

Genus *Zizeeria* Chapman, 1910
Grass Blue

Transactions of the Entomological Society of London **1910**: 480, 482 (479-497).

Type-species: *Polyommatus karsandra* Moore, by original designation.

The genus *Zizeeria* belongs to the Family Lycaenidae Leach, 1815; Subfamily Polyommatinae Swainson, 1827; Tribe Polyommagini Swainson, 1827; Subtribe *incertae sedis*. The other genera in the Subtribe *incertae sedis* in the Afrotropical Region are *Cupidopsis*, *Pseudonacaduba*, *Catochrysops*, *Lampides*, *Uranothauma*, *Cacyreus*, *Harpenderyus*, *Leptotes*, *Cyclurius*, *Tuxentius*, *Tarucus*, *Zintha*, *Zizina*, *Actizera*, *Zizula*, *Brephidium*, *Oraidium*, *Azanus*, *Eicochrysops*, *Euchrysops*, *Orachrysops*, *Lepidochrysops*, *Thermoniphys* and *Oboronia*.

Zizeeria (**Grass Blue**) is a genus containing a single Afrotropical species, which extends extraliminally.

****Zizeeria knysna* (Trimen, 1862)#**
African Grass Blue



African Grass Blue (*Zizeeria knysna*). Male upper- and underside.
Images courtesy Steve Woodhall.



African Grass Blue (*Zizeeria knysna*). Female upper- and underside.
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Lycaena knysna Trimen, 1862. *Transactions of the Entomological Society of London* (3) 1: 282 (279-291).
Lycaena knysna Trimen. Trimen, 1866a.
Lycaena lysimon Hübner. Trimen, 1866a. [Synonym of *Zizeeria knysna*]
Lycaena lysimon (Hübner, 1798). Trimen & Bowker, 1887b. [Synonym of *Zizeeria knysna*]
Zizeeria knysna Trimen. Swanepoel, 1953a.
Zizeeria knysna (Trimen, 1862). Dickson & Kroon, 1978.
Zizeeria knysna (Trimen, 1862). Pringle *et al.*, 1994: 276.
Zizeeria knysna Trimen, 1862. d'Abreu, 2009: 815.



Zizeeria knysna knysna. Male (Wingspan 21 mm). Left – upperside; right – underside.
 Sterkspruit Nature Reserve, Mpumalanga, South Africa. 7 March 2003. M. Williams.
 Images M.C.Williams ex Williams Collection.



Zizeeria knysna knysna. Female (Wingspan 23 mm). Left – upperside; right – underside.
 Limpopo River, Limpopo Province, South Africa. 1 May 2011. M. Williams.
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Alternative common name: African Grass Blue.

Type locality: [South Africa]: “Cape Town, Knysna, Plettenberg Bay; King William’s Town, Graham’s Town, Keiskamma River, near Bodiam, Port Elizabeth”.

Diagnosis: Similar to *Zizina otis antanossa* – see this species for differentiating features.

Distribution: Mauritania, Senegal, Gambia, Guinea-Bissau (Bivar-de-Sousa & Passos-de-Carvalho, 1987), Guinea, Sierra Leone, Liberia, Mali, Ivory Coast, Ghana, Burkina Faso, Togo, Benin (Fermon *et al.*, 2001), Nigeria, Niger, Cameroon, Equatorial Guinea (Bioko), Gabon, Angola (Ladeiro, 1956), Democratic Republic of Congo, Uganda, Kenya, Tanzania, Malawi, Zambia, Mozambique, Zimbabwe, Botswana, Namibia, South Africa, Swaziland, Lesotho, Yemen (including Socotra) (Balint, 1999: 307), Saudi Arabia, United Arab Emirates, Oman, Madagascar, Mauritius, Reunion, Seychelles, Cape Verde Islands, and other offshore islands.

Extralimitally in North Africa (north-west), southern Spain, Canary Islands, Sicily, Crete, North Africa, Sudan, Middle East, tropical Asia and most of Australia.

Habitat: A variety of habitats, including open areas in the forest zone, and suburban gardens and parks. Absent from the interior of forests and in deserts. Most often in open, grassy habitats (Heath *et al.*, 2002). From sea-level to high mountains (Kielland, 1990d).

Habits: This is one of the commonest butterflies in Africa (Larsen, 2005a). Specimens have a weak to fairly brisk flight, barely above ground level, usually in the vicinity of patches of the larval foodplants. They are commonly seen flying just above suburban lawns in which the larval host plant is growing. Both sexes avidly visit small flowers near ground-level. Males often come to damp patches. On cool days specimens may bask with the wings partially opened (Larsen, 1991c).

Flight period: All year in favourable localities (Pringle *et al.*, 1994).

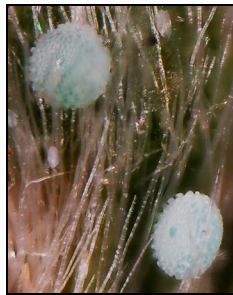
Early stages:

Clark & Dickson, 1952: 29.

Clark & Dickson, 1971: 84 [as *Zizeeria knysna*; Port Elizabeth, Eastern Cape Province].

“**Egg.** 0.5 mm diam. x 0.25 mm high. Laid singly on a leaf or among buds. Very pale green with fine white ribbing. On the sides, there are horizontal and reversed rows of ribs, punctuated by small moles at their intersections. On the top surface there is a beautiful symmetrical web-pattern. Eggs hatch after some 5 days. The discarded shell is not eaten. **Larva.** 1st instar 0.8 mm, growing to 1.75 mm in 4 days; 2nd instar growing to 2.8 mm in 3 days; 3rd instar growing to 6 mm in 4 days; 4th instar growing to 10.5-11 mm in 6-7 days. The honey-gland is present in the 2nd to 4th instars. The tubercles are only present in the 3rd and 4th instars. Larvae, at first, feed on the underside of young leaves and occupy the portion eaten out, with their body. Moulting takes place where they are feeding. The discarded skins are not eaten. There are always ants on the food-plants and they occasionally ‘milk’ the larger larvae. There are 24 spines on each final-instar tubercle. The colour of the larva varies from pale green to dull green with pale whitish diagonal marking and a white ridge-stripe. In some larvae the ridge-stripe is pink round the final segments. There is a succession of broods, in some parts. **Pupa.** 7.5-8.5 mm. Secured to rubbish under the food-plant, by the cremastral hooks and a girdle. The colour is light yellow-green without markings, or green with grey markings which vary in intensity. Emergence takes place after 7-10 days. **Parasites.** Egg parasitized by small chalcids (*Trichogramma* sp.). Larva killed by Diptera; the tachinid species *Aplomyia distans*, *Mesochorus* (*Stictopisthus*) *breviscapus*; and by *Apanteles* sp. in the 3rd instar (maggot 11.XII.62; cocoon 12.XII.62; pupa 13.XII.62; wasp 18.XII.62).”

Fiedler & Hagemann, 1995 [*J. Res. Lepid.* **31** (3-4): 213-232].



Early stages of *Zizeeria knysna*. Left – eggs. Right – 2nd instar larva.
Images courtesy Steve Woodhall.



Early stages of *Zizeeria knysna*. Left – final instar larva. Right – pupa.
Images courtesy Steve Woodhall.

Larval food:

Amaranthus species (Amaranthaceae) [Schurian, 1994; Canary Islands].

Amaranthus deflexus L. (Amaranthaceae) (exotic) [Clark & Dickson, 1952: 29].

Amaranthus dubius (Amaranthaceae) [Lawrence, 2014; Seychelles].

Amaranthus thunbergii Moq. (Amaranthaceae) [Kroon, 1999].

Amaranthus viridus L. (syn. *gracilis* Desf.) (Amaranthaceae) (exotic) [Clark & Dickson, 1952: 29].

Cajanus cajan (L.) Millsp. (Fabaceae) [Mamet, 1955].

Chenopodium species (Chenopodiaceae) [Larsen, 1991c: 238].

Euphorbia species (Euphorbiaceae) [Pinhey, 1949].

Fagonia species (Zygophyllaceae) [Larsen, 2005a].

Glinus lotoides L. var. *lotoides* (Molluginaceae) [Otto *et al.*, 2013: 72; exotic].

Lotus species (Fabaceae) [Larsen, 2005a].
Malva species (Malvaceae) [Schurian, 1994; oviposition only].
Medicago sativa L. (Fabaceae) (exotic) [Clark & Dickson, 1952: 29; as “Lucerne”].
Mollugo nudicaulis Lam. (Molluginaceae) [Otto *et al.*, 2013: 72; exotic].
Oxalis corniculata L. (Oxalidaceae) (exotic) [Clark & Dickson, 1952: 29].
Pisum sativum L. (Fabaceae) [Mamet, 1955].
Spinacea species (Chenopodiaceae) [Larsen, 2005a].
Tribulus terrestris L. (Zygophyllaceae) [Clark & Dickson, 1952: 29].
Trigonella species (Fabaceae) [Larsen, 2005a].
Zaleyia pentandra (L.) C. Jeffrey (Aizoaceae) [Otto *et al.*, 2013: 72].
Zornia species (Fabaceae) [Pinhey, 1949; as *Zarnia*?].

Associated ants:

Pheidole species (Myrmicinae) [Schurian, 1994; Canary Islands]
Lasius flavus (Formicinae) [Fiedler & Hagemann, 1995; experimental]

Relevant literature:

Lawrence, 2009a [Population decline on a Seychelles island].
 Seguna, 2005 [Records from the Maltese Islands].
 Fiedler & Hagemann, 1995.
 Catania & Sammut, 1993.
 Catania, 1992.

Zizeeria knysna knysna (Trimen, 1862)#
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Extraliminally in North Africa (north-west), southern Spain, Canary Islands.

In South Africa its distribution covers 390 quarter degree squares (2229 records) [see <http://vmus.adu.org.za>]. It is regarded as very widespread.

Specific localities:

Cape Verde Islands – Brava Island (Tennent & Russell, 2019); Fogo Island (Tennent & Russell, 2019); Santiago Island (Tennent & Russell, 2019); Maio Island (Tennent & Russell, 2019); Boa Vista Island (Tennent & Russell, 2019); Sal Island (Tennent & Russell, 2019); Sao Nicolau Island (Tennent & Russell, 2019); Sao Vicente Island (Tennent & Russell, 2019); Santo Antao Island (Tennent & Russell, 2019).

Gambia – Fajara, Brufut, Tintinto, Farasutu, Sanyang, Bijilo, Pirang, Abuko, Keneba, Janjanburh Island, Tendaba, Basse (Jon Baker, pers. comm, May 2020).

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

Benin – Noyau Central, Lama Forest (Fermon *et al.*, 2001); Lokoli (Tchibozo *et al.*, 2008); Houeyogbe Forest (Coache & Rainon, 2016); see Coache *et al.* (2017).

Cameroon – Korup (Larsen, 2005a).

Gabon – Nyonie (Vande weghe, 2010); Pongara (Vande weghe, 2010); Iguela (Vande weghe, 2010); Gamba (Vande weghe, 2010); Libreville (Vande weghe, 2010); Bateke Plateau (Vande weghe, 2010).

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

Uganda – Semuliki N.P. (H. Selb, unpublished, 2016).

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

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

Mozambique – Mt Inago (Congdon *et al.*, 2010); Mt Namuli (Congdon *et al.*, 2010); Mt Mabu (Congdon *et al.*, 2010); Mt Yao [-12.4432 36.5114] (Congdon & Bayliss, 2013).

Botswana – Throughout (Larsen, 1991); Kolobeng River (Larsen, 1991); Gaborone Mall (Larsen, 1991); Mokgethe Farm near Zanzibar, Tuli Block (Larsen, 1991).

Limpopo Province – Throughout (Swanepoel, 1953); Percy Fyfe Nature Reserve (Warren, 1990); Lekgalameetse Nature Reserve (“Malta Forest”); Highlands Wilderness (Bode & Bode, unpublished checklist); Soetdoring Farm [-24.561 28.233] (A. Mayer, pers comm. 2015).

Mpumalanga – Throughout (Swanepoel, 1953); Sterkspruit Nature Reserve (Williams); Buffelskloof Nature Reserve (Williams).

North West Province – Throughout (Swanepoel, 1953); Kgaswane Mountain Reserve (Williams); Utopia Resort (C. Dobson, 2006); Borakalalo Nature Reserve (J. Dobson, unpublished, 2009).

Gauteng – Throughout (Swanepoel, 1953); Witwatersrand Botanical Gardens (J. Dobson, unpublished checklist, 2001); Pretoria (male illustrated above).

Free State Province – Zastron (Swanepoel, 1953); Smithfield (Swanepoel, 1953); Ladybrand (Swanepoel, 1953); Bloemfontein (Swanepoel, 1953); Kroonstad (Swanepoel, 1953); Ficksburg (Swanepoel, 1953); Cyferfontein [-30.3736 25.8131] (R. Griesel, unpublished).

KwaZulu-Natal – Durban (Swanepoel, 1953); Estcourt (Swanepoel, 1953); Ladysmith (Swanepoel, 1953); Eshowe (Swanepoel, 1953); St. Lucia (Swanepoel, 1953); Port Shepstone (Swanepoel, 1953); Kosi Bay Nature Reserve (Pringle & Kyle, 2002); Tembe Nature Reserve (Pringle & Kyle, 2002); Ndumo Nature Reserve (Pringle & Kyle, 2002).

Eastern Cape Province – King William’s Town (Trimen, 1862); Grahamstown (Trimen, 1862);

Keiskamma River (Trimen, 1862); near Bodiam (Trimen, 1862); Port Elizabeth (Trimen, 1862); Uitenhage (Swanepoel, 1953); East London (Swanepoel, 1953); Queenstown (Swanepoel, 1953); Graaff-Reinet (Swanepoel, 1953); Kokstad (Swanepoel, 1953).
Western Cape Province – Cape Town (Trimen, 1862); Knysna (Trimen, 1862); Plettenburg Bay (Trimen, 1862); Stellenbosch (Swanepoel, 1953); Swellendam (Swanepoel, 1953); Worcester (Swanepoel, 1953).
Northern Cape Province – Colesberg (Swanepoel, 1953).
Swaziland – Throughout (Swanepoel, 1953); Mlawula Nature Reserve (www.sntc.org.sz); Malolotja Nature Reserve (www.sntc.org.sz).
Lesotho – Throughout (Swanepoel, 1953).
Mauritius – Widespread and very common (Davis & Barnes, 1991). Chamerel (Lawrence, 2016); Grand Gaube (Lawrence, 2016); Ramgoolam Botanical Gardens (Lawrence, 2016); Le Morne (Lawrence, 2016).
Seychelles – Mahe (Lawrence, 2014); Cerf Island (Lawrence, 2014); St. Anne (Lawrence, 2014); Silhouette (Lawrence, 2014); Praslin (Lawrence, 2014); La Digue (Lawrence, 2014); Cousin (Lawrence, 2014); Cousine (Lawrence, 2014); Aride (Lawrence, 2014); Curieuse (Lawrence, 2014); Bird Island (Lawrence, 2014); Denis Island (Lawrence, 2014); Desroches (Lawrence, 2014); Remire (Lawrence, 2014); Farquhar (Lawrence, 2014); Aldabra (Lawrence, 2014). The most common butterfly in the Seychelles (Lawrence, 2014).

lysimon Hübner, 1803-4. *In*: Hübner, 1799-1838 (as sp. of *Papilio*). *Sammlung europäische Schmetterlinge* 1 Papiliones: pl. 105 (207 pls.). Augsburg. No locality. Invalid; junior primary homonym of *Papilio lysimon* Stoll, [1790] [Riodinidae].

***Zizeeria knysna karsandra* (Moore, 1865)**
Asian Grass Blue

Polyommatus karsandra Moore, 1865. *Proceedings of the Zoological Society of London* 1865: 505 (486-509).
Zizeeria knysna karsandra Moore, 1865. d'Abreu, 2009: 815.

Type locality: India: "Plains of N.W. India".

Distribution: Yemen (Balint, 1999: 307), Saudi Arabia, United Arab Emirates, Oman.

Extraliminally in Sicily, Crete, North Africa, Sudan, Middle East, tropical Asia and most of Australia.

Relevant literature:

John & Tamson, 2011 [Predation by a crab spider on Cyprus]
 Anastassiou *et al.*, 2010 [Presence on Crete].