

**Genus *Durbaniopsis* van Son, 1959**  
**Boland Rocksitter**

*Novos Taxa Entomologicos* (16): 12 (15 pp.).

Type-species: *Durbania saga* Trimen, by original designation.

*Durbaniopsis* (**Boland Rocksitter**) is a purely Afrotropical genus containing a single South African species.

**\**Durbaniopsis saga* (Trimen, 1883)#**  
**Boland Rocksitter**



Boland Rocksitters (*Durbaniopsis saga*).  
Images courtesy Steve Woodhall (left) and Jeremy Dobson (right).

*D'Urbania saga* Trimen, 1883. *Transactions of the Entomological Society of London* **1883**: 354 (347-363).

*D'Urbania saga* Trimen, 1883. Trimen & Bowker, 1887b.

*Durbania saga* Trimen. Swanepoel, 1953a.

*Durbaniopsis saga* (Trimen, 1883). Van Son, 1959.

*Durbaniopsis saga* (Trimen, 1883). Dickson & Kroon, 1978.

*Durbaniopsis saga* (Trimen, 1883). Pringle *et al.*, 1994: 130.

*Durbaniopsis saga* Trimen, 1883. d'Abreu, 2009: 626.

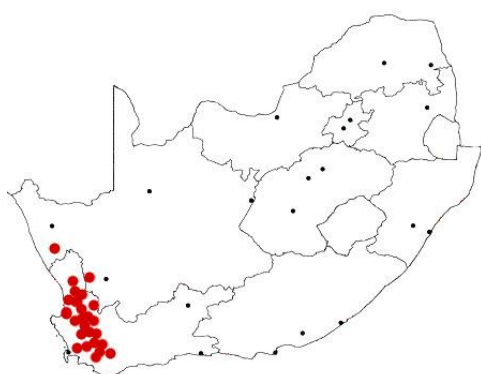


*Durbaniopsis saga*. Male (Wingspan 32 mm). Left – upperside; right – underside.  
Gifberg Resort, Western Cape Province, South Africa. 8 October, 2008. M. Williams.  
Images M.C. Williams ex Williams Collection.



*Durbaniopsis saga*. Female (Wingspan 36 mm). Left – upperside; right – underside. Gifberg, Vanrhynsdorp, Western Cape Province, South Africa. 7 October 1995. J. Greyling. Images M.C. Williams ex Greyling Collection.

**Type locality:** [South Africa]: “on the Hex River Mountain, in the Worcester district of the Cape Colony”.



#### Distribution of *Durbaniopsis saga*

Western Cape Province, Northern Cape Province.

**Distribution:** South Africa (Western Cape Province, Northern Cape Province).

#### Specific localities:

Western Cape Province – Hex River Mountains (TL; Péringuey); Mitchell’s Pass (Trimen); Tulbagh Pass (Swanepoel, 1953); Worcester – Boskloof (Swanepoel, 1953); Steenbras (Swanepoel, 1953); Bain’s Kloof (Swanepoel, 1953); Franschhoek Pass (Swanepoel, 1953); near Citrusdal (Claassens, 1988); Vanrhynsdorp (Pringle *et al.*, 1994); Porterville (Pringle *et al.*, 1994); Cedarberg (Pringle *et al.*, 1994); Piketberg (Pringle *et al.*, 1994); Klawer (Pringle *et al.*, 1994); Du Toit’s Kloof (Pringle *et al.*, 1994); Het Kruis (Pringle *et al.*, 1994); Redelinghuys (Pringle *et al.*, 1994); Clanwilliam (Pringle *et al.*, 1994); near Wuppertal (White); Heerenlogementsberg (Williams, unpublished); Gordon’s Bay (Mecenero *et al.*, 2013); Greyton (Mecenero *et al.*, 2013).

Northern Cape Province – Nieuwoudtville (Pringle *et al.*, 1994); Garies (Mecenero *et al.*, 2013).

**Habitat:** Rocky areas (Table Mountain sandstone) in fynbos (Williams, unpublished). Altitudinal range 200 to 600 m. (Mecenero *et al.*, 2013).

**Habits:** Flies slowly, frequently settling on rocks (Pringle *et al.*, 1994). Females are rarely found even when males are plentiful (Williams, unpublished).

**Flight period:** October to December. Appears as early as September in localities at low altitudes (Pringle *et al.*, 1994).

#### Early stages:

Clark & Dickson, 1971: 241, plate 113 [as *Durbania saga*; Bain's Kloof, Western Cape].

“Egg: 0.8 mm diam. x 0.5 mm high. Laid singly on rocks. Very pale brown, the egg has some 38 fine longitudinal ribs, cross-braced by 7 fine ribs and extending to the rounded edge below the concave sides. Below this the egg is rounded and the pattern is similar but irregular. Larva: The length of the larva on emergence has not been recorded, but this should be about 1.5 mm. In the 1st instar, the larva is whitish with brown marking, as shown in the figure. The head is black or nearly black and large in proportion to the size of the body. The longer setae are of considerable length but much shorter than in the preceding species [*Durbania amakosa*]; otherwise, they show a basic similarity in the two species, but with the slight differences in their disposition that might be

expected, and the number of at least some of the smaller setae not always corresponding in each case. The larger setae are dark brown or blackish and the smaller ones light coloured. The larva in question did not survive beyond the 1st instar. Pupa: 10 mm. Secured in the partially discarded larval skin which is attached to a rock in a sheltered spot. Recorded from eggs from Bain's Kloof, western Cape Province.”

Claassens, 1988: 14 [as *Durbania saga*; near Citrusdal, Western Cape].

“In the early years of the [20<sup>th</sup>] century G.C. Clark found the larvae of *Durbania saga* Trimen, 1883, on rocks at Ceres. Since that time nobody has recorded seeing the larvae of this butterfly. I have searched for the early stages of the Boland rocksitter on many occasions in various places where the butterfly occurs, and over a number of years, but I was always unsuccessful. During my stay at Citrusdal from 2nd until 8th of September, 1987, I spent many hours searching for the early stages in most likely places and at last I found them. I actually found eight larvae in three areas near Citrusdal. Six larvae were in the final instar and two were earlier instar larvae. One imago was caught on 8th September, an early record for the species. The larvae were invariably found on the shaded side of rocks, not covered with lichen, and thus not in contact with their foodplant. When dislodged from the rocks to which they clinged [*sic*] rather tightly, the larvae sometimes dropped to the ground where they were hard to find among the sand, stones and vegetation. This habit of dropping from the rocks may well be an adaptation of the larvae to escape predators. The larvae are rather flat, bear many setae both dorsally and laterally and have a notably protective, camouflaged colouration. No ants were found in association with the larvae. In captivity the larvae move away from the light and tended to hide in the darker corners of the rock, which was kept in a large container. During the night the larvae fed on the lichen growing on the rock taken from the original environment. The larvae showed a distinct preference for the young, greener tender growth. It would seem that the larvae of *D. saga* feed on the green, chlorophyll containing algal component of the lichen, rather than eating the non-photosynthesising fungal part of this dual organism. The larvae started pupating from the 13th September and imagines of *D. saga* emerged three weeks later. The larvae and pupae of *D. saga* resemble those of *D. amakosa amakosa* Trimen, as depicted in Clark and Dickson, 1971. Mr C.G.C. Dickson has described the last two instars and noted that they, on close examination, differ in various aspects from similar instars of *D. a. amakosa*.”

Dickson, 1991: 27 [as *Durbania saga*; near Citrusdal, Western Cape].

The following descriptions were based on the larva found by Claassens (Claassens, 1988: 14). “Larva (penultimate instar). The larva attains a length of about 14 mm. The body is flattened ventrally and is of a light brownish-grey colour, and bears some small dark blotches on the upper surface. The head is, in general, rather light brown, partly speckled with black with the lower portion of the clypeus and the labrum decidedly darker, while the ocelli are black. The mouth-parts, including the mandibles, are well extended when the larva is feeding and give the impression of their being specially adapted in this regard to the lichen-feeding habits of the larva. There are sparsely-distributed, very fine, light setae on the head. The rather small neck-shield is elongated and is dark brown, with a somewhat shiny surface, and has a light division medio-dorsally. The anal-shield (or what appears to be one) is of a roughly rounded shape and is smaller than the neck-shield but also of dark coloration and rather shiny. The light brown thoracic legs are claw-like; and the prolegs themselves are well developed. The larva possesses neither honey-gland nor tubercles. The setae are a very striking feature of the larva of *D. saga* and, as the late Gowan Clark used to remark in any analogous case, such as that of *D. amakosa amakosa* Trimen, they obviously act as most effective “shadow-breakers”. There are dense fascicles of slender setae of various lengths, the many longer ones of very considerable length; and these are arranged in two well separated dorsal rows and in a lateral series on each side of the larva which extends to each extremity of its body. The groups of setae arise from low, and small rounded protuberances, and there are much shorter and finer setae at the bases of the main ones. In addition to those already mentioned, there are also very many even more slender, and principally long, white setae, largely at a slightly lower level, laterally, than the other lateral row and, more regular series. A number of setae which are longer than any of the others (but in combination with less lengthy ones) arise from or close to the anal end of the larva. The above-mentioned setae (other than the distinctive white ones) are somewhat dark, rather rufous-brown to yellowish grey, or partly so to the eye, in accordance with the light under which the larva is viewed; but with the darker ones by far predominating and giving a general impression of the rufous-brown tone referred to. The bases of the setae are of rather conical form and the setae themselves are very finely, and generally but sparsely, barbed. The larva spins a slight web on the rock-surface before settling down to moult into the next instar, this being away from the part bearing the lichen. Larva (final (probably fifth) instar). The larva in this instar does not differ greatly from its form and features in general, in the previous instar and, to save repetition, such as reference to the neck-shield and anal-shield, not all its characters will be noted hereunder. The larva attains a maximum length of about 20 mm. The colouring of the body itself does not differ much from that in the previous instar, though giving an over-all lighter impression. The head is light grey as regards the upper two thirds of the lobes and light straw-coloured on the lower third, and with the former portion covered with greyish-black blotches of various sizes, irregularly disposed. The surface of the head is somewhat shiny. The clypeus as a whole is straw-coloured, but with some darkened areas, while the labrum itself is of a darker tone. There is a light, ivory-coloured division between the lobes, superiorly, and then between each lobe and the clypeus, where it is superiorly wider and more prominent. The ocelli are black, or nearly so. There appears to be little if any noticeable increase in the number of very fine, light setae, in the final

instar; but these setae are proportionately longer on the whole than in the penultimate instar. The setae, with respect to the main dorsal and lateral ones, as distinct from the very fine and numerous white ones, are generally of a lighter tone with very little if any of the rufous tint apparent, as mentioned for the previous instar. There does not seem to be much increase in the length of the setae, the longest ones at the anal end of the larva, in fact, being shorter apparently than the corresponding ones in the earlier instar. The main dorsal setae arise from well-defined protruberances of a rufous-brown colour; and the similar lateral setae from less well-defined and smaller protruberances.”

Claassens, 1996: 127 [as *Durbaniopsis saga*; general remarks].

“Larval food. Bampton, 1995 maintains that all liptenine larvae, except those of the genus *Cooksonia*, are algae feeders. Claassens, 1988 having studied the final and penultimate instar lichen-feeding larvae of *D. saga* in captivity, concluded that they prefer the chlorophyll-containing, photosynthesizing and hence food-storing algal part. However, the algal and fungal components of lichen are so closely intertwined that the larvae, while feeding on the upper algal part, cannot avoid ingesting some of the less nutritious fungal threads. I believe that true lichen-feeding larvae obtain nourishment from both the algal and the fungal components of lichen even though quite understandably they prefer the more wholesome algal part. Adaptations of the larval mouth-parts. Bampton, 1995 points out that judging by the “browsing” feeding habits of liptenine larvae they must have mouth-parts adapted for scraping rather than for cutting food. He asserts that nobody seems to have taken up his suggestion that the larval mouth-parts should be studied under a microscope in order to solve the problem in a proper scientific manner. However, Dickson, 1991 in his description of the final and penultimate larval instars of *D. saga* remarks: “The mouth-parts, including the mandibles, are well extended when the larva is feeding and give the impression of their being specially adapted in this regard to the lichen-feeding habits of the larva”. Further investigation into the possible structural adaptations of the mouth-parts of *D. saga* are clearly desirable. Ant association. Bampton, 1995 states that with the exception of *Deloneura* all of the South African Lipteninae are ant associated by choice. While observing resting *D. saga* larvae in their natural environment, I have never seen ants attending them during the day, and larvae, kept in captivity on rocks covered with lichen, thrive without ants attending them. Honey-glands, tubercles and epidermal secretions have not been recorded from the larvae and it seems likely that their highly setigerous epidermis would discourage ants from approaching them. Protection. Lichen- as well as algae-feeding larvae have to cope with daytime dangers of dehydration and predation. The size and structural nature of their food-plants offer no protection against these hazards. The larvae of *D. saga*, and no doubt the larvae of other Lipteninae, are negatively phototactic. They move away from light, seeking out those rock-faces or sides and corners of smaller lichen-covered stones and rocks lying about, which are shaded from the sun, and as a result bear little or no lichen growth. It is for that reason that *D. saga* larvae are not to be found on lichen during the daytime, at least not on sunny days. In captivity too the larvae, when kept in a glass container on rocks covered with lichen, remain dormant in the darker areas during the day and crawl onto the lichen to feed when it is dark. Although phototaxis is a means of escaping potential predators during the day the larvae of *D. saga* are further protected against predators by being covered with long setae. The shape, size and colour of these setae are well described for the final and penultimate instars by Dickson (1991). Clark and Dickson, 1971, refer to these setae as “shadow-breakers”. Taking the daily behaviour of the larvae into account there seems little need for breaking their shadows in situations where shadows are not, or are hardly noticeable. The setae do, however, obliterate the shape of the larva and, together with their camouflaging colours, they render the larvae rather inconspicuous. Another feature which may help the larvae escape from predators is their habit of dropping to the ground when one tries to dislodge them. Between debris and vegetation below rocks the larvae are very difficult to find. *D. saga* larvae pupate in concealed places on rocks. Both the larvae and the pupae of *D. saga* closely resemble those of *Durbania amakosa amakosa* (Trimen) which are beautifully illustrated in Clark and Dickson (1971).”

#### **Larval food:**

Rock lichens (Lichenes) [Clark & Dickson, 1971: 241; Bain's Kloof, Western Cape].