

The scientific names of *Gandaca harina* (Lepidoptera, Pieridae) from Babi, Indonesia with discovery of its female¹⁾

Takeo YAMAUCHI²⁾³⁾, Osamu YATA²⁾ and Rienk de JONG⁴⁾

²⁾ Biosystematics Laboratory, Graduate School of Social and Cultural Studies, Kyushu University, Ropponmatsu, Fukuoka, 810-8560 Japan; e-mail: ³⁾ takeorcb@mbox.nc.kyushu-u.ac.jp

⁴⁾ Department of Entomology, National Museum of Natural History, P. O. Box 9517, 2300 RA, Leiden, The Netherlands

Abstract *Gandaca harina babiensis* Hanafusa, 1994 from Babi I., the Mentawai Archipelago, Indonesia is identical with *Gandaca harina* var. *gilva* Van Eecke, 1913 described from the same island. Under the Code of Zoological Nomenclature (4th Edn), *gilva* remains available for the subspecific name, and thus *babiensis* becomes a junior synonym of *gilva*. The females of *gilva* are found, and descriptions and figures of both sexes are provided. This subspecies is distinguished from the other known subspecies by the absence of forewing black border in both sexes.

Key words Pieridae, Coliadinae, *Gandaca harina gilva*, *Gandaca harina babiensis*, new synonym, lectotype, female, Babi, Mentawai Archipelago, Indonesia.

Introduction

The genus *Gandaca* Moore, 1906 consists of two species, *G. harina* (Horsfield, 1829) and *G. butyroasa* (Butler, 1875) (Yata, 1981). The former is widely distributed over most of the Oriental region and exhibits a remarkable regional variation. Thus, at least 22 subspecies have so far been described (Yamauchi & Yata, 2000).

Gandaca harina var. *gilva* Van Eecke, 1913 was described based on five males (syntypes) from Babi. It appears that there are few papers referring to this taxon (Bridges, 1988), and that no specimens corresponding to *gilva* have been identified until recently. Hanafusa (1994) described a subspecies *G. harina babiensis* also from Babi. Although type material of the later subspecies was not examined, its diagnostic characters are consistent with the description of *gilva*. Comparison of *G. h. babiensis* with the syntypes of *gilva* (Figs 1–2) reveals that the two taxa are identical. Under Article 45. 6. 4 of the Code of Zoological Nomenclature (4th Edn), “*gilva*” remains available for the subspecific name, is valid for the population of Babi, and is senior to *G. h. babiensis*.

Both *gilva* and *babiensis* were described solely on the basis of males (Hanafusa, 1994; Van Eecke, 1913), and females have remained unknown. In the course of our revisional research on the genus *Gandaca*, we found some females of *G. harina* from Babi, and we below describe and illustrate both sexes of *G. harina gilva*.

Materials

The materials used were mainly from the collection of the Biosystematics Laboratory,

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Graduate School of Social and Cultural Studies, Kyushu University, Fukuoka (BLKU). All type specimens of *gilva* are preserved in the National Museum of Natural History (formerly Rijksmuseum van Natuurlijke Historie), Leiden, the Netherlands (NMNH). Abbreviations used in the text are indicated by the above acronyms.

Description

Gandaca harina gilva Van Eecke, 1913 (Figs 1-4)

Gandaca harina variety *gilva* Van Eecke, 1913: 205.

Gandaca harina babiensis Hanafusa, 1994: 18. **Syn. nov.**

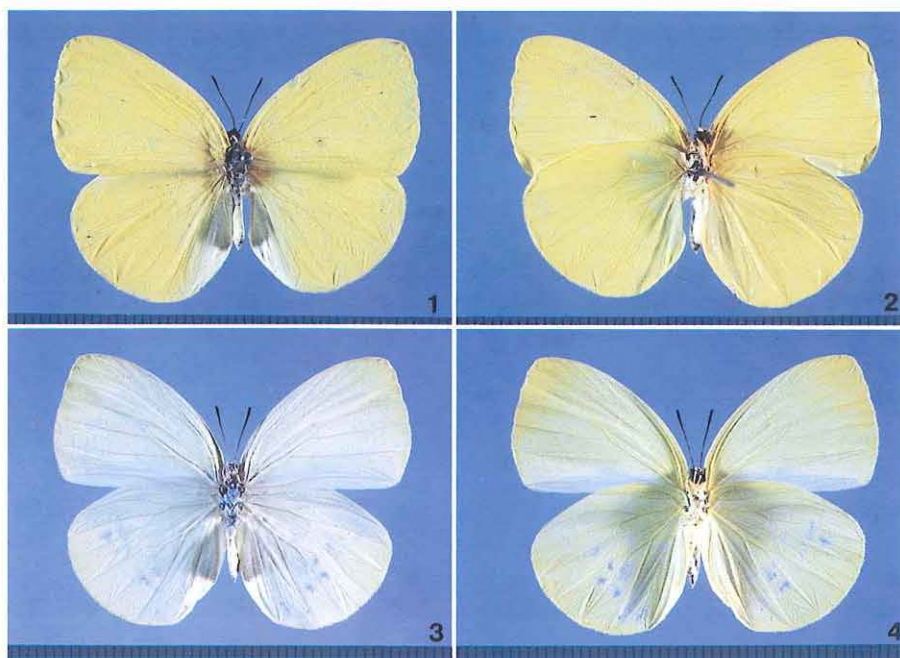
Male (Figs 1-2). Forewing somewhat rounded at apex, distal margin slightly convex. Upperside: Ground color pale lemon-yellow; forewing black border usually absent, exceptionally very much reduced. Underside: Ground color pale lemon-yellow.

Female (Figs 3-4). Forewing somewhat rounded at apex, distal margin slightly convex. Upperside: Ground color pale cream, yellowish along wing margin; forewing black border usually absent, rarely much reduced. Underside: Ground color yellowish pale cream.

Forewing length. Male, 20.0-23.0 mm; female, 20.0-22.5 mm.

Male genitalia. Although the material shows slight individual variations, they are within the range of variation observed for *G. harina*.

Female genitalia. There are no distinctive differences between *G. h. gilva* and *G. h. harina*.



Figs 1-4. *Gandaca harina gilva* Van Eecke from Babi. 1. ♂, syntype. 2. *Ditto*, underside. 3. ♀. 4. *Ditto*, underside.

Type material. Syntypes 5 ♂, 4310-4314/E. Jacobson, Pulu Babi, Simalur, IV. 1913/Type/Museum Leiden, *Gandaca harina* Horsf var. *gilva*, Det: v. Eecke/Cat. No 2.

Additional material. 32 ♂ 4 ♀, Indonesia, Mentawai Archipelago, Babi, xi. 1990?

Distribution. This subspecies is restricted to the island of Babi.

Remarks. This subspecies can be easily distinguished from the other subspecies of *G. harina* based on the absence or considerable reduction of the forewing black border in both sexes.

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摘 要

インドネシア、バビ島産 *Gandaca harina* の学名、およびその雌の発見 (山内健生・矢田脩・Rienk de Jong)

インドネシア、メンタワイ諸島のバビ島に産する *Gandaca harina babiensis* Hanafusa, 1994 は Van Eecke (1913) がバビ島から *G. harina* の変種として記載した *gilva* と同一の分類群であることが明らかになった。変種 *gilva* の記載は、命名規約第4版 45.6.4 項の適用により亜種として適格で、この結果、*babiensis* は *gilva* の junior synonym と結論される。したがって、本種のバビ島産の亜種名は *G. harina gilva* Van Eecke, 1913 となる。

さらに、これまで未知であったバビ島産の雌が発見されたため、*G. harina gilva* の雌雄の記載を行った。本亜種の雄は、前翅表面の黒帯がほぼ消失する顕著な特徴が知られており、今回発見された全ての雌も雄同様、前翅表面の黒帯がほぼ完全に消失している。この特徴から、本亜種は他の亜種から容易に識別可能である。なお本亜種の雌雄交尾器の形態は、*Gandaca harina* の特徴と一致する。

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