

## Genus *Physcaeneura* Wallengren, 1857 Webbed Ringlets

Öfversigt af Kongl. Vetenskaps-Akademiens Förhandlingar. Stockholm annis 1838-1845. Collecta (n.s.) 2 (4): 32 (55 pp.).

Type-species: *Satyrus panda* Boisduval, by monotypy.

= *Periplysia* Gerstaecker, 1871. *Archiv für Naturgeschichte* 1871 (1): 358 (345-363). Type-species: *Periplysia leda* Gerstaecker, by monotypy.

The genus *Physcaeneura* belongs to the Family Nymphalidae Rafinesque, 1815; Subfamily Satyrinae Boisduval, 1833; Tribe Satyrini Boisduval, 1833; Subtribe Callerebiina, Grishin, 2021. The other genera in the Subtribe Ypthimina in the Afrotropical Region are *Ypthima*, *Ypthimomorpha*, *Mashuna*, *Mashunoides*, *Strabena*, *Neocoenyra*, *Coenyropsis*, *Coenyra*, *Neita*, *Melampias*, *Cassionympha*, *Pseudonympha*, *Paternympha* and *Stygionympha*.

*Physcaeneura* (**Webbed Ringlets**) is an Afrotropical genus containing five species.

### \**Physcaeneura jacksoni* Carcasson, 1961

*Physcaeneura jacksoni* Carcasson, 1961. *Occasional Papers. Coryndon Memorial Museum, Nairobi* 7: 15 (1-23).

**Type locality:** [Tanzania]: “Turiani, Morogoro, northern Tanganyika”.

**Diagnosis:** Upperside of wings white, with forewing costa and distal borders of both wings dark brown (Kielland, 1990d).

**Distribution:** Tanzania (north-east).

**Specific localities:**

Tanzania – Turiani, Morogoro (TL); Usambara Mountains (Kielland, 1990d); Uluguru Mountains (Kielland, 1990d); South Pare Mountains (Kielland, 1990d); Nguru Mountains (Kielland, 1990d); Ukaguru Mountains (Kielland, 1990d); Uzungwa Rift (Kielland, 1990d); Ulanga District (Kielland, 1990d).

**Habitat:** Dense woodland, forest margins and grassy forest clearings from near sea-level to 1 500 m (Kielland, 1990d).

**Habits:** The flight is very feeble and specimens fly just above ground-level, amongst the grass (Kielland, 1990d).

**Early stages:**

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

**Larval food:**

Grasses (Poaceae) [Congdon et al., 2017; Sanje, Tanzania].

**Note:** Specimens from the population in Ulanga District are larger and the underside striations and distal margin are more extended than in topotypical material (Kielland, 1990d: 86).

## \**Physcaeneura leda* (Gerstaecker, 1871)

*Periplysia leda* Gerstaecker, 1871. *Archiv für Naturgeschichte* **1871** (1): 358 (345-363).

**Type locality:** [Tanzania]: “Zanzibar”.

**Diagnosis:** Upperside of wings with broader brown margins than in *Physcaeneura jacksoni* (Kielland, 1990d).

**Distribution:** Somalia (south), Kenya (coast), Tanzania (north-east).

**Specific localities:**

Kenya – coastal forests (Larsen, 1991c); Shimba Hills (Larsen, 1991c); Mount Sagala (Larsen, 1991c).

Tanzania – Zanzibar (TL); South Pare Mountains (Kielland, 1990d); Tanga Region (Kielland, 1990d).

**Habitat:** Dense woodland, forest margins and grassy forest clearings from sea-level to 1 850 m (Kielland, 1990d).

**Habits:** The flight is slow and bouncing. They often rest on the upper surface of leaves (Larsen, 1991c).

**Early stages:** Nothing published.

**Larval food:**

Unidentified grasses (Poaceae) [Larsen, 1991c: 278].

## \**Physcaeneura panda* (Boisduval, 1847)#

Dark Webbed Ringlet



Dark Webbed Ringlet (*Physcaeneura panda*). Left – male upperside. Right – male underside.  
Images courtesy Herbert Otto (left) and Jeremy Dobson (right).

*Satyris panda* Boisduval, 1847. *In*: Delegorgue, A., *Voyage dans l'Afrique australe* **2**: 594 (585-602).

*Physcaeneura panda* (Boisduval, 1847). Wallengren, 1857.

*Erebia panda* Boisduval. Trimen, 1866a.

*Physcaeneura panda* (Boisduval, 1847). Trimen & Bowker, 1887a.

*Physcaeneura panda* Boisduval. Swanepoel, 1953a.

*Physcaeneura panda* (Boisduval, 1847). Dickson & Kroon, 1978.

*Physcaeneura panda* (De Boisduval, 1847). Pringle *et al.*, 1994: 60. [misspelling of author's name]



*Physcaeneura panda*. Male (Wingspan 37 mm). Left – upperside; right – underside.  
Hennops River, Gauteng, South Africa. 18 February 2005. J. Dobson.  
Images M.C.Williams ex J. Dobson Collection.



*Physcaeneura panda*. Female (Wingspan 38 mm). Left – upperside; right – underside.  
Leeufontein Nature Reserve, Gauteng, South Africa. 5 December 2009. J. Dobson.  
Images M.C.Williams ex J. Dobson Collection.

**Type locality:** [South Africa]: “Pays des Amazoulous”.

**Distribution:** Mozambique (south), Zimbabwe, Botswana, Namibia (north), South Africa (Limpopo Province, Mpumalanga, North West Province, Gauteng, KwaZulu-Natal), Swaziland (Duke *et al.*, 1999).

**Specific localities:**

Botswana – Gaborone (Larsen, 1991); Kanye (Larsen, 1991); Lobatse (Larsen, 1991); Ngotwane Siding (Larsen, 1991); Serowe (Larsen, 1991); Tswapong Hills (Larsen, 1991).

Limpopo Province – Throughout bushveld areas (Swanepoel, 1953); Doorndraai Dam Nature Reserve (Warren, 1990); Percy Fyfe Nature Reserve (Warren, 1990); Highlands Wilderness (Bode & Bode, unpublished checklist); Soetdoring Farm [-24.561 28.233] (A. Mayer, pers comm. 2015).

Mpumalanga – Throughout bushveld areas (Swanepoel, 1953); Mariepskop area (Henning, 1994c); Malelane (male illustrated above).

North West Province – Throughout bushveld areas (Swanepoel, 1953); Mafikeng (Swanepoel, 1953); Borakalalo Nature Reserve (J. Dobson, unpublished, 2009).

Gauteng – Throughout bushveld areas (Swanepoel, 1953).

KwaZulu-Natal – Greytown (Swanepoel, 1953); Estcourt (Swanepoel, 1953); Empangeni (Swanepoel, 1953); Hluhluwe (Swanepoel, 1953); St Lucia Bay (Swanepoel, 1953); Kosi Bay Nature Reserve (Pringle & Kyle, 2002); Tembe Nature Reserve (Pringle & Kyle, 2002); Ndumo Nature Reserve (Pringle & Kyle, 2002).

Swaziland – Mlawula N. R. ([www.sntc.org.sz](http://www.sntc.org.sz)).

**Habitat:** Savanna.

**Habits:** The flight is weak, low down, and it often settles, on low vegetation or on the ground. Specimens tend to keep to the shade cast by large trees. Both sexes feed from flowers and are also attracted to fermenting fruit (Pringle *et al.*, 1994). Larsen saw some males at water in Botswana (Larsen, pers. comm., 2007).

**Flight period:** The summer months (Pringle *et al.*, 1994).

**Early stages:**

Clark, *in* Van Son, 1955: 93.

“**Egg.** The eggs are laid singly on a blade of grass. They are elliptical in section, being 1.1 mm in the major diameter halfway down, and 0.95 mm in the minor diameter, and are 1.3 mm high. There are 19-20 longitudinal ribs braced by 14-16 troughs which increase in size towards the top and turn into round indentations. Micropyle slightly irregular and sunken. Watery yellow when laid, they darken slightly and develop brick-red to red maculae. Egg-stage eleven days. **Larva: First instar.** The young larva eats its way out near the top and devours the discarded shell. It is 3 mm long, whitish-yellow with a brownish-yellow head. The setae of the head are black with light tips, those of the body are watery white. There is a pale brown dorsal line and a lateral line of the same colour, but the subdorsal line is restricted to light brown dashes on the first two wrinkles of each segment. Below, the lateral line is touched with pale brown. The larva takes short feeds from the edge of a blade of grass and grows to 6¾ mm in about twelve days. Towards the end of the first instar, the larva has a broad dull green dorsal line split down the centre and edged by very thin brown, followed by a bluish-white line about half the breadth of the dorsal line. This is followed by a dull green line edged above and below with thin brown. This line envelops the first two rows of moles bearing white setae. Below this is another bluish-white line about three times the breadth of the former white line, but cut about the lower third by a ragged green line on the line of the third row of white setae-bearing moles. This is followed by a brown-edged dark green line and then a thinnish bluish-white line followed by a dark green line darkly edged above. This line includes the spiracles on the lighter portion. The lateral ridge is bluish-white and includes the double setae. Below, the larva is dark green for a third of the ventral portions on each side, the centre underneath is pale green. The dark green is divided by a bluish-white line edged thinly above and below by brown. The posterior segments shade off to pale salmon-yellow. With no food in the body the colours are white and salmon, with green on the ventral portion. The brown portions in some larvae are more inclined to dull purple. **Second instar.** The larvae have a whitish ground-colour with dull purple dorsal, subdorsal, lateral and spiracular stripes. Between the subdorsal and lateral line there is a very thin brown line. The body is covered with small white setae on white moles, arranged in rows; the setae of the first instar are still present and much larger than the rest. The instar lasts 12-13 days, and the larvae grow to 10-10½ mm. The larvae split into two groups. One group goes right through feeding normally, but growing slowly; the other grows more rapidly and aestivates in the fourth instar. The slight differences in the fourth instar are shown in the plate (see figs 9 and 12). The larval period is eighty-three days for non-aestivating larvae, and about six weeks longer in aestivating ones. **Pupa.** Light green, 13-14½ mm long by 5 mm wide. Pupal stage about twelve days.”

**Larval food:**

*Dactyloctenium austral* Steud. (Poaceae) [Otto *et al.*, 2013: 72].

*Ehrharta erecta* Lam. (Poaceae) [Dickson & Kroon, 1978: 42; in captivity].

*Panicum maximum* Jacq. (Poaceae) [Otto *et al.*, 2013: 72].

*Pennisetum clandestinum* Hochst. ex Chiov. (Poaceae) [Williams, *in* Pringle *et al.*, 1994: 60; in captivity].

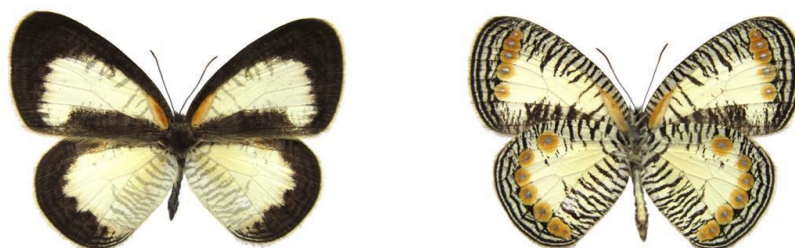
**\**Physcaeneura pione* Godman, 1880**

Light Webbed Ringlet

*Physcaeneura pione* Godman, 1880. *In*: Godman & Distant, 1880. *Proceedings of the Zoological Society of London* **1880**: 183 (182-185).

*Physcaeneura pione* Godman, 1880. Dickson & Kroon, 1978.

*Physcaeneura pione* Godman, 1880. Pringle *et al.*, 1994: 61.





*Physcaeneura pione*. Male. Left – upperside; right – underside.  
Cross Kopje, Mutare, Zimbabwe. 17 December 1998.  
Images M.C.Williams ex J. Greyling Collection.



*Physcaeneura pione*. Female. Left – upperside; right – underside.  
Lauranceville, Vumba, Zimbabwe. 28 February 1999.  
Images M.C.Williams ex J. Greyling Collection.

**Type locality:** [Tanzania]: “Gnuru [sic?] Hills, East Africa”.

**Diagnosis:** Upperside forewing hind margin dark brown; underside more heavily striated than in either *Physcaeneura jacksoni* or *Physcaeneura leda* (Kielland, 1990d).

**Distribution:** Democratic Republic of Congo (Shaba), Tanzania (north-east and west), Malawi, Zambia (north), Mozambique, Zimbabwe (east).

**Specific localities:**

Tanzania – Gnuru [?] Hills (TL); Southern Kigoma District (Kielland, 1990d); Mpanda District (Kielland, 1990d); Uluguru Mountains (Kielland, 1990d); Mikumi National Park (Kielland, 1990d); Rubeho Mountains (Kielland, 1990d); Mwanihana Rift (Kielland, 1990d); Magombera Forest (Kielland, 1990d); Pugu Hills (Kielland, 1990d); Madaba near Songea (Kielland, 1990d); Katavi National Park (Fitzherbert, *et al.*, 2006).

Malawi – Zomba (Butler, 1894); near Fort Songwe (Butler, 1897); Mt Mulanje (Congdon *et al.*, 2010).

Zambia – Kamapanda (Heath *et al.*, 2002); Ikelenge (Heath *et al.*, 2002); Mwinilunga (Heath *et al.*, 2002); Kabompo River (Heath *et al.*, 2002); mid Lungu River (Heath *et al.*, 2002); Mumbwa (Heath *et al.*, 2002); Kabwe (Heath *et al.*, 2002); Chisamba (Heath *et al.*, 2002); Mbala (Heath *et al.*, 2002).

Mozambique – Buzi River (Pringle *et al.*, 1994); Dondo (Pringle *et al.*, 1994); Njesi Plateau (Congdon *et al.*, 2010).

Zimbabwe – Mutare (Cross Kopje) (Pringle *et al.*, 1994); lower slopes of the Vumba Mountains (Pringle *et al.*, 1994); Mount Selinda (Pringle *et al.*, 1994); Mount Darwin (Paré); Burma Valley (male illustrated above).

**Habitat:** Moist savanna. In Tanzania it is found at altitudes from 100 to 1 400 m (Kielland, 1990d).

**Flight Period:** December to May (Pringle *et al.*, 1994).

**Early stages:** Nothing published.

**Larval food:**

*Siphonochilus* species (Zingiberaceae) [Pinhey, *vide* Dickson & Kroon, 1978: 42; as ?*Kaempferia*; doubtful (MCW)].

*johnstoni* Butler, 1894 (as sp. of *Periplysia*). *Proceedings of the Zoological Society of London* **1893**: 647 (643-684). Malawi: “Zomba”.

*lucida* Butler, 1897 (as var. of *Physcaeneura pione*). *Proceedings of the Zoological Society of London* **1896**: 853 (851-855). Malawi: “probably from near Fort Songwe, N.W. Nyasa”.

## \**Physcaeneura robertsi* Kielland, 1990

*Physcaeneura robertsi* Kielland, 1990. *Butterflies of Tanzania* 87 (363 pp.). Melbourne.

**Type locality:** Tanzania: “Mwanza – Tabora, F.R. Roberts (no date)”.

**Description:**

“**Male.** Upperside f.w. as in *pione*, but f.w. totally lacking the prominent brown bar along its hind margin which is always present in *P. pione*. Ground colour whitish; costa of f.w. narrowly brown, slightly widening towards apex (in *pione* rather widely brown in its distal half); apex and outer margin brown, enclosing four orange, black-centered round spots (more clearly defined than is usual in *pione*); two submarginal dark-brown lines and a fine dark-brown border; h.w. whitish with a brown outer border (narrower than in *pione*). Grey stripes along inner margins, costal and basal areas of the wings less extended than is usual in *pione*. Underside whitish; distal border with a black marginal line, two continuous, evenly curved submarginal lines and a rather uneven black line proximad of these, bordering a pale-orange oval band, extending from vein 2 to vein 7, enclosing five silvery spots; h.w. as the f.w., but with an orange spot in space 6 near its base, and with seven silvery spots. Both wings with black stripes in basal, costal and hind marginal areas (in the hind margin of the f.w. the stripes are not so extensive as in *pione*). Length of f.w. 17-17.3 mm. **Female.** As the male, but larger and with much more extended grey stripes on the upperside and black stripes on the underside. Length of f.w. 19-19.6 mm. **Male genitalia.** Uncus less wide basally than in *P. pione*; saccus shorter; valva distal end armed with numerous sharp teeth dorsally; its dorsal outline more even than in *pione*; basal end of aedeagus rounded.”

**Diagnosis:** Closest to *Physcaeneura pione* but the upperside forewing hind margin lacks the dark brown bar. There are also small differences in the genitalia (Kielland, 1990d).

**Distribution:** Tanzania (central).

**Specific localities:**

Tanzania – Mwanza – Tabora (Roberts; TL). Known only from two males and four females from the type locality (Kielland, 1990d).

**Habitat:** Nothing published.

**Early stages:** Nothing published.

**Larval food:** Nothing published.