



# HOKKAIDO UNIVERSITY

Title	Meteorus japonicus Ashmead, a Parasite of the Gypsy Moth, <i>Lymantria dispar</i> Linné (Hymenoptera : Braconidae)
Author(s)	Watanabe, Chihisa
Citation	Insecta matsumurana, 13(2-3), 63-65
Issue Date	1939-03
Doc URL	<a href="https://hdl.handle.net/2115/9406">https://hdl.handle.net/2115/9406</a>
Type	departmental bulletin paper
File Information	13(2-3)_p63-65.pdf



*METEORUS JAPONICUS* ASHMEAD, A PARASITE  
OF THE GYPSY MOTH,  
*LYMANTRIA DISPAR* LINNÉ  
(HYMENOPTERA : BRACONIDAE)

By

CHIHISA WATANABE  
(渡邊千尙)

In 1937 the present writer represented five species of *Meteorus* in Japan, but two of them, *M. japonicus* ASHMEAD and *M. nipponensis* VIERECK, were treated as imperfectly known species. In the course of the present study, however, the writer's observations have convinced him that *M. nipponensis* should be a synonym of *M. japonicus* which is a parasite of the gypsy moth.

On this occasion the writer is much indebted to Dr. C. F. W. MUESEBECK for his kind suggestion, and to Mr. S. FUKAYA for his kindness in sending the material.

***Meteorus japonicus* ASHMEAD**

*Meteorus japonicus* ASHMEAD, Proc. U. S. Nat. Mus., XXX, p. 190, ♀ (1906); WATANABE, Jour. Facul. Agr., Hokkaido Imp. Univ., XLII, p. 133 (1937).

*Meteorus nipponensis* VIERECK, Proc. U. S. Nat. Mus., XLII, p. 624, ♀ (1912); WATANABE, Jour. Facul. Agr., Hokkaido Imp. Univ., XLII, p. 134 (1937) (syn. nov.).

♀. Rufo-testaceous; stemmaticum, tips of the mandibles, propodeum, 1st abdominal segment and ovipositor-sheath dark brown to black; mesonotum somewhat fuscous; antennae brownish yellow, darkened towards the apex; wings hyaline; tegulae testaceous; veins fuscous; stigma fuscous, with a pale exterior margin; legs testaceous, the hind tarsi somewhat fuscous, the claws black.

Head transverse, as wide as the thorax, rounded behind the eyes; vertex smooth and shining; face densely pubescent, finely transversely striate at the middle; clypeus prominently convex; antennae as long as the body, 30-jointed. Thorax almost smooth and shining, with scattered hair-punctures; parapsidal furrows punctate; depression behind the middle lobe of the mesonotum reticulate-rugulose; disk of the scutellum slightly convex, triangular, the fovea in front of the scutellum crenulate; mesopleural furrows broad, shallow, rugulose punctate. Propodeum slightly convex, densely reticulate-rugulose. First abscissa

of the radius shorter than the 2nd, which is as long as the 2nd intercubitus; 1st intercubitus as long as the 2nd abscissa of the cubitus; 2nd cubital cell slightly narrowed towards the apex; recurrent nervure slightly rejecting into the 1st cubital cell; nervulus postfurcal. First tergite as long as the following ones united, longitudinally striate, the trachial grooves obsolete, and the ventral margins meeting at the base, touching for nearly half the length of the segment; 2nd and following tergites smooth and shining; ovipositor as long as two-thirds the length of the abdomen.

Length, 4.5 mm.

Described from two females bred from the gypsy moth.

♂. Unknown.

This species is closely related to *Meteorus pulchricornis* WESMAEL\* which is a parasite of the gypsy moth in Europe, but may be distinguished from the latter by the structure of the 1st tergite as VIERECK (1912) pointed out.

It was Dr. MUESEBECK who suggested to the writer that *M. nipponensis* may be a synonym of *M. japonicus*: his letter reads as follows:—

“The specimen\*\* of *Meteorus* which was reared from the gypsy moth in Japan is, in my opinion, *M. japonicus* ASHMEAD. Furthermore, I consider *M. nipponensis* VIERECK to be a synonym of *M. japonicus*.”

Cocoon: Pencile, yellowish brown, shining, and transparent like that of *Meteorus versicolor* WESMAEL, 5 × 2 mm. in size.

Host—*Lymantria dispar* LINNÉ

This species is a solitary parasite of the young larva of the gypsy moth, *Lymantria dispar* LINNÉ.

In the original description of *M. japonicus* it is described as a parasite of an undetermined Lepidopteron, while that of *M. nipponensis* is without host record. HOWARD and FISKE (1911) recovered a species of *Meteorus* bred from young gypsy moth caterpillars from Japan in 1908 and 1909 and determined it as *M. japonicus* ASHMEAD. BURGESS and CROSSMAN (1929) followed them and said as follows:—

“In 1923 a few cocoons (of *M. japonicus* ASHMEAD) were obtained from Japanese gipsy-moth caterpillars. From several females which were received there were reared five unfertilized ones which were used in a reproduction experiment. They bred, parthenogenetically, a generation of 400 females, and these were liberated. The species has not been recovered.”

\* Nouv. Mém. Acad. Sci. Bruxel., IX, p. 42, ♀ ♂ (1835).

\*\* It has been sent to Dr. MUESEBECK to ask him to compare it with the types of *M. japonicus* and *M. nipponensis*, both of which are deposited in the United States National Museum, Washington, D. C., U. S. A.

SCHEDL (1936) listed *M. japonicus* as a parasite of the gypsy moth. FUKAYA (1936) reported that two representatives of a species of *Meteorus*, which he said might be identified with *M. japonicus*, were reared from the second instars of the gypsy moth, and by his courtesy one of the representatives has been made use of in the present information. Two females of this species, one of which has been sent to Dr. MUESEBECK for identification, were bred from the same host by ISHIKAWA at Niigata in 1915. Moreover, CHU (1935) gave Wusih, Nantung and Hangcho in China as habitats of *Meteorus japonicus* with seven different hosts belonging to *Noctuidae*, *Arctiidae*, *Geometridae* and *Pyralidae*, but the identification of the species, the writer thinks, may be obviously questionable.

Habitat—Honshu (Gifu, after ASHMEAD; Nagaoka, after HOWARD and FISKE; Rokugo, Saitama-ken, after FUKAYA; Doai, Saitama-ken, 1 ♀, 14. VI, 1936, S. FUKAYA leg.; Niigata, 2 ♀ ♀, 2. VII, 1915, T. ISHIKAWA leg.).

General Distribution: Japan.

### References

- ASHMEAD, W. H. (1906): Descriptions of new Hymenoptera from Japan (Proc. U. S. Nat. Mus., XXX, p. 190, 1906).
- BURGESS, A. F. and CROSSMAN, S. S. (1929): Imported insect enemies of the gypsy moth and the brown-tail moth (U. S. Dept. Agr., Techn. Bull. 86, p. 103, 1929).
- CHU, J. T. (1935): Preliminary notes on the ichneumon-flies in Kiangsu and Chekiang Provinces, China (1924 Year Book, Bur. Ent. Hangchow, 4, pp. 19-20, 1935).
- FUKAYA, S. (1936): Maimai-ga no kiseihō (Hymenopterous parasites of the gypsy moth) (Ōyō-Dōbutsugaku-zasshi, 8, pp. 334-335, 1936).
- HOWARD, L. O. and FISKE, W. F. (1911): The importation into the United States of the parasites of the gypsy moth and the brown-tail moth (U. S. Dept. Agr., Bur. Ent. Bull. 91, pp. 190-191, 1911).
- SCHEDL, K. E. (1936): Der Schwammspinner (*Porthetria dispar* L.) in Euroasien, Afrika und Neugland (Zeits. ang. Ent., XXII, p. 192, 1936).
- VIERECK, H. (1912): Contributions to our knowledge of bees and ichneumon-flies including the descriptions of twenty-one new genera and fifty-seven new species of ichneumon-flies (Proc. U. S. Nat. Mus., XLII, p. 624, 1912).
- WATANABE, C. (1937): A contribution to the knowledge of the Braconid fauna of the Empire of Japan (Jour. Facul. Agr., Hokkaido Imp. Univ., XLII, pp. 133-134, 1937).