DESCRIPTIONS OF TWO NEW SPECIES OF *MEGASTIGMUS* FROM JAPAN

(Hym., Chalcidoidea)

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Megastigmus chamaecyparidis sp. n.

Female. Length: body 2.0-2.3 mm., abdomen 0.9-1.2 mm., ovipositor sheath 1.4-1.7 mm.

Head, seen from above, about $1^2/_3$ as wide as long. Occipital margin rather deeply emarginate; occipital carina evenly arcuate. Vertex strongly convex with very weak rugulae, virtually smooth. Minimum distance between posterior ocellus and occipital carina shorter than ocellocular line, and longer than half of postocellar line. Face convex with sparse black hairs. Malar space shorter than half height of compound eye. Antennal scrobe shallow, not attaining anterior ocellus; scape with sparse black hairs on inner surface distally, barely longer than pedicel, ring segment, first funicle segment (FI), and $^1/_4$ second funicle segment (FII) combined; pedicel wider and almost as long as FI; funicular segments about equal in length. Pronotum about $1^1/_3$ as wide as long with fine and weak rugulae; flange on anterior margin very weakly emarginate. Fine transverse rugulae of mesoscutum somewhat irregular and sparser than those of pronotum. Parapsidal furrows shallow. Scutellum evenly convex, usually with three pairs of strong, black bristles; its sculpture weak and indistinct, somewhat shingled; area behind transverse line almost smooth. Propodeum rather elongate, almost as long as $^2/_3$ distance between propodeal spiracles, about 11 : 17, finely irregularly reticulate on anterior area; median carina distinct; arcuate strong lateral carinae enclosing roundly arcuate rugae from median posterior margin. Groove below propodeal spiracle shallow. Upper surface of fore wing with very sparse hairs at base (Fig. 1, A). Proximal $^2/_3$ of submarginal vein with 6 to 8 strong bristles. Stigma as in Fig. 1, B. Abdomen subcompressed.

Brownish yellow or orange. Funicles and club, sometimes area along occipital carina, and occiput dark brown. Ocelli partially surrounded by brownish black patches. Abdomen darker. Ovipositor sheath black.

Male. Length; body 2.0-2.3 mm., abdomen 0.8-1.2 mm.

Scape as long as pedicel, ring segment, and FI combined; pedicel nearly as long as FI. Ratio of length of propodeum to distance between propodeal spiracles about 10 : 14. Sculpture similar to female. Proximal $^2/_3$ of submarginal

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vein with 8 bristles. Stigma as in Fig. 1. C.

Holotype (♀): Otaki, Nagano Pr., Honshu, 23. V, 1957, reared by K. KAMIJO. Allotype (♂): Honshu (exact locality and date are unknown). Paratypes: (6♀♀), with same data as holotype; (8♀♀, 12♂♂), with same data as allotype. The types are deposited in the Entomological Institute, Hokkaido University.

Locality: Japan (Honshu).

Host: Seeds of *Chamaecyparis obtusa* ENDLICHER.

This species is closely allied to *Megastigmus thuyopsis* YANO[1], from which it can be separated by the longer ovipositor sheath, by the shorter stigmal vein, and by the pedicel which is nearly as long as FI. It is also closely related to *M. cryptomeriae* YANO[2], but in *chamaecyparidis* the FI is nearly as long as the FII, the ocellocular line is longer than the minimum distance between the posterior ocellus and the occipital carina, and the fore wing possesses very sparse hairs at base.

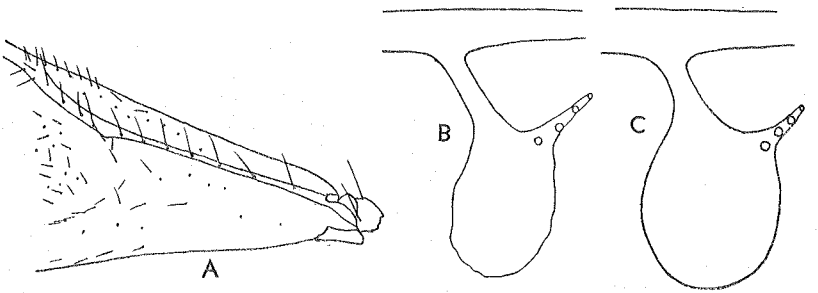

Fig. 1. *Megastigmus chamaecyparidis* sp. n.
A. Fore wing. B. Stigma of female. C. Stigma of male.

Megastigmus tsugaphilus sp. n.

Female. Length: Body 2.3–2.9 mm., abdomen 1.1–1.3 mm., ovipositor sheath 1.8–2.0 mm.

Head, seen from above, transverse oval, about twice as wide as long. Occipital margin deeply emarginate; occipital carina evenly roundly arcuate above. Vertex evenly weakly convex, transversely weakly rugulose behind ocelli. Minimum distance between posterior ocellus and occipital carina shorter than ocellocular line, and longer than half of postocellar line. Head, seen in front, much wider than high, about 4 : 3. Face with sparse, black hairs at sides. Malar space shorter than half height of compound eye. Antennal scrobe moderate in depth, not attaining anterior ocellus; scape with sparse black hairs on inner

1) Rept. Forest Exp., Forestry Bur., (Tokyo), no. 17, p. 46, 1918. Insect World, Vol. 22, p. 374, 1918.

2) Rept. Forest Exp., Forestry Bur., (Tokyo), no. 17, p. 45, 1918. Insect World, Vol. 22, p. 373, 1918.

surface distally, as long as pedicel, ring segment, FI, and 1/2 FII together; pedicel wider and as long as FI, which is slender and nearly twice as long as wide; funicular segments about equal in length. Pronotum much wider than long (3 : 2), finely transversely rugulose; flange on anterior dorsal margin rather sharp, very weakly emarginate. Transverse rugulae of mesoscutum stronger and sparser than those of pronotum. Parapsidal furrows rather deep. Scutellum slightly longer than wide, about 11 : 10, with fine, irregular rugulae and with 4 to 5 pairs of bristles; its basal two-thirds convex and the anterior portion roundly declivous

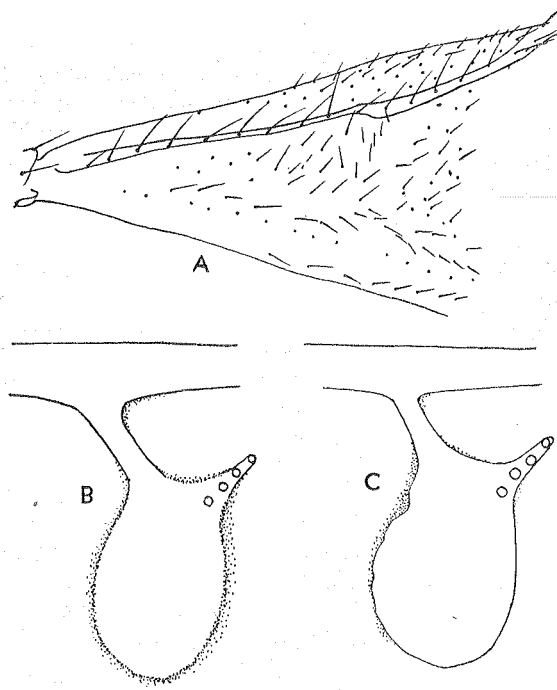

Fig. 2. *Megastigmus tsugaphilus* sp. n.
A. Fore wing. B. Stigma of female. C. Stigma of male.

toward apex; area behind transverse line with feeble punctures anteriorly, weakly longitudinally aciculate medially. Propodeum slightly longer than 1/2 distance between propodeal spiracles, about 11 : 21, weakly convex, usually with an arched, transverse depression medially, finely irregularly reticulate; median carina distinct anteriorly, weak and sometimes branched posteriorly; a few carinae extending from posterior margin at sides. Groove below propodeal spiracle very shallow. Fore wing with hairs moderate in number at base

(Fig. 2, A). Proximal $^2/_3$ of submarginal vein with 10 to 13 bristles. Stigma as in Fig. 2, B. Abdomen not compressed.

Orange or brownish yellow. Funicular segments and club dark brown. Ocelli partially surrounded by brownish black patches. Tergites I to III each with a dark, indistinct band posteriorly. Ovipositor sheath black.

Male. Length: body 2.2–2.7 mm., abdomen 0.9–1.1 mm.

Scape barely longer than pedicel, ring segment, FI, and $^1/_3$ FII combined; pedicel slightly shorter than FI, which is sometimes longer than FII. Pronotum wider than long (5 : 4). Scutellum longer than wide (11 : 9), evenly roundly convex. Propodeum slightly shorter than $^2/_3$ distance between spiracles, about 11 : 18; its sculpture similar to female except sometimes weak, arcuate lateral carinae enclosing rugae from median posterior margin. Proximal $^2/_3$ of submarginal vein with 10 to 11 bristles. Stigma as in Fig. 2, C. Colour similar to female.

Holotype (♀), allotype (♂), and paratypes (13♀♀, 5♂♂,) Kochi Pr., Shikoku, 9. V,-20. VI, 1957, reared by K. KAMIJO. The types are deposited in the Entomological Institute, Hokkaido University.

Locality: Japan (Shikoku).

Host: Seeds of *Tsuga Sieboldii* CARRIÈRE.

This species is closely allied to *hoffmeyeri* WALLEY, but may be distinguished from the latter by having more bristles on the anterior $^2/_3$ of the submarginal vein and by the occipital carina being evenly round above and not angulate medially above. It is also closely related to *chamaecyparidis* sp. n. and *thuyopsis* YANO. From *chamaecyparidis* it can be separated by the carination of the propodeum and by the fore wing having moderate hairs at base (Fig. 2, A). From *thuyopsis* it can be distinguished by the longer ovipositor sheath and by the shape of the stigma.

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