

Genus *Cyrestis* Boisduval, 1832

Maps

Voyage de Découvertes de L'Astrolabe sous le commandement de M. J. dumont D'Urville. Faune entomologique de l'Océan Pacifique. Lépidopteres (1): 117 (267 pp.). Paris.

Type-species: *Papilio thyonaeus* Cramer, by subsequent designation (Scudder, 1875. *Proceedings of the American Academy of Arts and Sciences* **10**: 152 (91-293).) [extralimital].

Synonyms based on extralimital type-species: *Apsithra* Moore; *Sykophages* Martin.



Cyrestis camillus camillus. Cameroon, May 2019.
Image courtesy Jeremy Dobson.

The genus *Cyrestis* belongs to the Family Nymphalidae Rafinesque, 1815; Subfamily Cyrestinae Guenée, 1865. There are no other genera in the Subfamily Cyrestinae in the Afrotropical Region.

Cyrestis (**Maps**) is an Old World genus of 22 species, only one of which is Afrotropical.

Subgenus *Azania* Martin, 1903

Deutsche Entomologische Zeitschrift, Iris **16**: 160 (71-169).

Type-species: *Papilio camillus* Fabricius, by subsequent designation (Hemming, 1939. *Proceedings of the Royal Entomological Society of London* (B) **8**: 133 (133-138).).

****Cyrestis (Azania) camillus* (Fabricius, 1781)#**
African Map



Mudpuddling African Map butterflies (*Cyrestis camillus*) in Tanzania (left) and Madagascar (right).
Images courtesy Sudheer Kommana (left) and Bart Wursten (right).

Papilio camillus Fabricius, 1781. *Species Insectorum* 2: 11 (499 pp.). Hamburgi & Kilonii.
Cyrestis (Azania) pantheus (Drury, 1782). Pringle *et al.*, 1994: 111. [synonym of *camillus*]



Cyrestis camillus camillus. Male (Wingspan 47 mm). Left – upperside; right – underside.
Mabira Forest, Uganda. 15 June 2009. J. Dobson.
Images M.C. Williams ex Dobson Collection.



Cyrestis camillus camillus. Female (Wingspan 53 mm). Left – upperside; right – underside.
Mabira Forest, Uganda. 1 December 2007. J. Dobson.
Images M.C. Williams ex Dobson Collection.



Cyrestis camillus camillus. Male (melanic form). Left – upperside; right – underside.
Central African Republic. March, 2014.
Images M.C. Williams ex J. Lawrence Collection.

Alternative common name: African Map Butterfly.

Type locality: “Africa aequinoctiali”.

Diagnosis: Some seasonal variation is shown by this otherwise very distinctive butterfly: the golden transverse bands on the underside of the hindwing are strongly marked in midsummer specimens but may be very faint in the early spring brood (Pringle *et al.*, 1994).

Distribution: Senegal, Guinea-Bissau (Bivar-de-Sousa *et al.*, 2008), Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin, Nigeria, Cameroon, Equatorial Guinea, Sao Tome & Principe, Gabon, Congo, Angola, Central African Republic, Democratic Republic of Congo, Ethiopia, Uganda, Kenya, Tanzania, Malawi, Zambia, Mozambique, Zimbabwe, South Africa, Madagascar.

Habitat: Forest and dense secondary growth. Commoner in secondary than in primary forest (Larsen, 2005a). In Tanzania the nominate subspecies occurs from 800 to 1 500 m and subspecies *sublineata* from near sea level to 1 600 m (Kielland, 1990d).

Habits: Despite its small body, relative to the wing surface, this butterfly is a powerful flier. When not threatened the flight is often gliding, with occasional flaps of the wings, much as in the genus *Neptis*. Specimens are usually found in the canopy of trees near streams but males often come down to suck moisture at damp spots on the ground. When mudpuddling they assume a unique position, holding the wings open and inclined slightly downwards, with the forewings pushed forwards (Van Son, 1979). Males also come to foul substances and urine, running about excitedly with the wings held flat (Larsen, 2005a). If disturbed they will fly off rapidly, with a zig-zagging flight, and alight suddenly on the underside of a leaf with the wings held flat, thus appearing almost to miraculously disappear (Van Son, 1979). Individuals also alight with open wings on the upper surface of the leaves of branches that overhang water (Kielland, 1990d). Specimens are strongly attracted to flowers (Pringle *et al.*, 1994). Van Son (1979) states that when settled it resembles the distasteful uraniid moth *Urapteroides falcifera* Warren. R. Schutte (pers. comm. April 2010) found ssp. *elegans* in Madagascar to be a common resident, mud puddling with swarms of pierids along a forest track. Its open wing gliding flight made it easily distinguishable from the other white butterflies in the swarm.

Flight period: All year, with slight seasonal variation.

Early stages:

Mullin, in Pringle *et al.*, 1994: 111 [as *Cyrestis pantheus sublineatus*; Mount Selinda, Zimbabwe; first bred in February, 1989].

“Egg: Eggs are generally laid on the edges of young leaves or on new buds. The egg is bright yellow when laid. It measures 0.7 mm wide at the base by 0.9 mm high. It is elliptical in shape with a flattened and recessed top. It has 9-11 longitudinal ribs. After a couple of days the egg develops brownish streaks between the ribs, giving it an orange appearance. The eggs hatched after some 10 days (much slower than the summer brood). Larva: The first instar larva is 1.5 mm long, a watery greenish-ochre colour with a black head. It devours its eggshell for the first meal. The anal segment is wine-brown and bears a short sphingid-like horn. Final instar larva: Approximately 40 mm long (maximum size). Head: spherical, bearing a pair of horns which curve outwards and backward, similar to a

young goat, about 5 mm long; face cream edged in grape-black; horns grape-black, and this coloration extends in two diagonal stripes to link with the mouth parts. The body exhibits a tan-coloured dorsal strip extending from head to tail. Segments 1, 2 and 3 dorsally tan-coloured merging to plum-black laterally. From the fourth segment arises a backward-pointing curved horn, about 8 mm long, plum-black in colour as is the dorsum to the tail. Lateral coloration bright, pale green to the tail with the exception of segments 5 and 7, which are grape-black with a black diagonal stripe extending dorsally backwards into segments 6 and 8. A very narrow, faint diagonal stripe may also be discerned on segments 4, 6, 8, 9 and 10. Arising from the anal segment is a backward-pointing horn which then curves forward before curving yet again backwards at the tip rather like an S-bend. The final instar larvae rest on the upper surface of the leaves, relying no doubt on their coloration as camouflage against predators. Pupa: Medium brown; 28 mm long; similar to a *Neptis*; palps protrude at the anterior end, and these are not joined although they meet; slightly winged laterally. The thoracic area is dorsally domed and pointed and embellished, where it joins the abdomen, with a silver spot on either side of the dorsal line. A dried leaf-like structure appears dorsally behind the thorax in a vertical plane, and the remaining abdominal segments are serrated dorsally, and to a lesser extent, ventrally. The anal segment is laterally flattened and dark brown. The whole pupa is netted with veining which resembles a semi-decomposed leaf. Although individual durations were not recorded, the whole cycle from egg-laying to adult emergence took approximately five weeks. Young larvae seem to cut main leaf veins to the area on which they are feeding, probably to prevent the sap flow. First instar larvae make ‘ropes’ in the fashion of *Pseudacraea boisduvalii trimenii*. The ropes are black and the larva rests at the end”.

Congdon et al., 2017 [final instar larva].

Larval food:

Antiaris toxicaria Lesch. var. *africana* Scott-Elliot ex A.Chev. (Moraceae) [Vuattoux & Blandin, 1979; as *Antiaris africana*; Ivory Coast].

Chlorophora species (Moraceae) [Owen, *vide* Larsen, 2005; Sierra Leone].

Ficus asperifolia Miq (Moraceae) [Congdon, et al., 2017].

Ficus exasperata Vahl (Moraceae) [Vuattoux & Blandin, 1979; Ivory Coast].

Ficus sur Forssk. (Moraceae) [Mullin, *in* Pringle et al., 1994: 112; Chimanimani, Zimbabwe].

Ficus sur Forssk. (Moraceae) [Vuattoux & Blandin, 1979; as *Ficus capensis*; Ivory Coast].

Maclura africana (Bureau) Corner (Moraceae) [Congdon et al., 2017].

Milicia excelsa (Welw.) C.C.Berg. (Moraceae) [Vuattoux & Blandin, 1979; as *Chlorophora excelsa*; Ivory Coast].

Morus mesozygia Stapf (Moraceae) [Vuattoux & Blandin, 1979; Ivory Coast].

Treculia species (Moraceae) [Pyrzcz, 1991; Principe].

Trilepisium madagascariense DC. (Moraceae) [Mullin, *in* Pringle et al., 1994: 112; as *Bosquiea phoberos* Baill.; Mount Selinda, Zimbabwe].

Trilepisium madagascariense DC. (Moraceae) [Mullin, *in* Pringle et al., 1994: 112].

Ziziphus species (Rhamnaceae) [S. Collins, *vide* Larsen, 1991c; Kenya coast].

Note: *Cyrestis pantheus pantheus* (Drury, 1782) was proposed as replacement name for *Papilio camillus* Fabricius, 1781, nec Cramer, 1780 – see Koçak, 1996 (*Centre for Entomological Studies Miscellaneous Papers* 27-28: 12 (10-16)). Proposed conservation of *Cyrestis camillus* by Larsen, 1997 was upheld (Opinion 1917, ICZN 1999) – see Larsen, 1997 (*Bulletin of Zoological Nomenclature* 54 (3): 157 (155-158)).

Cyrestis (Azania) camillus camillus (Fabricius, 1781)

African Map

Papilio camillus Fabricius, 1781. *Species Insectorum* 2: 11 (499 pp.). Hamburgi & Kilonii.



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Cyrestis camillus camillus. Male (melanic form). Left – upperside; right – underside.
Central African Republic. March, 2014.
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Type locality: “Africa aequinoctiali”.

Distribution: Senegal, Guinea-Bissau (Bivar-de-Sousa *et al.*, 2008), Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Benin (south, central), Nigeria (south and Cross River loop), Cameroon, Equatorial Guinea (Bioko), Sao Tome & Principe (Principe), Gabon, Congo, Angola, Central African Republic, Democratic Republic of Congo, Ethiopia, Uganda, Kenya (west), Tanzania (north-west), Zambia (north).

Specific localities:

Senegal – Basse Casamance (single record) (Larsen, 2005a).

Guinea – Ziama (Safian *et al.*, 2020).

Liberia – Wologizi (Safian *et al.*, 2020); Wonegizi (Safian *et al.*, 2020).

Ghana – Bobiri Butterfly Sanctuary (Larsen *et al.*, 2007); Boabeng-Fiema Monkey Sanctuary (Larsen *et al.*, 2009).

Benin – see Coache *et al.*, 2017.

Cameroon – Korup (Larsen, 2005a).

Equatorial Guinea – Caldera de Luba, Bioko (Martin, 2015).

Gabon – Lake Evaro (Vande weghe, 2010); Kinguele (Vande weghe, 2010); Waka (Vande weghe, 2010); Bitam (Vande weghe, 2010); Ipassa (Vande weghe, 2010); Franceville (Vande weghe, 2010); Ekouyi (Vande weghe, 2010); camp PPG (Vande weghe, 2010).

Central African Republic – Dzanga (Noss, 1998).

Democratic Republic of Congo – Stanleyville (Le Cerf, 1927); Ituri Forest (Ducarme, 2018); Semuliki Valley (Ducarme, 2018); Central Forest Block (Ducarme, 2018); Mt Mitumba (Ducarme, 2018).

Uganda – Semuliki N.P. (Davenport & Howard, 1996).

Tanzania – Mpanda and Kigoma Districts (Kielland, 1990d).

pantheus Drury, 1782 (as sp. of *Papilio*). *Illustrations of Natural History* 3: index et 7 (76 pp.). London. Sierra Leone: “Sierra Leon”.

donckieri Le Cerf, 1927 (as f. (? indiv.) of *Cyrestis camillus*). *Encyclopédie Entomologique* (B. 3. Lepidoptera) 2: 48 (44-58). [Democratic Republic of Congo]: “Stanleyville, Congo belge”.

Cyrestis (Azania) camillus elegans Boisduval, 1833
Malagasy African Map

Cyrestis elegans Boisduval, 1833. *Nouvelles Annales du Muséum d’Histoire Naturelle, Paris* 2: 190 (149-270).



Cyrestis camillus elegans. Male. Left – upperside; right – underside.
Madagascar. May, 2015.
Images M.C. Williams ex J. Lawrence Collection.



Cyrestis camillus elegans. Female. Left – upperside; right – underside.
Ranamofana, Madagascar. 11 April 2018. J. Lawrence.
Images M.C. Williams ex Lawrence Collection.

Type locality: Madagascar: “à Sainte-Marie, à Foule-Pointe, et à Tamatave [Toamasina]”.

Distribution: Madagascar.

Specific localities:

Madagascar – Sainte-Marie (TL); Foule-Pointe (Boisduval, 1833), Toamasina (Boisduval, 1833); Perinet Montadia primary forest (R. Schutte, pers. comm. April 2010).

Cyrestis (Azania) camillus sublineata Lathy, 1901#

African Map

Cyrestis sublineata Lathy, 1901. *Transactions of the Entomological Society of London* **1901**: 25 (19-36).

Cyrestis camillus sublineatus Lathy, 1901. Dickson & Kroon, 1978.

Cyrestis (Azania) pantheus sublineatus Lathy, 1901. Pringle *et al.*, 1994: 111.



Cyrestis camillus sublineata. Male. Left – upperside; right – underside.
Essex Valley, Vumba, Zimbabwe. 17 December 1998. J. Greyling.
Images M.C. Williams ex Greyling Collection.



Cyrestis camillus sublineata. Female. Left – upperside; right – underside.
 Rusito, Zimbabwe. 22 September 1996. J. Greyling.
 Images M.C. Williams ex Greyling Collection.

Type locality: [Malawi]: “Zomba”.

Diagnosis: Differs from the nominate subspecies in that the forewing orange discal band is irregular (in the nominate subspecies it is straight to vein 4) (Kielland, 1990d).

Distribution: Kenya (east), Tanzania (east), Malawi, Mozambique, Zimbabwe (eastern border), South Africa (Limpopo Province).

Recorded, apparently in error, from Zambia by Ackery *et al.*, 1995 (Heath *et al.*, 2002).

Specific localities:

Kenya – coast (Larsen, 1991c); Teita Hills (Larsen, 1991c); Shimba Hills (Larsen, 1991c).

Tanzania – Rondo (Kielland, 1990d); Tanga Region (Kielland, 1990d); Pare Mountains (Kielland, 1990d); Mount Meru (Kielland, 1990d); Moshi (Kielland, 1990d); Morogoro (Kielland, 1990d); Uzungwa Range (Kielland, 1990d); Masagati Forest (Kielland, 1990d).

Malawi – Zomba (TL); Mt Mulanje (Congdon *et al.*, 2010); Nyika N.P. (J. Timberlake, pers. comm., 2019).

Mozambique – Dondo (Pringle *et al.*, 1994); Xiluvo (Pringle *et al.*, 1994); Maronga (Pringle *et al.*, 1994); Posto de Catandica (Pringle *et al.*, 1994); Mt Mabu (Congdon *et al.*, 2010).

Zimbabwe – Mutare (Pringle *et al.*, 1994); Mount Selinda (Pringle *et al.*, 1994); Shamvu, north-east of Harare (Paré); junction of Sabi and Runde rivers (Pringle *et al.*, 1994); Chiredzi River (Mullin).

Limpopo Province – Pafuri (Pringle *et al.*, 1994); Punda Maria (Kloppers); Woodbush (Swanepoel, 1983; single record); Lekgalameetse Nature Reserve (“Malta Forest”) (Badham, *vide* Swanepoel (1983); single record).