

## Genus *Zizina* Chapman, 1910 Clover Blues

*Transactions of the Entomological Society of London* **1910**: 482 (479-497).

Type-species: *Polyommatus labradus* Godart, by original designation [extralimital]. Now *Zizina otis labradus* (Godart) (Yago *et al.*, 2008).

The genus *Zizina* belongs to the Family Lycaenidae Leach, 1815; Subfamily Polyommatinae Swainson, 1827; Tribe Polyommadini Swainson, 1827; Subtribe *Incertae sedis*. The other genera in the Subtribe *Incertae sedis* in the Afrotropical Region are *Harpencyreus*, *Tuxentius*, *Tarucus*, *Zintha*, *Eicochrysops* and *Cyclus*.

*Zizina* (**Clover Blues**) is a small genus of three species. One subspecies (*Zizina otis antanossa*) occurs in the Afrotropics and two other species (*Zizina emelina*, *Zizina oxleyi*) are entirely extralimital. The genus was reviewed by Yago *et al.* in 2008.

### \**Zizina otis* (Fabricius, )# Clover Blue



Clover Blue (*Zizina otis*) female upperside (left), male underside (right)  
Images courtesy Steve Woodhall

*Papilio otis* Fabricius, ? ?

**Alternative common name:** Dark Grass Blue.

**Type locality:** China.

**Diagnosis:** Similar to *Zizeeria knysna* but the blue scaling on the upperside is silvery and is less extensive. The discal row of spots on the hindwing underside is sharply elbowed in *antanossa* but evenly rounded in *knysna* (Pringle *et al.*, 1994). In addition, *Zizeeria knysna* has a black spot in the centre of the discal cell on the forewing underside, a feature missing in *Zizina otis antanossa* (Davis & Barnes, 1991).

**Distribution:** As subspecies *antanossa* in the Afrotropical region, viz.: Senegal, Gambia, Guinea-

Bissau (Bivar-de-Sousa *et al.*, 2016), Guinea, Burkina Faso, Liberia, Ghana, Togo, Benin (Fermon *et al.*, 2001), Nigeria, Gabon, Central African Republic, Uganda, Kenya, Democratic Republic of Congo, Tanzania, Zambia, Angola, Mozambique, Zimbabwe, South Africa, Swaziland (Duke *et al.*, 1999), Yemen (Larsen, 1983), Madagascar, Reunion, Mauritius, Comoro Islands.

Extraliminally in Japan [Ryukyus], Taiwan, Indochina, India, Pakistan, Sri Lanka, Andaman, Philippines, Palawan, Mariana Islands, Malay Peninsula, Borneo, Sumatra, Indonesian Archipelago, New Guinea, Micronesia, Melanesia, Polynesia, Australia, New Zealand.

**Habitat:** Grassy areas in savanna, from sea-level to high mountains.

**Habits:** Does not appear to be very common in West Africa (Larsen, 2005a). Occurs as more or less discrete colonies, which may contain large numbers of individuals. Larsen (1991c) once saw thousands at damp patches along a river bed near Sultan Hamud, in Kenya, in June. Both sexes frequently visit flowers.

**Flight period:** All year. In KwaZulu-Natal it is commonest from February to April (Pringle *et al.*, 1994).

**Early stages:**

Clark & Dickson, 1971: 85 [as *Zizina antanossa*; Burman's Bush, Durban, KwaZulu-Natal].

“**Egg.** 0.65 mm diam. x 0.25 mm high. Laid singly on buds or on the surface of a leaf. The eggs are pure white with two sets of reversed involute curves radiating from the micropyle, 20 in each set. The ribs continue diagonally down the sides, where the intersections are punctuated by small moles. Eggs hatch after 6 days. The discarded shell is not eaten. **Larva.** 1<sup>st</sup> instar 0.95 mm, growing to 1.6 mm in 5 days; 2<sup>nd</sup> instar growing to 3 mm in 4 days; 3<sup>rd</sup> instar growing to 5.5 mm in 8 days; 4<sup>th</sup> instar growing to 8.5-10 mm in 9 days. The honey-gland is present in the 2<sup>nd</sup> to 4<sup>th</sup> instars but the tubercles are only present in the 3<sup>rd</sup> and 4<sup>th</sup> instars. The final-instar tubercles have 28 spines each. Larvae feed on buds and young shoots. They moult where they are feeding. The discarded skins are not eaten. There are about four broods. The colour varies, especially in the final instar, in which it can be almost plain green (sometimes with pale purple markings), to dull dark green with dark purple markings. **Pupa.** 6.5.-7.5 mm. Secured to rubbish or a twig by the cremastral hooks and a girdle. The colour is generally light green, but this can be darkened by heavy grey markings. Emergence takes place after 12 days. **Parasites.** Egg attacked by small chalcids. Larva killed by small tachinids. Pupa killed by a small *Pimpla* sp.”

**Larval food:**

*Desmodium incanum* (Sw.) DC. (Fabaceae) [Clark & Dickson, 1971: 85; for subspecies *antanossa*].

*Indigofera* species (Fabaceae) [Clark & Dickson, 1971: 85; for subspecies *antanossa*].

**Relevant literature:**

Tiple *et al.*, 2009 [Genetic relationships with closely-related species].

## *Zizina otis antanossa* (Mabille, 1877)#

### African Clover Blue

*Lycaena antanossa* Mabille, 1877. *Bulletin de la Société Entomologique de France* (5) 7: 72 (71-73).

*Zizina antanossa* Mabille. Swanepoel, 1953a.

*Zizina antanossa* (Mabille, 1877). Dickson & Kroon, 1978.

*Zizina antanossa* (Mabille, 1877). Pringle *et al.*, 1994: 276.

*Zizina otis antanossa* (Mabille, 1877). Yago *et al.*, 2008, **stat. rev.**

*Zizina antanossa* Mabille, 1877. d'Abbrera, 2009: 816. [Yago *et al.*, 2008 ignored]



*Zizina otis antanossa*. Male (Wingspan 23 mm). Left – upperside; right – underside. Cintsu West, Eastern Cape Province, South Africa. 28 December 2001. M. Williams. Images M.C. Williams ex Williams Collection.



*Zizina otis antanossa*. Female (Wingspan 24 mm). Left – upperside; right – underside.  
Cintsa West, Eastern Cape Province, South Africa. 28 December 2001. M. Williams.  
Images M.C.Williams ex Williams Collection.

**Type locality:** Madagascar: “Madagascar”.

**Distribution:** Senegal, Gambia, Guinea-Bissau (Bivar-de-Sousa *et al.*, 2016), Guinea, Burkina Faso, Liberia, Ghana, Togo, Benin (throughout), Nigeria (south), Gabon, Angola, Central African Republic, Uganda, Kenya, Democratic Republic of Congo, Tanzania, Zambia (widespread), Mozambique, Zimbabwe, South Africa (Limpopo Province, KwaZulu-Natal, Eastern Cape Province), Swaziland (Duke *et al.*, 1999), Yemen (Larsen, 1983), Madagascar, Reunion, Mauritius, Comoro Islands.

In South Africa its distribution covers 109 quarter degree squares (485 records) [see <http://vmus.adu.org.za>]. It is regarded as widespread.

**Specific localities:**

Gambia – Fajara, Brufut, Bijilo, Tintinto, Keneba, Tendaba, Basse (Jon Baker, pers. comm, May 2020).

Benin – Noyau Central, Lama Forest (Fermon *et al.*, 2001); Houeyogbe Forest (Coache & Rainon, 2016); see Coache *et al.* (2017).

Nigeria – Lagos area (Larsen, 2005a).

Gabon – Tchimbele (Vande Weghe, 2010); Lope N.P. (Vande Weghe, 2010); Langoue (Vande Weghe, 2010); Ipassa (Vande Weghe, 2010); Bateke Plateau (Vande Weghe, 2010).

Central African Republic – Dzanga (Noss, 1998).

Democratic Republic of Congo – Ituri Forest (Ducarme, 2018); Semuliki Valley (Ducarme, 2018); Mt Mitumba (Ducarme, 2018).

Kenya – Widespread (Larsen, 1991c); Sultan Hamud (Larsen, 1991c).

Tanzania – Throughout (Kielland, 1990d); Katavi National Park (Fitzherbert *et al.*, 2006).

Malawi – Mt Mulanje (Congdon *et al.*, 2010).

Zambia – Lusaka (Heath *et al.*, 2002); Chisamba (Heath *et al.*, 2002); Mpongwe (Heath *et al.*, 2002); Kitwe (Heath *et al.*, 2002); Bwingi Mfumu (Heath *et al.*, 2002).

Mozambique – Mt Namuli (Congdon *et al.*, 2010).

Limpopo Province – Polokwane (Swanepoel, 1953); Marabastad (Swanepoel, 1953); Munnik (Swanepoel, 1953).

KwaZulu-Natal – Umkomaas (Swanepoel, 1953); Durban (Swanepoel, 1953); Howick (Swanepoel, 1953); Bellair (Swanepoel, 1953); Rwayi, South Coast (S. Woodhall, unpublished, 2009).

Eastern Cape Province – Port St Johns (Swanepoel, 1953); Cintsa West, near East London (male and female illustrated above).

Swaziland – Mlawula Nature Reserve ([www.sntc.org.sz](http://www.sntc.org.sz)).

Mauritius – Believed to have been introduced in about 1900 (Manders, 1908). Widespread and common (Davis & Barnes, 1991).