

Scientific Note

A NEW RECORD OF ORCHID FLORIVORY BY THE BORNEAN ENDEMIC *Spilosoma griseabrunnea* Holloway (LEPIDOPTERA: ARCTIIDAE)

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The caterpillar of a Bornean endemic Tiger Moth, *Spilosoma griseabrunnea* Holloway (Lepidoptera: Arctiidae) was recorded for the first time feeding on the flowers of a hybrid orchid, *Vanda Amani*.

It was observed feeding on the hybrid orchid flowers of *Vanda Amani* (Figure 1. a) planted in a house compound in Sandakan, Sabah on the 2nd of March, 2011. The caterpillar, measuring 55 mm in length, had a lateral yellowish line on each side of the body and a band of the same colour on the head (Figure 1. b). It was collected and reared in captivity at a mean temperature of 29°C, within a plastic container embedded with tissue paper, and fed on flowers of the same orchid. Due to its size, it had a voracious feeding habit. The caterpillar, however, did not feed on the leaves of the orchid. After six days, the mature caterpillar, measuring 60 mm in length, pupated. The adult moth emerged after 12 days of pupation. It was a female moth of *Spilosoma griseabrunnea* Holloway, with a wing span of 44 mm and a body length of 23 mm (Figure 1. d & e).

This species is classified under the subfamily Arctiinae of Arctiidae. The hairy larva of this species and many other species of Arctiidae are popularly known as 'woolly bears'. Descriptions of this species are provided by Holloway (1988). The identity of this species, however, has been explored further in relation to a number of very similar species in Southeast Asia (Holloway, 2011). Although its distribution is confined to Borneo, it is common in disturbed habitats, agricultural areas and secondary vegetation from the lowlands to 1,200 m. Chey (1996) reported this species defoliating *Gmelina arborea*

while Robinson *et al.* (2001) did not have any hostplant information. Hence, this orchid florivory is a new record.

In another observation, a mating pair of *Spilosoma griseabrunnea* were spotted at the Sepilok Forest Research Centre in Sandakan on the 27th of May, 2011 perched on a young fern leaf of *Microsorium scolopendria* (Burm. f.) Copeland (Figure 1. f). The following day, some 600 eggs were found on the underside of the fern leaf, on which they perched. The eggs were greenish in colour, measuring 0.5-0.8 mm in diameter (Figure 1. g). After three days, they turned dark brown and hatched the next day (Figure 1. h & i). Upon hatching, the first instars, measuring 2-3 mm in length, fed on the green tissues of the fern while others were fed with flowers of *Vanda Amani* (Figure 1. j). After a week, most of the caterpillars were released except for a few, to monitor their life cycle. As the hybrid orchid flowers were not easily available at that time, the caterpillars were fed with young fern leaves of *Microsorium scolopendria* (Burm. f.) (Figure 1. c) Copeland and *Drynaria quercifolia* Linnaeus (Figure 1. k). The latter was also given as food because the author initially thought it was the same species as the former. The larval stage from the first to final instar was about 40 days. Hence, the moth's life cycle from egg to the emerged adult stage was about 55 days.

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Received: 24 August 2011 Accepted: 26 January 2012

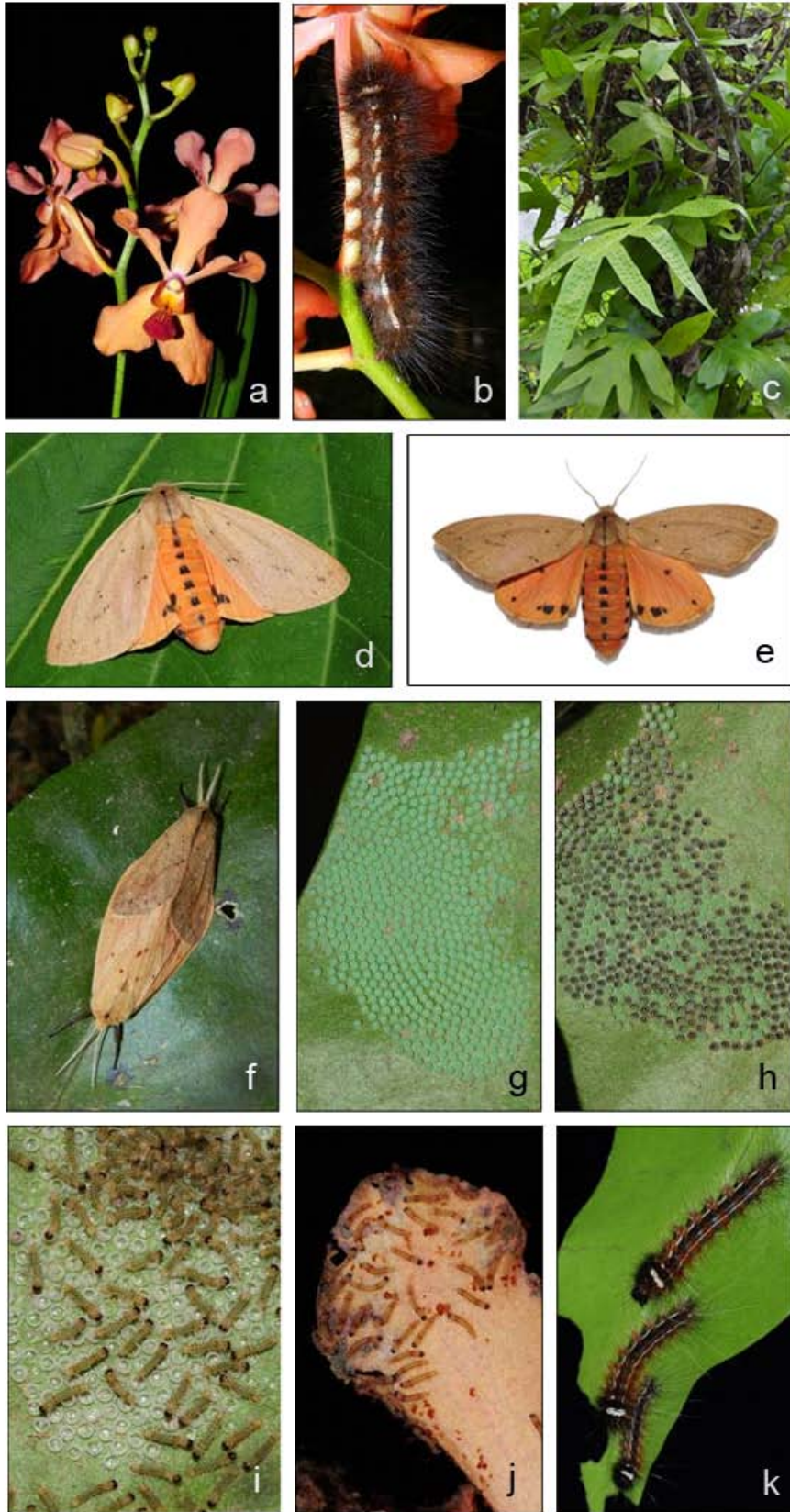


Figure 1.

a. An inflorescence of *Vanda Amani*

b. Lateral view of the hairy caterpillar

c. Fern leaves of *Microsorium scolopendria*

d. A newly emerged adult female moth of *Spilosoma griseabrunnea*

e. The mounted specimen of *Spilosoma*

griseabrunnea, exposing its hindwings

f. A mating pair of *Spilosoma griseabrunnea*

g. Eggs of *Spilosoma griseabrunnea*

h. The eggs turned dark brown before hatching.

i. Newly hatched caterpillars of *Spilosoma griseabrunnea*

j. First instars feeding on the hybrid orchid flower

k. Middle instars feeding on a young leaf of *Drynaria quercifolia*

ACKNOWLEDGEMENTS

The author would like to thank Datuk Chan Chew Lun for identifying the hybrid orchid. The ferns were identified by Shim Phiau Soon. Anthony Lamb, Dr Joan Pereira and Eyen Khoo provided some comments. John L. Yukang and Narti Alias assisted in this study. The editor and two anonymous reviewers provided constructive comments on this scientific note.

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