Field Guide of Insects in Lambir

Panduan Lapangan Serangga di Lambir

Vol. 2: Yellow-Winged Butterflies

Jilid 2: Kupu-Kupu Bersayap Kuning

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Front cover: The background is the canopy of Lambir Hills National Park on August 2019. This photo was taken by Hasumi Kawagoe. From the bottom left: *Eurema nicevillei*, *Dercus gobrias*, *E. andersoni* and *Ixias undatus.* These photos were taken by Taiyu Miyazaki of Kyoto University.

Back cover: *Eurema* spp. coming to drink water in Muput Forest Management Unit in Bintulu, November 2024. Photographed by Mohamad Nafri Bin Ali of Forest Department Sarawak.

Introduction

When you're walking in a park or exploring the forest, the most visible insects that you'll encounter is the yellow-winged butterfly. Most of these butterflies belong to the Pieridae family, which is the most species-rich family featuring yellow-winged members. Pieridae butterflies are found worldwide.

Specifically, Lambir Hills National Park (previously known as Lambir) is home to twenty-five (25) species from fifteen (15) genera across two (2) subfamilies of Pieridae. Out of these, twelve (12) species in six (6) genera have yellow wings; the rest are mostly white-winged. Within the yellow-winged group, the genus *Eurema* is the most commonly observed (Table 1). A closer look at the underside of their wings will reveal unique patterns for each species. Their larvae typically feed on plants in the legume family (Fabaceae) (Tan & Khoon, 2012).

This booklet describes nine (9) *Eurema* species found in Sarawak, including guide for simple identification and descriptions. Five (5) of these species are common in Lambir, one (1) is rare, and three (3) are not yet recorded in Lambir (Itioka et al., 2009). Besides, this booklet also shared six (6) other yellow-winged Pieridae species observed in Lambir that are not part of *Eurema* genus.

Pengenalan

Apabila anda berjalan-jalan di taman atau meneroka hutan, kupu-kupu bersayap kuning adalah antara serangga yang paling mudah ditemui. Kebanyakan kupu-kupu ini tergolong dalam keluarga. Pieridae, iaitu keluarga spesies bersayap kuning yang paling banyak. Kupu-kupu Pieridae dijumpai di seluruh dunia.

Khususnya, Taman Negara Lambir Hills (sebelum ini dikenali sebagai Lambir) merekodkan 25 spesies daripada 15 genus di bawah dua (2) subkeluarga Pieridae (Jadual 1). Daripada jumlah ini, dua belas (12) spesies dalam enam (6) genus mempunyai sayap kuning; selebihnya adalah bersayap putih (rujuk halaman seterusnya). Dalam kumpulan bersayap kuning, genus Eurema adalah antara genus yang paling kerap dijumpai (Jadual 1). Pengecaman teliti pada bahagian bawah sayap mereka akan menunjukkan corak unik bagi setiap spesies. Larva kupu-kupu ini biasanya memakan tumbuhan dalam keluarga kekacang (Fabaceae) (Tan & Khoon 2012).

Buku ini menjelaskan sembilan (9) spesies Eurema yang ditemui di Sarawak, turut diselitkan bersama panduan asas dalam pengecaman dan pengenalan spesies. Lima (5) spesies ini mudah dijumpai di Lambir, satu (1) spesies sangat jarang, dan tiga (3) lagi belum direkodkan di Lambir (Itioka et al. 2009). Selain itu, buku ini turut memperkenalkan enam (6) spesies Pieridae bersayap kuning lain yang terdapat di Lambir dan bukan daripada genus Eurema.

Table 1. Number of Pieridae species collected in Lambir. **The genera that have yellow-winged species are in bold.**

Jadual 1. Bilangan spesies Pieridae yang dikumpul daripada Lambir. ***Genus yang mempunyai spesies bersayap kuning dilabelkan tebal.***

Subfamily	Genus	No.	Subfamily	Genus	No.	Genus	No.
Coliadinae	***Catopsilia***	2	Pierinae	*Appias*	5	*Leptosia*	1
	Dercas	1		*Cepora*	1	*Pareronia*	1
	Eurema	6		*Delias*	3	*Prioneris*	1
	Gandaca	1		*Hebomoia*	1	***Saletara***	1
				Ixias	1		

Various Pieridae species found at Lambir

Pelbagai spesies Pieridae yang ditemui di Lambir

Coliadinae

Catopsilia pomona

Dercus gobrias

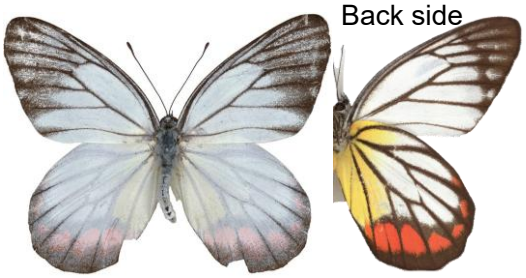
Eurema andersoni

Gandaca harina

Pierinae

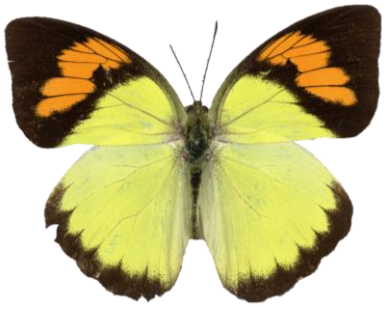
Appias paulina

Cepora iudith



Delias hyparete

Hebomoia glaucippe

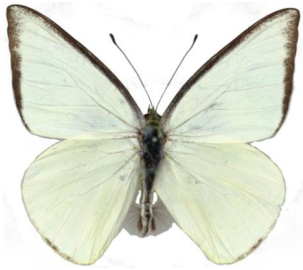


Ixias undatus

Leptosia nina

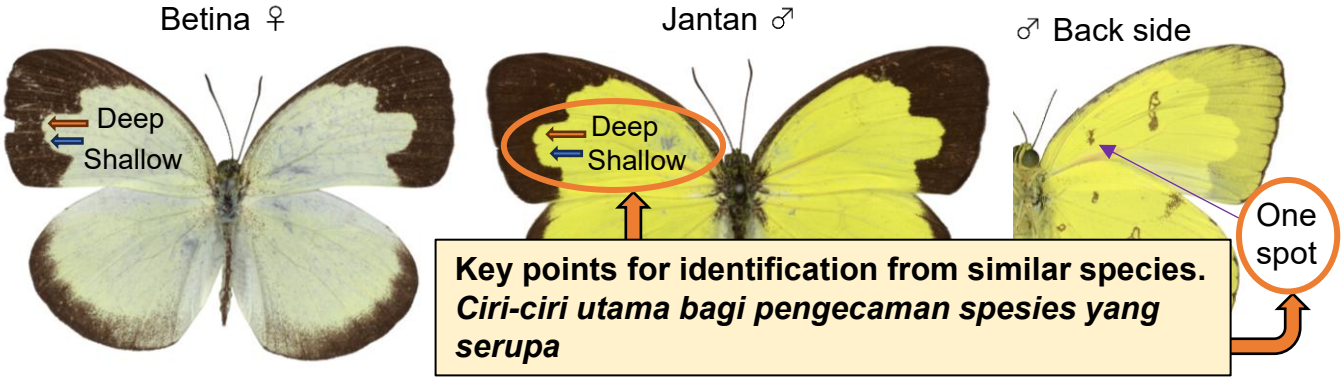
Pareronia valeria

Prioneris vollenhovi



Saletara panda

Guide for Identification & Descriptions
Panduan Pengecaman dan Penerangan

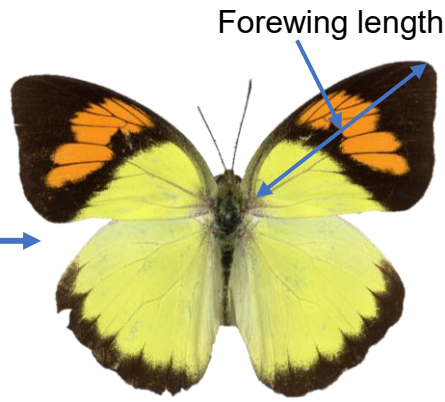


Eurema andersoni **One spot grass yellow**

● ♀15–22mm ♂15–23.5mm ●Forest edges, forest gaps, forest floors and river sides ●Oriental Region: The area extending from India across Assam, Indo-China, Sundaland to Lesser Sunda Islands and Taiwan ● *Ventilago leiocarpa, V. elegans* and *Rhamunus nanakaharai* (Rhamnaceae) in Taiwan, *V. dichotoma* in Philippines and *V. calyculata* in Laos ●★★☆

Scientific name
A globally recognised name written in Latin or other languages in accordance with international regulations
Nama yang diiktiraf di peringkat global yang ditulis dalam bahasa Latin atau bahasa lain mengikut peraturan antarabangsa

Common name
A name given in English
Nama dalam bahasa Inggeris



● **Forewing length**
Length from the base to the apex of the forewing
Panjang dari pangkal hingga ke hujung sayap hadapan

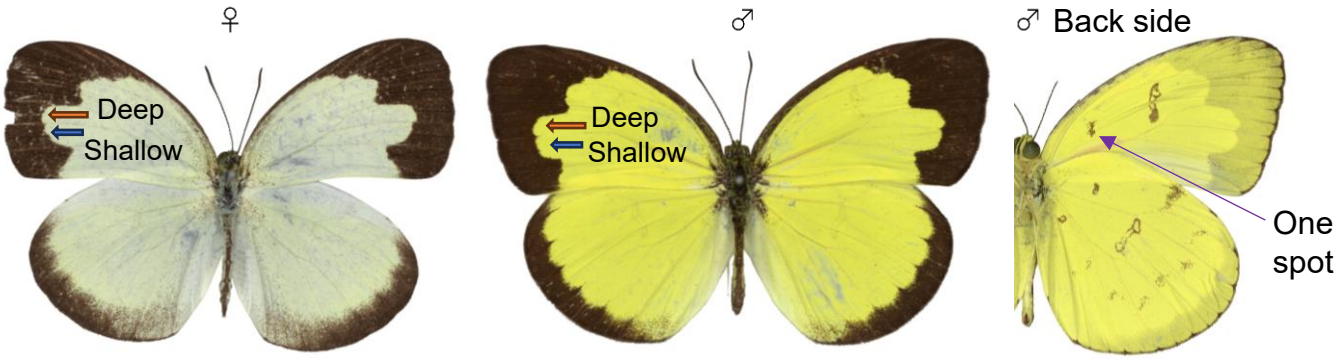
● **Habitats**
Locations and environments where that butterflies can be observed (Refer to the photos on page 11)
Lokasi dan keadaan persekitaran kupu-kupu dijumpai (Rujuk halaman no.11)

● **Distribution**
The regions where that butterflies can be found in the world
Kawasan kupu-kupu dijumpai di seluruh dunia

● **Food plants of larvae**
Types of plants fed by the butterfly's caterpillars
Jenis tumbuhan yang dimakan oleh ulat kupu-kupu

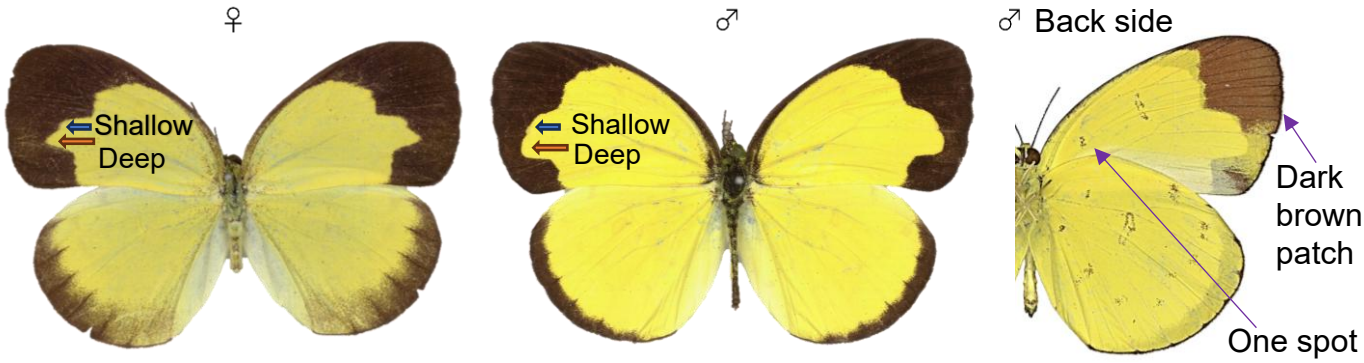
● **Abundance in Lambir**
★☆☆ Common, *Biasa ditemui*
★★☆ Moderate, *Sederhana banyak*
★★★ Rare, *Jarang*

Eurema Butterflies in Lambir
Kupu-kupu *Eurema* di Lambir



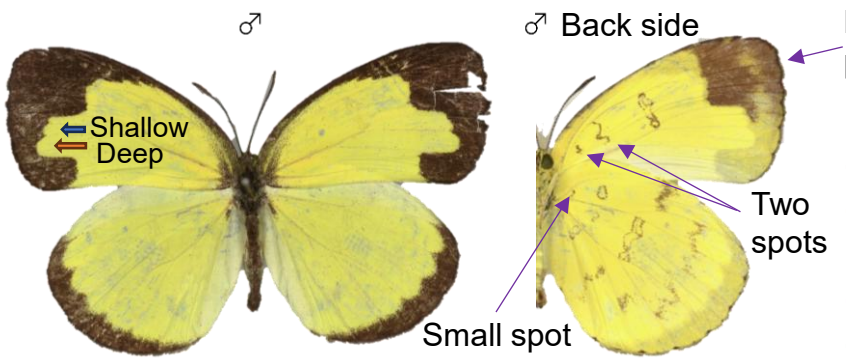
Eurema andersoni One spot grass yellow

● ♀15–22mm ♂15–23.5mm ●Forest edges, forest gaps, forest floors and river sides ●Oriental Region: The area extending from India across Assam, Indo-China, Sundaland to Lesser Sunda Islands and Taiwan ● *Ventilago leiocarpa, V. elegans* and *Rhamunus nanakaharai* (Rhamnaceae) in Taiwan, *V. dichotoma* in Philippines and *V. calyculata* in Laos ●★★☆



Eurema sari Chocolate grass yellow

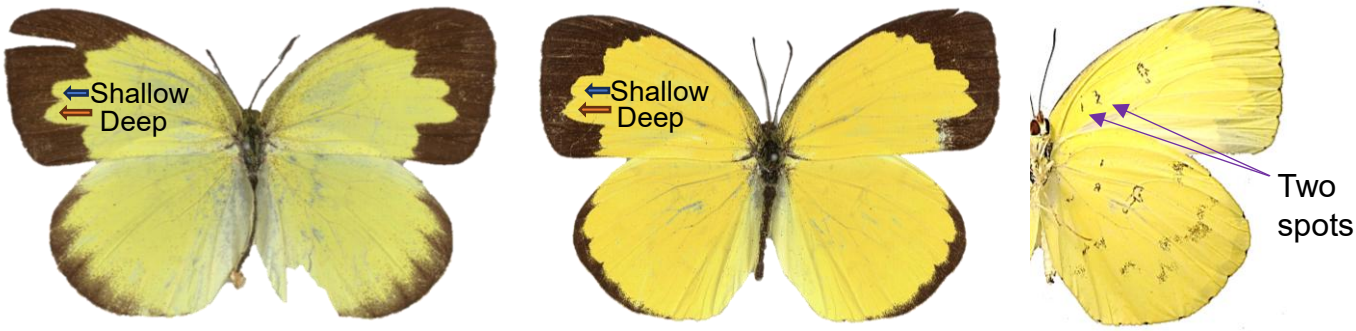
● ♀18.5–22.5mm ♂19–23.5mm ●Forest edges, forest gaps, river sides in primary forests and secondary forests ●Oriental Region, from India across Indo-China and Sundaland ● *Archidendron bigeminum* and *A. jiringa* (Fabaceae) in Singapore ●★★☆



● ♀19–26mm ♂19.5–26.5mm
●Forest edges and open habitats in primary forests
●Mindanao and Sundaland
●Unknown ●★★★

Eurema simulatrix Divided grass yellow

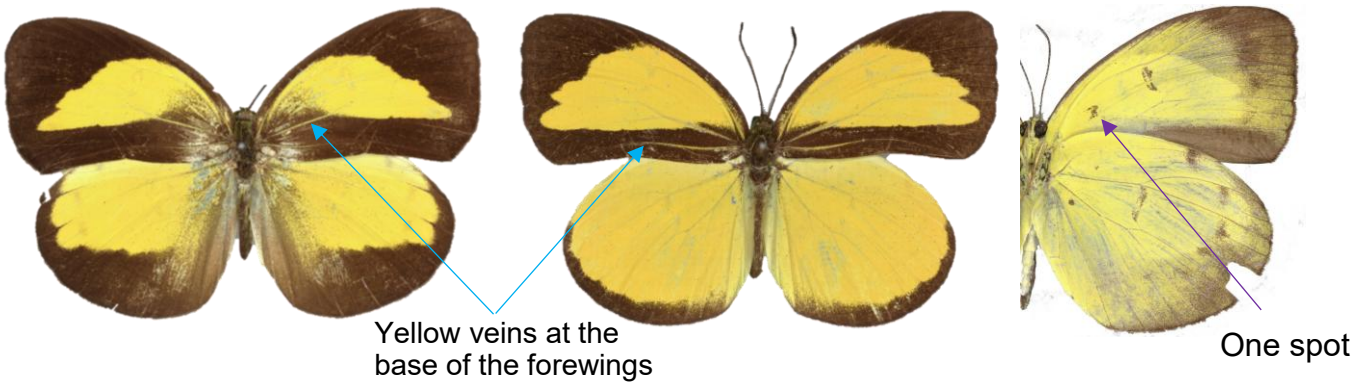
♀ ♂ ♂ Back side



Eurema hecabe Common grass yellow

● ♀15.5–27.5mm ♂15.5–26.5mm ●Forest edges, forest gaps, forest floors, river sides and cultivation fields ●Almost all over the Oriental, Australian and Afrotropical Regions, and extends into the Eastern Palearctic Region ● Various species of Fabaceae, Rhamnaceae, Euphorbiaceae, Phyllanthaceae and Hypericaceae ●★☆☆

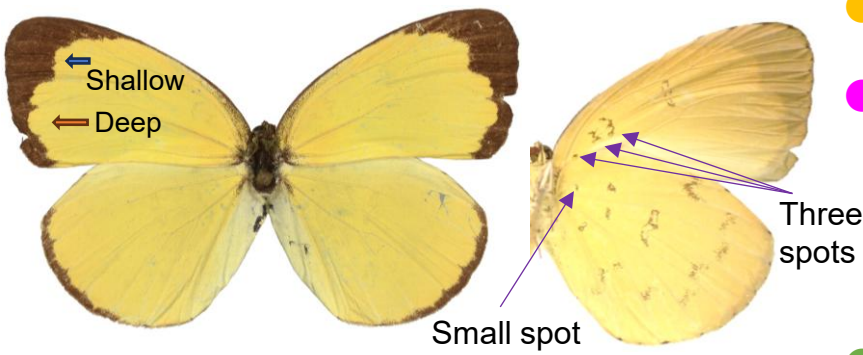
♀ ♂ ♀ Back side



Eurema nicevillei Banded grass yellow

● ♀21.5–27mm ♂21–28mm ●Forest edges, forest gaps and river sides ●Borneo, Malay Peninsula, South Burma, Sumatra and Mentawi Island ●*Senna siamea* (Legminosae) in Thailand ●★★☆

♀ ♀ Back side



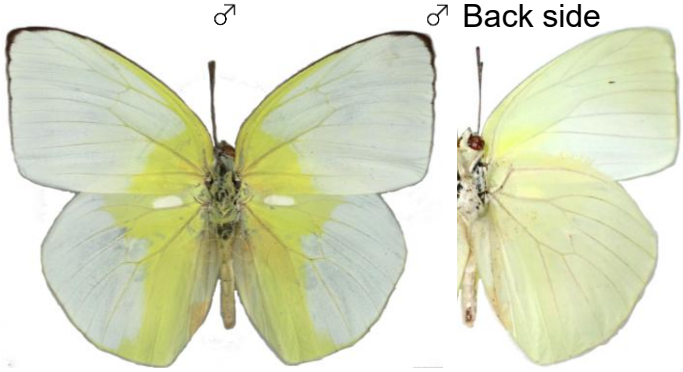
Eurema blanda Three spot grass yellow

● ♀16.5–27mm ♂17.5–28mm
● Forest edges, roadside and river sides
● Almost all over the Oriental and Australian Regions. Only one specimen of this species has collected in Lambir (Collection date: 10 March 2001).
● Leaves of various species of Fabaceae

Other Yellow-winged Butterflies (except *Eurema*) in Lambir

Kupu-Kupu Bersayap Kuning (selain Eurema) di Lambir

♂ ♂ Back side



🔴♂31mm 🟡Cultivation fields
🟣Asia and parts of Australia
🟢*Cassia* spp., *Butea* spp., *Bauhinia* spp., *Pterocarpus indicus*, *Senna alata* and *Sesbania* spp. (Fabaceae)
🔵★★★ (Commonly found in cultivation fields around Lambir)

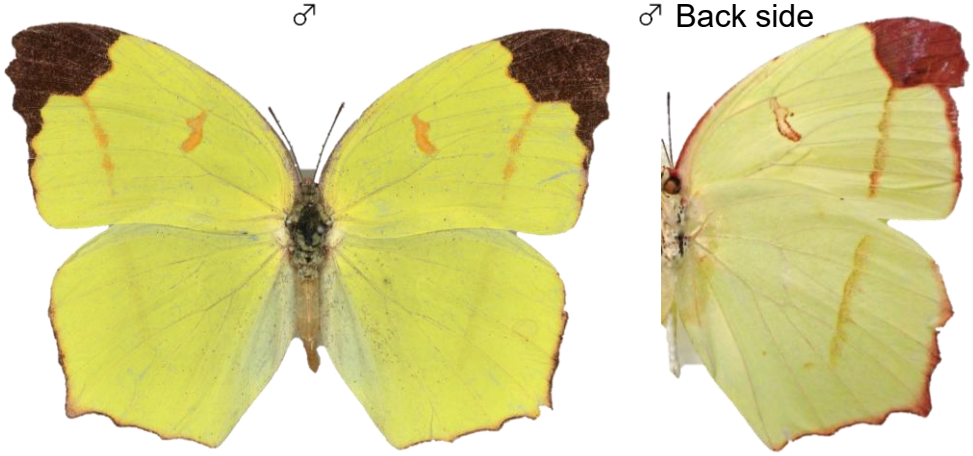
Catopsilia pomona Common emigrant

♀ ♂ ♂ Back side

Catopsilia pyranthe Mottled emigrant

🔴♀29mm ♂28–31mm 🟡Forest edges, open habitats and cultivation fields 🟣South Asia, Southeast Asia, and parts of Australia 🟢*Cassia* spp., *Senna* spp., *Crotalaria* spp, *Ormocarpum cochinchinense*, *Sesbania* spp. (Fabaceae), *Gnidia glauca* (Thymelaeaceae) and *Colocasia* spp. (Aroideae) 🔵★★★ (Commonly found in cultivation fields around Lambir)

♂ ♂ Back side



Dercas gobrias Notched yellow

🔴♂32–36mm 🟡Forest edges in primary forests 🟣Borneo, Malay Peninsula and Sumatra 🟢Fabaceae in Kinabalu 🔵★★☆

♀ ♂ ♂ Back side

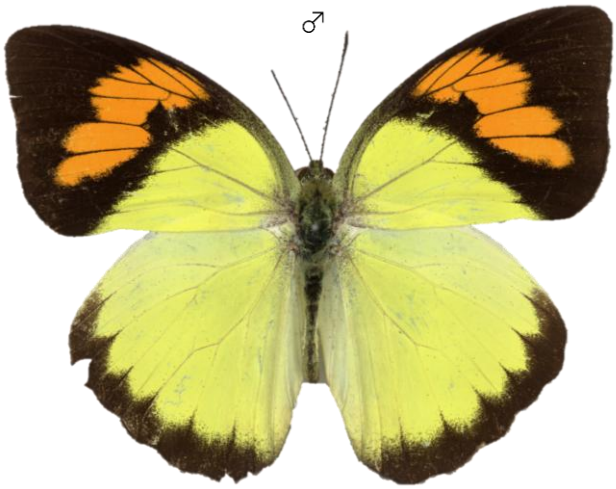


Gandaca harina Tree yellow

No pattern

● ♀20–22.5mm ♂20–23mm ●Forest edges, forest floors, forest gaps and river sides in primary forests ●Almost the entire region of Sundaland and India ● *Ventilago oblongifolia* (Rhamnaceae), *Monocarpia marginalis* and *Mitrephora maingayi* (Annonaceae) in Peninsular Malaysia ●★☆☆

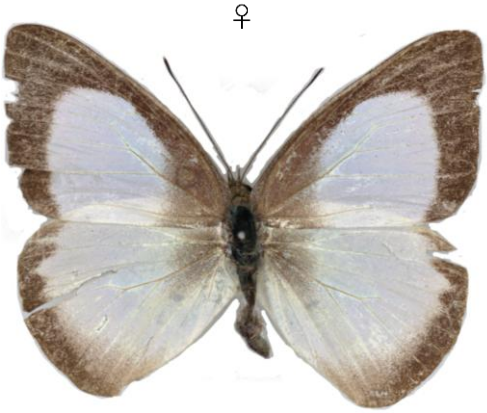
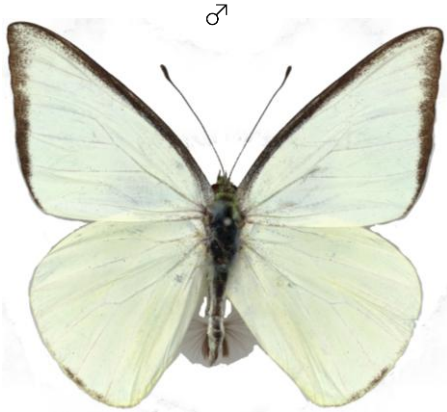
♂ ♂ Back side




Ixias undatus Yellow orange tips

● ♂36–37mm ●Forest edges in primary forests ●Borneo ●Unknown. The closely related species *I. pyrene* larvae feeds on *Capparis sepiaria, C. zeylanica* in India and *C. acutifolia* (Capparidaceae) in Taiwan ●★★★

♀ ♂ ♂ Back side

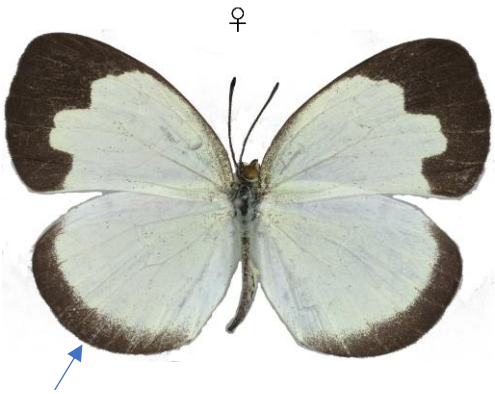

Saletara panda Triangle white

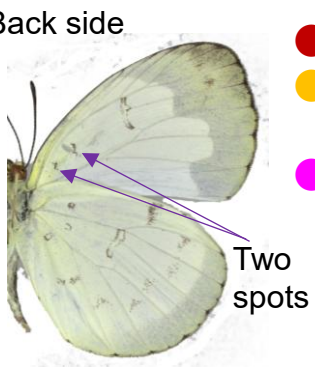
● ♀26mm ♂22–28mm ●Forest edges, forest floors, forest gaps and river sides in primary forest ●Malay Peninsula, Sumatra, Java, Bali, Borneo, Palawan, Philippines and Sulawesi ●Unknown ●★★☆

Other *Eurema* Butterflies found in Sarawak
Kupu-kupu Eurema lain yang terdapat di Sarawak

The following species of the genus *Eurema* are distributed in Sarawak and not yet been recorded in Lambir

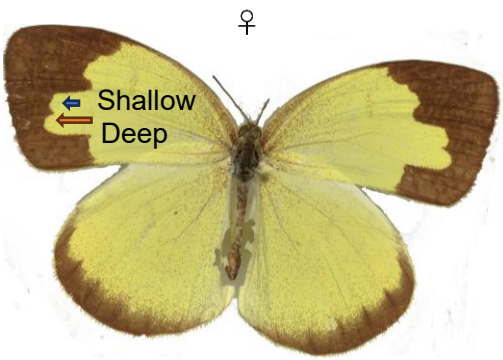
Spesies berikut dalam genus Eurema dijumpai tersebar di seluruh Sarawak tetapi belum direkodkan di Lambir

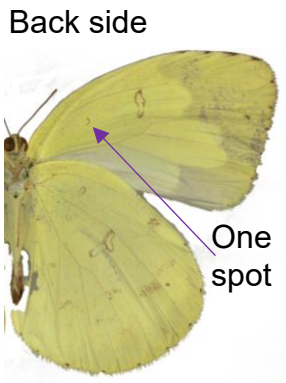




- ♀ 13.5–21.5mm ♂ 16–21.5mm
- Forest edges in mixed primary and secondary forests
- Borneo, Malay Peninsula, Sumatra and Java. Collection site in Sarawak: Batang Ai National Park and Miri area (Long Napir in the upper Baram river)
- Unknown

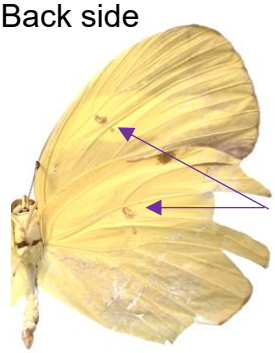
Eurema ada **Talbot's grass yellow**





- ♀ 21.5–23mm ♂ 21–24.5mm
- River side in lowland forests
- Borneo, Malay Peninsula, Sumatra and Java. Collection site in Sarawak: Sibu, Kuching area (Semengoh)
- Segeretia filiformis (Rhamnaceae) in Bali and Legminosae

Eurema lacteola **Scarce grass yellow**



- ♀ 18–28.5mm ♂ 17.5–26mm
- Forest edges in lowland forests
- Borneo, Belitung Islands, Sulawesi and its neighboring islands. Collection site in Sarawak: Kuching area (Semengoh and Kampong Segu) and Kapit area (Rumah Nyala)
- Fabaceae

Eurema tominia **Black banded grass yellow**

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A habitat where adult yellow-winged butterflies are frequently observed. (a) Forest edge, (b) forest gap, (c) forest floor and (d) river side in Kubah National Park.

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