

## A NEW SUBSPECIES OF *ARGYREUS HYPERBIUS* (*NYMPHALIDAE*) FROM NEW GUINEA

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### *Argyreus hyperbius niugini* Samson, subsp. nov.

**Male.** Forewing length: 37–45 mm.

Dorsal surface: Margins well defined, particularly those of the hindwings which, when combined with broad submarginals, produce a wide band. In addition to black bar of hindwing discal cell, there are remnants of another on discocellulars.

Ventral surface: Constant character appears to be the absence of silver spot which, in nominate subspecies and majority of others, is present in dark postbasal area of hindwing cell. Absence of such spot also characterised in the Australian subspecies: *inconstans* Butler.

**Female.** Forewing length: 35–48 mm.

Dorsal surface: Extensive charcoal-blue band, bisecting forewing; black bars in cell are pronounced. White bar in space 4, plus spot therein usually inferior. Hindwing submarginal bands broad, more so than those of male.

Ventral surface: Markings well defined on fore- and hindwings; broad hindwing submarginals. As in male, silver spot absent in dark area of hindwing cell.

**Holotype.** Male: New Guinea, Nondugl (Central Highlands), 5,500 ft., October 16, 1950. Coll. by Wm. Brandt (E. J. L. Hallstrom). Forewing length, 43 mm.

**Allotype.** Female: same as holotype, but November 1950. Forewing length, 45 mm.

The above primary types are in the Australian National Insect Collection, Canberra, A. C. T.

**Paratypes.** 6 ♂♂, 5 ♀♀, Daulo Pass, Eastern Highlands District, New Guinea, 8,000 ft., August 1971 (2 ♂♂, 3 ♀♀ to British Museum [Natural History]; 2 ♂♂ to American Museum of Natural History; 2 ♂♂, 2 ♀♀ retained by author). Also in the British Museum (Natural History): 1 ♀, Br. New Guinea, Foothills between Kikori R. & Purari R. (J. P. de Verteuil); 3 ♂♂, Watut R. to Buiang, west-side of Herzog Mts., 3,200–5,400 ft., early 1928 (A. F. Eichhorn); 4 ♂♂, Saiko, Bubu R., Upp. Waria R. Sept., Beg. October, 5,500 ft., 1936; 2 ♂♂, 2 ♀♀, Zageheme, Cromwell Mts., East Finisterre Range, 20 VI to 7 VII.31, 4800' (F. Shaw Meyer); 1 ♂, same as above, but 16 VII.31. Retained by author: 1 ♂, 1 ♀, New Guinea, Western Highlands, Kandep, 8,000–8,500 ft., 23.1.61 to 14.2.62, W. W. Brandt.

Further material of this subspecies collected by Wm. Brandt in New Guinea, now in the Australian National Insect Collection: 5 ♂♂, 2 ♀♀, Western Highlands, Kandep, 8,000–8,500 ft., 23.1.61 to 14.2.62; 6 ♂♂, 1 ♀, Kodama Range, Mt. Kaindi, 6,500 ft., 24.2.1952, Sir Edward Hallstrom; 8 ♂♂, 4 ♀♀, Nondugl (Central Highlands), 5,500 ft., 1950, Sir Edward Hallstrom (dates range from Sept. 24 to Dec. 12); 3 ♂♂, Western Highlands, Mt. Hagen Valley, Keltiga, 5,600 ft., 28.9 to 25.10.1961; 1 ♀, Western Highlands, Jimi River, 4,700 ft., 16.7 to 21.9.1961; 1 ♂, Telefomin (Eliptamin), 4,500–5,500 ft., 19 June to 14 Sept. 1958.

The Rijksmuseum at Leiden, Netherlands, possess at least 2 males of *A. hyperbius niugini* from Irian Jaya (formerly Dutch New Guinea and

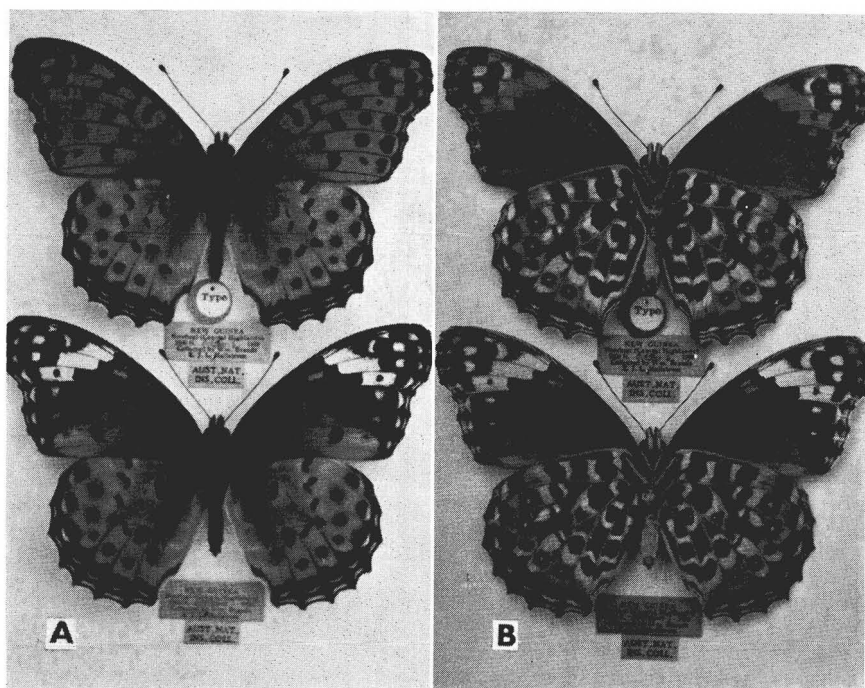


Fig. 1. *Argyreus hyperbius niugini*. A, holotype (male) and allotype (female); B, ventral surfaces of same.

West Irian), i.e., Paniai, 14 & 15.XI.1939. This locality is now known as Enaratoli and lies to the east of Wissel Lakes, at approximately 5700'. In the British Museum (Natural History) there is a female *A. hyperbius* subspecies labelled: Dutch N. Guinea, Kobotil, O. Kaba (BM 1922-165). This appears to be within the known variation of *A. hyperbius javanica* Oberthür, and is a dark, well marked example. I am unable to locate any examples from the Moluccas or intermediate islands, but *A. hyperbius* subspecies reappear in the west in the Sunda Islands, Java and Sumatra, Sulawesi (formerly Celebes) and through India to Abyssinia.

I have seen males and females of *A. h. niugini* from the Central and Northern Districts of Papua, and according to Ray Straatman (pers. comm., 1973): "... the species flies in open areas (grassland) at altitudes from 1500 to 3000 metres and is most common at about 2000 to 3000 metres." D'Abrera (1971, p. 210) records the Australian subspecies, *A. h. inconstans* as occurring also in New Guinea and possibly Papua. All specimens that I have observed from Papua New Guinea are quite

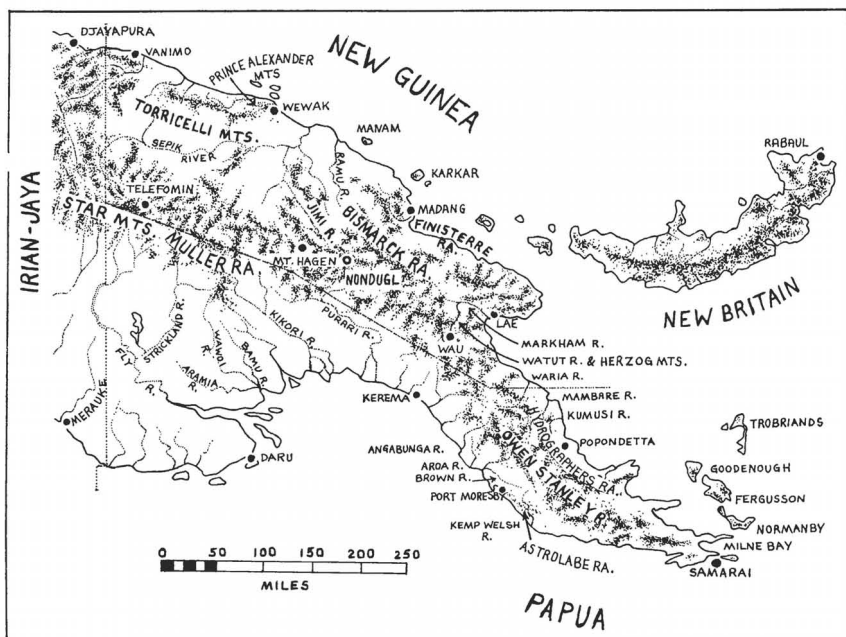


Fig. 2. Map of Papua New Guinea (excluding Manus, New Ireland, Woodlark and Bougainville) indicating main ranges and localities for paratypes and primary type material.

separable from those in Australia which, to the best of my knowledge, are restricted to that area. Thus, we record the new subspecies from mainland Papua New Guinea and Irian Jaya.

The life-history of *A. h. niugini* is probably similar to that of the nominate subspecies from North India, the larvae feeding on Violaceae; indeed, the early stages of *A. hyperbius* from Japan are well illustrated and documented in Shirôzu & Hara (1960, p. 31).

As noted from the material examined, many specimens of *A. h. niugini* were collected by William Brandt, including the primary types; thus, I think it only fitting to include some notes on this accomplished naturalist:

William Brandt came to Australia from Sweden about 1949 and was employed by the late Sir Edward Hallstrom to collect butterflies for him in New Guinea. For five years Brandt built up an impressive collection of Lepidoptera, primarily from Papua and New Guinea, and mainly of the larger species. In 1955 Hallstrom lost interest in his collection of butterflies and donated it to the Australian Government, whereupon it became part of the Division of Entomology, C.S.I.R.O. at Canberra. From 1955 until his retirement about 1969, Brandt continued to collect

mainly Lepidoptera in New Guinea, New Britain, New Ireland, New Hebrides, Solomons and many of the smaller New Guinea islands. In this work he was financed largely by the Bishop Museum, Hawaii; during the latter period the Lepidoptera continued to come to the Australian National Insect Collection, while the other insects went to the Bishop Museum.

Brandt collected for a total of about 15 years in New Guinea, the last three or four years before his retirement being spent working on the Collection in Australia or, for about two years, working on New Guinea Lepidoptera at the British Museum (Natural History). During the period when Brandt was collecting for Hallstrom, the latter insisted that the data labels bore his name, as well as the actual collector. Hallstrom was very interested in New Guinea and set up an Experimental Livestock Station at Nondugl, the type locality for the new subspecies herein described.

#### ACKNOWLEDGMENTS

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