

## ***Asota eusemioides* Felder, 1874, a new identity for an old moth "*versicolor*", from New Guinea**

**Jaap Zwier**

Turfweg 27, 7021 JN Zelhem, THE NETHERLANDS

Email: jaap.zwier@slangenburg.nl

Website: www.aganainae.nl

Suara Serangga Papua 4 (2): 46 - 51

*Abstract:* In 1794 Fabricius gave the name *Noctua versicolor* to a moth living in "Americae Insulis" (= the islands of America), but subsequently the name has been applied erroneously to a moth in the genus *Asota* (Hübner) living in New Guinea and the surrounding islands. Donovan (1805) was probably the originator of the incorrect usage of this name in using his text, as well as in the legend to a picture in his book about the butterflies and moths of Australia and New Guinea. Subsequently almost all authors have followed Donovan's error, though it was recognised as an error by Jordan (1897). The name *versicolor* should therefore not be applied to this New Guinea moth, but replaced by *Asota eusemioides* Felder, 1874. *Ikhtisar:* Pada tahun 1794 Fabricius memberikan nama *Asota versicolor* terhadap ngengat yang ditemukan di Americae Insulis (Pulau-pulau dari Amerika), tetapi nama ngengat tersebut selanjutnya diikatkan pada suatu ngengat dari genus *Asota* (Hübner) yang hadir di New Guinea dan pulau-pulau di sekitarnya. Barangkali Donovan (1805) menjadi sumber kekeliruan tersebut, waktu menulis nama spesies tersebut di dalam teks dan di bawah gambar pada bukunya tentang kupu-kupu dan ngengat dari Australia dan New Guinea. Selanjutnya hampir semua pengarang mengikuti kesalahan Donovan tersebut, walaupun ditemukan sebagai kesalahan oleh Jordan (1897). Maka, nama *versicolor* jangan diikatkan dengan ngengat dari New Guinea, melainkan diganti dengan nama *Asota eusemioides* Felder, 1874.

In 1794 Johann Christian Fabricius published his *Entomologica Systematica*, in which he described the species *Noctua versicolor* in Latin as follows (p. 49):

"134 *N. laevis alis deflexis griseis sive purpurascens*

*tibus: anticis fascia abbreviata alba.*

*Habitat in Americae Insulis Dr. Pflug*

*Media. Color alarum variat mox griseus, fulvo*

*pauco nitens, mox purpurascens strigis obscurioribus*

*punctisque costalibus, albis, semper tamen fascia abbreviata*

*alba ad marginem crassiorem. Subtus sere concolores*

*striga unica, media, obscuriore"*

Approximate translation:

"134 *Noctua* with downward bent wings, grey or purplish. With short white fascia on the first wing.

It occurs on the isles of America Dr. Pflug.

Media. The colour of the wings variable, sometimes grey and a bit bronzed and then sometimes again purplish with dark streaks and on the edges white dots can be found, but always with the short white fascia broadening towards the margin. Below almost the same colour with now and then a slightly darker streak in the middle, a bit darker."

In 1805 E. Donovan published "An epitome of the natural history of the insects of New Holland, New Zealand, New Guinea, Otaheite and other islands in the Indian, Southern and Pacific Oceans", in which he described *Noctua dama* and *Noctua caricae*, referring to *Noctua versicolor* Fabricius, stating:

"The above variety of *Noctua Caricae*, for it is certainly nothing more, is introduced upon the authority of Mr. Francillon, who received the individual specimen, from which our figure is taken, together with the following species, from New Holland. We conceive it proper to state this circumstance explicitly upon the testimony of that gentleman. *Noctua Caricae* have been previously described by Fabricius as a native of the East Indies, and *Noctua Versicolor* as an inhabitant of the American islands, but neither of them heretofore as Australian insects.

It is rather singular that in two insects so dissimilar to each other as *Noctua Caricae* and *Dama*, the fulvous spot, and dots, at the base of the anterior wings should perfectly correspond."

In Donovan's opinion expected that *Noctua versicolor* was an inhabitant of the Australian continent as well as of the American islands. The origin of the specimen figured by Donovan was probably New Guinea, because the taxon is not referred to in the Australian checklist (Nielsen et al., 1996)

Jordan, in Rothschild & Jordan (1897: 336), discussed Donovan's concept of *Asota versicolor* Fabricius, 1794, noting:

"The description by Fabricius does not fit this insect, and as the habitat "in Americae Insulis" also does not agree with that of the present species, Donovan must be quoted as "the author" of *Asota versicolor*."

This quotation of Jordan implies that the habitat "in Americae Insulis" is not in the New Guinea region, where the moth generally known as *Asota versicolor* (Fig. 1) lives.

The distribution of the New Guinea "*versicolor*" is New Guinea and the surrounding islands, more in detail: on the mainland of New Guinea, and the Papuan (Indonesia) islands Salawati and Waigeu; at the eastern part (Papua New Guinea) besides the

mainland on the islands of New Britain, New Ireland, Fergusson Island, Duke of York Island, Manam Island, Lavongai, Goodenough Island, Dampier Island and Mioko.

The question therefore arises of the identity the true Fabrician species and, consequently, the identity of the moth in New Guinea.

There is a moth known as *Azeta versicolor* Fabricius 1794 which lives in the "Americae Insulis" such as the Virgin Islands, according to Robert Poole, the former curator of Smithsonian, who sent me the images of a male and a female specimen; see also Poole (1989: 118). This moth is quite different from *Asota versicolor* and it has a short white fascia on the forewing that broadens towards the costal margin as in the original description of Fabricius. In the Latin text the name of Dr Pflug is mentioned. Obviously Fabricius had received that moth from him.

The curator of the Zoologisk Museum Kobenhavn, Ole Karsholt, who advised the author that the holotype of *Noctua versicolor* is not present in the Fabricius collection in that museum, and gave the following information about Dr Pflug: "Paul Gottfried Pflug (1741-1789) was a German medical doctor. He spent some of his last years in St. Croix (Virgin Isl.) where he also collected insects, many of which were described by Fabricius. He is also mentioned as a collector (or perhaps owner) of specimens originated from elsewhere. When you consider that the original description of *Noctua versicolor* Fabricius, 1794 [fits] with the *Azeta* species [more closely, then] that is probably correct".

Fabricius and Pflug must have known each other, because of the fact that Fabricius described insects that were captured by Pflug. We should also keep in mind that the current "United States Virgin Islands" were purchased from Denmark in 1917, and had been Danish for approximately 250 years. The other part of this archipelago is British. The moths illustrated above (Figs. 2 & 3) are stored in the USNM collection (USNM = NMNH = National Museum of Natural History, Smithsonian Institute Washington D.C., USA) and were captured in the Bahamas.

Concerning these figures, Dr. Robert W. Poole (NMNH) noted:

"Attached to this message are photos of a male and a female of the species *Azeta versicolor* as currently curated in the USNM collection. The specimens are from the Bahama Islands. The original locality is probably St. Croix in the American Virgin Islands. Most Fabricius names from [Pflug], *Americae Insulae* are from St. Croix. I do not know who first assigned the name to this species in our collection, but it was probably William Schaus around the turn of the twentieth century".

Obviously Fabrician name cannot be applied to the species in New Guinea as well as that in the Caribbean. The absence of type material or a contemporary image

also poses a problem. But the provenance cited and the better fit of the description to the Caribbean species suggest that the name *versicolor* is incorrectly applied to the New Guinea species.

Accepting this, the next question concerns the right name available for the New Guinea species.

Jeremy Holloway (BMNH) was very helpful in trying to solve this problem and informed:

"If his (= Fabricius) description does not match the *Asota* species currently going under the name *versicolor*, then it must follow that the latter is a misidentification (by Donovan?), and an alternative name (the most senior synonym if available) must be applied.

I don't think it is possible to 'put things right' by transferring authorship of *versicolor* to Donovan! Even if it was, *versicolor* Donovan would still be a junior homonym of *versicolor* Fabricius if both still rest in *Asota* or if Donovan retained *versicolor* in *Noctua* in 1805."

He also tried to find the most senior name and concluded after searching in the card index of The Natural History Museum (BMNH) that it should be *eusemioides* Felder 1874.

Gaede (1932) presented an account of all the names of the Aganaiidae. About "*versicolor*" he wrote:

<i>versicolor</i>	Fabricius, Ent. Syst., 3 (2), p. 49 (1793 (sic))
	Donovan, Ins N.-Holland, t. 39, f. 3 (1805)
	Boisduval, Voy. Astrolabe, Lep., p. 252 (1832) (Aganais)
	Walker, List. Lep. Het. Br. Mus., 2, p. 459 (1854) (Hypsa)
	Butler, Trans. Ent. Soc. Lond., p. 323 (1875)
	id. Ann. Mag. Nat. Hist., (5) 10, p. 159 (1882)
	Swinhoe, Cat. Lep. Het. Oxf. Mus., 1, p. 91 (1892) (Hypsa)
	Pagenstecher, Forschungsreisen Semon, 5, p. 214 (1895)
	id., Lepid. Bismarck-Arch., 2, p. 47 (1900)
	Rothschild & Jordan, Novit. Zool., 4, p. 336 (1897)
	Seitz, Grossschmetterlinge d. Erde 10, p. 230, t. 28 b (1914)
	Rothschild, Rep. Br. Orn. Un. Exp., 78 (1915)
<i>eusemioides</i>	Felder, Reise Novara, Lep. t. 106, f. 1 (1874) (Aganais)
	Butler, Proc. Zool. Soc. Lond., p. 161 (1879)
<i>Eusimoides</i> (sic)	Kirby, Syn. Cat. Lep. Het. p. 389 (1892)

<i>Ensemoides</i> (sic)	Butler, Trans. Ent. Soc. Lond. p. 324 (1875)
var. <i>novohibernica</i>	Pagenstecher, Lepid Bismarck-Arch., 2, p. 48 (1900)
var. <i>subrupta</i>	Rothschild. Novit. Zool., 4, p. 337 (1897)
	Pagenstecher, Lepid. Bismarck-Arch., 2, p. 48 (1900)

## Conclusion

The name of *versicolor* Fabricius, 1794 was wrongly applied by Donovan (1805) to the *Asota* species from New Guinea; the correct name should be *Asota eusemioides* Felder, 1874 (See Fig. 4. image Part II division 2 nr. 1 Novara Exp. Felder 1864-1867).

## Acknowledgments

In the first place I would like to thank Jeremy Holloway for help in finding a lot of above mentioned data and who was so kind to read the text very critically; further on Robert Poole, Scott Miller and Ole Karsholt for their assistance in solving this problem.

Also thanks to Jan Meulenbeld for translating the Latin text in Dutch, Greet Hooymans for vetting the English text, and Godard Tweehuysen and Danny Boomsma, librarians of the Library of the Dutch Entomological Society in Amsterdam, who were very helpful by searching for literature of the Aganainae.

Last but not at least thanks to The Uyttenboogaart-Eliassen Foundation (The Netherlands) and Dipl.-Kfm. Thomas Witt (Germany) for the financial support to visit the collections.

## Literature

- Donovan, E. 1805. An epitome of the Natural History of the Insects of New Holland, New Zealand, New Guinea, Otaheite and other islands in the Indian, Southern, and Pacific Ocean, London
- Fabricius, J.C. 1794. Entomologica Systematica, Flensburg,
- Gaede, M., 1932. Lepidopterorum Catalogus Entrik Strand, pars 52, Berlin. (p.29)
- Jordan, K. 1897. In: Rothschild, W., E. Hartert and K.Jordan (1897). Novitates Zoologicae, IV, London.
- Nielsen, E.S., E.D. Edwards, & T.V. Rangsi (eds). 1996. Checklist of the Lepidoptera of Australia. Monographs on Australia Lepidoptera 4. CSIRO, Australia.
- Poole, R.W. 1989. Noctuidae, Lepidopterorum catalogues [2] 118, Brill, Leiden / New York



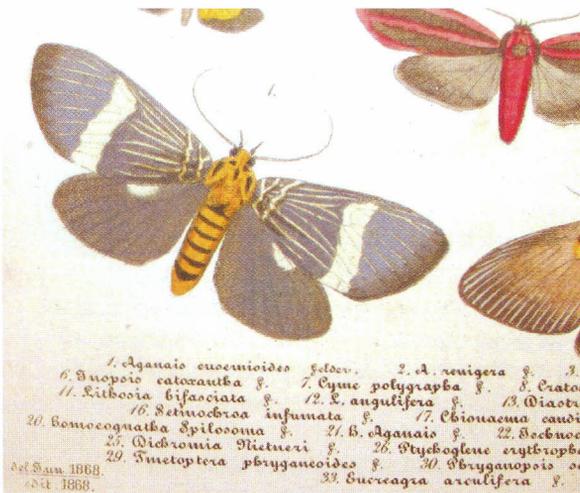
**Fig. 1.** *Asota eusemioides* Felder, 1874



**Fig. 2.** *Azeta versicolor* ♂



**Fig. 3.** *Azeta versicolor* ♀



**Fig. 4.** Image Part II division 2 nr. 1 Novara Exp. Felder 1864-1867