

Genus *Actizera* Chapman, 1910 Rayed Blues

Transactions of the Entomological Society of London **1910**: 483 (479-497).
Type-species: *Lycaena atrigemmata* Butler, by monotypy.

The genus *Actizera* belongs to the Family Lycaenidae Leach, 1815; Subfamily Polyommatainae Swainson, 1827; Tribe Polyommataini Swainson, 1827; Subtribe Actizerina Stradomsky 2016. There are no other genera in the Subtribe Actizerina in the Afrotropical Region.

Actizera (**Rayed Blues**) is a purely Afrotropical genus containing four species.

Actizera atrigemmata (Butler, 1878) Malagasy Rayed Blue

Lycaena atrigemmata Butler, 1878. *Annals and Magazine of Natural History* (5) **2**: 290 (283-297).
Actizera atrigemmata Butler, 1878. d'Abrera, 2009: 816.

Type locality: Madagascar: "Fianarantsoa".

Distribution: Madagascar.

Specific localities:

Madagascar – Fianarantsoa (TL).

Habitat: Transformed grassland (Lees *et al.*, 2003).

Early stages: Nothing published.

Larval food: Nothing published.

Note: Larsen (2005a) suggests that this taxon may be a subspecies of *Actizera lucida*.

Actizera drucei (Bethune-Baker, 1906) Malagasy Small Rayed Blue

Zizera [sic] *drucei* Bethune-Baker, 1906. *Annals and Magazine of Natural History* (7) **17**: 109 (104-110).
Actizera lucida drucei (Bethune-Baker, 1906). Stempffer, 1967: 262-63.
Synonym of *Actizera lucida* (Trimen, 1883). Ackery *et al.*, 1995.
Actizera drucei (Bethune-Baker, 1906). Lees *et al.*, 2003. **stat. rev.**



Actizera drucei. Male. Left – upperside; right – underside.
Isalo, Madagascar. 13 April 2017. A. Gardiner.
Images M.C.Williams ex Gardiner Collection.



Actizera drucei. Female. Left – upperside; right – underside.
Antanarivo, Madagascar. 26 March 2017. A. Gardiner.
Images M.C.Williams ex Gardiner Collection.

Type locality: Madagascar: “Madagascar”.

Distribution: Madagascar.

Specific localities:

Madagascar – Sirabe (probably Antsirabe) (Lees *et al.*, 2003).

Habitat: Transformed grassland (Lees *et al.*, 2003).

Early stages: Nothing published.

Larval food: Nothing published.

Note: Not listed by d’Abrera, 2009: 816.

Actizera lucida (Trimen, 1883)# Rayed Blue



Rayed Blue (*Actizera lucida*) male and two females.
Images courtesy Steve Woodhall (left and right) and Jeremy Dobson (centre).

Lycaena lucida Trimen, 1883. *Transactions of the Entomological Society of London* **1883**: 348 (347-363).

Lycaena lucida Trimen, 1883. Trimen & Bowker, 1887b.

Actizera lucida Trimen. Swanepoel, 1953a.

Actizera lucida (Trimen, 1883). Dickson & Kroon, 1978.

Actizera lucida (Trimen, 1883). Pringle *et al.*, 1994: 275.

Actizera lucida Trimen, 1883. d’Abrera, 2009: 816.



Actizera lucida. Male (Wingspan 20 mm). Left – upperside; right – underside.
Pretoria, Gauteng, South Africa. 14 February 1971. M. Williams.
Images M.C.Williams ex Williams Collection.



Actizera lucida. Female (Wingspan 21 mm). Left – upperside; right – underside.
Cintsa West, Eastern Cape Province, South Africa. 22 December 2001. M. Williams.
Images M.C.Williams ex Williams Collection.

Type locality: [South Africa]: “Cape Colony, Kaffraria Proper, Natal, and Transvaal”.

Diagnosis: Easily identified by the diagonal (radial) white streak on the underside of the hindwing (Pringle *et al.*, 1994).

Distribution: Ivory Coast, Ghana (Volta Region), Benin (south), Nigeria (south), Cameroon, Gabon, Angola, Democratic Republic of Congo, Uganda, Kenya, Tanzania, Zambia, Mozambique, Zimbabwe, ?Botswana, Namibia, South Africa (Limpopo Province, Mpumalanga, North West Province, Gauteng, Free State Province, KwaZulu-Natal, Eastern Cape Province, Western Cape Province, Northern Cape Province), Swaziland, Lesotho, Yemen, Comoros.

Recorded, in error, from Madagascar by Kielland (1990d).

In South Africa its distribution covers 207 quarter degree squares (1119 records) [see <http://vmus.adu.org.za>]. It is regarded as very widespread.

Specific localities:

Ivory Coast – Lamto (Larsen, 2005a).

Benin – Houeyogbe Forest (Coache & Rainon, 2016); see Coache *et al.* (2017)..

Nigeria – Badagry (Larsen, 2005a); Benin City (Larsen, 2005a); Nsukka (Larsen, 2005a); Gashaka-Gumpti (Larsen, 2005a).

Gabon – Bateke Plateau (Vande weghe, 2010).

Democratic Republic of Congo – Mt Mitumba (Ducarme, 2018); Mt Blue (Ducarme, 2018).

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

Kenya – Widespread (Larsen, 1991c); Rabai (Larsen, 1991c).

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

Zambia – Widespread (Heath *et al.*, 2002); Ikelenge (Heath *et al.*, 2002); Lusaka (Heath *et al.*, 2002); Chisamba (Heath *et al.*, 2002); Mufulira (Heath *et al.*, 2002).

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

Limpopo Province – Warmbaths (Swanepoel, 1953); Potgietersrus (Swanepoel, 1953); Polokwane (Swanepoel, 1953); Zoekmekeer (Swanepoel, 1953); Sibasa (Swanepoel, 1953); Vivo (Swanepoel, 1953); Tzaneen (Swanepoel, 1953); Leydsdorp (Swanepoel, 1953); Lekgalameetse Nature Reserve (“Malta Forest”); Highlands Wilderness (Bode & Bode, unpublished checklist); Soetdoring Farm [-24.561 28.233] (A. Mayer, pers comm. 2015); Bateleur Nature Reserve (Williams & Dobson, unpub., 2015).

Mpumalanga – Lydenburg (Swanepoel, 1953); Burgersfort (Swanepoel, 1953); Verloren Vallei Nature

Reserve (Warren, 1990); Sterkspruit Nature Reserve (Williams); Buffelskloof Nature Reserve (Williams).

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

Gauteng – Singerton (Swanepoel, 1953); Heidelberg (Swanepoel, 1953); Pretoria (Swanepoel, 1953; male illustrated above).

Free State Province – Bloemfontein (Swanepoel, 1953).

KwaZulu-Natal – Isipingo (Swanepoel, 1953); Umkomaas (Swanepoel, 1953); Durban (Swanepoel, 1953); Eshowe (Swanepoel, 1953); Hluhluwe (Swanepoel, 1953); Greytown (Swanepoel, 1953); Howick (Swanepoel, 1953); Estcourt (Swanepoel, 1953); Tembe Nature Reserve (Pringle & Kyle, 2002).

Eastern Cape Province – Port Elizabeth (Swanepoel, 1953); Schoenmaakers Kop (Swanepoel, 1953); East London (Swanepoel, 1953); Umtata (Swanepoel, 1953); Cintsa West (female illustrated above).

Western Cape Province – Hermanus (Schlosz).

Swaziland – Malolotja Nature Reserve (www.sntc.org.sz).

Yemen – Ibb (Larsen, 1982).

Habitat: Grassland and grassy savanna. At altitudes from near sea-level to high mountains (Kielland, 1990d).

Habits: A common butterfly that is apparently scarce in West Africa (Larsen, 2005a). The flight is weak and close to the ground and individuals often settle on grass blades or stems. Both sexes feed regularly from small flowers. In Yemen, Larsen (1991c) once estimated a population density of more than one individual per 10 square cm on a large hillside.

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

Early stages:

Clark & Dickson, 1971: 48 [as *Actizera lucida lucida*; Port Elizabeth, Eastern Cape Province].

“**Egg.** 0.475 mm diam. x 0.25 mm high. Laid singly on buds. Eggs are very pale blue-green with white netting-ribbing forming reversed sets of rough involute curves, 16 in each direction. They hatch after some 9 days. The discarded shell is not eaten. **Larva.** 1st instar 1.0 mm, growing to 1.75 mm in 4 days; 2nd instar growing to 3.25 mm in 3 days; 3rd instar growing to 5.5-6.5 mm in 4 days; 4th instar growing to 10-12 mm in days. The honey-gland and tubercles are present in the 3rd and 4th instars. Larvae feed on the buds and flowers. Their colour varies to match their surroundings, mainly, whitish or pale green with green, very pale pinkish purple, or pinkish brown markings in the shape of diagonal stripes. They moult where they are feeding. There is a succession of broods. **Pupa.** 7.5 mm. Secured to dead leaves or twigs or near-by plants by the cremastral hooks and a girdle. The colour, normally a pale greenish-yellow, varies to a dull pale grey to match surroundings. Emergence is generally after 12 days.”



Egg of *Actizera lucida*. Image courtesy Steve Woodhall.

Larval food:

- Argyrolobium* species (Fabaceae) [Platt (1921), cited by Clark & Dickson, 1971: 48].
- Argyrolobium tuberosum* Eckl. & Zeyh. (Fabaceae) [Kroon, 1999].
- Crotalaria lanceolata* E.Mey. (Fabaceae) [Platt (1921), cited by Clark & Dickson, 1971: 48].
- Oxalis corniculata* L. (Oxalidaceae) [Van Someren, 1974: 330].
- Oxalis* species (Oxalidaceae) [Clark & Dickson, 1971: 48].
- Rhynchosia* species (Fabaceae) [Platt (1921), cited by Clark & Dickson, 1971: 48].
- Vigna* species (Fabaceae) [Van Someren, 1974: 330].

Actizera stellata (Trimen, 1883)#
Red-clover Rayed Blue



Upperside and underside of the Red-clover Rayed Blue (*Actizera stellata*).
Images courtesy Kevin Cockburn.

Lycaena stellata Trimen, 1883. *Transactions of the Entomological Society of London* **1883**: 349 (347-363).
Lycaena stellata Trimen, 1883. Trimen & Bowker, 1887b.
Actizera stellata Trimen. Swanepoel, 1953a.
Actizera stellata (Trimen, 1883). Dickson & Kroon, 1978.
Actizera stellata (Trimen, 1883). Pringle *et al.*, 1994: 276.
Actizera stellata Trimen, 1883. d'Abreu, 2009: 816.



Actizera stellata. Male. Left – upperside; right – underside.
Mweka Cawm, near Moshi, Tanzania. 3 December 2014. A. Gardiner.
Images M.C. Williams ex Gardiner Collection.



Actizera stellata. Female. Left – upperside; right – underside.
Nyika, Malawi. 6 November 2014. S. Ndarama and A. Gardiner.
Images M.C. Williams ex Gardiner Collection.

Alternative common name: Clover Blue.

Type locality: [South Africa]: “Burghersdorp (Albert District), Cape Colony”.

Distribution: Ethiopia, Sudan (south), Uganda, Kenya, Democratic Republic of Congo (east – Kivu), Tanzania (north), Malawi (north), Zambia, South Africa (Free State Province, Eastern Cape Province), Yemen.

Specific localities:

Kenya – western and central highlands (Larsen, 1991c); Mount Kulal (Larsen, 1991c); Chyulu Hills (Larsen, 1991c).

Tanzania – Ufipa Plateau (Kielland, 1990d); Mufindi (Kielland, 1990d); Kalimbazi Mountain (Kielland, 1990d); Nyumbenitu Mountain (Kielland, 1990d); Mafwemiro Forest (Kielland, 1990d); Mangalisa Forests (Kielland, 1990d); Oldeani-Ngorongoro (Kielland, 1990d); Mbulu forests (Kielland, 1990d); Mount Meru (Kielland, 1990d); Kitulo Plateau near Mount Rungwe (Kielland, 1990d); Londrossi/Simba area at 1900-2200 m on West Kilimanjaro (Cordeiro, 1995).

Malawi – Nyika N.P. (J. Timberlake, pers. comm., 2019).

Zambia – Mafinga Mountains (Heath *et al.*, 2002); Nyika (Heath *et al.*, 2002).

Free State Province – near Springfontein (Oosthuizen).

Eastern Cape Province – Burgersdorp (TL; Kannemeyer); Dordrecht (male illustrated above); Helspruit (Swanepoel, 1953); Stormberg (Swanepoel, 1953); Steynsburg – Southwell (Swanepoel, 1953); Farm Hillmoor in the Steynsburg district (Pennington); Cathcart (Pringle *et al.*, 1994); Bedford (Pringle *et al.*, 1994); Compassberg (Pringle *et al.*, 1994).

Habitat: Damp areas in semi-montane and montane grassland. In Kenya it is rarely found at altitudes below 1 500 m. In Tanzania at altitudes from 1 700 to 2 700 m (Kielland, 1990d). It is known to breed on clover growing in the lawns of gardens in Nairobi, Kenya (Larsen, 1991c).

Habits: Flies low down but quite fast for such a small butterfly. Both sexes feed from flowers regularly (Larsen, 1991c). Pringle *et al.* (1994) note that the flight is weak and fluttering and that specimens alight frequently on the leaves or flowers of the larval host-plant.

Flight period: November to January (Pringle *et al.*, 1994).

Early stages:

Clark & Dickson, 1971: 48 [as *Actizera stellata*; Dordrecht, Eastern Cape Province].

“**Egg.** 0.5 mm diam. x 0.25 mm high. Laid singly on the surface of a leaf, on a stalk or a bud. The eggs are pale green, with fine white ribbing. There are 24 vertical ribs on the sides, intersected by reversed diagonal ribs; the intersections are punctuated by small moles. On the top, this pattern breaks up into an irregular triangular pattern. Eggs hatch after 4 days. The discarded shell is not eaten. **Larva.** 1st instar 0.8 mm, growing to 1.6 mm in 4 days; 2nd instar growing to 2.5 mm in 3 days; 3rd instar growing to 4 mm in 4 days; 4th instar growing to 8 mm in 7 days. The honey-gland and tubercles are present in the 3rd and 4th instars. Larvae feed on leaves, buds, or flowers and their size and colour make them inconspicuous. They moult where they are feeding. There are 16-20 spines on each final instar tubercle. Three to four broods are usual in this species. **Pupa.** 6 mm. Secured to rubbish, under the clover, by the cremastral hooks and a girdle. Emergence takes place after some 11 days.”

Larval food:

Fabaceae (a red-flowered clover) [Clark & Dickson, 1971: 48].

Medicago species (Fabaceae) [Kielland, 1990d: 218].

Oxalis corniculata L. (Oxalidaceae) [Van Someren, 1974: 330].

Trifolium africanum Ser. (Fabaceae) [Larsen, 1991c; Pringle *et al.*, 1994: 276].

Trifolium species (Fabaceae) (probably) [Kannemeyer, *in* Trimen & Bowker, 1887, Vol. 2: 50; Burghersdorp, E. Cape].

Vigna species (Fabaceae) [Van Someren, 1974: 330].