Observations on the preimaginal ecology of
*Rhynchina canariensis* Pinker, 1962 (Erebidae: Hypeninae)
and *Abrostola canariensis* Hampson, 1913 (Noctuidae: Plusiinae)
on the Canary island of La Gomera

**WOLFGANG WAGNER**

Anton-Hohl-Str. 21a, D-87758 Kronburg, www.pyrgus.de; wolfgang@pyrgus.de

Received 18 June 2012; reviews returned 4 September 2012; accepted 24 September 2012.
Subject Editor: Alberto Zilli.

**Abstract.** In this work some information (including photos) is provided on larvae and preimaginal ecology of two Canarian endemics *Abrostola canariensis* Hampson, 1913 and *Rhynchina canariensis* Pinker, 1962 from La Gomera. Larvae of *R. canariensis* were observed in Vallehermoso on *Lotus emeroides* R. P. Murray (Fabaceae). They inhabit stony, semidry slopes with *Juniperus turbinata* Guss. (Cupressaceae) where there are stands of *L. emeroides* on more or less open ground. The brownish, elongate larvae resemble those of *Zekelita antiqualis* (Hübner, 1809). Eggs and larvae of *Abrostola canariensis* were found on *Parietaria judaica* L. (Urticaceae) on not too dry or partially shaded rocky slopes and especially stone walls made of natural stone in cultivated or abandoned areas. *Parietaria* L. spp. should be the main host plants of this species and *Urtica* L. spp. are likely to be used only occasionally.

**Introduction**

The Canary Islands are famous for their high rate of endemic plants and insects. While the species composition is relatively well known, the preimaginal stages and bionomics of many species are still in need of detailed study.

*Rhynchina canariensis* Pinker, 1962 (Erebidae: Hypeninae) and *Abrostola canariensis* Hampson, 1913 (Noctuidae: Plusiinae) are both endemic to the Canary Islands. While the former is known from Tenerife eastwards, the latter inhabits all islands of the archipelago (Baez 1998; Hacker & Schmitz 1996). The larva and relevant life habits were fully unknown in the case of *R. canariensis* and poorly known in that of *A. canariensis*. The latter is said to use *Urtica urens* L. as host plant (e.g., Hacker & Schmitz 1996), but no reliable field observations have been published so far.

During a trip to La Gomera in December 6 – 19, 2011 the author had the chance to find eggs and larvae of *A. canariensis* and larvae of *R. canariensis*, the latter being new to La Gomera.

**Material and methods**

Eighteen larvae of *Rhynchina canariensis* were found on December 8 in Vallehermoso (La Gomera, Canary Islands, Spain) at about 400 m above sea level by careful investigation of *Lotus emeroides* R. P. Murray stands. As to *Abrostola canariensis*, five larvae and two eggs were found in several localities (Vallehermoso, Agulo) on La Gomera between December 8 – 15, 2011 by searching *Parietaria judaica* L. stands. The larvae were successfully reared in small glass containers with perforated caps to avoid
WAGNER: Preimaginal ecology of *Rhynchina canariensis* and *Abrostola canariensis* on La Gomera

excessive moisture at room temperatures (18–20°C), and taxonomic identifications were confirmed after they attained the imaginal stage.

Additionally, an ex-ovo rearing of *A. canariensis* after oviposition of a female (Fig. 1) from Valle Gran Rey (found at an illuminated building) has been carried out under the same conditions as mentioned above.

Results

**Bionomics.** Larvae of *Rhynchina canariensis* inhabit dry to semidry, stony or rocky slopes with partially exposed soil (Fig. 2) where procumbent shoots of *Lotus emeroides* grow on mostly open ground in the “succulent” belt between the sea level and approximately 600–700 m above sea level. On La Gomera the species is obviously restricted to the *Juniperus turbinata* Guss. (Cupressaceae) dominated slopes between Vallehermoso and Hermigua where the observed host plant *Lotus emeroides* grows. This plant species is endemic to La Gomera. Larvae of *R. canariensis* had been found already in December 2009 in the same locality, though nearly at the sea level, but rearing had failed so that they could not have been identified. The larvae hide by day, stretching themselves along the lower parts of the procumbent shoots (Fig. 3) of the host plants and in later instars they feed preferentially at night. In captivity the moths emerged after 14 to 18 days of pupal phase.

Larvae of *Abrostola canariensis* were observed on *Parietaria judaica* which grows on walls bordering roads and fields (Fig. 4) or on rocks. The young, whitish green larvae rest on the lower side of the leaves while in the last instar they tend to hide at the base of the plant during daytime. The eggs (Fig. 5) were found singly on the lower side.
between the end of December and January; all pupae (n = 12) entered dormancy and moths did not emerge until late April and May 2012.

Searches for larvae of *A. canariensis* on *Urtica urens* in Fuerteventura (Pico de la Zarza and above Cofete) in February 2011 did not result in any specimens except for those of *Vanessa vulcanica* (Godart, 1819), which is rare on this eastern island. Another examination of *Urtica morifolia* Poir. on La Gomera was also not successful and resulted only in larvae of *Vanessa vulcanica* and *Mniotype schumacheri* (Rebel, 1917).

**Habitus.** The larvae (Figs 6–11) of *Rhynchina canariensis* are brownish, the first two pairs of prolegs are reduced. They bear a variably broad (viz. not parallel-sided) darker dorsal field which is bordered by a slightly white and then dark area. The ventral side is light coloured, almost whitish. The head shows a darker finely reticulated pattern and especially two large dark spots. The pupa (Fig. 12) is light yellowish to reddish brown.

Young larvae of *Abrostola canariensis* are whitish green (Figs 13–14) and thus well matching the lower sides of *Parietaria* leaves. In the last instar their colour ranges from greenish yellow to light brown (Figs 15–16) with several small whitish marks and speckles. The larva is similar to that of *A. triplasia* (Linnaeus, 1758), but, for example, the dorsal markings on the fourth and fifth segments are different: dark triangles point towards the head in *A. triplasia* whereas there are oppositely oriented subtriangular markings in *A. canariensis*. Additionally, the number of white spots and their size and arrangement is different (e.g., two larger spots at the sides of the triangle of the fourth segment in *A. triplasia*).

Typical traits of *Abrostola* Ochsenheimer, 1816 are well expressed: prolegs on abdominal segments 3–6, transverse, semicircular flecks on the dorsal zone of abdominal segments 1, 2 and 8. The pupa (Fig. 17) is brown and does not differ significantly from those of its European congeners.
Discussion

*Rhynchina canariensis* (Fig. 18) is a xerothermophilous species of lower and middle elevations, as shown by the localities where adults have been captured, mainly at light (e.g., Hacker & Schmitz 1998; Pinker 1962). The species is not restricted to slopes, but can also be found in drier coastal plains. On islands other than La Gomera the moth must evidently rely on other *Lotus* spp. such as *Lotus lancerottensis* Webb et Berth., *Lotus glaucus* Dryand. in Aiton, *Lotus glinoides* Delile or *Lotus campylocladus* Webb et Berth., which are locally abundant in biotopes where *R. canariensis* occurs (e.g., in the low hills and valleys around Betancuria on Fuerteventura). It is questionable but it should be examined whether *R. canariensis* is able to develop on other genera of Fabaceae as well. Last instar larvae supplied in captivity with *Onobrychis viciifolia* Scop. (Fabaceae) did not accept this plant. The larvae resemble in both external appearance and behaviour those of *Zekelita antiqualis* (Hübner, 1809) (cf. Beck 1999), which belongs to a closely related genus within the subfamily Hypeninae (Mayerl & Lödl 1997). For example, the larval head markings (Fig. 11) are very similar to each other. Interestingly, larvae of *Rhynchina* (and *Zekelita*) show some characters commonly ob-
served within the subfamily Catocalinae, e.g., the non-parallel sided darker dorsal field, the overall shape, and their behaviour. The higher classification of Noctuoidea has been in great flux recently and the closer affinity of some subfamilies formerly assigned
to Noctuidae in the old sense such as Hypeninae and Catocalinae is reflected by their placement in the newly established family Erebidae (cf. Lafontaine & Fibiger 2006; Zahiri et al. 2011).

_Abrostola canariensis_ is also an inhabitant of semidry, rocky slopes of the “succulent” belt and cultivated areas, and secondarily of stone walls along roads or between fields. As _Parietaria judaica_ is relatively widespread on the islands, it should be the most important host plant for this species. In the literature there are hints and especially presumptions of _Urtica_ being the host plant of _A. canariensis_. However, my own examination of _Urtica urens_ on Fuerteventura did not yield any larvae, but as the larvae did accept _Urtica dioica_ L. in captivity, it is likely that _Urtica urens_ is a host plant in nature, too. _Urtica morifolia_, as an endemic member of the genus _Urtica_ L., which grows especially in the so-called “Laurisilva”, is probably not suited because of the cool microclimate prevailing in the humid areas where such wood formations usually occur. Probably the moth also uses other _Parietaria_ spp. such as the endemic _Parietaria filamentosa_ Webb & Berth. Rearing results indicate that this species is able to survive the dry summer period in pupal dormancy in the same way as its Central
European allies do during the cold winters. Sometimes there are hints about the occurrence of *Abrostola canariensis* on the Ilhas Selvagens which are located between the Canaries and Madeira and belong to Portugal (e.g., the Fauna Europaea project), but the species is not mentioned in the cited paper (Aguiar & Karsholt 2006).

**References**


