

## *Condica dolorosa* (Lepidoptera: Noctuidae), New to Korea

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### ABSTRACT

A noctuid moth, *Condica dolorosa* (Walker, 1865) was newly recorded from Korea. *Condica dolorosa* can be distinguished by the blackish forewing that shows irregular yellowish dots on the ante- and postmedian and a large pale yellowish dot at dorsum, and yellowish white discal dot with renal marking, and the basally whitish hindwing. Externally, *Condica dolorosa* is similar to *C. cyclicoides* but can be distinguished by the dark ochreous dots on dorsum of the forewing. The female genitalia of *C. dolorosa* are similar to those of *C. cyclicoides* but can be distinguished by the large bowl-shaped ostium bursae with a midventral invagination and the long ductus bursae. To date, five species of the genus *Condica* have been recorded in Korea.

**Keywords:** Lepidoptera, Noctuidae, Condicinae, *Condica*, Korea

### INTRODUCTION

The genus *Condica* Walker, 1856 consists of about 92 medium-sized noctuid moths in the subfamily Condicinae Poole (Savelle, 2014). The unique characteristic of the genus is the uncus of male genitalia that shows a pair of small but well-defined lateral lobes at the base separated by a depression (Holloway, 1989). Additionally, no triline hair pencils, the eighth sternite with long lateral rods, the strap-like valva with simple central harpe, and the large reniform stigma of forewing are diagnosing characters (Holloway, 1989). This paper reports the occurrence of *Condica dolorosa* for the first time in Korea.

A larva was collected in field and reared at one of authors' (UHH) house. The newly hatched moth was preserved in a freezer and mounted for examination. For slide preparation of female genitalia, each specimen was prepared by boiling the abdomen in 10% KOH for approximately 20 min. The scales and tissues were removed, stained with Chlorazol black, and mounted on slides in a Euparal solution. For wingspan measurements, the distance from the tip of the left forewing to the tip of the right forewing was used.

The terminology of the adult, including the female genitalia, refers to Holloway (1989). The specimen is now deposited in the Collection of National Institute of Biological Resources

(NIBR), Incheon. The following abbreviations are used: TS, type species; TL, type locality; JN, Jeollanam-do.

### SYSTEMATIC ACCOUNTS

Order Lepidoptera Linnaeus, 1758

Family Noctuidae Latreille, 1809

Subfamily Condicinae Poole, 1995

Genus *Condica* Walker, 1856

Type species: *Condica palpalis* Walker, 1856 (a junior synonym of *Condica cupentia* Cramer, [1779])

= *Gaphara* Walker (TS. *Gaphara sobria* Walker)

= *Platysenta* Grote (TS. *Platysenta atriciliata* Grote)

= *Myrtale* Druce (TS. *Myrtale imitata* Druce)

= *Bicondica* Berio (TS. *Perigea selenosa* Guenée)

= *Monocondica* Berio (TS. *Condica saalmuelleri* Berio)

<sup>1\*</sup> *Condica dolorosa* (Walker, 1865)

*Mamestra dolorosa* Walker, 1865: 667. TL: Ceylon.

*Hadena taprobanae* Felder and Rogenhofer, 1874: 110. TL: Ceylon.

*Perigea atronitens* Draudt, 1950: 94. TL: Hoeng-shan.

Korean name: <sup>1\*</sup>담배풀밤나방 (신칭)

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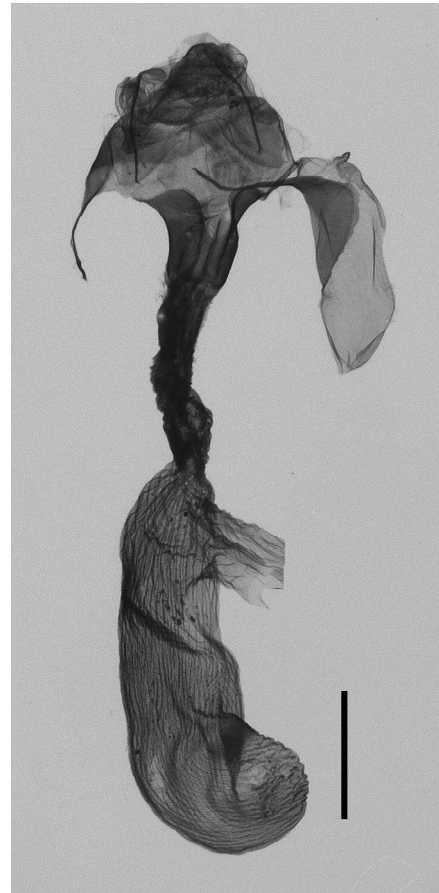
**Fig. 1.** Adult of *Condica dolorosa* in Korea. Scale bar=10 mm.

**Material examined.** 1 female, Korea: JN: Gurye, Temple Hwaeum, 29 Aug 2018 larvae, 20 Sep 2018 eclosion, Heo UH. NIBR specimen No. VLYVIN0000009697.

**Diagnosis.** Wingspan 30 mm (Fig. 1). Antennae filiform; frons top blackish bar-shaped, centrally and bottom covered with yellowish white scales; labial palpi blackish with yellowish white scales, long, about twice the eye diameter, strongly upturned, projected beyond the frons. Body and legs mixed with dark brown and yellowish white hairs. Forewing blackish in ground color; basal line weak, whitish, medially strongly curved, with pale yellowish dot on dorsum; ante- and post-median with irregular yellowish dots, dorsum with a large pale yellowish dot; discal dot yellowish white renal marking; termen blackish with yellow and white dots and margin lined with yellowish white. Hindwing basally whitish, distally blackish. Abdomen pale blackish. Female genitalia (Fig. 2). Papilla anales simple, not projected; anterior apophyses almost the same length as the posterior apophyses; ostium bursae bowl-shaped, midventrally strongly invaginated; ductus bursae long, weakly coiled, scobinate; corpus bursae long pouch-shaped, corrugate, anteriorly strongly bent and round, posteriorly with a thick ductus seminalis; signum absent.

**Distribution.** Korea, Japan, Indo-Australian tropics (Borneo, Hawaii, Hong Kong, India, Sri Lanka, Taiwan, Queensland).

**Remarks.** Up to now, five species of *Condica* are recorded in Korea: *C. illecta* (Walker, 1865), *C. fuliginosa* (Leech, 1900), *C. illustrata* (Staudinger, 1888), *C. cyclicoides* (Draudt, 1950), and *C. dolorosa*. *Condica dolorosa* is externally similar to *C. cyclicoides*, but can be distinguished by the dark ochreous dots on dorsum of the forewing and the basally whitish hindwing. The female genitalia of *C. dolorosa* are similar to those of *C. cyclicoides*, but can be distinguished by the large bowl-shaped ostium bursae with a midventral invagination and the long ductus bursae. Larva light green with large dark purple diamond dots along middorsum and spiracular dots (Fig. 3). *Condica*



**Fig. 2.** Female genitalia of *Condica dolorosa* in Korea. Scale bar=1 mm.



**Fig. 3.** Larva of *Condica dolorosa* in Korea.

*dolorosa* feeds on *Carpesium abrotanoides* L. (Asteraceae). In Borneo, *C. dolorosa* feeds on *Conyza* and *Elephantopus* (Compositae) (Holloway, 1989).

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## CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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## REFERENCES

- Draudt M, 1950. Beiträge zur Kenntnis der Agrotiden: Fauna Chinas aus den ausbeuten Dr. H. Höne's (Beitrag zur Fauna Sinica). Mitteilungen der Münchner Entomologischen Gesellschaft, 40:1-174.
- Felder C, Rogenhofer AF, 1874. Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859. Zoologischer Theil. Band 2. Abtheilung 2. Lepidoptera. Heft 4, pp. 1-136.
- Holloway JD, 1989. The moths of Borneo. art 12. Noctuidae, trifine subfamilies Noctuinae, Heliiothinae, Hadeninae, Acronictinae, Amphipyrrinae, Agaristinae. The Malayan Nature Journal, 42:1-226.
- Savela M, 2014. Lepidoptera Index [Internet]. Accessed 1 Nov 2020, <<http://www.funet.fi>>.
- Walker F, 1865. List of the specimens of lepidopterous insects in the collection of the British Museum, 32:323-706.

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