

***Mimeusemia morinakai* KISHIDA, 1995 (Lepidoptera: Noctuidae, Agaristinae) on Lombok Island (Indonesia) with a checklist of the Agaristinae of Sumatra, Java, Bali and Lombok (Plate 58)**

by

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Summary

Mimeusemia morinakai KISHIDA, 1995 is recorded for the first time on Lombok Island (Indonesia). The author presents an overview of the collecting site and the collecting methodology. Moreover, a checklist of the Agaristinae of the Sumatra, Java, Bali and Lombok is given.

Zusammenfassung

Mimeusemia morinakai KISHIDA, 1995 wird erstmals von Lombok (Indonesien) nachgewiesen. Der Autor gibt einen Überblick zum Fundort und beschreibt das Biototop und die Sammelmethodik. Außerdem wird eine Checkliste der Agaristinae der Inseln Sumatra, Java, Bali und Lombok zusammengestellt.

key words: Lepidoptera, Noctuidae, Agaristinae, *Mimeusemia morinakai* KISHIDA, 1995, biotops, distribution, female genitalia, checklist, Indonesia, Sumatra, Java, Bali, Lombok

Introduction

Surprisingly very few details about the Insect fauna and especially the Lepidoptera of the Indonesian Islands Bali and Lombok are known.

During a trip in December 2003 and January 2004 the author collected on these two islands at various places.

In the last years KISHIDA (1992a, 1992b, 1993, 1995, 2000a, 2000b, 2001 & 2003) worked very intensively with Agaristinae and also with the genus *Mimeusemia* BUTLER, 1875. Some years earlier KIRIAKOFF (1977) published a systematic monography of the Palaearctic and Oriental Agaristinae. Additionally RABENSTEIN & SPEIDEL (1995) reported some details of the life history and biology of some Agaristinae species. It is quite well known that some species of Agaristinae send acoustic contacts and set territoriality signals (ALCOCK et al. 1989, BAILEY 1978, CONNER, 1999). Some Agaristinae moths produce strong vanilla smell if they get touched or disturbed by other Insects or animals; this behaviour is especially known from species of the genus *Sarbanissa* WALKER, 1865 (BUCHSBAUM 2006).

Many Agaristidae species are day flyer; some also come to artificial light. The specimens treated here were recorded by light.

Genus *Mimeusemia* BUTLER, 1875

This genus contains 22 species. They all are restricted to East and Southeast Asia (HOLLOWAY 1989, KOBES 1985) beginning from the Oriental subtropics of Japan and China to India and through the Indo-Australian region down to Australia (HOLLOWAY 1989, KIRIAKOFF 1977). From Japan only one species is recorded (INOUE et al. 1982), from Taiwan one as well, *M. vilemani* HAMPSON, 1911 (HEPPNER & INOUE 1992), from Thailand three species (KONONENKO & PINRATANA 2005), from Sumatra four species (see table below, KOBES 1985) and from Australia three species (NIELSEN et al. 1996). BUTLER (1875) described this genus *Mimeusemia* with the type species *M. persimilis* from Japan. Larvae of the genus feed on Vitacea and Dilleniaceae (HOLLOWAY 1989).

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Locality

The collecting site is located north of Mount Rinjani in the northern part of Central Lombok Island. Lombok is one of the Lesser Sunda Islands in Indonesia and is situated east of the Wallace Line, which divides Bali and Lombok and the Oriental from the the Australian Faunal Region. This line is named after Alfred Russel WALLACE who worked there for a long time in the whole Malayan Archipelago (WALLACE 1869, 1876). Basing on its special character these region has his own rank as zoogeographical subregion called Wallacea (BALKE & RIBERA 2004, ILLIES 1971, WALLACE 1860, WHITTAKER 1998, WHITMORE 1987).

The collecting site is close to the village Senaru below the mountain Rinjani and is situated at: 08°18'02 S / 116°24'31 E with an altitude of 515 m (pl. 1, fig. 6). It was direct above from primary rainforest (pl. 58, fig. 6).

At this collecting site further more Noctuid species (Acotiinae and Agaristinae) new to science were collected and described (HACKER et al. 2008, KISHIDA 1995) and close to this place also a new Crambidae species was found at this time (SPEIDEL et. al. 2004).

Mimeusemia morinakai KISHIDA, 1995

M. morinakai is described by KISHIDA (1995) from Bali, basing on a single pair, male (holotype) and female (paratype) At present the species is only kown from Bali (Mt. Munuk).

KISHIDA (1995) published this article in Japanese language with a short english summary. Only the male genitalia were figured.

Wingspan of the male 32 mm, of the female 37 mm (KISHIDA 1995). All the Lombok specimens are larger (pl. 58, fig. 1 - male, pl. 58, fig. 2 - female). Male: Forewing length: 17 – 19 mm, ø 18,3 mm, wingspan: 35 – 40 mm, ø 37,2 mm. Female: Forewing length: 18 – 22 mm, ø 20,2 mm, wingspan: 34 – 42 mm, ø 40,4 mm.

The specimens were collected at artificial light in the year 2003, at 27th - 30th December (pl. 58, fig. 5, 7 & 8), a short time after dawn till latest around midnight. At the first date (27th December) more than 30 specimens were recorded, at the second date only one, and at the third date about 10 specimens. Weather at these days was very similar: sunshine during the day, and short, but strong rain at late afternoon.

The female genitalia are published here for the first time (pl. 58, fig. 4).

The closest related species are *M. perakana* ROTHSCHILD, 1896 and *M. postica* WALKER, 1862. These species are common in Sumatra and known from numerous localities there.

For the first time SEM pictures of the eggs of *M. morinakai* and their surface structures are presented here. (figs 1 - 8).

Table 1: Checklist of the Agaristinae of Sumatra, Java, Bali and Lombok

species	Sumatra	Java	Bali	Lombok	general distribution / remarks / references
<i>Episteme connexa</i> (WALKER, 1856)		x			endemic on Java / KIRIAKOFF 1977
<i>E. vetula vetula</i> (GEYER, 1832)	x	x			Thailand, Indonesia (Sumatra, Java) / HOLLOWAY 1989, KIRIAKOFF 1977, KOBES 1985, KONONENKO & PINRATANA 2005
<i>E. vetula fasciatrix</i> (WESTWOOD, 1848)	x				Thailand, Vietnam, North India, Indonesia (Kalimantan, Sumatra, Java), Philippines / KIRIAKOFF 1977, KONONENKO & PINRATANA 2005
<i>E. vetula irenae</i> (BOISDUVAL, 1874)	x				only known from Nias / KIRIAKOFF 1977, KOBES 1985

species	Sumatra	Java	Bali	Lombok	general distribution / remarks / references
<i>E. hebe</i> (JORDAN, 1912)		x			only recorded from Java / KIRIAKOFF 1977
<i>E. sumatrana</i> ROTHSCHILD 1899	x				only old records from Sumatra / KIRIAKOFF 1977, KOBES 1985
<i>E. bisma bisma</i> (MOORE, 1859)	x	x	x	x	from Sumatra westwards to the Lesser Sunda Islands / KIRIAKOFF 1977, KOBES 1985
<i>E. bisma inomatai</i> KISHIDA, 1992			x		described as new subspecies, only from Bali / KISHIDA, 1992
<i>Scrobigerera proxima proxima</i> (WALKER, 1848)	x	x	x?		from Assam, Thailand to Indonesia / KIRIAKOFF 1977, KOBES 1985, KONONENKO & PINRATANA 2005
<i>S. proxima balinensis</i> KISHIDA, 1992			x		described as new subspecies, only from Bali / KISHIDA, 1992
<i>S. muramotoe</i> KISHIDA, 1995				x	only recorded from Lombok / KISHIDA, 1995
<i>Fleta belangeri</i> (GUÉRIN-MENEVILLE, 1834)	x	x			KIRIAKOFF 1977, KOBES 1985
<i>F. moorei</i> (FELDER, 1974)		x			KIRIAKOFF 1977
<i>Longicella mollis mollis</i> (WALKER, 1912)	x				Thailand, Malaysia, Borneo, Indonesia (Sumatra) / HOLLOWAY 1989, KIRIAKOFF 1977, KOBES 1985, KONONENKO & PINRATANA 2005
<i>L. mollis decipenis</i> (BUTLER, 1884)	x				endemic subspecies from Nias, not mentioned by KOBES (1985) / KIRIAKOFF 1977
<i>L. mollis</i> ssp. ?	x				probably a further subspecies from Nias
<i>L. luctifera</i> (BOISDUVAL, 1936)		x			only known from Java / KIRIAKOFF 1977
<i>Mimeusemia lombokensis lombokensis</i> (ROTHSCHILD, 1897)				x	endemic on Lombok / KIRIAKOFF 1977
<i>M. lombokensis javana</i> (ROTHSCHILD, 1898)		x			endemic on Java / KIRIAKOFF 1977
<i>M. moriakai</i> KISHIDA, 1995			x	x	described by KISHIDA (1995) from Bali, new for Lombok
<i>M. flavescens</i> KISHIDA, 1992			x		endemic on Bali / KISHIDA 1992
<i>M. vittata vittata</i> (BUTLER, 1875)	x	x			North Borneo, Sumatra, Java / HOLLOWAY 1989, KIRIAKOFF 1977, KOBES 1985
<i>M. postica</i> WALKER, 1862	x				Thailand, Myanmar, Laos, North Vietnam, South China, Malaysia, Borneo, Philippines, Indonesia (Sumatra, Java) / BARLOW 1982, HOLLOWAY 1989, KIRIAKOFF 1977, KOBES 1985, KONONENKO & PINRATANA 2005
<i>M. perakana</i> ROTHSCHILD 1896	x				Malaysia, Borneo, Indonesia (Sumatra, Java) / HOLLOWAY 1989, KIRIAKOFF 1977, KOBES 1985

species	Sumatra	Java	Bali	Lombok	general distribution / remarks / references
<i>M. econia</i> HAMPSON, 1900			x		West Sulawesi and Bali only / KIRIAKOFF 1977
<i>M. semyron</i> (HERRICH-SCHÄFFER, 1853)	x				only any few records from Sumatra / KIRIAKOFF 1977, KOBES 1985
<i>Ophthalmis milete milete</i> (CRAMER, 1864)	x				not mentioned from KOBES 1985 for Sumatra / HOLLOWAY 1989, KIRIAKOFF 1977
<i>O. milete leucisia</i> JORDAN, 1912		x	x		only known from Java and Bali / KIRIAKOFF 1977
<i>O. milete torva</i> JORDAN, 1912				x	endemic subspecies from Lombok / KIRIAKOFF 1977
<i>Ipanica cornigera</i> (BUTLER, 1886)				x	Indonesia (Lesser Sunda Islands), New Guinea, Australia (Queensland), KIRIAKOFF 1977, NIELSEN et al. 1996
<i>Argyrolepidia concisa</i> JORDAN, 1912 *	x				In Coll. ZSM recorded for Sumatra, not mentioned from KOBES (1985), new for West Indonesia, before only known from New Guinea / KIRIAKOFF 1977
<i>Sarbanissa venosa</i> (MOORE, 1879)	x				Northeast India, Indochina, one specimen labeled with Sumatra in Coll. ZSM, not mentioned from KOBES (1985) for Sumatra / KIRIAKOFF 1977
<i>S. transiens transiens</i> (WALKER, 1912)	x	x	x		Malaysia, Indonesia (Sumatra, Java, Bali) / BARLOW 1982, BUCHSBAUM 2006, HOLLOWAY 1989, KIRIAKOFF 1977, KOBES 1985, KONONENKO & PINRATANA 2005 SUGI 1993
<i>S. catocaloides</i> (WALKER, 1862)	x	x	x	x	Nepal, North India (Sikkim, Assam), Myanmar, Thailand, Laos, Vietnam, Borneo, Indonesia (Sumatra (Nias), Java, Bali, Lombok) / BUCHSBAUM 2006, HOLLOWAY 1989, KIRIAKOFF 1977, KOBES 1985, KONONENKO & PINRATANA 2005 SUGI 1993
<i>S. sundana</i> HOLLOWAY, 1982	x				Malaysia, Borneo, Sumatra / HOLLOWAY 1989
<i>S. albifascia</i> WALKER, 1865	x				India, Nepal, South China, Myanmar, Thailand, Malaysia, Andaman Islands / BUCHSBAUM 2006, KIRIAKOFF 1977, KOBES 1985, KONONENKO & PINRATANA 2005
<i>S. kiriakoffi</i> KOBES, 1985	x				Sumatra / KOBES 1985
number of species	22	13	10	7	

* The species *Argyrolepidia concisa* JORDAN, 1912 was described with several subspecies. All of them are restricted to New Guinea (Irian Jaya and Papua New Guinea). One specimen, present in the Staatsslg. München is labeled: "N-Sumatra; Deli; Dolok Merangir 180 m; 1973; leg. E. DIEHL". This is the first record of this species in West Indonesia and in the Oriental Region.

Only three species were reported from all of the three Islands; four species were only collected on Lombok. 29 species occur on Sumatra, Java and / or Bali, usually they are distributed over more than a single Island.

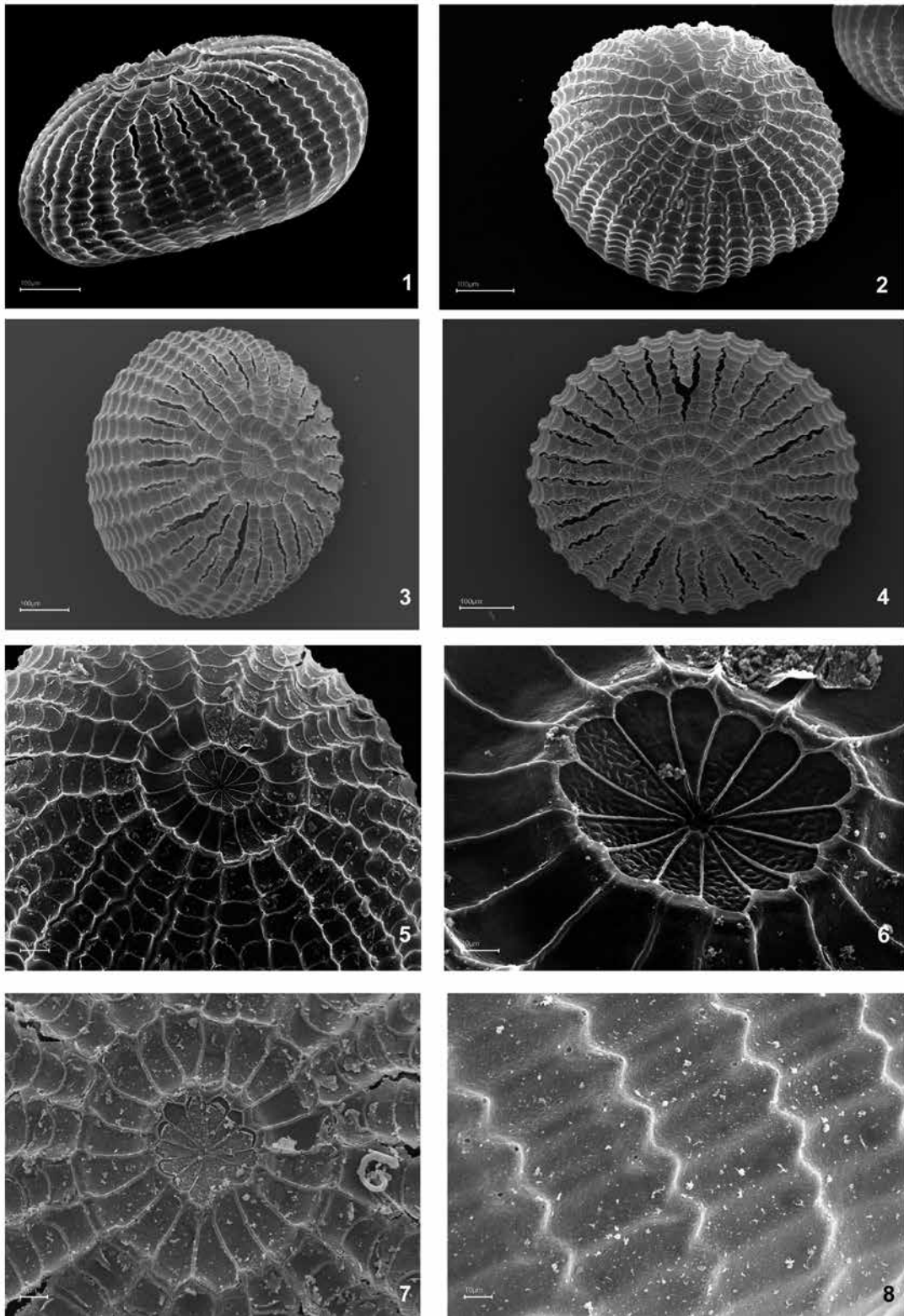
I. cornigera is characteristic species of the Australian Faunal Region; while the other species or subspecies mentioned from Lombok seem likely to belong to the Orientis.

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Figs 1- 8: SEM pictures of the eggs of *M. morinakai*