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DESCRIPTION OF A NEW SPECIES OF
THE GENUS ASCOGASTER WESMAEL AND NOTES
ON SYNONYMY OF APANTELES SPECIES*

(HYMENOPTERA, BRACONIDAE)

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The description of a new species given in this paper is based upon the material offered by Dr. J. Minamikawa and Dr. K. Kamijo, to whom I wish to express my sincere thanks for their kindness. On this occasion I will discuss synonymy of two *Apanteles* species.

Subfamily **Cheloninae**

Ascogaster reticulatus, sp. nov.

♀. Black; mandibles and tegulae straw-yellow; antennae yellowish brown, darkened towards apex; palpi pale yellow. Abdomen wholly black or black with a pale yellow marking at base, the marking being variable in size. Legs including coxae straw-yellow, sometimes hind coxae black basally; hind femora black at apex; hind tibiae black at both ends, sometimes almost black with a yellow ring near base; fore and middle tarsi straw-yellow or dark brown; hind tarsi black. Wings subhyaline; stigma and veins brownish yellow; 2nd intercubitus decolored.

Head transverse, narrower than thorax; face transversely reticulate-rugulose, pubescent, slightly prominent medially with a median longitudinal carina continued between antennae; clypeus finely reticulate-rugulose, its apical margin rather narrowly rounded. Antennal scrobes not delimited by carinate rims except at sockets, separated by a median longitudinal carina, the inner surface almost smooth; areas between scrobes and orbits reticulate-rugulose; vertex transversely reticulate-rugulose; distance between lateral ocelli twice as long as diameter of an ocellus; eyes rather small; genae obliquely reticulate-rugulose. Antennae (Fig. 1, A) shorter than body, slightly dilated medially with 32~34 segments. Mesonotum strongly, coarsely reticulate-rugulose, the notauli marked by broad, shallow, oblique impressions; posterior depressed area of mesonotum irregularly foveolate; mesopleura sculptured as in mesonotum; scutellar sulcus 5-foveolate; disc of scutellum strongly, longitudinally striate-rugulose. Propodeum coarsely reticulate-rugulose as in mesonotum, the transverse rim developed, with obtuse sub-medial and acute lateral teeth. Fore wing (Fig. 1, C): stigma twice as long as wide;

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1st abscissa of radius a little longer than the 2nd, and the 3rd not reaching to apex of wing, slightly curved inwardly; 1st intercubitus 1.5 times as long as the 2nd; cubitus issuing from basal vein not so far from parastigma; nervulus postfurcal. Radial cell of hind wing sessile. Hind coxae smooth and shining. Abdomen longitudinally reticulate-rugulose, the reticulation becoming fine apically. Viewed from side abdomen as long as thorax including propodeum, gradually deeper apically, the apex being rounded;

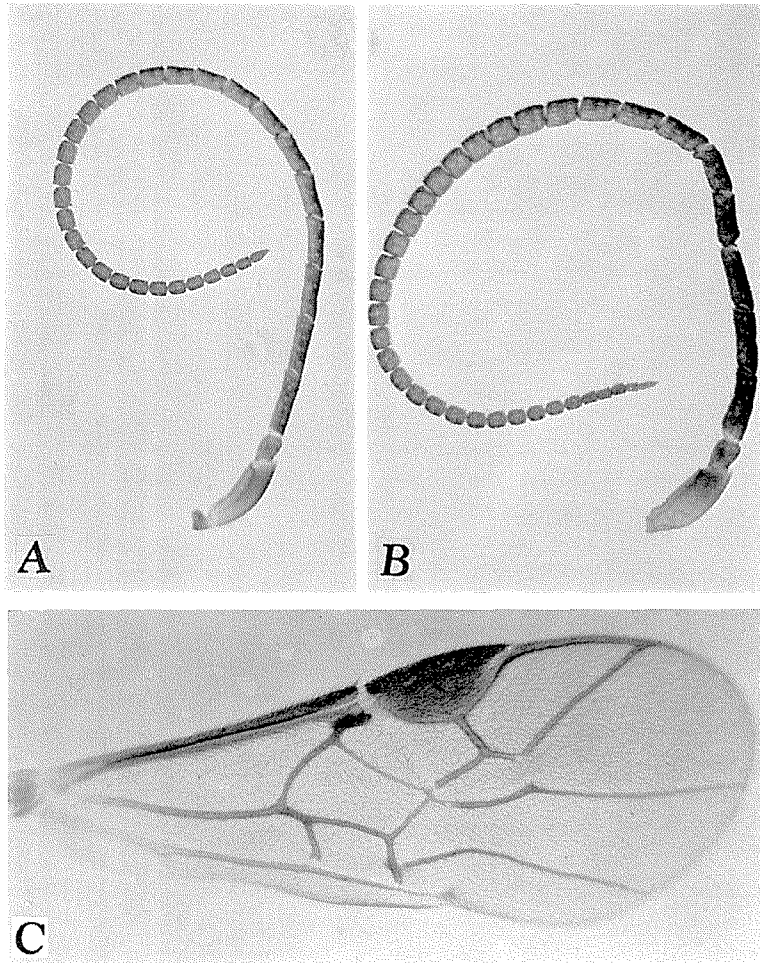


Fig. 1. *Ascogaster reticulatus*, sp. nov.

A: Antenna (♀). B: ditto (♂). C: Fore wing (♀).

vertical cavity not reaching to extreme apex; ovipositor usually concealed in the cavity. Length, 4.5~5 mm.

♂. Essentially as in the female, except that the antennae (Fig. 1, B) are longer with 37~39 segments. Length, 4.5~5 mm.

Localities: Hokkaido—Asahigawa, 11 ♀♀ (one the holotype), 15 ♂♂ reared from *Ariola* sp. (Vernacular name: *Kurotatesuji-hamaki*) feeding on leaves of *Abies sachali-*

ensis; 3 ♀♀, 1 ♂ from *Archips piceanus*; 2 ♂♂ from *Ariola pulchra*; and 1 ♀, 1 ♂ from *Archips issikii*, vi-60, K. Kamiyo leg. Honshu—Kameyama, Miye-ken, 5 ♀♀, 15-vii-61, M. Osakabe leg. and Kanaya, Shizuoka-ken, 5 ♀♀, 20-vii-60, J. Minamikawa leg. All reared from *Adoxophyes orana*. The holotype is deposited in the Entomological Institute, Hokkaido University.

Host: *Adoxophyes orana* Fischer von Röslerstamm, *Archips issikii* Kuroda, *Archips piceanus* Linné, *Ariola pulchra* Butler and *Ariola* sp.

There are certain differences in color between two series of specimens, one including the holotype from Hokkaido and the other from Honshu, but they are not of sufficient value to justify the separation of these insects into two full species. The series from Honshu differs from that from Hokkaido as follows:—abdomen with a yellow marking at base; legs including coxae yellow, only hind femora at extreme apex, hind tibiae at both ends and hind tarsi black.

This species is characterized by the sculpture of the body and by the coloration of the legs. Judging from the literature it seems that the present species comes near the two European species, *Ascogaster elegans* (Nees, 1818) and *Ascogaster egregius* Kokuju, 1895. In the state of the present knowledge, however, it is very difficult to give an accurate comparison among these species, since the European species have not yet been fully revised.

Subfamily **Microgasterinae**

Apanteles opacus (Ashmead)

Urogaster opacus Ashmead, Proc. U. S. Nat. Mus. 29: 118, ♀, 1905. Philippine Is.

Apanteles opacus: Wilkinson, Bull. Ent. Res. 19: 128, ♀, 1928. Philippine Is.

Apanteles derogatae Watanabe, Ins. Mats. 10: 49, ♀, 1935. China. Host: *Syllepte derogata* (= *Syllepta derogata*). **Syn. nov.**

Apanteles opacus: Nixon, Bull. Brit. Mus. (Nat. Hist.) Ent. Suppl. 2: 44, ♀, 1965. India, Malaya, Java & Japan. Host: *Pachyzancla stultalis* & *Pericallia ricini*.

In the course of the present study I have been convinced that *Apanteles derogatae* should be suppressed as a synonym of *Apanteles opacus*, because the types of *derogatae* agree well enough with the descriptions of *opacus* given by Ashmead (1905), Wilkinson (1928) and Nixon (1965). Furthermore, I have also examined several specimens (5 ♀♀, 5 ♂♂, Kodaira, Tokyo, 7-viii-64, J. Minamikawa leg.) reared from *Syllepte derogata* in Japan, and others caught in a sweep-net at paddy fields in India and Malaya, all of which should be identified with this species.

The male was not previously known. The present male specimens taken from Tokyo are like the female, apart from usual sexual differences, except that the 1st tergite is more or less slenderer than in the female. Further, the stigma is not hyaline but dark brown as in the female. This species is variable in color as Nixon points out: in the types of *derogatae* and the present Japanese specimens the 2nd and 3rd tergites are markedly yellow and the hind femora are yellow, only fuscous at the extreme base.

Apanteles baoris Wilkinson

Apanteles baoris Wilkinson, Bull. Ent. Res. 21: 280, ♀♂, 1930. Malaya. Host: *Parana bada* & *Pelopidas mathias*.

Apanteles paranae Watanabe, Ins. Mats. 10: 50, ♀, 1935. China. Host: *Parana guttata*. **Syn. nov.**

Apanteles paranae: Watanabe, Ins. Mats. 25: 90, 1963. Japan. Host: *Parana guttata*.

Having examined the types of *Apanteles paranae*, some specimens reared from *Parana guttata* in Japan and a lot of specimens caught in a sweep-net at paddy fields in various countries, that is, India, Ceylon, West Pakistan, Malaya, Sabha, the Philippine Islands, Hong Kong and Japan, I have concluded that the two names, *baoris* and *paranae*, should apply to a single species.

DIPTEROUS AND HYMENOPTEROUS PARASITES OF FIVE NYMPHALID BUTTERFLIES. In the course of the present investigation six tachinids, two braconids and one ichneumonid have been found to be parasites of five Nymphalidae, *Inachus io* (Linné), *Aglais urticae* (Linné), *Araschnia levana* (Linné), *Araschnia burejana* (Bremer) and *Vanessa indica* (Herbst), of which the larvae feed on leaves of nettles at Hôheikyô near Sapporo. The relations between these parasites and their hosts are shown in the following table:—

Parasite	Host				
	<i>Aglais urticae</i>	<i>Inachus io</i>	<i>Araschnia levana</i>	<i>Araschnia burejana</i>	<i>Vanessa indica</i>
Tachinidae					
<i>Blepharipoda zebina</i> Walker	++	+	++	++	
<i>Compsilura concinnata</i> Meigen	+	++	+	+	
<i>Pelatachina tibialis</i> Fallén	++	+++			++
<i>Phryxe vulgaris</i> Fallén	+				
<i>Sturmia bella</i> Meigen	+	++			
<i>Suensonomyia</i> sp.					+
Braconidae					
<i>Microgaster globatus</i> (Linné)	+				++
<i>Microgaster tibialis</i> Nees					+
Ichneumonidae					
<i>Meloboris</i> sp.	+				

+++ very frequent ++ frequent + rare

So far as the present investigations go, on the leaves of nettles the most dominant species is *Inachus io*, to which *Aglais urticae* and *Araschnia levana* are next in abundance. *Araschnia burejana* and *Vanessa indica* are very few. Of the parasites the most principal one is *Pelatachina tibialis*, to which *Blepharipoda zebina*, *Compsilura concinnata* and *Sturmia bella* come next.

Errata

Vol. 29, No. 2, p. 43, line 6 from top, for "Kuroda" read "Kodama".

Vol. 29, No. 2, p. 43, line 2 and 4 from bottom; p. 44, line 1 and 3 from top, for "*Parana*" read "*Parnara*".

Vol. 29, No. 2, p. 43, line 2 from bottom; p. 44, line 1, 2 and 5, for "*paranae*" read "*parnae*".

Vol. 29, No. 2, p. 46, line 17 from top; p. 47, line 19 from top; p. 48, line 13 from top; and p. 49, line 11 from top, for "postfulcal" read "postfurcal".

Vol. 29, No. 2, p. 48, between lines 17 and 18 from bottom add "Length; body 6-7 mm.; forewing 4.5 mm."

Vol. 29, No. 2, p. 50, line 15 from bottom, for "Japaan" read "Japan".

Vol. 29, No. 2, p. 51, line 18 from bottom, insert a comma between "*Hydrophorus*" and "*Thinophilus*".