

NOTES ON *ERESSA CONFINIS* AND ALLIED SPECIES
WITH DESCRIPTIONS OF A NEW SPECIES
AND A NEW SUBSPECIES (CTENUCHIDÆ)

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The Asiatic species known as *Eressa confinis* (Walker, 1854) has already been discussed in some notes and redescribed by HAMPSON in 1898. A synopsis of its variation was completed by the same author in his supplementary work of 1914.

The materials of the U.S. National Museum containing a series of moths of this group, known previously as a single species, gave me an opportunity to revise them, to establish the taxonomic value of some synonyms, and to describe a new subspecies of *E. confinis* from West China and a new species from Java. I am very obliged to Mr. J. F. GATES CLARKE of the National Museum for his kind assistance in giving me the materials for the completion of the present paper and to Dr. A. N. DIAKONOFF for sending the moths from the collection of the Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands. Like the earlier authors, I had at my disposition chiefly male moths of the group in question.

Eressa confinis Walker ssp. *confinis* Walker

Glaucopsis (Eressa) Walker, 1854, List Spec. Lep. Ins. B.M., vol. 1: 149.

Syntomis confinis Walker, 1856, *op. cit.*, vol. 7: 1592; Hampson, 1893, Moths Ind., vol. 1 (1892): 223.

Eressa confinis (Wkr.) Moore, 1882, Lep. Ceyl., vol. 2: 36, t. 95 fig. 6; Swinhoe (& Cotes), 1887, Cat. Moths Ind.: 52; Kirby, 1892, Synon. Cat. Lep. Het., vol. 1: 104; Swinhoe, 1892, Cat. East. & Austral. Het., vol. 1: 40; —, 1895, Trans. Ent. Soc. London: 32; Hampson, 1898, Cat. Lep. Phal., vol. 1: 116, fig. 38; —, 1900, J. Bombay N. H. Soc. 13: 223, fig.; Zerny, 1912, Wagner's Lep. Cat., pars 7: 32; Seitz, 1913, Gross-Schm. Erde, vol. 10: 83; Hampson, 1914, Cat. Lep. Phal., Suppl., vol. 1: 46; Fletcher, 1925, Cat. Ind. Ins., pars 8: 25; Wileman, 1928, Trans. Ent. Soc. London 76: 445.

The above mentioned redescription of *E. confinis* by HAMPSON corresponds to the nominotypical subspecies from India. The male genitalia (fig. 1) are as follows: Tegumen with two large, roundish, lateral appendages; uncus relatively shorter than in allied species described in this paper, with a broad, latero-basal enlargement and the tip curved downward. Valva with an elongate cucullus; sacculus much narrower than the upper part of the cucullus, with a tip directed upward.

Eressa confinis Walker ?ssp. *musa* Swinhoe

Eressa musa Swinhoe, 1885, Proc. Zool. Soc. London: 290, t. 20 fig. 1; Swinhoe (& Cotes), 1887, Cat. Moths Ind.: 52; Kirby, 1892, Synon. Cat. Lep. Het., vol. 1: 104.

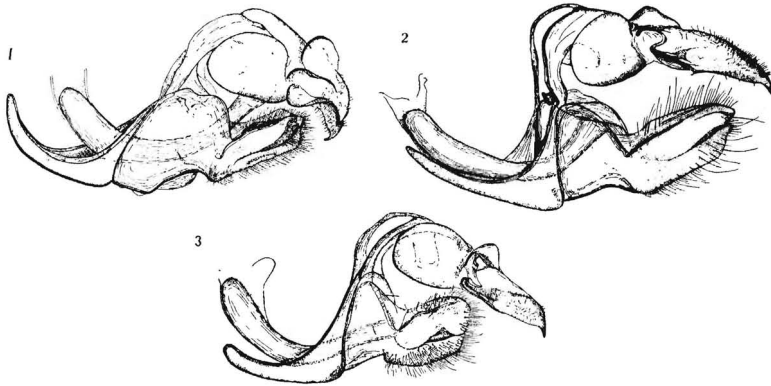
Syntomis musa Hampson, 1893, Moths Ind., vol. 1 (1892): 222.

Eressa confinis ab. *musa* Hampson, 1898, Cat. Lep. Phal., vol. 1: 116; Zerny, 1912, Wagner's Lep. Cat., pars 7: 32; Seitz, 1913, Gross-Schm. Erde, vol. 10: 83.

Eressa confinis (part.) Fletcher, 1925, Cat. Ind. Ins., pars 8: 25; Wileman, 1928, Trans. Ent. Soc. London 76: 445.

This form, established originally as an independent species from Bombay, is a variety of *E. confinis*. The problem of whether it might be a subspecies or a simple aberration (individual variety) of the latter species, could not be solved because only a single male specimen from Mhow, Indore, Central India (U. S. National Museum, preparation of genitalia No. 4533, W. D. F.), corresponding in the wing pattern to the original description and the figure of *E. musa*, was at my disposal. The genitalia of this moth are identical with those of ssp. *confinis*.

The question of the identity of *Syntomoides finitima* Wileman, 1910, from Formosa (ranked by HAMPSON, in 1914, as a synonym for *E. confinis*), could not be solved because I had no specimen of this form at my disposition.



MALE GENITALIA. Fig. 1: *Eressa c. confinis* Wlk. Fig. 2: *E. catoria* Swinh.
Fig. 3: *E. javanica* n. sp.

Eressa confinis Walker ssp. *szechueniensis*, new subspecies

MALE. Antennæ white at tips. Head and body coloring and the structural characters as in ssp. *confinis*. Length of forewing: 11-13 mm. The wing spots as large as in ssp. *confinis* but the forewing interno-median spot ($m_1 + m_3$) extends further towards the wing base and is enlarged there; the hindwing spots confluent in a large hyaline area occupying the whole middle cell and all interspaces of veins from costa to vein A_2 leaving a grayish black wing border as large as in ssp. *confinis*.

Described from male HOLOTYPE and eight male PARATYPES from south of Sui-fu, Szechuen, West China, D. C. GRAHAM leg., U. S. National Museum (preparation of genitalia of a paratype No. 4529, W. D. F.).

A further male specimen in the same collection from Shin-Kai-Si, Mount Omei, Szechuen, 4400 ft., belongs also to this new subspecies. This last specimen has a little additional spot above the base of the forewing vein R_5 like the three males of the type series and corresponds to f. *musa*.

Eressa confinis Walker ssp. *malaccensis* Rothschild

Eressa confinis malaccensis Rothschild, 1910, Nov. Zool. 17: 437; —, 1912, *ibid.* 19: 376, t. 4 fig. 6; Zerny, 1912, Wagner's Lep. Cat., pars 7: 32; Seitz, 1913, Gross-Schm. Erde, vol. 10: 83, t. 12 a, fig. 7; Candèze, 1927, Enc. Ent., ser. B, Lepidopt., vol. 2: 75; Joannis, 1928, Ann. Soc. Ent. France 97: 246; Wileman, 1928, Trans. Ent. Soc. London 76: 446.

Eressa confinis (part.) Hampson, 1914, Cat. Lep. Phal., Suppl., vol. 1: 46; Fletcher, 1925, Cat. Ind. Ins., pars 8: 25.

Eressa deliana Roepke, 1935, Miscell. Zool. Sumatr. 99: 2, fig. 1.

Structural characters as in ssp. *confinis*. Antennæ white at tips. Two yellowish orange patches on thorax, one anterior and one posterior. Patches on pectus and at the middle of the abdominal tergites and sternites yellowish orange; the upper patches at sides of the abdomen slightly reddish orange. Length of forewing: 9-11 mm. Wings brown, rather densely scaled, the hyaline spots arranged as in subspecies *confinis* but differently shaped. The middle cell spot (m_2) of forewing short, the rest of the forewing spots smaller with the veins having a broader brown scaling; the extra spot between spots m_4 and m_5 dot-like and in one specimen absent. Only the distal half of the hind wing middle cell hyaline; the spots of the hyaline area of hind wing separated one from another by dark brown veins; these hyaline spots smaller than in ssp. *confinis*; the spot below the hind wing middle cell divided by a brown longitudinal streak and the lower part of this spot sometimes poorly developed.

The above description is based upon three male specimens from Bangkok, Siam, in the U. S. National Museum (preparation of genitalia No. 4530, W. D. F.) which correspond very well to the original diagnosis of ssp. *malaccensis* known now only from Penang (Waterfall Valley) and Tonkin.

A single female specimen present in the collection, from Bangkok, is paler than the male specimens. Its vertex is yellow. The abdomen has yellow middle patches on 4th to 7th tergites, the postsegmental edges of these tergites diffusely yellowish scaled; in addition, the postsegmental edge of 7th tergite is covered with a whitish felt-like pile; the lateral patches are as in the male but broader; the yellow spots of the corresponding sternites are very broad. The wing spots are larger than in the male but nevertheless smaller than in the male of ssp. *confinis*, the hind wings are similar to those in the latter subspecies. Length of forewing: 11 mm.

A fourth male specimen in the U. S. National Museum, labelled "Siam, Cockerell", differs from the preceding series from Bangkok only by somewhat larger hind wing hyaline area with veins crossing it not dark scaled. A male specimen from the province Bienhoa, Cochin China, is more similar to the series from Bangkok.

From East Sumatra ROEPKE, in 1935, described *Eressa deliana* as a new species. The wing characters were described very insufficiently. ROEPKE wrote only about the forewing "with three distal and four proximal hyaline spots." The male genitalia of *E. deliana* presented in a figure by this author are very similar to those of *Eressa confinis*, and *E. deliana* is undoubtedly conspecific with it. The broadness of the uncus base, a narrow sacculus with the tip directed upward and extended to the nearby exterior edge of the upper part of the valva, the mentioned pigmentation, and the pattern of the body confirm this point of view.

In the collection of the Rijksmuseum van Natuurlijke Historie, Leiden, there are one male and three female specimens from North Sumatra ("Medan S. O. K. v. d. Meer Mohr, 24-12-1931, 15-1-1932, 8-11-1932, Lampoe") which cannot be distinguished from *E. confinis* ssp. *malaccensis*. The female specimens have darker scaling of the forewings than the female from Bangkok, and the abdominal patches are not so diffusely traced, but there is no doubt

that these females and the male belong specifically together. The genitalia of the Sumatran male specimen (Rijksmuseum, preparation No. Ct. 1) does not differ from those of *E. confinis*.

There is little probability that there are on Sumatra two different sub-species of *E. confinis*; therefore, the above series from North Sumatra is presumably the same as *E. deliana*. The correctness of this supposition finds its confirmation in Roepke's statement that there are three distal forewing spots in *E. deliana*; in the ssp. *malaccensis* (males!) they are the spots m_4 , m_5 , and m_6 which are well developed while the extra spot between m_4 and m_5 is dot-like or missing. In the male from Medan this spot is very small.

A further male specimen from Hongkong (Rijksmuseum, preparation of genitalia No. Ct. 2) belongs to the ssp. *malaccensis* too.

Eressa catoria Swinhoe

Eressa confinis ab. 2 Hampson, 1898, Cat. Lep. Phal., vol. 1: 116.

Eressa catoria Swinhoe, 1900, Ann. Mag. N. H., ser. 7, vol. 6: 305.

Eressa confinis (part.) Zerny, 1912, Wagner's Lep. Cat., pars 7: 32; Hampson, 1914, Cat. Lep. Phal., Suppl., vol. 1: 46; Fletcher, 1925, Cat. Ind. Ins., pars 8: 25; Wileman, 1928, Trans. Ent. Soc. London 76: 445.

Eressa confinis catoria Seitz, 1913, Gross-Schm. Erde, vol. 10: 83.

MALE. Antennæ bipectinate, black, white tipped. Head entirely black. Patagia, tegulae, and thorax black, the last with a large orange patch at the anterior edge and another one at the posterior edge; pectus with two orange patches on each side. Legs entirely brownish black. Abdomen black; 2nd to 7th tergites with a middle and two lateral orange patches each; the corresponding sternites yellow patched in the middle. Length of forewing: 12-13 mm.

Wings rather diffusely smoky black scaled, with very sparsely haired, white hyaline spots. Forewing with an elongate spot (m_2 in the middle cell extending nearly from the base of vein Cu_2 to the smoky black scaling around the discal veins; a large spot below the middle cell, close to this latter and the neighboring veins; this spot extends to the middle of vein Cu_1 ; an elongate spot (m_3), a third shorter than the preceding one, between veins Cu_1 and A_2 , with the base at the same level as both preceding spots; a narrow elongate spot between vein A_2 and the dorsum; a little triangular spot between veins R_4 and R_5 , at the base of these veins; a slightly curved, wedge-shaped, elongate spot (m_4) extending nearly to the base of vein M_1 between this vein and the radius; a shorter spot below the middle of the preceding one; an irregular ovoid spot (m_5), larger than the spot above, at the base of veins M_2 and M_3 and between them; a longer, subrectangular spot (m_6) in the interspace below; all spots separated one from another by a narrow, black vein scaling, this latter a little broader along vein M_2 ; both the upper exterior spots (m_4 and the extra spot below it) separated from the middle cell spot (m_2) by the above mentioned black scaling around the discal veins. Hind wing with two middle large, ovoid spots between veins M_2 , Cu_1 , and Cu_2 ; a slightly translucent black scaling (an underdeveloped spot) below vein Cu_2 . (SWINHOE, in 1900, mentioned a tendency of the hind wing spots to reduction and wrote: "in many specimens both these small spots are indistinct." HAMPSON, in 1898, mentioned a male specimen with entirely black hind wings.)

Genitalia (fig. 2): tegumen with two large, roundish, lateral appendages; uncus very long, with a moderate, latero-basal enlargement and a rather direct tip. Valva with an elongate cucullus; sacculus a little narrower than the upper part of cucullus, with a tip not curved upwards and extending to the distal edge of valva.

This species was established as an independent one, but ZERNY and others ranked it as a synonym or at least considered it a variety of *E. confinis*.

The type locality was given Jaintia Hills ("Many examples, all males"); HAMPSON, in 1898 added Bhutan and Khásis.

The present redescription of this independent species was made from a male specimen from Assam, collection W. SCHAUS, at present in the U. S. National Museum (preparation of genitalia No. 4532, W. D. F.). This specimen in 1923 was compared by W. SCHAUS with the type of *E. catoria* in the British Museum of Natural History, London, and found identical with it.

Eressa confinis intensa Rothschild, 1910, has some resemblance to *E. catoria*, but I have not studied it.

Eressa javanica, new species

MALE. Antennæ bipectinate, brown black, white tipped. Head brown black, vertex, cheeks and a little dot at the tongue base, yellow. Patagia and tegulae brown black, the anterior edge of patagia and the lateral ones of tegulae slightly touched with yellow; thorax black brown with a large yellow patch at the anterior edge and another one at the posterior edge; pectus with yellow scaling at both sides. Legs smoky brown, slightly coppery glossed. Abdomen grayish black; 1st tergite diffusely yellowish scaled; 2nd tergite with lateral yellow patches and a middle postsegmental patch; 3rd to 6th tergites with a yellow middle patch and two lateral ones each; postsegmental edge of the 7th tergite broadly yellow; 8th tergite entirely black; 2nd to 6th sternites with a yellow, broad, middle patch each. Length of forewing: 10 mm.

Wings rather diffusely smoky brown scaled, with very sparsely yellowish haired, white hyaline spots. Forewing with a short trapezoidal spot (m_2) in the middle cell extending from the base of vein Cu_2 to a rather large, smoky brown scaling around the discal veins; an elongate oval spot below the above spot and equally long with it; an elongate spot ($m_1 + m_3$) below the middle cell and vein Cu_2 ; this spot begins half-way between the wing base and the middle cell spot (m_2) and extends to about one-half of the vein Cu_2 ; a clear space below vein A_2 separated by it from the spot $m_1 + m_3$; an elongate oval spot (m_4) between veins R_4 and R_5 , remote from the base of these veins; a much shorter and narrower spot in the next lower vein interspace; two broader, slightly elongate spots (m_5 and m_6) in the interspaces between veins M_2 and Cu_1 ; the upper of these spots a little shorter than the lower; all exterior spots separated from the middle cell by the above mentioned large, smoky brown scaling around the discal veins. Hind wing with hyaline spots in the middle cell and in the neighboring interspaces between the dark scaled dorsum and vein M_2 ; all these spots form a common hyaline area extending to about two-thirds of the wing length and divided by blackish veins.

Genitalia (fig. 3): tegumen with two large, roundish, lateral appendages; uncus almost equally broad, with a moderate, latero-basal enlargement and a rather direct tip. Valva with a broad, rounded cucullus; sacculus rather broad, with a tip directed upwards and very remote from the distal edge of the upper part of cucullus.

Described from the unique male TYPE from Mount Gede, Java, 9000 ft., BRYANT & PALMER leg., U. S. National Museum (preparation of genitalia No. 4531, W. D. F.).

This species is very similar to *E. confinis* but differs from it by a yellow collar, yellow edged patagia and tegulae, a distinct disposition and number of yellow abdominal patches, and especially in the genitalia. From *E. lutulenta* described by SNELLEN in 1879, the new species differs by not having an orange frons, by the abdomen not being banded but only patched with yellow, and by a common hyaline area of the hind wings, which last in *E. lutulenta* is composed of separate spots.