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Acraea wigginsii occidentalis (Bethune-Baker, 1926), a new butterfly for Nigeria, with remarks on its habitat and known distribution (Lepidoptera: Nymphalidae)

R. Tropek, P. Jansta & D. Lestina

Abstract

Acraea wigginsii occidentalis (Bethune-Baker, 1926) is recorded in Nigeria for the first time, in the Gotele Mountains, close to the Cameroonian border. All of its known distribution is summarized, including four new records from Cameroon. Its occurrence in the degraded submontane grasslands is also discussed as the reason why it has been rarely observed.

KEY WORDS: Lepidoptera, Nymphalidae, Acraeini, Afromontane butterflies, Cameroon Volcanic Line, faunistics, Nigeria.

Acraea wigginsii occidentalis (Bethune-Baker, 1926), una nueva mariposa para Nigeria,
con indicaciones sobre su habitat y distribución conocida
(Lepidoptera: Nymphalidae)

Resumen

Se cita por primera vez para Nigeria a *Acraea wigginsii occidentalis* (Bethune-Baker, 1926), en las Montañas Gotele, próximas al borde cameroniano. Se resume toda la distribución conocida, incluyendo cuatro nuevas citas de Camerún. Se discute también su presencia en los praderas submontanas degradadas, posible razón por la que apenas ha sido observada.

PALABRAS CLAVE: Lepidoptera, Nymphalidae, Acraeini, mariposas afromontanas, línea volcánica de Camerún, faunística, Nigeria.

Introduction

The Gulf of Guinea Highlands (alternatively known as Cameroon Volcanic Line), the line of volcanic mountains on the border of Cameroon and Nigeria, is the only large mountain area in West and Central Equatorial Africa. Due to its unique mountain climate and history, this region is a hotspot of biodiversity and endemism. As a result, about 36 endemic butterflies and 14 other orobiont butterfly taxa with wider distribution (occurring in the highlands of East Africa and/or the Upper Guinea Highlands) are known from this area (LARSEN, 2005, TROPEK & KONVICKA, 2010). However, very little is known about the bionomy or even detailed distribution of these montane species (cf. TROPEK & KONVICKA, 2010).

Methods and a faunistic record

Acraea wigginsii occidentalis (Bethune-Baker, 1926) is an endemic butterfly of the Gulf of Guinea

Highlands, with its closest relatives in the mountains of East Africa (*A. w. wigginsii*) and Angola (*A. anacreon speciosa*) (LARSEN, 2005). It has never been recorded from Nigeria, although its occurrence there has been repeatedly expected (e.g., LARSEN, 2005, BERNAUD, 1995).

The Tchabal Gandoua mountain (also known as Chappal Waddi, Tchabal Wadi, Tchabal Gangroua, Tchabel Ouade, or Gangirwa), Gotel Mountains, Nigeria (Taraba State) - Cameroon (Adamawa province) border was surveyed by the authors from 14-I-2012 to 16-I-2012. The locality consists of mountain ridge covered by a mosaic of overgrazed, species-poor grassland with remnants of rare scrubby vegetation around streams on its Cameroonian (SE) side and remnants of more or less degraded montane forest with smaller extensive pastures on its Nigerian (NW) side.

We observed *A. w. occidentalis* on both sides of the border, in a single site within the area, overgrazed grassland on the top of the ridge, strongly dominated by *Sporobolus africanus*, just several hundred square meters in total range (from 7.027798° N, 11.701607° E to 7.028884° N, 11.700287° E; 2100 m a.s.l.). We did not record any specimen within the surveyed locality outside this relatively small spot although the population there was estimated at more than a hundred specimens. Six specimens (three males and three females) were caught as vouchers.

Known distribution and habitat

A. w. occidentalis is a strictly submontane butterfly, scarcely recorded below 1500 m a.s.l. (LARSEN, 2005). In some sources (such as ACKERY *et al.*, 1995, D'ABRERA, 1998, WILLIAMS, 2008), this butterfly was also reported from Nigeria. All known 'Nigerian' material was, however, inspected as from the former British Cameroon, mainly from the Bamenda Highlands (LARSEN, 2005, BERNAUD, 2012). In Cameroon, the knowledge on its distribution is also hardly complete. It has been known only from several mountains: Mt. Bana and Batchingou in the Bafoussam region (West province), Mt. Bali and Mt. Lefo in the Bamenda region (Northwest province), and Bitye in the Sangmelina region (South province) (BERNAUD, 1995, AMIET & LIBERT, 1995, BERNAUD, 2012). In 2011 and 2012 we found it in several other unknown localities in Cameroon: Northwest province, Big Babanki region, Mendong Buo (alternatively known as Saba Nilbe, 6.094961° N, 10.300001° E), 2300 m a.s.l., 1 ♂, 27-XI-2011; Northwest province, Kumbo region, the Dom forest (alternatively known as Kedjosam, 6.353751° N, 10.613349° E), 2200 m a.s.l., several tens of ♀♀ and ♂♂, 29-XI-2011; West province, Dschang region, Mt. Bani (alternatively known as Mt. Baloum, 5.380397° N, 10.178853° E), 1850 m a.s.l., 2 ♂♂, 20-I-2012.

In all the above-mentioned localities, we found *A. w. occidentalis* in spatially restricted small spots. Even where larger populations occurred (Tchabal Gandoua, the Dom forest) they were concentrated in a single spot within each locality. In all cases, it was species-poor grassland degraded by overgrazing and/or burning with substantial proportions of bare substrate. This is congruent with Bernaud (BERNAUD, 1995) who recorded *A. w. occidentalis* on steep grassy slopes. Larsen (LARSEN, 2005) indicates that it "flies along grassy areas at forest edges" but we never observed it at any forest edge. Contrarily, at the Dom forest and Mt. Bani it occurred relatively far from any forest (several hundreds of meters).

The fact that relatively few localities of *A. w. occidentalis* are still known is probably caused by its patchy distribution within degraded grasslands which are usually not systematically surveyed for butterflies. We suppose that it would be found as a relatively common butterfly in both Cameroonian and Nigerian mountains if these butterfly-poor spots were explored more intensively.

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