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New Records of Two Olethreutini Species (Lepidoptera: Tortricidae: Olethreutinae) from Khao Nan National Park, Thailand

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ABSTRACT: Survey work in the evergreen forests of Khao Nan National Park, Nakhon Si Thammarat Province, Thailand during 2007-2009 resulted in 13 species of Olethreutini belonging to 9 genera. Among these, *Gnathmocerodes tonsoria* and *Sorolopha argyropa* are recorded for the first time from Thailand. Diagnoses and photographs of adults and genitalia structures are provided for each species.

KEY WORDS: Olethreutini, Olethreutinae, Tortricidae, Khao Nan National Park.

INTRODUCTION

The Olethreutini fauna of Thailand is poorly known. Diakonoff (1971) was the first to record species of this subfamily from Thailand, although he documented only eight species. The most significant effort to inventory Olethreutinae in Thailand has been by the Lepidopterological Expeditions of the University of Osaka Prefecture (now Osaka Prefecture University). The expeditions were made by a group of lepidopterists in 1981, 1983, 1985, and 1987. A large number of Olethreutinae were collected during the expeditions, and some of these were described in the series the Microlepidoptera of Thailand (Kawabe, 1987, 1989, 1995, Bae 1995). The purpose of this paper is to continue to document the olethreutine fauna by providing records of 13 species recorded during survey work in the evergreen forests of Khao Nan National Park, Nakhon Si Thammarat Province, Thailand during 2007-2009.

MATERIALS AND METHODS

Study Site

Khao Nan National Park covers an area of approximately 436 square kilometres in Noppitum sub-district, Tha Sala district, and Si Chon district in the Nakhon Si Thammarat Province. This area includes part of the Nakhon Si Thammarat mountain range that extends from north to south across the province. Vegetation is comprised of evergreen forests that provide an important watershed that includes the Su Nantha, Khao Nan, Krung Nang, and Klong Pean waterfalls. This area has a tropical climate with frequent rain year-round. Specimens were collected over a wide range of elevations.

Field and Laboratory Methods

Specimens were collected using a 20-watt black light operated with a 12-volt car battery suspended in front of a white sheet. Latitudes and longitudes were recorded with a Magellen GPS 315. An Olympus SZ30 stereomicroscope with an ocular micrometer was used to examine specimens and genitalia slides. Forewing length was measured from the outer edge of the tegulae at wing base to the outermost edge of the fringe scales at apex. A compound microscope also was

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used to examine the characters of genitalia. Genitalia preparation methods were adapted from Common (1990). Adult genitalia were photographed with an Olympus C7070 camera on an Olympus SZ30 stereomicroscope. Terminology of forewing patterns and genitalia structure follow Brown and Powell (1991), as modified by Baixeras (2002), and Horak (1984, 1991), respectively. Identifications were made by comparison of specimens with published descriptions and illustrations. Species accounts are arranged by alphabetical order first by genera and then by species.

Specimens Deposition

Specimens are deposited in the insect collection in the Department of Entomology at Kasetsart University, Kamphaengsaen Campus. Institutional abbreviations are as follows: BMNH, The Natural History Museum, London, England; DEIB, Deutsches entomologisches Institut, Berlin, Germany; FIRM, Forest Research Institute of Malaysia, Kepong, Malaysia; IZAS, Institute of Zoology, Chinese Academy of Sciences, Beijing, China; KKIC, Kasetsart Kamphaengsaen Insect Collection, Nakhon Pathom, Thailand; MGAB, Muzeul de Istoria Naturala "Grigore Antipa", Bucharest, Romania; MNHN, Museum National d'Historie Naturelles, Paris, France; OPU, Entomological Laboratory, Osaka Prefecture University, Sakai, Japan; RMNH, Nationaal Natuurhistorisch Museum, Leiden, The Netherlands (formerly Rijksmuseum); USNM, National Museum of Natural History, Washington, DC, USA; and ZMUC, Zoological Museum, University of Copenhagen, Denmark.

RESULTS

***Dactylioglypha pallens* Diakonoff, 1973** (Figs. 1, 14)

Dactylioglypha pallens Diakonoff, 1973, Zool. Monogr. Rijksmus. Nat. Hist. 1: 194. Type locality: Indonesia (West Java, Gede-Panggrango, Tjibodas). Holotype (♂): RMNH.

Diagnosis. This species is characterized by the forewing pattern: the inner margin has a distinct dark brown, sub-triangular basal patch that is separated by light brown striae from a dark brown, triangular median patch. The male genitalia can be distinguished from those of its congeners by the oblong valva with a rounded apex.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°51'46"N 99°37'36"E, 22 Dec 2006 (1♂, genitalia slide NP1003), N. Pinkaew (KKIC).

Distribution. Thailand and Indonesia.

Remarks. Specimens were collected during the rainy season at 207 m in evergreen forest.

***Dudua aprobola* (Meyrick, 1886)** (Figs. 2, 15)

Eccopsis aprobola Meyrick, 1886, Trans. Entomol. Soc. Lond. 1886: 275. Type locality: Tonga. Holotype (♂): BMNH.

Temnolopha metallta Lower, 1901, Trans. R. Soc. S. Austral. 25: 73. Type locality: Australia (Queensland, Cocktown). Syntype (♂): SAMA.

Dudua aprobola kusaiensis Clarke, 1976, Insects Micronesia 9: 86. Type locality: Micronesia (Kusaie, Mutunlik). Holotype (♂): USNM.

Diagnosis. The wing pattern is very similar to *D. brachytoma*, but the former usually can be distinguished by the presence of a dark brown spot on the inner margin near the tornus of the forewing. *Dudua aprobola* also has a dark brown

posterior scale tuft on the thorax. The male valva can be distinguished from that of congeners by being broad and apically rounded.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°55'25"N 99°39'49"E, 11 Mar 2008 (1♂, genitalia slide NP1066), 08°45'99"N 99°48'39"E, 24 Jan 2007 (2♂), 08°46'55"N 99°47'44"E, 1 May 2008 (1♂), N. Pinkaew (KKIC).

Distribution. Thailand, Tonga, Micronesia, Australia, North China, Taiwan, and Japan.

Remarks. Specimens were collected during the late rainy season to the dry summer season at 93-131 m in evergreen forest.

***Dudua brachytoma* Diakonoff, 1973** (Figs. 3, 16)

Dudua brachytoma Diakonoff, 1973, Zool. Monogr. Rijksmus. Nat. Hist. 1: 423. Type locality: Indonesia (West Java, Buitzenborg). Holotype (♂): RMNH.

Diagnosis. This species can be distinguished by the forewing pattern with two dark brown spots on the inner margin, a distinct one near the base and a less distinct one near the tornus, and the presence of a dark brown posterior tuft on the thorax. The male genitalia have a large cucullus similar to that of *D. microsema*, but the dorsoapical and ventroapical angles are more acute in *D. brachytoma*.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°46'55"N 99°47'44'E, 4 May 2008 (2♂), N. Pinkaew (KKIC).

Distribution. Thailand and Indonesia.

Remarks. Specimens were collected in the dry summer season at 123 m in evergreen forest.

***Dudua tetanota* (Meyrick, 1909)** (Figs. 4, 17, 26)

Argyroploce tetanota Meyrick, 1909, J. Bombay Nat. Hist. Soc. 19: 602. Type locality: India (Assam, Khasi Hills). Lectotype (♂): BMNH.

Diagnosis. *Dudua tetanota* is distinguished by its large size (a forewing length 10.20-10.75 mm). Male genitalia are similar to those of *D. haperialis* but the basal lobe of the cucullus has a long acute protrusion. In the female genitalia sternite VII is concave on the posterior margin and close to sterigma, the ostium bursae is narrow, and the sterigma is similar to that of *D. aprobola* but the lateral margin has a broad circular plate.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°45'99"N 99°48'39"E, 23 Jan 2007 (1♂), 24 Jan 2007 (1♂, genitalia slide NP1079), 08°46'55"N 99°47'44"E, 4 May 2008 (1♀, genitalia slide NP1185), 08°51'47"N 99°37'36"E, 20 Jan 2007 (1♂), N. Pinkaew (KKIC).

Distribution. Thailand and India.

Remarks. Specimens were collected during the dry summer season at 123 m in evergreen forest.

***Gnathmocerodes tonsoria* (Meyrick, 1909)** (Figs. 5, 18)

Argyroploce tonsoria Meyrick, 1909, J. Bombay nat. Hist. Soc. 19: 592. Type locality: Ceylon [Sri Lanka] (Bentota). Holotype (♂): BMNH.

Gnathmocerodes tonsoria Diakonoff, 1968, Bull. U.S. natn. Mus. 257 (1967):

71. Type species: *Gnathmocerodes petrifraga* Diakonoff, 1968.

Diagnosis. The forewing is characterized by a large, dark brown patch consisting of portions of the median and postmedian fasciae and interfascia area, extending from the costa to the cubital vein. In the male genitalia the valva has a large, broad, flat cucullus and a curved, narrow neck.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°46'55"N 99°47'44"E, 2 May 2008 (1♂, genitalia slide NP1135), N. Pinkaew (KKIC).

Distribution. Thailand (new record) and Sri Lanka.

Remarks. A single specimen of this species was collected in the dry summer season at 123 m in evergreen forest.

***Olethreutes nomas* Diakonoff, 1983**
(Figs. 6, 19, 27)

Olethreutes nomas Diakonoff, 1983, Zool. Verh. Leiden 204: 63. Type locality: Indonesia (Sumatra, Mt. Bandahara, Bivouac One). Holotype (♂): RMNH.

Diagnosis. *Olethreutes nomas* is a small moth; the forewing has a distinct dark brown basal patch and a median fascia represented by a triangular spot on the costa. The male genitalia are similar to those of *O. agnota* Diakonoff but differ by having a valva with a small cucullus, a large basal excavation, and a more concave neck. In the female genitalia there is a distinct sterigma similar to that of *O. bipunctana*, but the dorsoapical angles are round in *O. nomas.*

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°51'47"N 99°37'36"E, 25 Aug 2006 (2♂, genitalia slide NP783, NP791), 08°55'25"N 99°39'49"E, 5 Feb 2008 (1♀), 08°47'00"N 99°47'46"E, 8 Jan 208 (1♀, 1♂), 08°48'07"N 99°34'57"E, 16 Feb 2007 (1♀), 08°51'47"N 99°37'36"E, 22 Dec 2006 (1♂, genitalia slide NP876), 08°43'56"N 99°38'21"E, 1 Apr 2008 (2♂), Klong glay 22 Jan 2007 (1♂), Klong gun 3 Apr 2008 (1♂), N. Pinkaew (KKIC).

Distribution. Thailand and Indonesia.

Remarks. Specimens were collected from the rainy season to dry summer season at 116-207 m in evergreen forest.

***Phaecasiophora kurokoi* Kawabe, 1959**
(Figs. 7, 20, 28)

Phaecasiophora kurokoi Kawabe, 1959, Microlepid. Thailand 2: 32. Type locality: Thailand (Nakhrn Nayok, Khao Yai). Holotype (♂): OPU.

Diagnosis. The forewing of this species has a dark brown patch at the apex and a brown suffusion through the discal cell. The male genitalia are very similar to those of *P. guttulosa,* but the uncus of *P. kurokoi* has a tuft of setae and a relatively narrow cucullus. The female genitalia have an extremely long ductus bursae, and the corpus bursae lacks a signum.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°45'99"N 99°48'39"E, 23 Jan 2007 (1♂, genitalia slide NP1020), 08°46'55"N 99°47'44"E, 3 May 2008 (1♀, genitalia slide NP1170, 1♀), 14 Jun 2008 (1♂), 08°51'47"N 99°37'32"E, 28 Aug 2006 (1♀, genitalia slide NP 844), N. Pinkaew (KKIC).

Distribution. Thailand.

Remarks. Specimens were collected from the rainy season to dry summer season at 93-200 m in evergreen forest.

***Sorolopha bathysema* Diakonoff, 1973**
(Figs. 8, 21, 29)

Sorolopha bathysema Meyrick, 1973, Zool. Monogr. Rijksmus. Nat. Hist. 1: 95. Type locality: Northwest New Guinea (Sorong). Holotype (♂): RMNH.

Diagnosis. This species can be distinguished by the sub-triangular basal patch, the median fascia that is angled on the outer margin, and the postapical spot on the costa of the forewing. The male genitalia have a short sacculus and long, narrow cucullus. In the female the posterior margin of sternite VII is concave near the sterigma, and the corpus bursae has a crescent-shaped signum.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan NP., 08°51'47"N 99°37'36"E, 20 Oct 2006 (2♂, genitalia slide NP1019), 08°46'55"N 99°47'44"E, 3 May 2008 (1♀), 14 Jun 2008 (1♂, genitalia slide NP1127), 98°51'47"N 99°37'32"E, 21 Mar 2007 (1♀, genitalia slide NP1056), 26 Aug 2006 (1♀, genitalia slide NP807), N. Pinkaew (KKIC).

Distribution. Thailand and New Guinea.

Remarks. Specimens were collected from the rainy season to dry winter season at 123-210 m in evergreen forest.

***Sorolopha cyclotoma* Lower, 1901** (Figs. 9, 22, 30)

Sorolopha cyclotoma Lower, 1901, Trans. R. Soc. S. Austral. 25: 74. Type locality: Australia (Queensland, Mackay). Syntype (♂): SAM.

Diagnosis. *S. cyclotoma* is distinguished from its congeners by the forewing pattern: a dark brown triangular subbasal spot on the dorsum, an incomplete median fascia, and a large postmedial spot in the ocellar region. In the male genitalia the valva has a large flat sacculus and a cucullus that is narrowed apically. The female genitalia are characterized by a small sterigma, a long ductus bursae, and the plate-like signum of the corpus bursae.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°46'55"N 99°47'44"E, 4 May 2008 (1♂), 08°45'99"N 99°48'39"E, 24 Jan 2007 (1♂, genitalia slide NP1017, 1♀, genitalia slide NP1018), N. Pinkaew (KKIC).

Distribution. Thailand and Australia.

Remarks. Specimens were collected from the rainy season to summer season at 93-123 m in evergreen forest.

***Sorolopha argyropa* (Diakonoff, 1973)** (Figs. 10, 23)

Sorolopha argyropa Diakonoff, 1973, Zool. Monogr. Rijksmus. Nat. Hist. 1: 78. Type locality: Central East Borneo (Long Petak). Holotype (♂): RMNH.

Diagnosis. This species is distinguished by the sinuous outer margin of the hindwing. In the forewing the median fascia forms a large dark brown patch that borders a white preapical spot. In the male genitalia the aedeagus is curved, concave on the lateral margin. In the female genitalia the ostium is inverted-conical with the truncated top, and the signum is represented by a small sclerotized patch.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan N.P., 08°46'55"N 99°47'44"E, 2 May 2008 (1♂, genitalia slide NP1190), N. Pinkaew (KKIC).

Distribution. Thailand (new record) and Central East Borneo.

Remarks. Specimens were collecting during the dry summer season at 123 m in evergreen forest.

***Statherotis discana* (Felder & Rogenhofer, 1875)** (Figs. 11, 24, 31)

Totrix discana Felder & Rogenhofer, 1875 (*Tortrix?*), Reise öst Fregatte. Novara (Zool.) (2)5: pl. 137, fig. 41. Type locality: Molucca Is. (Amboina). Holotype (♂): BMNH.

Statherotis discana, Diakonoff, 1973, Zool. Monoger. Rijksmus. Nat. Hist. 1: 247. Type locality: Indonesia (East Java, Tengger Mountains Tretes). Holotype (♂): RMNH.

Diagnosis. This species can be distinguished by the triangular white spot on the forewing costa and the dark brown patch near the base of the male hindwing. The male genitalia have an uncus that is longer than other congeners. The female genitalia have two signa with unequal, sharply pointed teeth,

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan NP., 08°51'47"N 99°37'37"E, 23 Nov 2006 (1♂), 08°48'07"N 99°34'57"E, 23 Mar 2007 (1♀), 08°46'55"N 99°47'44"E, 1 May 2008 (1♀), 08°54'59"N 99°43'57"E, 7 Feb 2008 (2♂), 08°55'25"N 99°39'49"E, 6 Feb 2008 (1♂, 2♀), 08°51'47"N 99°37'36"E, 24 Nov 2006 (1♂), 08°46'19"N 99°48'12"E, 13 May 2006 (1♂), 08°51'47"N 99°37'36"E, 20 Jan 2007 (1♀), 08°45'99"N 99°48'39"E, 24 Jan 2007 (1♀), N. Pinkaew (KKIC).

Distribution. Thailand, Taiwan, Philippine Islands, India, Java, Solomon Islands and Molucca Islands.

Remarks. Specimens were collected from the rainy season to the summer season at 93-375 m in evergreen forest.

***Sycacantha inopinata* Diakonoff, 1973** (Figs. 12, 25)

Sycacantha inopinata Diakonoff, 1973, Zool. Monogr. Rijksmus. Nat. Hist. 1: 159. Type locality: Indonesia (Bali Island). Holotype (♂): BMNH.

Diagnosis. This species is very easy to distinguish from other *Sycacantha*: the forewing lacks markings except for a dark brown patch at the apex. In the male genitalia the socii are bilobed; the inner lobe is long and slender with bristles along outer edge at the top, and outer lobe is larger.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan NP., 08°48'07"N 99°34'57"E, 23 Mar 2007 (1♂), 08°46'55"N 99°47'44"E, 11 Jan 2008 (1♂), 3 May 2008 (1♂), 4 May 2008 (2♂), 13 Jun 2008 (1♂, genitalia slide NP1065), 08°55'25"N 99°39'49"E, 11 Jan 2008 (2♂), 9 Dec 2007 (1♂), 08°51'81"N 99°37'62"E, 21 Mar 2007 (1♂), 08°51'47"N 99°37'36"E, 22 Nov 2006 (1♂), 22 Dec 2006 (1♂), 19 Jan 2007 (1♂), 08°46'19"N 99°48'12"E, 13 May 2006 (1♂), 08°54'59"N 99° 43'57"E, 9 Mar 2008 (4♂), 08°43'56"N 99°38'21"E, 2 Apr 2008 (1♂), N. Pinkaew (KKIC).

Distribution. Thailand and Indonesia.

Remarks. Specimens were collected from the rainy season to the dry summer season 161-375 m in evergreen forest.

***Temnolopha matura* Diakonoff, 1973** (Figs. 13, 32)

Temnolopha matura Diakonoff, 1973, Zool. Monogr. Rijksmus. Nat. Hist. 1: 322. Type locality: Indonesia (East Borneo, Tabang, Bengen River). Holotype (♀): RMNH.

Diagnosis. This species is characterized by its contrasting and strongly sinuate, grany and brown wing markings, and by the long, conspicuously apically pointed labial palpi. In the female genitalia the sterigma is sclerotized and elongate.

Specimens examined. Thailand: Nakhon Si Thammarat Prov.: Khao Nan NP., 08°46'14"N 99°48'10"E, 12 May 2006

(1♀, genitalia slide NP810), N. Pinkaew (KKIC).

Distribution. Thailand and Borneo.

Remarks. Specimens were collected during the dry summer season at 123-375 m in evergreen forest.

DISCUSSION

At present, the totally number of Olethreutini in Thailand are 101 species belonging to 40 genera, including two new records, *Gnathmocerodes tosoria* and *Sorolopha argyropa*, as presented in this paper (Table 1).

Table 1. Checklist of Olethreutini in Thailand:

Name	Literature cited
Antaeola antaea (Meyrick, 1912)	2
Apsidophora purpurorbis Diakonoff, 1973	2, 5
Arcesis anax Diakonoff,1983	5
Asaphistis praeceps Meyrick, 1909	2
Baburia abdita (Diakonoff, 1973)	2
Cymolomia phaeopelta (Meyrick, 1921)	2, 5
Dactylioglypha pallens Diakonoff, 1973	5
Dactylioglypha tonica (Meyrick, 1909)	2, 5
Diakonoffiana mataea (Diakonoff, 1973)	4
Dicephalarcha herbosa (Meyrick, 1909)	2, 5
Dudua aprobola (Meyrick, 1886)	2, 5
Dudua brachytoma Diakonoff, 1973	2, 5
Dudua charadraea (Meyrick, 1909)	5
Dudua hemigrapta (Meyrick, 1931)	2
Dudua tetanota (Meyrick 1909)	2, 5
Eubrochoneura altissima Kawabe, 1978	2
Eudemopsis brevis Liu and Bai, 1982	2
Gnathmocerodes tonsoria (Meyrick, 1909)	*
Gonomomera halixanta (Meyrick, 1910)	4
Hedya ebenina (Meyrick, 1916)	2
Hedya iophaea (Meyrick, 1912)	2
Hedya kurokoi Kawabe, 1995	3
Hoplitendemis erebodes Diakonoff, 1973	2
Lobesia aeolopa Meyrick, 1907	3, 5
Lobesia ambigua Diakonoff, 1954	3
Lobesia fetialis (Meyrick, 1920)	3
Lobesia genialis Meyrick, 1912	3, 5
Lobesia kurokoi Bae, 1995	3, 5
Lobesia lithogonia Diakonoff, 1954	3, 5

Name	Literature cited
Lobesia moriutii Bae, 1995	3
Lobesia pattayae Bae, 1995	3
Lobesia siamensis Bae, 1995	3
Lobesia transtrifera (Meyrick, 1920)	3
Lobesia ultima Diakonoff, 1954	3
Megalota fallax (Meyrick, 1909)	5
Megalota vera Diakonoff, 1966	2, 5
Metendothenia albomaculata Kawabe, 1989	2
Metendothenia fidelis Diakonoff, 1973	2
Metendothenia pulchra Kawabe, 1989	2
Neohermenias thalassitis (Meyrick, 1910)	5
Neopotamia angulata Kawabe, 1995	4
Neopotamia cathemacta Diakonoff, 1983	5
Neopotamia divisa (Walsingham, 1900)	2
Neopotamia formosa Kawabe, 1989	2, 5
Neopotamia punctata Kawabe, 1989	2
Neopotamia siamensis Kawabe, 1995	4
Olethreutes manoi (Kawabe, 1987)	2
Olethreutes nomas Diakonoff, 1983	4
Olethreutes pachypleura (Meyrick, 1921)	2
Ophiorrhabda mormopa (Meyrick, 1906)	5
Ophiorrhabda philocompsa (Meyrick, 1921)	2, 5
Paleomorpha jacobsoni Diskonoff, 1973	4
Penthostola albomaculatis (Liu and Bai, 1985)	4, 5
Penthostola diakonoffi Kawabe, 1995	3
Penthostola nigrantis Kawabe, 1995	4
Phaecadophora fimbriata Walsingham, 1900	2, 5
Phaecasiophora attica (Meyrick, 1907)	1, 2
Phaecasiophora caryosema (Meyrick, 1931)	2
Phaecasiophora cornigera Diakonoff, 1959	1
Phaecasiophora kurokoi Kawabe, 1989	2
Phaecasiophora thaiensis Kawabe, 1987	1
Phaecasiophora walsinghami Diakonoff, 1959	1, 2, 5
Phaulacantha metamelas Diakonoff, 1973	2, 5
Proschistis marmaropa (Meyrick, 1907)	2
Rhectogonia ancalota (Meyrick, 1907)	2
Rhodacra parvusa Kawabe, 1995	4, 5
Rhodacra pyrrhocrossa (Meyrick, 1912)	2, 5
Rhopaltriplasia anamilleta Diakonoff, 1973	2
Semniotes abrupta Diakonoff, 1973	2
Semutophila saccharopa Tuck, 1986	5
Sisona albitibiana (Snellen, 1902)	2, 5

Name	Literature cited
Sorolopha aeolocholora (Meyrick, 1916)	2
Sorolopha archimedias (Meyrick, 1912)	5
Sorolopha argyropa Diakonoff, 1973	*
Sorolopha bathysema Diakonoff, 1973	2
Sorolopha camarotis (Meyrick, 1936)	2
Sorolopha chaingmaiensis Kawabe, 1989	2
Sorolopha cyclotoma Lower, 1901	2
Sorolopha ferruginosa Kawabe, 1989	2
Sorolopha herbifera (Meyrick, 1909)	2, 5
Sorolopha karsholti Kawabe, 1989	2
Sorolopha khaoyaiensis Kawabe, 1989	2
Sorolopha nagaii Kawabe, 1989	2, 5
Sorolopha plinthograpta (Meyrick, 1931)	2, 5
Sorolopha plumboviridis Diakonoff, 1973	2
Sorolopha rubescens Diakonoff, 1973	2
Sorolopha saitoi Kawabe, 1989	2
Sorolopha sphaerocopa (Meyrick, 1930)	2, 5
Sorolopha stygiaula (Meyrick, 1933)	5
Statherotis discana (Felder and Rogenhofer, 1875)	2, 5
Statherotis leucaspis (Meyrick, 1902)	2, 5
Sycacantha choanantha Diakonoff, 1971	2
Sycacantha complicitana (Walker, 1863)	1, 2
Sycacantha concentra Diakonoff, 1973	1, 2
Sycacantha diakonoffi Kawabe, 1987	1, 5
Sycacantha formosa Diakonoff, 1971	1, 5
Sycacantha inopinata Diakonoff, 1973	1, 2
Sycacantha potamographa Diakonoff, 1968	2
Sycacantha siamensis Diakonoff, 1971	2
Teleta tatalis (Durrant, 1915)	2, 5
Temnolopha matura Diakonoff, 1973	2, 5

Remarks: 1 = (Kawabe, 1987); 2 = (Kawabe, 1989); 3 = (Bae, 1995); 4 = (Kawabe, 1995)
5 = (Pinkaew, 2007); * = New record

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REFERENCES

Bae, Y.S. 1995. The Thai species of *Lobesia* (Lepidoptera: Tortricidae). *Microlepidoptera of Thailand.* 3: 33-48.

Baixeras, J. 2002. An overview of genus-level taxonomic problems surrounding *Argyroploce* Hübner (Lepidoptera: Tortricidae), with description of a new species. *Annals of the Entomological Society of America.* 95: 422-431.

Brown, R.L. and J.A. Powell, 1991. Description of new species of *Epiblema* (Lepidoptera: Tortricidae: Olethreutinae) from coastal redwood forests in California with an analysis of the forewing pattern. *Pan-Pacific Entomologist*. 67: 107-114.

Diakonoff, A. 1971. South Asiatic Tortricidae from zoological collection of the Bavarian State (Lepidoptera). *Veröffentlichungen der Zoologischen Staatssammlung München.* 15: 167-202.

Horak, M. 1984. Assessment of taxonomically significant structures in Tortricinae (Lep., Tortricidae). *Mitteilungen der schweizerischen entomologischen Gesellschaft.* 57: 3-64.

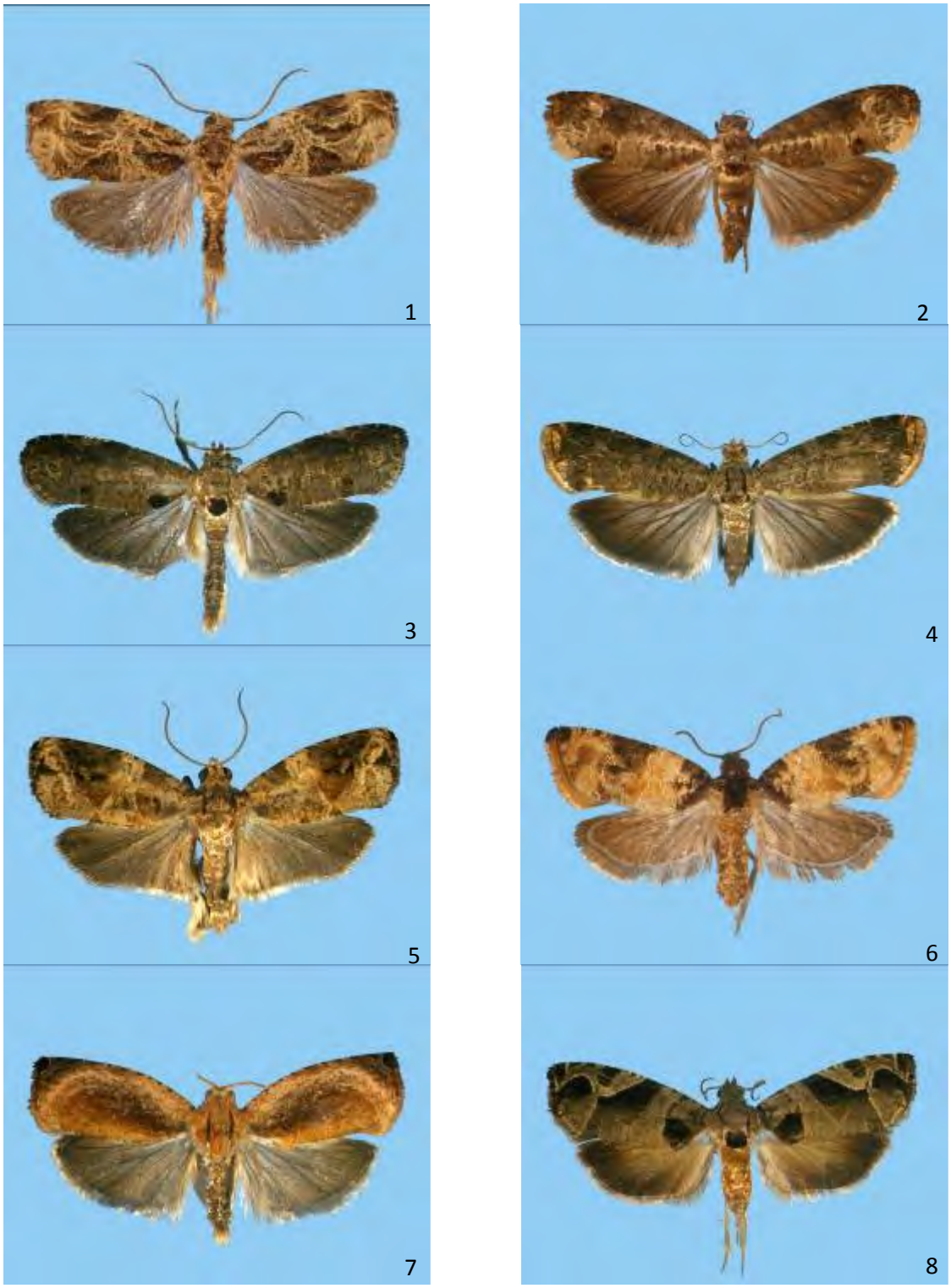
Horak, M. 1991. Morphology, pp. 1-22. In: L.P.S. Van der Geest and H.H. Evenhuis (eds.), *Worlds Crop Pest, Tortricid Pest, Their Biology, Natural Enemies and Control*, Amsterdam.

Kawabe, A. 1987. Records and Descriptions of the subtribe *Sycacantha* (Lepidoptera: Tortricidae) from Thailand. *Microlepidoptera of Thailand.* 1: 61-68.

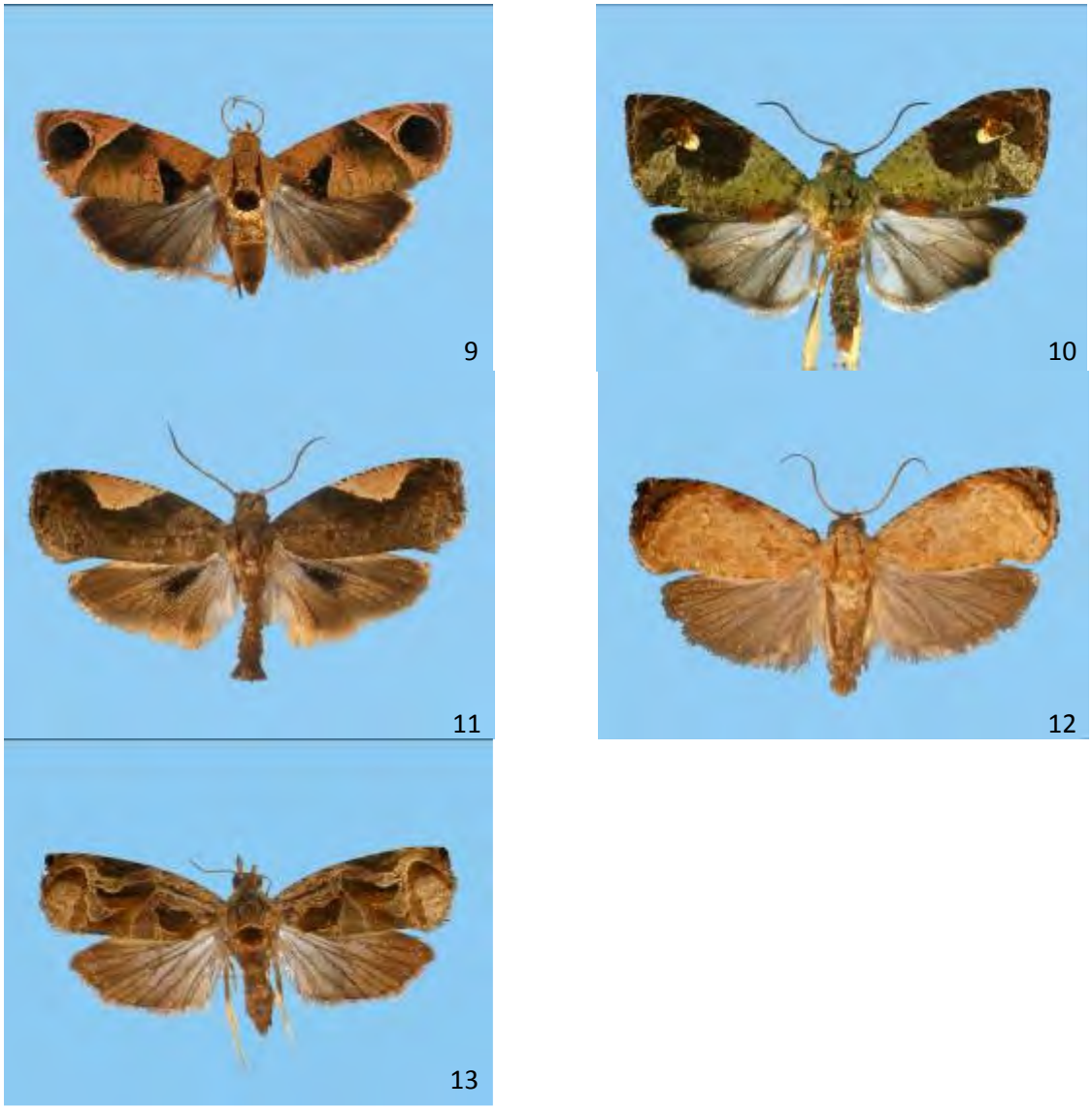
Kawabe, A. 1989. Records and Descriptions of the subfamily Olethreutinae (Lepidoptera: Tortricidae) from Thailand. *Microlepidoptera of Thailand.* 2: 23-82.

Kawabe, A. 1995. Records and Descriptions of the family Tortricidae (Lepidoptera) from Thailand, IV. *Microlepidoptera of Thailand.* 3: 49-62.

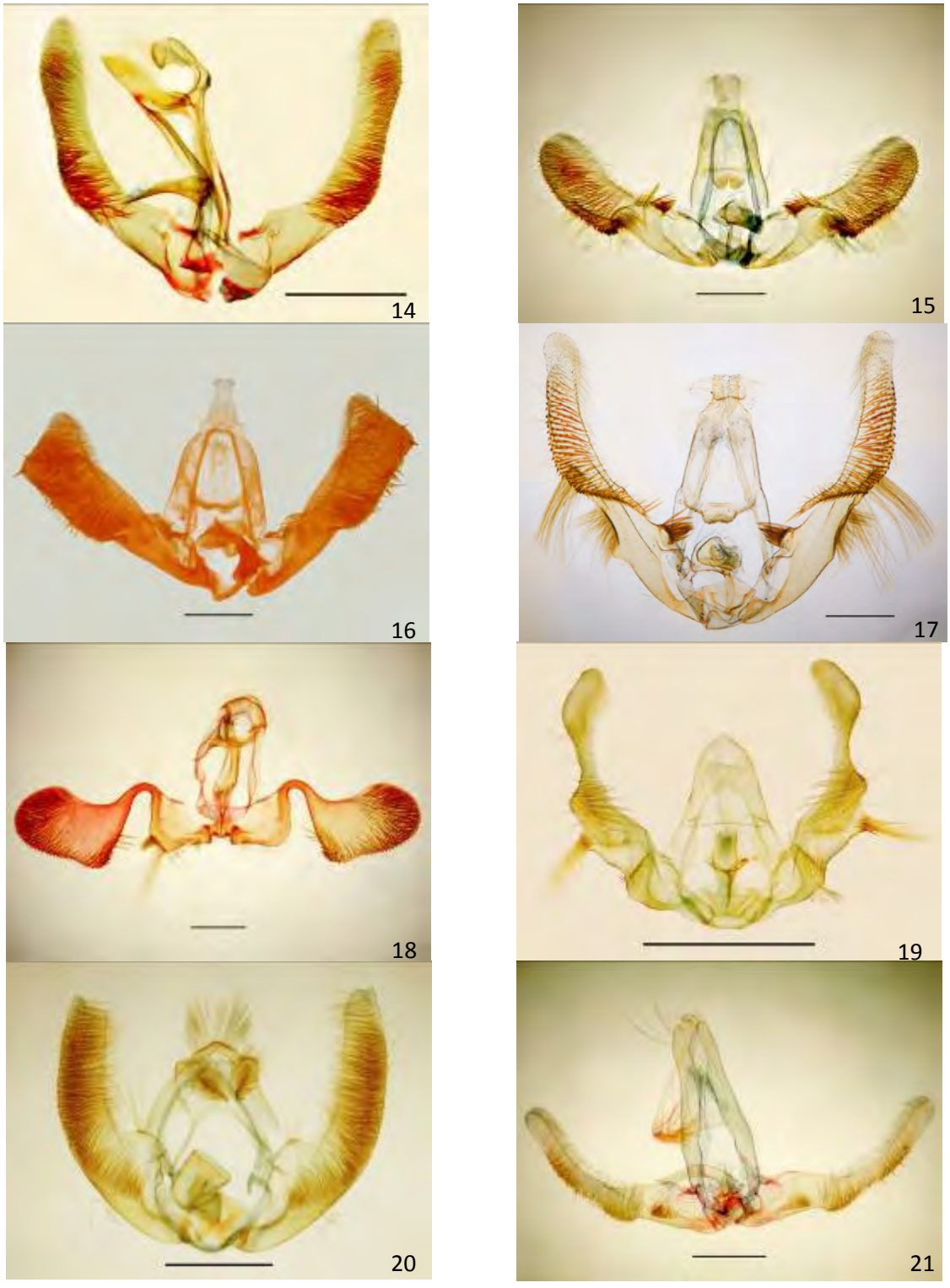
Pinkaew, N. 2007. New records and known species of the tribe Olethreutini (Lepidoptera: Tortricidae: Olethreutinae) from Thong Pha Phum National Park, Thailand. *The Thailand Natural History Museum Journal.* 2(1): 1-18.



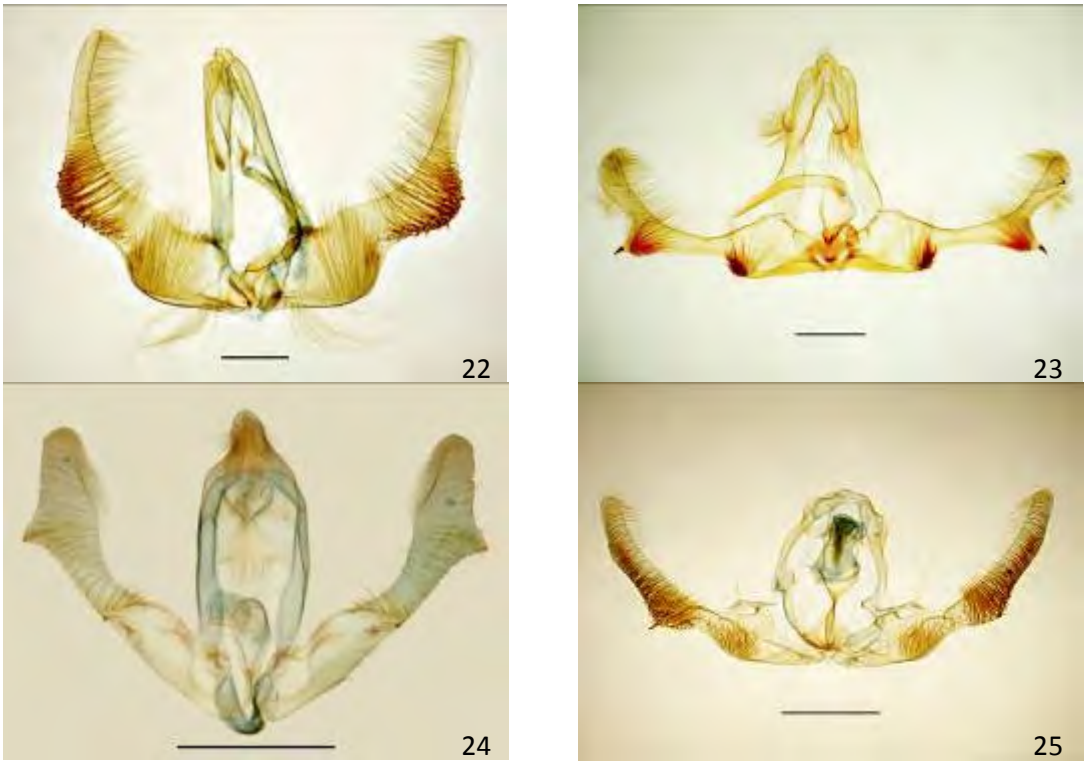
Figures 1-8. Adults. 1. *Dactylioglypha pallens* Diakonoff, 2. *Dudua aprobola* (Meyrick), 3. *D. brachytoma* Diakonoff, 4. *D. tetanota* (Meyrick), 5. *Gnathmocerodes tonsoria* (Meyrick), 6. *Olethreutes nomas* Diakonoff, 7. *Phaecasiophora kurokoi* Kawabe, 8. *Sorolopha bathysema* Diakonoff.



Figures 9-13. Adults. 9. *Sorolopha cyclotoma* Lower, 10. *S. argyropa* (Diakonoff), 11. *Statherotis discana* (Felder & Rogenhofer), 12. *Sycacantha inopinata* Diakonoff, 13. *Temnolopha matura* Diakonoff.



Figures 14-21. Male genitalia. 14. *Dactylioglypha pallens* Diakonoff, 15. *Dudua aprobola* (Meyrick), 16. *D. brachytoma* Diakonoff, 17. *D. tetanota* Meyrick, 18. *Gnathmocerodes tonsoria* (Meyrick), 19. *Olethreutes nomas* Diakonoff, 20. *Phaecasiophora kurokoi* Kawabe, 21. *Sorolopha bathysema* Meyrick, Scales = 0.5 mm.



Figures 22-25. Male genitalia. 22. *Sorolopha cyclotoma* Lower, 23. *S. argyropa* (Diakonoff),24. *Statherotis discana* (Felder & Rogenhofer), 25. *Sycacantha inopinata* Diakonoff. Scales = 0.5 mm.

Figures 26-29. Female genitalia. 26. *Dudua tetanota* (Meyrick), 27. *Olethreutes nomas* Diakonoff, 28. *Phaecasiophora kurokoi* Kawabe, 29. *Sorolopha bathysema* Meyrick. Scales = 0.5 mm.

Figures 30-32. Female genitalia. 30. *Sorolopha cyclotoma* Lower, 31. *Statherotis discana* (Felder & Rogenhofer), 32. *Temnolopha matura* Diakonoff. Scales = 0.5 mm.