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Two New Species of *Eoophyla* Swinhoe, 1900 from Continental South East Asia (Lepidoptera: Crambidae, Acentropinae)¹

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Abstract. *Eoophyla clasnaumanni* Speidel & Mey sp. nov. from North Thailand and *Eoophyla myanmarica* Mey & Speidel sp. nov. from North-west Myanmar (Burma) are described. These new species are closely related to each other and to *Eoophyla aureolalis* (Snellen, 1876) from Sundaland. Differential characters and figures of all three species are provided.

1. INTRODUCTION

The species of *Eoophyla* Swinhoe, 1900 are currently placed in a number of species groups. SPEIDEL & MEY (1999) recognised six groups including an assemblage of nine isolated species which could not be assigned then to one of the defined groups. The study of the Philippine species of the genus resulted in the establishment of three further groups (SPEIDEL 2003). The definition of the groups are based on external characters. Especially the number and arrangement of the eye-spots on the hindwings are used as a simple and discernable trait. It has proved to be a practical way in sorting species and to cope with the increasing species numbers. The species treated in this paper belong to the *crassicornalis* group of species (SPEIDEL & MEY 1999). Since the phylogenetic value of this and other characters is unclear yet, the ordering group system of the genus should be regarded as provisional.

The Acentropinae collection in the ZMHB and the collection of W. Speidel contain a number of undescribed species. In the *crassicornalis* – group *Eoophyla aureolalis* (Snellen, 1876) is the only species hitherto known with a dark spot in the anal field of the forewings. The species is distributed in Sundaland. The examination of specimens with the same wing pattern from Thailand and Myanmar showed that they are related to *E. aureolalis* but represent separate species. They are described in the present paper.

Abbreviation: ZMHB = Museum für Naturkunde, Humboldt Universität, Berlin

2. DESCRIPTION OF SPECIES

Eoophyla clasnaumanni Speidel & Mey, sp. nov.

Material: Female holotype (genitalia slide: Mey 10/04) and 1 male paratype (genitalia slide: Mey 11/04), North Thailand, Nan Province, Pua, Doi Phu Kha, 1600m, km 35, 16. – 20. 2. 1993, lux, leg. W. Speidel, deposited in ZMHB (holotype) and coll. Speidel (paratype).

Description (Fig. 1 male, fig. 2 female): Length of forewing 12 mm (male) – 14 mm (female). Head and thorax yellow-white, scape of male with curved process and enlarged antennal flagellomeres. Tegulae with brown spots. Legs yellow, tarsal segments of foreleg brown at the articulations; femora and tibia of forelegs dark-brown on inner side; male hindfemora with scale-brush. Forewing predominantly yellow except the slightly curved, antemarginal white band which is darkly lined on its margins; frontside of costa with dark line; cell between Cu 1+2 and A 1+2 filled with white in the centre, but not lined; disco-cellular bar reduced to a brown, rounded spot at the base of M2 and M3; a similar brown spot in the anal field between anal vein and wing margin. Cu 2 and A 3 present with their basal stems. Male with tuft of broad scales on R before bifurcation with R 5. Hindwing with subapical incision, strongly developed in male, weaker in female; antemarginal white band short, just reaching the marginal spots; short yellow band at the base of the hindwing present; two small marginal, oval, white spots, lined with black scales.

Male genitalia (Fig. 9): General structure as usual in the genus; valvae long, with 3 apical, caudally directed setae. Gnathos slightly shorter than uncus, with 5 subapical, dorsal teeth. Aedeagus without cornuti.

Female genitalia (Fig. 6): Ninth segment shorter than apophyses posteriores; ductus bursae long, beginning with a wide antrum; colliculum laterally sclerotised.

¹ In commemoration of Clas Michael Naumann zu Königsbrück (26.06.1939 – 15.02.2004)

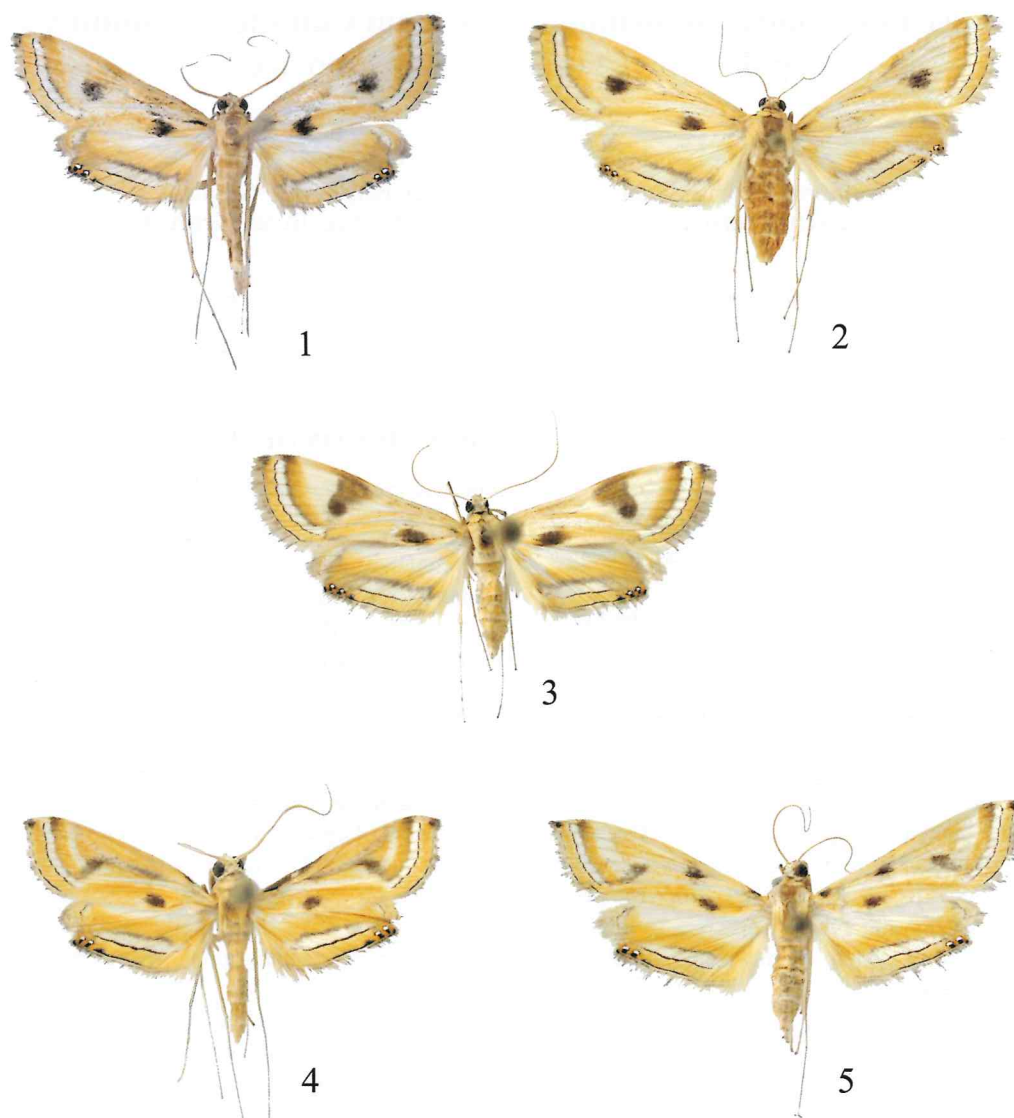


Fig. 1-5: Adult specimens

Fig. 1: *Eoophyla clasnaumanni* Speidel & Mey sp. nov. Male, paratype. Forewing length 12 mm

Fig. 2: *Eoophyla clasnaumanni* Speidel & Mey sp. nov. Female, holotype. Forewing length 14 mm

Fig. 3: *Eoophyla myanmarica* Mey & Speidel sp. nov. Female, holotype. Forewing length 13 mm

Fig. 4, 5: *Eoophyla aureolalis* (Snellen, 1876) (Indonesia, Sumatra, Sumatera Utara, Prapat, 2°46' N 98°59' E, logging trail 2, 1050 m, 1.-30.12.1994, lux, leg. E.W. Diehl Sumatra), fig. 4 male (Forewing length 9 mm), fig. 5 female (Forewing length 12 mm)

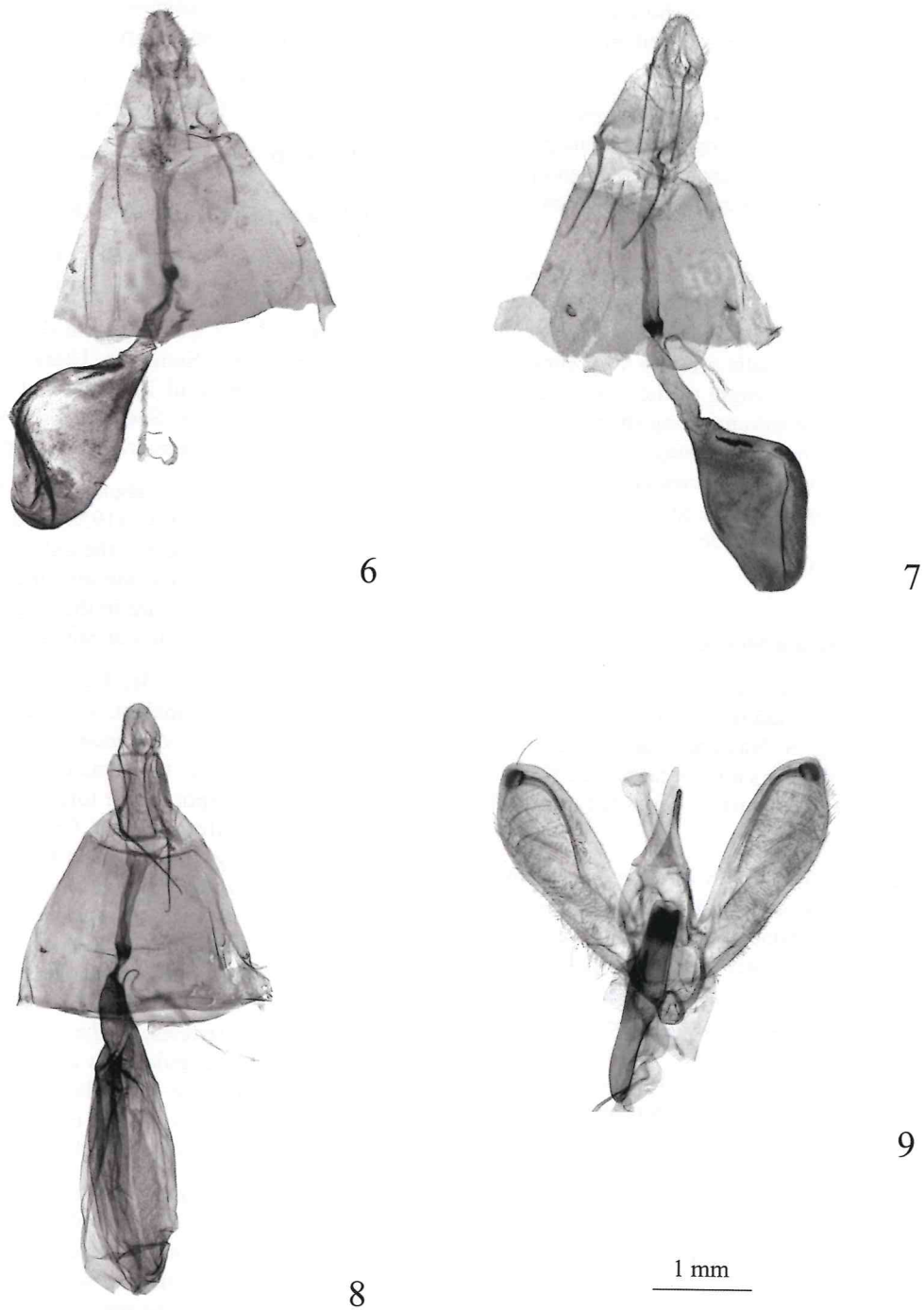


Fig. 6-9: Genitalia

Fig. 6: *Eoophyla clasnaumanni* Speidel & Mey sp. nov. Female holotype.

Fig. 7: *Eoophyla myanmarica* Mey & Speidel sp. nov. Female Paratype.

Fig. 8: *Eoophyla aureolalis* (Snellen, 1876). Female.

Fig. 9: *Eoophyla clasnaumanni* Speidel & Mey sp. nov. Male paratype.

Corpus bursae elongate, club-shaped. Signum consists of small teeth, arranged in one short and one long pair of elongate bands, which are situated on the ridge of the somewhat flattened corpus bursae.

Etymology: The species is named in memory of the late Clas M. Naumann, our distinguished lepidopterist colleague and adviser, who always supported and promoted our studies on Lepidoptera and who passed away far too early.

Relationship: The wing pattern of *E. clasnaumanni* sp. nov. is similar to that of *E. myanmarica* sp. nov. The shape of the corpus bursae and the structure of the signum in the female genitalia are also very similar. They differ, however, in the length of the ninth segment and in the structure of the antrum, being short and wide in *E. clasnaumanni* sp. nov. and long and narrow in *E. myanmarica* sp. nov. Both species probably form a species pair. According to female genitalic structures a related species is *E. simplicialis* sensu Yoshiyasu, 1987, recorded from Thailand.

***Eoophyla myanmarica* Mey & Speidel, sp. nov.**

Material: Female holotype (genitalia slide: Mey 12/04) Myanmar, Chin, Tiddim, Thaing-gnin, 2310 m, 25.5.2001, lux, leg. S. Naumann, deposited in ZMHB. Paratypes: 3 females, same locality, 2200 m, 17.–2.5.2001, lux, leg. S. Naumann, deposited in ZMHB and coll. Speidel.

Description (Fig. 3): Length of forewing 12 mm–13 mm (females). Head and thorax yellow-white, Tegulae with brown spots. Patagia white. Legs yellow, tarsal segments of foreleg brown at the articulations; femora and tibia of forelegs dark-brown on inner side. Forewing predominantly yellow except the slightly curved, antemarginal white band which is darkly lined on its margins; frontside of costa with dark line; cell between Cu 1+2 and A 1+2 filled with white in the centre, but not lined; disco-cellular bar light brown, but its apex dark brown forming a rounded spot at the base of M2 and M3; a similar brown, slightly elongate spot in the anal field between anal vein and wing margin. Cu 2 and A 3 present with their basal stems. Hindwing with subapical incision, antemarginal white band short, just reaching the marginal spots; short yellow band at the base of the hindwing present; two small marginal, oval white spots, lined with black scales.

Female genitalia (Fig. 7): Ninth segment as long as the apophyses posteriores; ductus bursae long, beginning with a narrow and long antrum; colliculum laterally sclerotised. First part of corpus bursae beyond colliculum a long ductus, widening to a somewhat elongate, trapeze-like form, pleated at the widening. Signum consists of small teeth, arranged in one short

and one long pair of elongate bands, which are situated on the ridge of the somewhat flattened corpus bursae; short pair darker than long pair.

Etymology: The specific epithet is derived from Myanmar, today the name of the former Burma.

Relationship: See *E. clasnaumanni* sp. nov.

***Eoophyla aureolalis* (Snellen, 1876)**

Oligostigma aureolalis Snellen, 1876: 193 (key), 200, pl. 8, fig. 5 a-c. Type locality: Java.

Material: 2 ♂♂, 2 ♀♀ (genitalia slide: Mey 13/04), Indonesia, Sumatra, Sumatera Utara, Prapat, 2°46' N 98°59' E, logging trail 2, 1050 m, 1.-30.12.1994, lux, leg. E.W. Diehl (coll. Speidel, ZMHB). Several other specimens, all from Sumatra, in coll. Speidel.

The lectotype, a female, labeled 'Java, Heckmeijer' was selected by Munroe et al. (1958) and is in the Leiden Museum. The lectotype and the only male paralectotype still in Leiden both lack the abdomen (Munroe et al., 1958). The coloured figure in the original description is good and fits very well to our Sumatran specimens.

Description (Fig. 4 male, Fig. 5 female). Length of forewing 8 - 9 mm (males), 10 - 12 mm (females). In comparison with *E. clasnaumanni* sp. nov. and *E. myanmarica* sp. nov. the female of this species has a third, dark brown spot on the forewings. It is situated in the cell before bifurcation of Cu 1a and Cu 1b. The males have a long costal fold in the forewings and the cape is without basal process. The femur and tarsus of the forelegs bear another separating character. In *E. aureolalis* the dark brown, inner and front sides are interrupted by a long, yellow line. The tarsal segments are not dark at the articulations. The yellow line is lacking in the other two species. In the genitalia of the female (Fig. 8), the bursa copulatrix is a large, oval sac, enlarging shortly behind the colliculum. Only a single, elongate, paired signum is present on its ridge. The antrum is wide and the ductus bursae a broad, folded tube.

Relationship: The species of the *crassicornalis*-group exhibit a distinct sexual dimorphism. In general, the females are more uniformly patterned as the males who have developed remarkable, secondary sexual characters. The variety of these traits are not accompanied by appropriate differences in the genitalia. It is therefore difficult to ascertain the relationships among species. The wing pattern of *E. clasnaumanni* sp. nov., *E. myanmarica* sp. nov. and *E. aureolalis* show a similar arrangement of spots. It possibly points to a closer relationship of these three species.

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