

***Everes argiades* (Pallas 1771) a vagrant butterfly newly recorded in Hong Kong (Lepidoptera: Lycaenidae)**

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Abstract

Material of a widespread temperate species, *Everes argiades*, was collected on Lantau Island in October 2009. However, judging from the distribution pattern and habit of the species, it is unlikely to establish in Hong Kong and therefore it is considered as a new vagrant record.

Key words: Lepidoptera, Lycaenidae, Polyommagini, *Everes argiades*, Hong Kong

Introduction

Everes Hübner, 1819 is a small Polyommagini genus composed of only five species and has a vast distributional range through Holarctic America, Europe and Asia to the Indo-Australian Region (Parsons, 1999; Tennent, 2002). Most members of the genus have an exclusively temperate distribution, with the only exception being *Everes lacturnus* (Godart 1824) which mainly occurs in tropical regions. *E. lacturnus* also occurs in Hong Kong and Bascombe et al. (1999) considered it as a common species.

During a biodiversity survey being conducted in Sha Lo Wan on Lantau Island, Hong Kong, two lycaenid ova were collected for immature biology study; surprisingly, a pair of unfamiliar *Everes* emerged from these eggs. After examining the specimens, the identity was confirmed to be *Everes argiades* (Pallas 1771), a species previously not known from Hong Kong.

Materials and methods

Samples of *Everes argiades* (2 males, 3 females) from Chongqing, central China were compared with the Hong Kong material. Genitalic illustrations in Shirozu (1960) and Gorbunov (2001) were used as supplementary references. Abdomens of one male Chongqing specimen and the Hong Kong male were placed in 10% NaOH for 24 hours to dissolve the soft tissue and then transferred to 75% ethyl alcohol for genitalia dissection under a 40x stereo microscope. Dissected genitalia were preserved in 75% ethyl alcohol and labelled. All specimens are deposited in the Y. F. Lo Collection, Hong Kong.

Taxonomic account

Everes argiades diporides Chapman 1909 (Figs. 1-4)
Voucher materials: 1 male (wings distorted), Hong Kong: Lantau Island, Sha Lo Wan, alt. 10m, 06.x.2009, Coll. A. Chau, reared from *Indigofera hirsuta*, emgd. 03.xi.2009 (genitalia preparation: YFL ly0019). 1 female, same collecting data and host, emgd. 02.xi.2009.

Diagnosis of adult: The appearance of *E. argiades* resembles that of the congeneric species *E. lacturnus* which is a common butterfly in Hong Kong. However, the two species can be distinguished by comparing the underside of the hindwing. *E. argiades* has a shorter tail with black postdiscal spots while *E. lacturnus* has a longer tail with postdiscal spots grey in colour. Moreover, male *E. argiades* usually possesses a dark cell-end bar on the upperside of the forewing (Figs. 3 & 5). The male genitalia of *E. argiades* has a short pointed uncus (Fig. 6), whereas the uncus of male *E. lacturnus* has a shallow concavity.

Discussion

E. argiades is primarily a temperate species that is distributed through most of the Palaearctic Region south of 60° N (Tolman & Lewington, 1997; Gorbunov, 2001), with some populations reaching the northern Oriental Region. Despite its small size and weak flight, *E. argiades* shows substantial dispersal ability and Tolman & Lewington (1997) reported it as a rare immigrant in England from the European continent. With the nearest known population found in Nanling, a mountain range in northern Guangdong, China (Chen, 1997), the occurrence of stray individuals in Hong Kong, a coastal city in southern China approximately 250km away from Nanling, is not unexpected.

However, even though breeding of *E. argiades* was observed at Sha Lo Wan, we predict that this species is unlikely to establish in Hong Kong. Colonies of *E. argiades* in Guangdong, India and Taiwan are all restricted to montane areas (Chen, 1997; Kehimkar, 2008; Yamanaka, 1980) and the Japanese race has never reached the Amami Islands (Shirozu, 2006). This distribution pattern reveals a strong temperate association for this species. Based on the definition of Hong Kong butterfly status suggested by Lo & Hui (2005), since Hong Kong is apparently outside the distribution range of *E. argiades*, we consider it as a new vagrant record for Hong Kong.

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Figures

Figure 1. Upperside of female *E. argiades* from Hong Kong.



Figure 2. Underside of female *E. argiades* from Hong Kong.



Figure 3. Right lateral view of Hong Kong male *E. argiades* (wings distorted), showing the dark cell-ended bar on upperside of left forewing.



Figure 4. Left lateral view of Hong Kong male *E. argiades* (wings distorted).



Figure 5. Upperside of male *E. argiades* from Chongqing, Central China.



Figure 6. Dorsal view of *E. argiades* male genitalia from Hong Kong. Scale bar: 0.5mm.

