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JEON, Jeong-Bae, Tae-Woo KIM, Pierre TRIPOTIN[1] and Jin-Ill KIM

Department of Biology, Sungshin Women's University, Seoul 136-742, Korea
[1]925-1, Pyeongsan-li, Dongi-myon, Okcheon-gun, Chungbuk 373-830, Korea

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ABSTRACT **The cicada parasitic moth *Epipomponia nawai* (Dyar) belonging to the family Epipyropidae is newly recorded from the Korean peninsula. Adults of both sexes, larva, and pupa are illustrated. Collecting data and host records for the species are also presented.**

Key words : Lepidoptera, Epipyropidae, *Epipomponia nawai* (Dyar), cicada, taxonomy, Korea

INTRODUCTION

The Epipyropid moths have a remarkable lifecycle: all are ecto-parasites in the larval stage. Most hosts belong to the order Homoptera, but some species have even been recorded from lepidopterous larvae. The mature larvae are onisciform (shaped like a wood-louse), and usually thickly covered with white waxy secretion. Some species are known to reproduce parthenogenetically. In such cases, males are very rare or non-existent. The family Epipyropidae includes a total of 32 species assigned to nine genera in two subfamilies, and is distributed in the tropical and warm temperate regions of the world: one species occurs in the Nearctic region, five species in the Neotropical region, four species in the Palearctic region, six species in the Ethiopian region, six species in the Oriental region, and ten species in the Australian region (Ohgushi, 1987; Common, 1990; Heppner, 1991).

In 1905, Perkins separated Epipyropidae from Arctiidae of the superfamily Noctuoidea. However, this small family is closely related to the family Limacodidae and belongs to the superfamily Zygaenoidea (Common, 1990). The genus *Epipomponia* was split from *Epipyrops* based on the difference that hindwing subcostal vein (Sc) and radius (R) are linked by a transverse vein (Dyar, 1906). Kato (1940) established the subfamily Epipyropinae that has a radius 3 veins (R_3) in forewings.

In this paper, we report the family Epipyropidae and *Epipomponia nawai* (Dyar) in the Korean peninsula for the first time. All the material examined are preserved in the present author's collections.

* Corresponing author
E-mail: jeon2nam@netian.com, Tel: 82-2-920-7173

Family Epipyropidae Perkins, 1905
메미기생나방科 (신칭)

Bull. Hawaiian Sugar Planters' Exp. Sta. 1 (2): 79.

Subfamily Epipyropinae Kato, 1940
메미기생나방亞科 (신칭)

Ent. Wld., Tokyo 8: 77-78. Type genus: *Epipyrops* Westwood.

Genus *Epipomponia* Dyar, 1906
메미기생나방屬 (신칭)

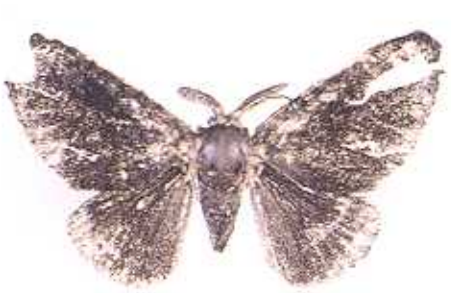
Jl. N.Y. Ent. Soc. 14: 111-112. Type species: *Epipyrops nawai* Dyar.

Epipomponia nawai (Dyar, 1904)
메미기생나방 (신칭)

Epipyrops nawai Dyar, 1904, Proc. ent. Soc. Wash. 6: 19. TL: Japan.

Epipomponia nawai: Kato, 1940: 82-83; Ohgushi, 1953: 185-191; Esaki, 1957: 149, pl. 26: 780; Hattori, 1969: 52, pl. 25: 99; Inoue, 1982, 1: 296, 2: 219, pl. 34: 8; Yamamoto, 1987: 16, pl. 1: 20-21; Ohgushi, 1987: 1-106, figs 1-14; Sugi et al., 1989: 939; Inoue, 1992: 101.

Diagnosis. Adult. Wingspan 16 ~ 19 mm. Their bodies and wings are black, with the forewings



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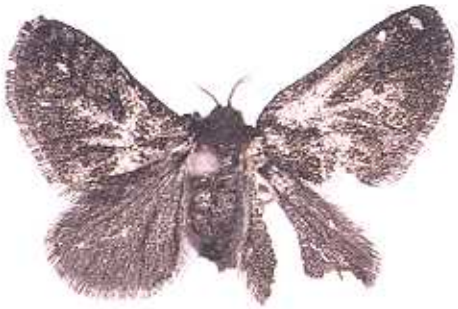

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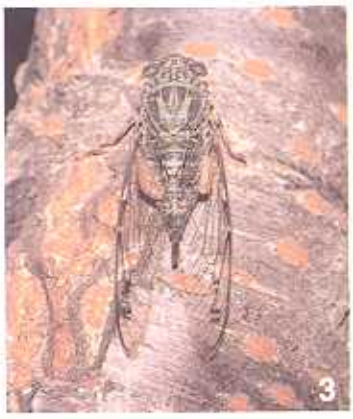

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Figs. 1, 2. *Epipomponia nawai* (Dyar), adults: 1. ♂, Mt. Myoham-san, Eomo-myeon, Gimcheon-si, Gyeongbuk, em., 20. IX. 2002 on *Meimuna opalifera*; 2. ♀, Gimcheon-gun, Gyeongbuk, em., 7. IX. 2000 on *Meimuna opalifera*.

Figs. 3-5. Parasitic phase: 3. second-instar larvae on *Meimuna opalifera*, Mt. Gyeomyeong-san, Chungju-si, Chungbuk, 28. VIII. 2002; 4. last-instar larva on *Meimuna opalifera*, *ditto*, 24. VIII. 2000; 5. last-instar larva on *Oncotympana fuscata*, *ditto*.

Figs. 6-8. Last-instar larvae: 6. lateral view; 7. ventral view; 8. head, Mt. Gyeomyeong-san, Chungju-si, Chungbuk, 24. VIII. 2000. Scale bar = 1 mm.

Fig. 9. Pupa in the cocoon; Mt. Gyeomyeong-san, Chungju-si, Chungbuk, 24. VIII. 2000.

sprinkled with metallic blue scales in the fresh specimens, but are dark brown in the old specimens. The antennae are short, and pectinated to the apex in both sexes; the pectinations are shorter in females (Figs. 1, 2).

Larva. Body length in mature larva is about 8mm. The larvae are Maggot-shaped larva, with reddish yellow body color (Figs. 3, 6–8). In the later stages, the larvae becomes covered with white waxy secretions (Figs. 4, 5). The head is very small and retracted into the prothorax. The thoracic legs are small, and with a sharp apical claw which is bent sharply backwards (Figs. 6–8).

Pupa. Make a cocoon of hemi-ellipsoid shape that is covered with the same white waxy secretion, and pupates thereinto (Fig. 9).

Materials examined. Early stages. 1 last-instar larva on *Oncotympana fuscata*, Mt. Taehwa-san, Yeongchun-myeon, Danyang-gun, Chungbuk, 27. VIII. 2001 (J.B. Jeon); 2 last-instar larvae on *Meimuna opalifera* and *Oncotympana fuscata*, and 1 pupa, Mt. Gyeomyeong-san, Chungju-si, Chungbuk, 24. VIII. 2000 (T.W. Kim); 2 second-instar larvae on *Meimuna opalifera*, *ditto*, 28. VIII. 2002 (J.B. Jeon); 1 last-instar larvae on *Meimuna opalifera*, Chubu-myeon, Geumsan-gun, Chungnam, 3. IX. 2002 (P. Tripotin).

Adults emerged. 1♀, Chubu-myeon, Geumsan-gun, Chungnam, collected 11. VIII. 2001 on *Meimuna opalifera*, emerged 23. VIII. 2001 (P. Tripotin); 1♂, Mt. Myoham-san, Eomo-myeon, Gimcheon-si, Gyeongbuk, collected 29. VIII. 2002 on *Meimuna opalifera*, emerged 20. IX. 2002 (P. Fauchas); 1♀, Gimcheon-si, Gyeongbuk, emerged 7. IX. 2000 on *Meimuna opalifera* (P. Tripotin).

Distribution. Korea (Central, new record), Japan (Honshu, Shikoku, and Kyushu), and Taiwan.

Hosts. *Meimuna opalifera* and *Oncotympana fuscata* (Cicadidae) in Korea; in Japan: *Meimuna opalifera*, *Oncotympana maculaticollis*, *Tanna japonensis*, *Graptopsaltria nigrofuscata*, *Platypleura kaempferi*, and *Euterpnosia chibensis* (Cicadidae).

Remarks. Ohgushi (1953; 1987) has hypothesized that this species parasitize mainly one group of species of cicadas having particular morphological feature of the thoracic region (cicadas with an "open slit"), allowing the first-instar larva to fix and feed on the host. The two Korean hosts recorded here belong to that group.

In Japan the larval period lasts about 6 days, pupal period 12–14 days, and life span of adult is very short. There is almost no record of males in Japan, where this species is thought to reproduce parthenogenetically (Ohgushi, 1953 & 1987; Hattori, 1969; Inoue, 1982; Yamamoto, 1987).

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