

A NEW SPECIES OF *PANOQUINA* FROM PANAMA (LEPIDOPTERA: HESPERIIDAE, HESPERIINAE, CALPODINI)

Richard A. Anderson

836 Amelia Ct. NE, St. Petersburg, Florida 33702; Research Associate, McGuire Center for Lepidoptera and Biodiversity,
Florida Museum of Natural History, University of Florida, P.O. Box 112710, Gainesville, Florida 32611-2710

Abstract – A new large species of *Panoquina* is named and described from Panama and illustrated with its genitalia. Its lack of forewing maculation sets it apart from other large members of the genus, although its ventral surface markings and genitalia are similar to known *Panoquina* species.

Key words: Panama, neotropics, genitalia, HesperIIDae.

An apparently unknown skipper was collected by Gasper Danish in the upland region of western Panama near the Costa Rican border in Chiriqui Providence in early 2012, and eventually forwarded to the author for confirmation and subsequent description. The specimen has been determined to be an unknown species of *Panoquina* Hemming, 1934 (HesperIIDae: HesperIInae: Calpodini) and is described below.

Panoquina danishi Anderson, new species, (Figs 1, 2)

Description. Male (Fig 1): forewing length 25 mm and without brands; forewing produced, termen convex from apex to CuA2 and straight from there to tornus; hindwing apex rounded, termen convex to CuA1 and concave from CuA2 to 2A, tornus rounded; dorsum dark chocolate brown with orange-brown hair-like setiform scales in the upper half of CuA2-2A extending distad to origin vein CuA2, and the basal 2/3 of the anal margin of forewing; orange-cupreous regular scales in basal 1/3 of costal margin, and in lower half of CuA2-2A extending distad half as far as the basal hair. Basal 1/3 of hindwing covered with same colored setiform scales; forewing without macules but with a faint trace of a spot in CuA1-CuA2 below origin of CuA1; fringe dark brown at apex transitioning to white at CuA1 to the tornus. Venter same chocolate brown basal 1/2 of forewing, paler brown towards apex, faint trace of the spot in CuA1-CuA2 more evident than on dorsal surface; hindwing fringe brown at apex transitioning to white at M2 and continuing to tornus and half of inner margin, a blue-white postmedian

band extends from the apex towards the tornus ending at vein 2A, distal border of band unevenly straight, proximal border expanded widest in M3-CuA1 (4 mm) and tapered at both ends. The band reduced to two spots near the apex in Sc+R1-Rs and Rs-M1, and to approximately 1/3 its maximum width in CuA2-2A.

Dorsum of head a mixture of black and blue-green setiform scales, tufts of pale ochreous setiform scales at base of antenna, palpi flattened against the head and mixed brown and white in color, pale ochreous under the eyes, third segment short and more cylindrical than conical; antenna dark brown with yellow scales under club, nudum orange-brown and similar in color to the basal setiform scales on forewing, fourteen segments; dorsal thorax covered with orange-brown setiform scales slightly darker than basal area of forewing, ventral thoracic mixed dark brown and pale blue-green setiform scales; hind legs (fore and middle legs of holotype missing) dark brown, hind tibia with spines, one pair of spurs; anterior half of abdomen dorsad covered with same colored setiform scales as dorsum of thorax, remainder of abdomen black with a 2 mm streak of white scales on either side of posterior end on ventral surface.

Genitalia (Fig. 2): tegumen length twice its width in dorsal view, dorsum slightly rounded in lateral view; uncus broadly divided and U-shaped at base in dorsal view, tip down turned forming a dull point, uncus and gnathos arms wide apart and of equal length in lateral view; gnathos arms extend cephalad almost length of tegumen in ventral view; vinculum smooth and slightly rounded; saccus slightly upturned; valvae symmetrical,



Fig. 1. Adult of *Panoquina danishi*; a) dorsal and b) ventral views of holotype male, data in text.

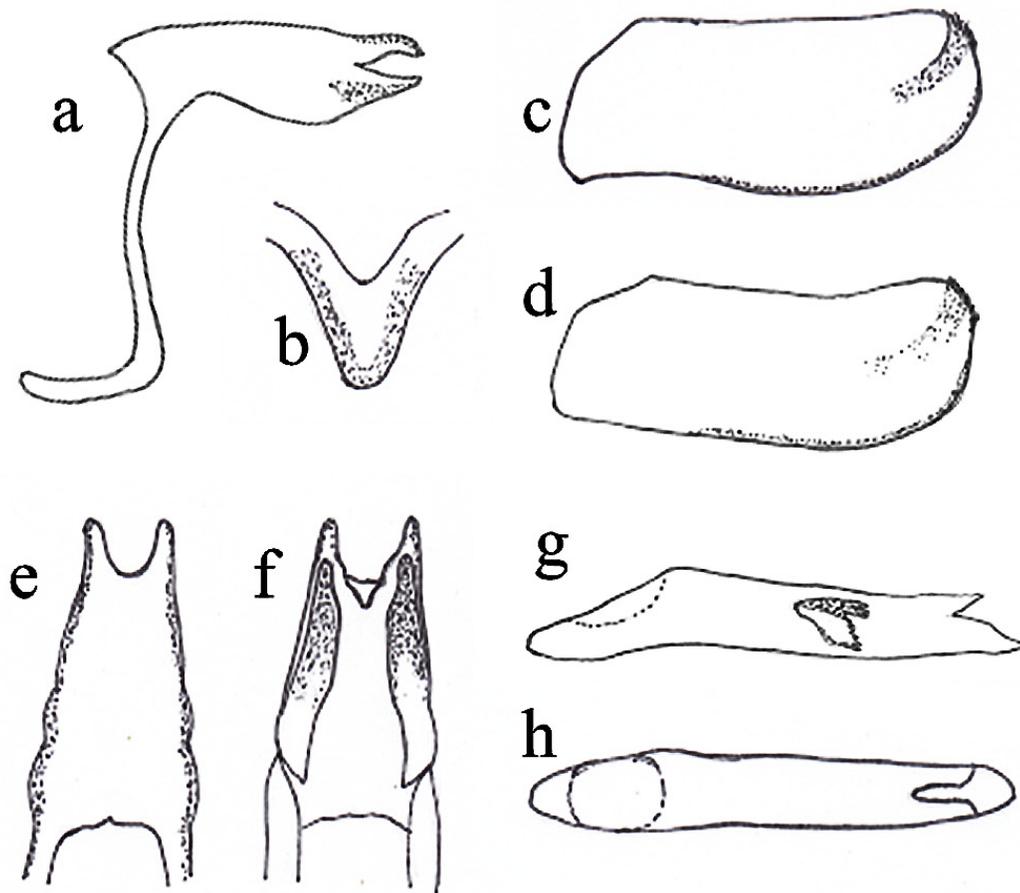


Fig. 2. Male genitalia of *Panoquina danishi* holotype, genitalia vial # RAA 0735, data in text; (a) lateral view of uncus, gnathos, tegumen, vinculum, saccus, (b) ventral view of saccus, (c) internal view of right valva, (d) lateral view of left valva, (e) dorsal view of tegumen and uncus, (f) ventral view of tegumen, uncus, and gnathos, (g) lateral view of aedeagus, (h) dorsal view of aedeagus.

dorsal edge of costa-ampulla straight, caudal edge rounded with a curved dorsally directed sclerotized band on inner surface terminating with a serrated edge barely extending past caudal end of valva; aedeagus straight, slightly enlarged cephalad, caudal end evenly rounded in ventral view, the terminal configuration in dorsal view is recessed with a cephalad directed narrow groove; two cornuti, one with a sclerotized pointed tip and the other edged with a row sclerotized teeth.

Female. Unknown.

Type. Holotype male with the following labels: white, hand written: / Panama / Chiriquí Province / Santa Clara / Finca Hartman / 20 February 2012 / leg. G. Danish /; white, printed: / Gent.Vial No. / RAA 0735 /; red, printed: / HOLOTYPE / *Panoquina danishi* Anderson /. The holotype is deposited in the collection of Gasper Danish.

Type locality. PANAMA: Chiriquí Province, Santa Clara, Finca Hartmann, near the Ojo de Agua Biological Research Station. The area is a mixture of heavily forested patches, coffee and banana plantations, and open fields varying in elevation from

1500 to 1800 meters. The holotype was captured in a heavily forested area at approximately 1560 meters in elevation with GPS coordinates of 8.868055°, -82.742778°.

Etymology. This species is named for its collector, Gasper Danish, who has collected extensively in Central and South America, as well as several Caribbean Islands. His collecting trips include five to Panama in the past decade.

Distribution and phenology. *Panoquina danishi* is presently known only from the holotype male. However, because the type locality of this taxon is close to the Costa Rican border (approximately 4 km), it should also be expected in similar habitats in this neighboring country.

Diagnosis and discussion. *Panoquina danishi* gives the impression that it belongs in the Calpodini group of Hesperinae due to its wing shape, size, rich dark brown appearance of the forewing, antennal club constricted before the apiculus, and palpi flattened against the head. The white band on the ventral surface of the hind wing is very similar to two known *Panoquina* species, and suggests it belongs in the genus. Additionally, the

genitalia are similar to several large *Panoquina* species, as discussed below, and the specimen's nudum occupies half the antennal club and half of the apiculus which is characteristic of the genus. Its placement in *Panoquina* is appropriate.

In the neotropics, fifteen species are listed in the genus *Panoquina* (Lamas 2004). Recently a sixteenth species (*P. neblina* Vargas & Salazar, 2013) was described from Colombia Constantino *et al.*, 2013. Of the continental species, only *P. evansi* (H.A. Freeman, 1946), *P. fusina* (Hewitson, 1868), *P. pauper* (Mabille, 1878), *P. luctuosa* (Herrich-Schaffer, 1869), *P. evadnes* (Stoll, 1781) and *P. neblina* have forewing lengths greater than 20 mm Evans (1955). All of these are well marked with hyaline spotting on the forewing and have some type of white band, or spotting in the case of *P. pauper*, on the ventral surface of the hindwing. *Panoquina danishi* most closely resembles the South American *P. luctuosa* and *P. neblina* on the ventral hindwing surface in the general form of the white band with its considerable variation in width and tapered ends. The other large banded species have the white hindwing band equal in width throughout its length, broader and/or with less tapering in width.

A review of the genitalia drawings of the large neotropical species in the genus *Panoquina* illustrated in Evans (1955) shows that differences between species are quite small. This is particularly true in the shape of the valva, and to a lesser degree in the tegumen and uncus. The sketch in Evans (1955) for the valva of *P. luctuosa* may be not be very precise, because it does not match closely genitalia preparations in the British Museum of Natural History photographs of any of the three *P. luctuosa* subspecies. Interestingly, the valva of *P. danishi* is nearly identical to that of *P. l. luctuosa* and less so to the subspecies *P. l. fonda* Evans 1955 and *P. l. cineas* Evans 1955. However Evans' drawing of the ventral view of the tegumen and uncus of *P. luctuosa* is close to that of *P. danishi* and even *P. pauper*. Because of the similarities in the genitalia, their use alone is less instructive for identification of large *Panoquina* species than it is for many other Hesperidae. Unfortunately the genitalia of *P. neblina* were not illustrated or described, so a comparison with *P. danishi* and *P. luctuosa* could not be made. *P. danishi* is readily distinguished from its similar congeners by the lack of forewing spotting. Future work and specimens are needed to further define the relationships and distinctions between these three species.

ACKNOWLEDGEMENTS

I wish to thank Andy Warren for taking the photographs of the holotype and for the encouragement to describe this new species. John Calhoun reviewed the initial draft of the manuscript and his constructive comments were incorporated. Nick Grishin provided photographs of the *P. luctuosa* subspecies types and their genitalia in the British Museum of Natural History. Additionally, I am grateful for his enlightening comments and corrections, and general helpful suggestions.

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