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Miyatake, Yorio
Osaka Museum of Natural History

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A New Species of the Genus *Aphalara* (Homoptera, Psylloidea, Aphalaridae) from the Alpine Regions of Honshu and Hokkaido, Japan

Yorio MIYATAKE

Osaka Museum of Natural History, Nagai Park,
Higashi-sumiyoshi-ku, Osaka, 546 Japan

Abstract. A new species of the genus *Aphalara* is described under the name of *A. morimotui*. It can be found from the alpine regions of Honshu and Hokkaido, Japan.

Key words: Taxonomy, Homoptera, Aphalaridae, *Aphalara morimotoi*. new species, *Polygonum*, alpine regions, Japan.

There are several species of the genus *Aphalara* without conspicuous maculation or markings on their forewings known from the Palaearctic Region such as *A. affinis* (Zetterstedt, 1828), *A. borealis* Heslop-Harrison, 1949, *A. calthae* (Linnaeus, 176 1), *A. longicaudata* Loginova, 1961 and *A. polygoni* Foerster, 1848 (Loginova, 196 1).

After careful examining specimens of the species of the genus obtained from the alpine regions of Hokkaido and Honshu, I came to the conclusion that it was new to science. Then, it is described in the present paper. It most resembles *A. longicaudata* in the long female genitalia especially, but can be distinguished from the latter by several characteristics.

It is my great pleasure that I can dedicate this short paper to Dr. Katsura Morimoto on the commemorative occasion of his retirement from Kyushu University, who has been long a teacher and friend to me since my school days. The specific name of the present new species is dedicated to him.

The holotype and a large part of paratypes treated in this paper will be kept at the Osaka Museum of Natural History, and some of paratypes will be deposited at the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka and the Entomological Institute, Faculty of Agriculture, Hokkaido University, Sapporo.

I express my gratitude to Dr. Toyohei Saigusa of Kyushu University, Dr. Tikahiko Naito of Kobe University and Dr. Akinori Nakanishi of Museum of Nature and Human Activities, Hyogo for their kind offer of materials.

Aphalara morimotoi Y. Miyatake, sp. nov.
[Japanese name : Urajirotade-kijirami]

(Fig. 1)

Coloration. General color yellowish to reddish brown, usually with some stripes and markings of lighter or darker brown dorsad. Antenna pale brown, with two apical

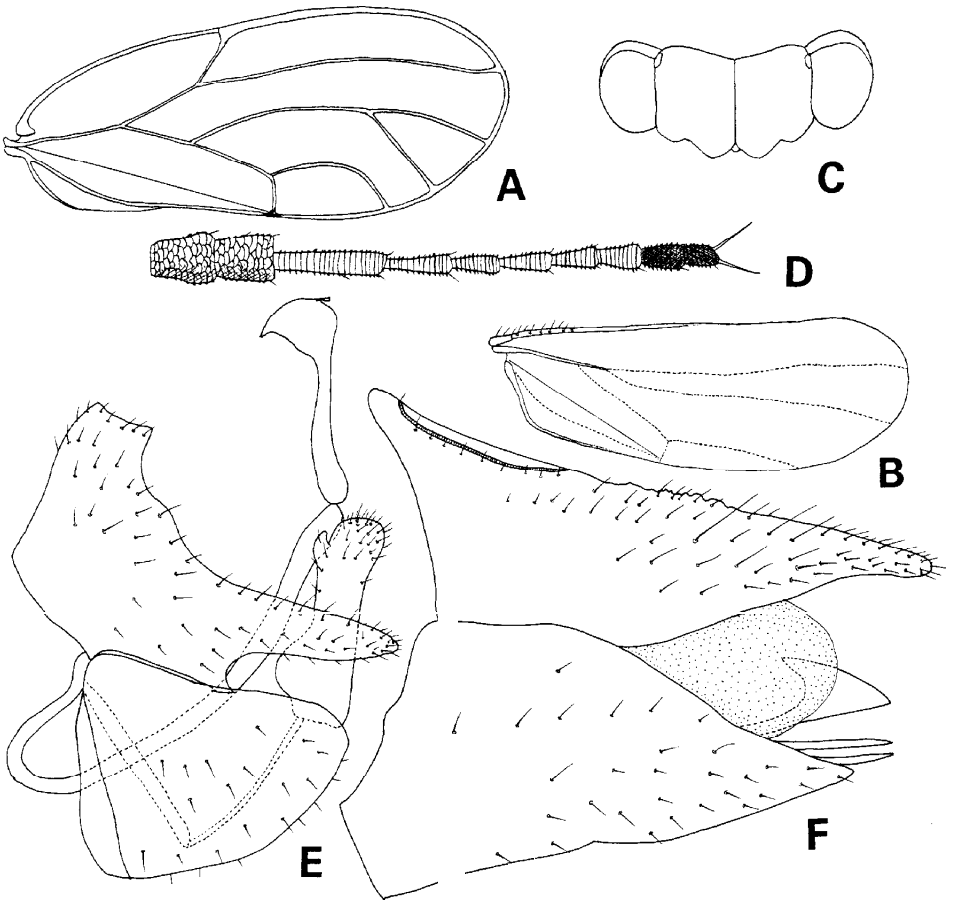

Fig.1. *Aphalara morimotoi* sp. nov. — A, Forewing, male; B, hind wing, male; C, head, female; D, antenna, male; E, male genitalia; F, female genitalia; Utsukushigahara, Mts. Daisetsu, Kamikawa-gun, Hokkaido, 22. vii. 1962.

segments of black, with two basal segments which are darker basally. Vertex pale brown, darker medially and anteriorly. Genal area pale to reddish brown. Eyes dark brown: ocelli pale to yellowish brown. Thorax with two pairs of stripes of reddish to dark brown on dorsum, with medial stripe in addition and stripes of lighter color in female: dark brown to black ventrally.

Forewing almost transparent, slightly smoky, with microscopic dots on membrane throughout, apex of Cu_1 with dark spot. Legs yellowish to pale brown; femora dark brown partly; claws and apical spurs of posterior tibia and tarsus black. Abdomen dark brown to black, with marginal stripes of lighter color on each segment. In male genitalia, proctiger brownish in basal half and pale brown in apical half; forceps and subgenital plate dark brown. Female genitalia dark brown with lighter markings.

Structure. Head (Fig.1 - C) nearly as wide as or slightly narrower than thorax. deflexed; vertex wider than long, rounded down to genal area anteriorly, with deep impression medio-posteriorly on each side of median line, rugose and not pubescent on surface. Genal area not conical, forming small rounded tubercle. Antenna (Fig. 1 - D) short and stout, slightly longer than width of head including eyes, with two long setae at : :5 : 3 : 2.5 : 2.5 : 2.5 : 2.5 : 2 : 2.

Thorax large, strongly arched, not pubescent; pronotum deflexed, medial part produced forward in dorsal view, not hairy; praescutum rather rhomboidal, twice as wide as long; mesoscutum deflexed, somewhat quadrilateral, twice as wide as long. Forewing (Fig.1 - A) elongate, 2.2 - 2.5 times as long as wide, narrow basally, broad apically, widely rounded at apex; S + Sc thickened; Rs long, sinuate, ended near wing apex; M slightly arched; mecial cell moderate in size, M_{1+2} slightly longer than M_{3+4}; cubital cell somewhat quadrilateral; relative length of veins M+Cu, Cu and Cu_2 as 1 : 1: 0.5. Hind wing (Fig.1 - B) long and slender, 2.7 - 3.0 times as long as wide, 4/5 as long as forewing, anterior margin sinuate, rounded at apex; venation not triozine, M branched from M; cubital cell flat; C+Sc with several setae and frenulum basally. Legs short, stout. moderately hairy; femora not much swollen; posterior tibia without basal spur, with 9 to 10 apical spines; proximal segment of posterior tarsus with a pair of apical spines; meracanthus rather long, acute apically, projected obliquely ventro-caudad. Abdomen (excl. genital segment) long, almost as long as thorax, with short pubescence ventrally.

Male genitalia (Fig.1 - E) almost half as long as the rest of abdomen, typically aphalarid type; proctiger extended laterally into a long horizontal process which is attenuate apically, narrowly rounded at apex, with slight and short pubescence as figured. with a conspicuous ventral projection near midway; forceps rather long, slightly higher than proctiger, rather parallel-margined in lateral view, with an anterior projection near apex and an anterior knob-like projection basally, subgenital plate large, subtriangular. nearly as high as forceps, dorsal margin sinuate, ventral margin strongly convex, with sparse pubescence. Female genitalia (Fig.1 - F) large, almost half as long as the rest of abdomen, somewhat wedge-shaped, conspicuously longer than wide: dorsal valve distinctly longer than ventral, with apical portion attenuate, subacute at apex. dorsal margin slightly impressed and more or less rugose near midpoint. with a few long and sparse short pubescence; ventral valve shorter than inner valve, with dorsal margin sinuate, ventral margin rather straight, subacute at apex, with sparse pubescence: inner valve nearly as long as dorsal.

Measurements. Length of body in male 1.7 mm - 1.9 mm, female 2.3 - 2.5 mm (to tip of folded wings in male 2.8 - 3.0 mm, female 3.2 - 3.3 mm) ; length of forewing in male 2.3 - 2.5 mm, female 2.6 - 2.8 mm ; width of forewing in male 0.9 to 1 .0 mm. female 1 .O - 1.1 mm ; length of hind wing in male 1.9 - 2.1 mm, female 2.1 - 2.3 mm ; width of hind wing in male 0.6 - 0.7 mm, female 0.7 - 0.8 mm ; length of antenna in male 0.6 - 0.7 mm, female 0.6 - 0.7 mm ; width of head in male 0.60 - 0.63 mm, female 0.63 - 0.69 mm.

Holotype. male, Utsukushiga-hara, alt. ca. 1,850m, nr Kurodake, Mts. Daisetsu. Kamikawa-gun, Hokkaido, 22.vii. 1962, on *Polygonum Weirichii*, Y. Miyatake leg. (OMNH TI 63)

Paratopotypes. 29 males and 47 females (2 males and 2 females on slides), the same data as the holotype.

Paratypes. 15 males and 12 females (lmale and 1 female on slides), 10.vii.1963, T.Saigusa leg.; 4 males and 2 females, 4.vii.1964, T. Naito leg.; 4 males and 1 female. 4.vii.1964, A. Nakanishi leg.; Karasawa, alt. ca. 2,400m, N. Japan Alps, Minamiazumi-gun, Nagano Pref.

Distribution . Japan (Hokkaido, Honshu).

Host plant . " Urajiro-tade " - *Polygonum Weirichii* Fr. Schmidt [Polygonaceae].

Remarks. Differs from *A. longicaudata* Loginova, 1961 in having slightly wider forewing, male forceps with more conspicuous and larger anterior projections apically and basally, and both of dorsal and ventral valves in female genitalia which are wider. Differs from *A. polygoni* Foerster, 1848 (Kwon, 1983) in being bigger and in having longer and wider forewing, male proctiger with longer caudal projection, and both dorsal and ventral valves in female genitalia which are much longer. There seems to be some tendency that individuals of the Honshu population are a little smaller than those of the Hokkaido population.

References

Kwon, Y. J., 1983. Psylloidea of Korea (Homoptera: Sternorrhyncha). *Insecta Koreana* Ser. *2*. 181 pp.

Loginova, M. M., 1961. A revision of the species of the genera *Aphalara* Frst. and *Craspedolepta* Enderl. (Homoptera, Psylloidea) in the fauna of the USSR. I. *Ent. Obozr.*, **Moscow, 40**(3): 602 - 623, 118 figs.