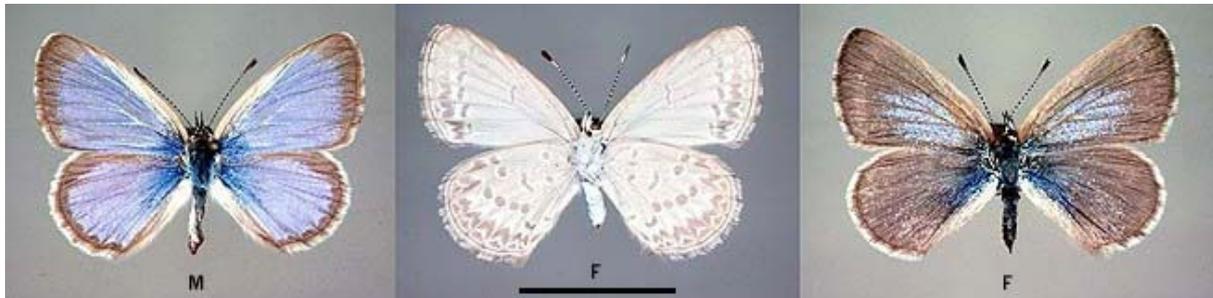


SOUTH AUSTRALIAN BUTTERFLIES

Data Sheet

Zizina labradus labradus (Godart) (Common Grass-blue)



Interesting aspects: One of the most common butterflies in Australia, with its larvae feeding on a wide range of small, usually herby legumes. It has adapted well to the extensive cultivation of leguminous pastures in agricultural South Australia, such that its numbers have probably increased considerably since its natural habitats have been destroyed. It belongs to a group of very similar species that range through much of the Eastern Hemisphere. The flight is weak and fluttery, with the butterflies flying close to the ground. Both sexes usually remain near the foodplant. Males are also often seen to slowly flutter beneath or around the foodplant looking for newly emerged females with which to mate. The extent of the blue areas in the wings of the female is variable, and sometimes it is nearly absent. On a very hot day the butterflies are often attracted to water or moist patches in gardens, along creek beds, or roadside edges after a thunder downpour, where they will sip from the water's edge or directly from the damp patch.

This butterfly is largely cosmopolitan in the Eastern Hemisphere where it used to be known as *Zizina otis*, and is generally found wherever mankind also occurs providing the butterfly with the cleared habitat and herby legumes that it requires. Whether it has spread naturally by migration or was helped by mankind is not known, but on each continent the butterfly is reputed to have independent morphological differences. In the Orient it is known as *Z. otis*, in the Australian Region as *Z. labradus*, and in Africa and India as *Z. antanossa*.

Due to the sometimes short periods of rain and foodplant blooming in the arid inland areas, the larval stage duration of the butterfly is often very rapid and incomplete, producing butterflies of variable size.

Life History

Larval food-host: Larvae feed on numerous native and introduced legumes, usually small herbs and plants from the Fabaceae family including *Crotalaria eremaea strehlowii* (smooth loose-flowered rattlepod), *Cullen(Psoralea) australasicum* (tall scurf-pea), *C. microcephalum* (mountain scurf-pea), *C. pallidum* (white scurf-pea), *C. patens* (spreading scurf-pea), *Daviesia brevifolia* (leafless bitter-pea), *Glycine* spp incl. **G. max* (soybean), *Glycyrrhiza acanthocarpa* (native liquorice), *Hardenbergia violacea* (native lilac), *Indigofera* spp (indigo's) incl. *I. australis* (austral indigo), *Lotus* spp incl. *L. australis*(trefoil), *L. cruentus* (redflower trefoil), **Lupinus* sp

(lupins), **Medicago* spp (lucerne, medic) incl. *M. sativa* (lucerne or alfalfa), **Phaseolus* spp incl. **P. vulgaris* (garden bean), **Pisum sativum* (garden pea), *Pultenaea tenuifolia* (narrow-leaf bush-pea), *Sesbania cannabina* (sesbania pea), *Swainsona* spp (darling or swainson peas), **Trifolium* spp (clovers), **Trigonella* spp (fenugreeks), **Vicia faba* (broadbean), *Vigna lanceolata* var. *latifolia* (maloga bean), **Virgilia oroboides* (Cape virgilia). In the Far North of South Australia they also utilise **Acacia farnesiana* (mimosa or sweet acacia) (Mimosaceae). The larvae will eat the flowers, leaves and the immature seeds within developing seed pods.

Larval attendant ant: Larvae are usually attended by a few ants, including small black ants *Iridomyrmex* sp, *Rhytedoponera* sp, *Tapinoma* sp, or a small dark-brown ant *Paratrechina* sp, or additionally in the Far North by the large black meat ant *Iridomyrmex viridiaeneus* or the large black sugar ant *Camponotus capito*.

Eggs: Small, initially pale green, later turning bluish white, hemispherical, strongly flattened top and bottom, slightly depressed on top with a small darker central micropylar area. Ornamented with a coarsely reticulated pattern on the side which becomes finer on top. The reticulation facets on the side are trigonal, which are grouped together in an orderly fashion to form large hexagons. The facets on the top of the egg are much smaller and are of irregular shape. There are short, thick, blunt spines at the pattern intersections on the side of the egg, which are absent on the top of the egg. Laid singly on the foodplant, which can be the flower buds, open flowers, leaves and other softer green parts. Eggs are sometimes so common on the foodplant as to produce a fine speckled appearance. Eggs take about four days to develop in spring.

Larvae: The first instar is initially pale yellow, changing colour after eating the foodplant, with long lateral and long recurved paired dorsal hairs. The head is black. Newly emerged larvae prefer to eat the flower petals. Older larvae will eat both flower petals and green parts of the foodplant. In subsequent instars the larvae become covered in secondary setae, and the long hairs become progressively shorter with each instar. Larvae require five instars in temperate areas but can develop with four instars in the hot Far North areas of the state.

The mature larvae are about 12 mm long, onisciform (slater shaped) with an indistinct longitudinal dorsal furrow. The head is small, smooth, dark brown, hidden beneath the body. The body has some short lateral and dorsal hairs, and is covered in numerous, pale coloured, minute secondary setae having a stellate base and a long erect or recumbent serrated and pointed central spine. The secondary setae impart a scabrous appearance to the larvae. The posterior dorso-lateral organs are well developed. The larvae are polymorphic (ie. they occur in many colour forms). Larvae colour and markings are highly variable, being some shade of greenish white, green, pink, purple or brown, or combinations thereof, with a darker longitudinal dorsal line and adjacent forward directed chevrons, a hatched subdorsal line, additional lateral markings and a pale yellowish white lateral line. The colours are cryptic and usually blend in with the portion of the foodplant they are eating. Green coloured larvae predominate. Larvae feed openly during the day. The presence of larvae on the foodplant is readily discernible by holes in the buds, flowers and seed pods, and by the scouring of the leaves. Small ants are usually indicative of the position of actively feeding larvae.

Larvae are sometimes carnivorous, practising cannibalism on its own kind, although it is usually very rare in this butterfly under natural conditions. It occurs when the larvae are so prolific on the foodplant that they quickly consume all of the edible parts. Some of these larvae are able to pupate even though not fully developed, producing smaller than normal flying adults. Others may devour either smaller larvae, particularly those undertaking a moult, or larger larvae undertaking pupation. Fully hardened pupae are not eaten due to their tough outer case. This cannibal tendency occurs in many Lycaenid species, particularly those species which lay large numbers of eggs on foodplants of small stature.

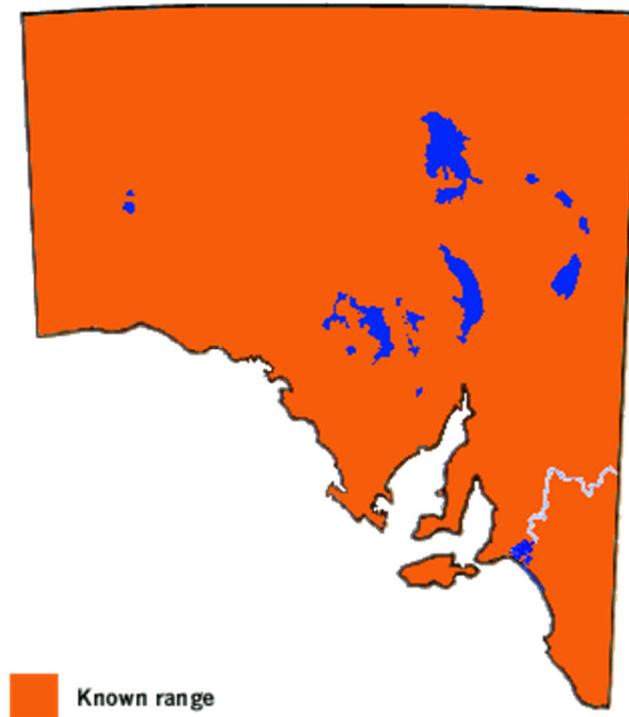
Larvae of this species often accompany those of *Lampides boeticus* on the same foodplant, in which case the latter usually eat the flower ovary and seed pod contents, while the former eat the leaves and flower petals.

Pupae: Short cylindrical, rounded anteriorly and posteriorly, about 8 mm long, mostly smooth with a few short bristles which are longer and more common on the anterior and posterior parts of the pupa. Polymorphic with individual pupae occurring in various shades of green, grey, pink or brown, and sometimes white or yellowish, speckled with darker markings, and with a dark brown or black dorsal line and a broken subdorsal line. When newly pupated, the pupa is usually subtranslucent greenish grey or white, later turning brownish grey or brown with age, but sometimes the pupae remain pale coloured dependant on the substrate colour onto which they have pupated. Weakly attached by anal hooks and a central girdle, often to some green part of the foodplant, or to leaf debris beneath the foodplant. The pupating larva will sometimes loosely web together a folded leaf or two leaves, within which it will pupate. The pupal period is variable. It can be as short as 16 days in temperate summer areas, extending to a month in early winter, or it can overwinter until the warm spring weather arrives. In the Far North the pupal period is 14 days in spring.

Flight period in S.A.: It is possible to find flying butterflies throughout the year, depending on the area. In the Far North pastoral areas it is more common after rainy periods as its foodplants respond to the moisture with new growth and flowers. In the southern areas it is common during the warmer months, but is also sometimes seen flying in winter during warm, sunny breaks. There are continuous broods over the warmer months, which are completed in less than 10 weeks in southern temperate areas, extending to 13 weeks in late autumn. Less than 7 weeks are required in the hot Far North areas of the state.



Distribution: Occurs throughout Australia, including Kangaroo Island and Tasmania. It has migration tendencies, typical of the Polyommata group of lycaenids, although no obvious migrations have been reported from South Australia. This is supported by its uniform adult morphology throughout Australia.



Habitat: Found wherever its foodplants occur, and these are common and widespread occurring in most habitats.

Conservation Status in S.A.: Locally common in breeding areas.

Threats: No major threats.

Conservation Strategy: None required. Thrives in urban gardens. Sometimes considered a pest due to the fondness of its larvae for low growing leguminous crops and vegetables.

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