

First record of *Apamea sphagnicola centralazorensis* WAGNER, 2015 (Lepidoptera: Noctuidae) in the Island of Terceira (Azores, Portugal)

Wolfgang WAGNER

Dr. Wolfgang WAGNER, Baseler Strasse 6, D-70619 Stuttgart, Germany; wolfgang@pyrgus.de, www.pyrgus.de

Abstract: A single larva of *Apamea sphagnicola centralazorensis* WAGNER, 2015 is recorded in Terceira Island (Serra de Santa Barbara) in mid-January 2016. After rearing, a female hatched in early March 2016. This subspecies has been known so far only from Pico Island.

Erstfund von *Apamea sphagnicola centralazorensis* WAGNER, 2015 (Lepidoptera: Noctuidae) auf der Insel Terceira (Azoren, Portugal)

Zusammenfassung: Mitte Januar 2016 wurde in der Serra de Santa Barbara (Terceira) eine einzelne Raupe von *Apamea sphagnicola centralazorensis* WAGNER, 2015 gefunden. Die anschließende Zucht ergab Anfang März 2016 ein Weibchen. Diese Unterart war bislang nur von der Insel Pico bekannt.

Introduction

Apamea sphagnicola WAGNER, 2014 has recently been described from San Miguel Island (eastern Azores). It is so far only known from this island (n nominate subspecies) and Pico Island (central Azores, ssp. *centralazorensis*). In the western Azores (Flores Island) it is replaced by the closely related *Apamea ramonae* WAGNER, 2015. Due to very specialized habitat requirements (steep, wet slopes or embankments with *Festuca francoi* FERN. PRIETO, C. AGUIAR, E. DIAS & M. I. GUT, Poaceae, and mosses in upper zones of the mountains) and occurrence in all three groups of Azorean islands in gradually different



Fig. 1: Larva, 12. I. 2016. Fig. 2: Reared e.l. female (1. III. 2016). Fig. 3: Habitat: wet embankment with *Festuca francoi* and mosses. — Photos by author, material from Terceira, Serra de Santa Barbara, 1000 m, near Radio/TV transmitter area.

forms, this obviously endemic species complex of the Azorean Islands is probably quite old.

During a short stay in Terceira Island (central Azores, in mid-January 2016) the author searched for larvae of *Apamea* OCHSENHEIMER, 1816. But suitable habitats appeared to be very scarce and restricted to the summit region of Serra de Santa Barbara in the western part of the Island. Apart from that, very bad weather conditions with permanent rain, fog and heavy storms made further investigations in the Serra de Santa Barbara difficult.

Results and discussion

A single mature larva could be found in the summit region of the Serra de Santa Barbara (western Terceira) in about 1000 m elevation near the Radio/TV transmitter area. It was concealed during daytime in a mossy grass tussock. Larval habitat (Fig. 3) was a typical steep and very wet embankment with mosses (*Sphagnum* and others) and the grass *Festuca francoi*. In the vicinity traces of other larvae – droppings in moss cavities that had been used as hiding-place during daytime – could be observed, but the larvae either had already pupated or fallen victim to predators.

The larva was as large as those of ssp. *centralazorensis* from Pico Island (WAGNER 2015). A female hatched on 1. III. 2016. Its appearance fits well into the description of ssp. *centralazorensis*: large (43 mm wingspan), voluminous, white elements more developed than in nominotypical subspecies, claviform stigma well developed etc. Only the black root streak is smaller than in the few examined individuals from Pico, but there may be some variability. Terceira is a bit isolated within the central Azores (distance to Pico almost 100 km, to Sao Jorge almost 70 km), but distances are much greater to the eastern (San Miguel: 180 km) or western group (Flores: 340 km).

In Terceira, the species is obviously very restricted and probably occurs only in the summit region of the Serra

de Santa Barbara. Here it settles in open Atlantic heathland with small embankments or humps with *Festuca francoi*. Unfortunately this type of habitat is very threatened there despite its status as nature reserve. In lower regions (below ca. 850 m) afforestations with the Japanese *Cryptomeria japonica* (THUNB. ex L. F.) D. DON (Cupressaceae) restricts the available habitat, but in the summit zone the large transmitter area has already destroyed some of the most valuable parts.

The other mountain ranges of Terceira lack open, native and grassy heathlands with *Festuca francoi*. *Apamea sphagnicola* cannot live in cattle fields with its trivialized grass flora that mainly consists in European mainland species. Another species that shares the habitat, host plant and thus the restricted distribution in Terceira is *Hipparchia azorina* (STRECKER, 1899) (e.g. MEYER 1993).

Considering the rarity of ssp. *centralazorensis* in Pico Island and its very small habitat in Terceira, the taxon may still be classified as critically endangered, even if it will possibly be found in Sao Jorge and Faial in future. The nominate subspecies in San Miguel Island is much more safe.

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Autor(en)/Author(s): Wagner Wolfgang

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