewhat darkened. Arista broadened and flattened, as long as front, with blackish dense pubescence, the apex slightly slender. Occiput entirely black. Face broader than height, pale yellow to blackish red brown with silvery

dense pubescence. Mesofacial plate flattened with a short median keel, the lower margin distinctly separated from the epistoma by a ridge-like rounded line. Parafacial ridges running straight and distinct, not parallel, narrowing toward the vibrissal angle. Genal areas as long as one-seventh the length of eye and slightly narrower than the third antennal segment. Palpi and clypeus orange yellow. Labellum brown. Thorax entirely black. Humeral calli pollinose. Mesonotum polished black, with the whitish pollen row running along each dorsocentral row which is broadened to the posterior half with a prescutellar pollen band. Dorsocentral row slightly grooved due to the arrangement of two rows of coarsely punctures. Only one hairy row arranged between the dorsocentral and acrostichal rows. Pleura shining black, the upper portion of mesopleura and pteropleura somewhat pollinose. Sternopleura with dense hairs. Halteres pale yellow. Scutellum as wide as long, somewhat rounded apically, with the disk entirely black and flattened, pollinose and rugulose. Three pairs of small and rounded marginal tubercles distinct, the apical one standing divaricately, its distance much longer than the distance from apical to lateral ones. Apical scutellar bristles slightly longer than scutellum (ratio 1.95 : 1.8) and nearly twice as long as the lower lateral one. Abdomen polished black, the first two tergites more or less brown. Legs orange yellow with some infuscation of the hind tibiae and tarsi, sometimes the fore tibiae and tarsi also infuscated. Wings hyaline; ratio of second, third and fourth costal sectors being 5.4 : 4.0 : 1.85; *rm* crossvein as long as half of *m* crossvein and parallel to the latter.

Body length: 2.6-3.4 mm.

Holotype: ♂, Monshizu, Hokkaido, 18, VII, 1952, Y. NISHIJIMA leg.

Allotype: ♀, Iwanai, Hokkaido, 2, VIII, 1953, Y. NISHIJIMA leg.

Paratypes: 1 ♀, Sapporo, Hokkaido, 27, IV, 1903, 1 ♂, *Ibid.*, 19, IV, 1904, 1 ♀, *Ibid.*, 23, V, 1916, S. MATSUMURA leg.; 1 ♂, 1 ♀, Jyozankei, Hokkaido, 5, VII, 1951, 1 ♀, Sapporo, 15, VI, 1952, 2 ♀ ♀, 2 ♂ ♂, Monshizu, 18, VII, 1952, 12 ♂ ♂, 10 ♀ ♀, Mt. Meakan, Hokkaido, 16, VII, 1952, 1 ♀, Asyoro, Hokkaido, 15, VII, 1952, 2 ♀ ♀, Sapporo, 28, VI, 1953, 4 ♀ ♀, 1 ♂, Niimi-Onsen, Hokkaido, 4, VIII, 1953, 4 ♂ ♂, Iwanai, 2, VIII, 1953, 7 ♀ ♀, 8 ♂ ♂, Mt. Tokachi, Hokkaido, 18, VII, 1954, 3 ♀ ♀, 1 ♂, Abira, Hokkaido, VI, 1954, 2 ♂ ♂, Sapporo, 21, V, 1954, Y. NISHIJIMA leg.

Types are preserved in the collection of Entomological Institute of Hokkaido University.

This species is most closely related to *E. cornuta* (FALLÉN) from Europe, differing by its broader face, longer antennae, longer frontal triangle and remote apical scutellar tubercles. The clypeus and labellum are lighter in colour. It should be noted that the larva of *E. cornuta* is found always in the stem of wheat, barley and rye, while the present species has never been discovered in the crop field, but in the forest.

Elachiptera sibirica (LOEW)

Elachiptera sibirica LOEW, Wien. Ent. Monatschr., II, 73 (1858).

[*Crassisetia*]; BECKER, Arch. Zool., I, 132 (1910); DUDA, Die Flieg. der Pala-

earkt. Reg., 64, 32 (1932).

Specimens examined: 1 ♂, Sapporo Hokkaido, 7, IV, 1903, 1 ♀, Ibid., 20, IV, 1903, 1 ♀, Ibid., 23, V, 1916, S. MATSUMURA leg.; 1 ♀, Ibid., 24, V, 1908, ARAKAWA leg.; 1 ♂, Kotoni, Hokkaido, 2, IX, 1931, M. TAKIZAWA leg.; 11 ♀ ♀, 7 ♂ ♂, Sapporo, 7, V, 1951, 3 ♂ ♂, 4 ♀ ♀, Ibid., 25, V, 1951, 9 ♀ ♀, 4 ♂ ♂, Atsunai, Hokkaido, 22, VII, 1951, 1 ♀, Teshio, Hokkaido, 25, VI, 1951, 2 ♂ ♂, 2 ♀ ♀, Kamisayari, Hokkaido, 23, VII, 1951, 1 ♂, Mt. Daisetsu, Hokkaido, 26, VII, 1951, 1 ♀, Jyozankei, Hokkaido, 5, VII, 1951, 1 ♂, Kawayu, Hokkaido, 23, VII, 1951, 1 ♂, 1 ♀, Kitami, Hokkaido, 25, VII, 1951, 7 ♀ ♀, 5 ♂ ♂, Sapporo, 13, VI, 1952, 3 ♀ ♀, Asyoro, Hokkaido, 15, VII, 1952, 4 ♀ ♀, 2 ♂ ♂, Mt. Meakan, Hokkaido, 16, VII, 1952, 1 ♂, 1 ♀, Misumai, Hokkaido, 30, V, 1952, 2 ♂ ♂, 2 ♀ ♀, Sapporo, 12, V, 1953, 1 ♀, Iwanai, Hokkaido, 2, VIII, 1953, 1 ♂, 1 ♀, Jyozankei, Hokkaido, 16, IX, 1953, 1 ♂, Abira, Hokkaido, 19, VI, 1954, 1 ♂, 1 ♀, Mt. Tokachi, Hokkaido, 18, VII, 1954, 2 ♂ ♂, Tokyo, 13, IV, 1955, Y. NISHIJIMA leg.; 1 ♀, Kenebetsu, Hokkaido, 30, VII, 1952, 1 ♀, Ibid., 21, VIII, 1954, T. KUMATA leg.; 1 ♀, Matsuo, Iwate-Ken, 19, VII, 1954, 1 ♂, Morioka, Iwate-Ken, 2, VI, T. OKU leg.; 1 ♂, Simoda, Izu, 23, VIII, 1949, 1 ♀, Konosu, 21, III, 1949, 1 ♀, Tachikawa, 16, VI, 1950, N. FUKUHARA leg.; 1 ♀, Tokura, Gunma-Ken, 23, IX, 1950, H. HASEGAWA leg.; 1 ♀, Ioki, Kochi-Ken, 18, III, 1949, 1 ♂, Hikosan, Fukuoka-Ken, 23, V, 1950, S. KATO leg.

Distribution: Japan (Hokkaido, Honshu, Shikoku, Kyushu,) Amur, Ussuri, Siberia, Europe.

Remarks: This species is characterized by the broad arista which is longer than its pubescence, large frontal triangle, entirely pollinose mesonotum, reddish pleura and three pairs of strong scutellar tubercles. In the present specimens the mesonotum usually has a broad blackish stripe at the middle, sometimes it has three stripes as in *E. bimaculata trifasciata* DUDA. It should be noted that the Japanese form seems to belong to the variety, *E. sibirica flavescens* DUDA, having a yellowish frontal triangle.

Elachiptera insignis (THOMSON)

Elachiptera insignis THOMSON, *Eugenies* Resa, 1865, 605 (1865), [*Oscinis*]; BECKER, Arch. Zool., I, 125 (1910); DUDA, Die Flieg. der Palaearkt. Reg., 64, 23 (1932); KATO, Icon. Ins. Jap., 1676 (1950).

Specimens examined: 2 ♂ ♂, Sapporo, Hokkaido, 20, IV, 1907, S. MATSUMURA leg.; 1 ♂, Ibid., 15, V, 1908, ARAKAWA leg.; 1 ♂, Syosanbetsu, Hokkaido, 24, VIII, 1943, reared from decayed stem of rice, 1 ♂, 1 ♀, Dōya, Hokkaido, 29, IX, 1949, reared from infested stem of rice by *Chilo suppressalis* (WALKER), 1 ♂, Sapporo, 29, VIII, reared from decayed stem of millet, 5 ♂ ♂, 8 ♀ ♀, Ibid., 7, V, 1951, 3 ♂ ♂, 4 ♀ ♀, Kotoni, Hokkaido, 20, VI, 1951, 1 ♀, Kamisayari, Hokkaido, 23, VII, 1951, 3 ♀ ♀, Teshio, Hokkaido, 25, VI, 1951, 6 ♀ ♀, 4 ♂ ♂, Mukawa, Hokkaido, 6, VI, 1952, 7 ♀ ♀, 4 ♂ ♂, Mt. Meakan, Hokkaido, 16, VII, 1952, 2 ♂ ♂, 2 ♀ ♀, Asyoro, Hokkaido, 15, VII, 1952, 1 ♀, Monshizu, Hokkaido, 18, VII, 1952, 4 ♀ ♀, 3 ♂ ♂, Iwanai, Hokkaido, 2, VIII, 1953, 1 ♀, Ishikari, Hokkaido, 16, VI, 1953, 2 ♀ ♀, 1 ♂, Abira, Hokkaido, 19, VI, 1954, Y. NISHIJIMA leg.; 3 ♀ ♀, 1 ♂, Obihiro, Hokkaido, 21, V, 1951, H. INOUE,

leg.; 1 ♂, Niigata, 21-22, V, 1950, S. TAKAGI leg.; 2 ♀ ♀, Toyama, 1, IX, 1953, TAKAGI-S. leg.; 1 ♀, Shimajima, Nagano-Ken, 3, V, 1949, T. TANAKA leg.; 1 ♂, Shimogamo, Kyoto, 25, III, 1949, N. FUKUHARA leg.; 1 ♂, Akita, 22, VI, 1949, 1 ♀, Shizuoka, 14, IV, 1949, S. KATO leg.; 5 ♀ ♀, 3 ♂ ♂, Matsuyama, 16, VI, 1953, M. MIYATAKE leg.; 1 ♂, Fukuoka, 29, IV, 1954, T. OKU leg.; 1 ♂, Koniya, Amami Island, 20, IV, 1954, KUMATA leg.

Distribution: Japan (Hokkaido, Honshu, Shikoku, Kyushu, Amami Islands), Ussuri, Formosa, China.

Remarks: In a few specimens, the mesonotum has a broad blackish stripe at the middle, or is entirely black except the humeral calli. In such cases, the occiput is wholly black.

In Japan, this species was first recorded by Dr. S. KUWAYAMA as a rice stem miner under the name of *Pseudogaurax* sp.*) The adult is commonly collected in the crop field and the larva is always found in the decayed stems of rice, wheat, barley, millet, Indian corn and quack grass.

*) Agr. & Hort., 20 (1), 33-35 (1945).