

A New Record of Parasitoid Wasp *Aleiodes thirakupti* (Hymenoptera: Braconidae) from South Korea

Gyeonghyeon Lee, Yeonghyeok Yu, Sangjin Kim, Juhyeong Sohn, Jongok Lim¹ and Hyojoong Kim*

Animal Systematics Lab., Department of Biological Science, Kunsan National University, Gunsan 54150, Korea

¹Department of Life and Environmental Sciences, Wonkwang University, Iksan 54538, Korea

한국산 미기록 기생벌 *Aleiodes thirakupti* (벌목: 고치벌과)에 대한 보고

이경현 · 유영혁 · 김상진 · 손주형 · 임종욱¹ · 김효중*

군산대학교 생명과학과 동물계통분류학연구소, ¹원광대학교 생명환경학과

ABSTRACT: *Aleiodes thirakupti* (Butcher et al., 2012) belonging to the subfamily Rogadinae in the family Braconidae is first reported from Korea. Diagnosis, distribution, and illustration are provided for this species.

Key words: Braconidae, Natural enemy, Taxonomy, Mummification

조 록: 고치벌과의 송충살이 고치벌아과에 속하는 *Aleiodes thirakupti* (Butcher et al., 2012)을 국내 최초로 보고한다. 본 종에 대한 진단, 분포 및 삽화를 제공한다.

검색어: 고치벌과, 천적, 분류, 미이라화

The Rogadinae is richness species subfamily containing more than 1,242 described species grouped in 62 currently recognized genera (Yu et al., 2016). Most members in Rogadinae are koinobiont endoparasitoids wasps characterized ‘mummifying’ their lepidopteran host larvae. It was known that the rogadine wasps mainly attack various lepidopterans. The genus *Aleiodes* is a large genus of subfamily Rogadinae, approximately about 632 described species worldwide (Yu et al., 2016), which almost attacks macrolepidopterans (Zaldívar-Riverón et al., 2008). Furthermore, some of them are very beneficial as biological control agents to host forest pests, such as gypsy

moth, cutworms, and fall webworm (Shaw, 2006). To date, 32 species of the genus *Aleiodes* have been recorded in the National Species List of South Korea (NIBR, 2020). In this study, *Aleiodes thirakupti* is reported, for the first time, from Korea, which has formerly been described in Thailand (Yu et al., 2016). Here, redescription, diagnosis, distribution and illustrations are provided.

Materials and Methods

Aleiodes species recently collected by sweeping, mountain 43, Goseo-ri, Bigeum-myeon, Sinan-gun, Jeonnam, South Korea. The samples were preserved in 75% ethyl alcohol. The species studied are deposited in Kunsan National University (KSNU). The terminology used for morphological characters follows

*Corresponding author: hkim@kunsan.ac.kr

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Achterberg (1988) For observation and photography, LEICA DMC2900 digital camera and LEICA M205 C microscope (Leica Geosystems AG) were used. Images were stacked by using Helicon software (Helicon Soft). Abbreviations are as follows: CU; cubituous vein, SC; subcostal vein, R; radial vein, SR; subradial vein, T; tergite.

Jirunia Malác, 1941: 4:136-139.

Dimorphomastax Shenefelt, 1979: 81(1):125-134.

Vietorogas Long and van Achterberg, 2008: 82(24-41): 313-329.

Aleiodes thirakupti (Butcher et al., 2012) 황동두렁고치벌(산칭) (Fig. 1A-F)

brown yellow T1~T2 dorsal midlongitudinal present like a rip
For this reason, it was named as follows

Systematic Accounts

Family Braconidae Nees von Esenbeck, 1811

Subfamily Rogadinae Förster, 1863

Genus *Aleiodes* Wesmael, 1838

Aleiodes Wesmael, 1838: 11:1-166.

Petalodes Wesmael, 1838: 11:1-166.

Schizoides Wesmael, 1838: 11:1-166.

Aliodes Agassiz, 1846: 360.

Nebartha Walker, 1860: (3)5:304-311.

Leluthinus Enderlein, 1912: 78(A):94-100.

Heterogamoides Fullaway, 1919: 80:39-59.

Hyperstemma Shestakov, 1940: 32A(19):1-21.

Hyperstemma [homonym] Telenga, 1941: 5(3) 466.

Redescription

Morphology. **Body** Length of body 5.6mm (Fig. 1A), length of forewing 3.7mm (Fig. 1B). Fore wing vein R not right angle with pterostigma, middle of pterostigma dark brown (Fig. 1B), vein 1-M and CU-a do not meet and CU1b absent; hind wing vein 2-SC+R interstitial transverse and SR weakly present. **Head** Antennae yellow brown (apex of antenna missing); flagellomeres sensillae of antenna evenly spaced around and dark brown towards the apex (Fig. 1C); occipital carina complete, ocellus dark purple (Fig. 1D). **Mesosoma** Precoxal sulcus present; mesopleuron

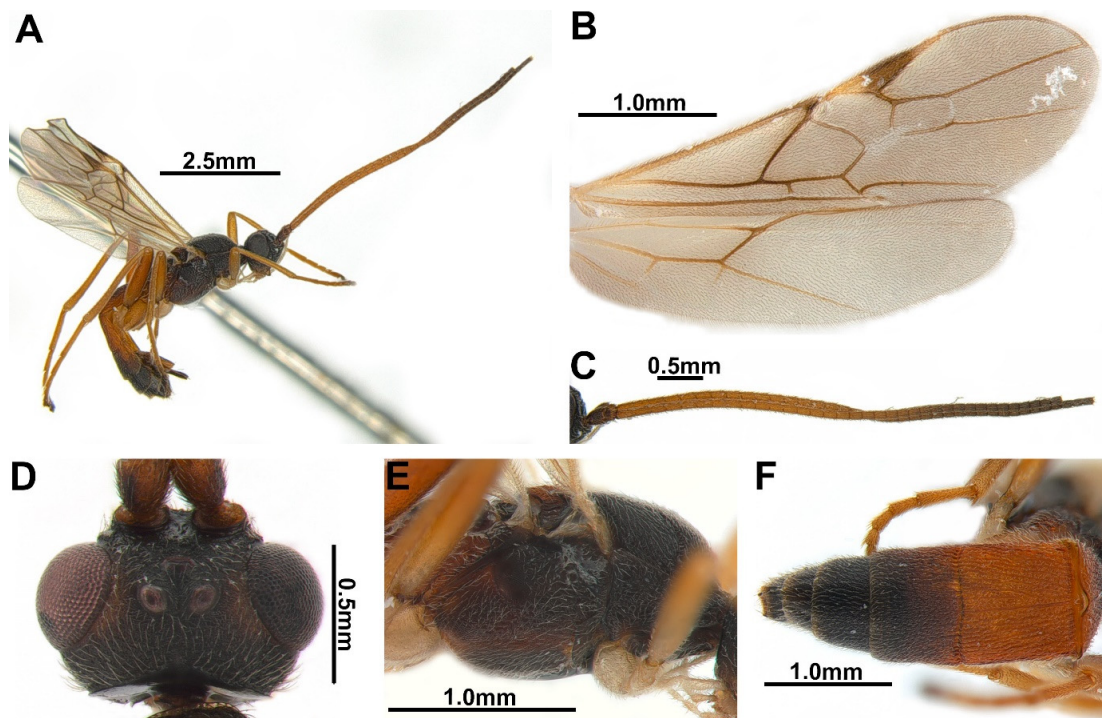


Fig. 1. Habitus of *Aleiodes thirakupti*(Butcher et al., 2012): A, whole body in lateral view; B, wings; C, antenna (apical segments broken); D, head dorsal view; E, mesosoma in lateral view; F, metasoma in dorsal view.

wider than high; prepectal carina present; tortuous pleural sulcus, presence of white setae throughout except for sulcus (Fig. 1E). **Metasoma** Tergites not smooth, T1~T2 dorsal midlongitudinal present and brown yellow, distinctly differentiated semicircle of T2 area, suture between T1 ~T3 present, edge of T2 and T3 almost straight (Fig. 1F).

Distribution. South Korea (new), Thailand (Yu et al., 2016).

Biology. Unknown.

Specimens examined. 1 ♀, mountain 43, Goseo-ri, Bigeum-myeon, Sinan-gun, Jeollanam-do (34°45'13.8, 125°54'18.4), South Korea, 15. VII. 2021, Hyojoong Kim (sweeping).

Remarks. This species has suture between T1~T3 present, SR weakly present, distinctly differentiated semicircle of T2 area.

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Statements for Authorship Position & Contribution

Lee GH: Kunsan National University, Student in M.S; Designed the research, wrote the manuscript and conducted the experiments

Yu, YH: Kunsan National University, Student in Ph.D; Collected and examined specimens

Kim, SJ: Kunsan National University, Student in Ph.D; Collected and examined specimens

Sohn, JH: Kunsan National University, Student in Ph.D; Collected and examined specimens

Lim, JO: Wonkwang University, Professor, Ph.D; Examined specimens and designed the research

Kim, HJ: Kunsan National University, Professor, Ph.D; Examined specimens and designed the research

All authors read and approved the manuscript.

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