

Problems about *Spialia ploetzi* (Aurivillius) (Lepidoptera, HesperIIDae)

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ABSTRACT — *Spialia ploetzi* (Aurivillius) can be divided into two geographic forms, viz. a western and an eastern one, generally known as *Spialia ploetzi* (Aurivillius) and *Spialia rebeli* (Higgins), respectively. The evidence for the supposed sympatry of these forms is examined. As both forms prove to be allopatric, they are consigned to subspecific level.

A lectotype of *Spialia ploetzi* is designated; this name is shown to refer to the eastern form and *Spialia rebeli* is a junior synonym of it. The western and eastern forms are named *Spialia ploetzi occidentalis* subsp. nov. and *Spialia ploetzi ploetzi* (Aurivillius), respectively.

INTRODUCTION

The genus *Spialia* numbers 26 species most of which occur in Africa south of the Sahara. They are so similar externally, that it is not surprising to meet with difficulties in interpreting old and short descriptions, particularly in those cases where the type is lost. The confusion dealt with here is, however, only partly due to inadequate original descriptions and much could have been avoided by better perusing the literature. It started from the description of "*Papilio Spio*" by Linnaeus (1767). It could not be concluded what species of *Spialia* this description referred to, until Aurivillius (1882) published for the first time the figure by Clerck depicting the type of this species. Apparently unaware of this, Plötz (1884) misidentified a *Spialia* species from the Congo and described it as "*Pyrgus Spio* Linné". The most important passage in Plötz' description reads (p. 21): "Unten haben die Hfl. dunkle, von den hellen Rippen durchschnittene Flecken, welche mindestens ein schräges Band vom Vorderrand bis in Z. 1^e am Saum frei lassen".

Mabille (1890), apparently also unaware of the publication of Clerck's figure, presented a photograph of a specimen from West Africa agreeing with this description, as *spio* Linnaeus. The description, however, does not conform to the figure of *spio* by Clerck. Aurivillius (1891) found a species agreeing with Plötz' description among material from Cameroun, and seeing the incorrect identification by Plötz, named this species *Hesperia Ploetzi* n. nom., without description, except for the reference to Plötz (1884). In this way Aurivillius suggested to give a replacement name, but as Plötz did not give a new name to his species (he only misidentified it), the name *Hesperia ploetzi* refers to an unnamed species and the type series consists of the combined material of Plötz and Aurivillius, with type locality "Congo and Cameroun". Evans (1937) stated as type locality "Cameroons" and he was followed in this respect by Lindsey & Miller (1965). This would have been correct, if Aurivillius described and named the species from a Cameroun specimen only, but in fact he combined his specimen (specimens?) with those of Plötz (by using the description of the latter).

Rebel (1914) described a *Spialia* species agreeing with Plötz' description of "*spio*" (= *ploetzi*), from the eastern Congo as *Hesperia zebra*. Higgins (1924) found differences between the *zebra* of Rebel and *ploetzi*, which he considered of specific importance, and as the name *Hesperia zebra* had already been used by Butler (1888) for another species (now also placed in *Spialia*), he replaced *Hesperia zebra* Rebel by *Hesperia rebeli*. However, Higgins did not compare *rebeli* with *ploetzi* ("plötz") from Cameroun and Congo (the type locality), but only with specimens from Sierra Leone, Gold Coast, Lagos, Old Calabar and Cape Coast Castle, i.e. only west of Cameroun, where the real *ploetzi* does not occur, as will be shown below. Evans (1937) followed this conception of a western and eastern species and from the localities listed by him under both species (*ploetzi* from Sierra Leone to Congo, *rebeli* from Kenya to Nigeria) one may conclude sympatry in Nigeria, Cameroun and Congo.

The description by Plötz cannot be simply referred to the western or eastern form and as the type locality (Congo and Cameroun) lies in the presumed area of sympatry, the correct use of the name *Spialia ploetzi* (Aurivillius) is at stake and the following questions arise:

1. Does there exist a real geographic overlap of the western and eastern forms?
2. Can the name *ploetzi* be restricted to the western or eastern form?

THE SUPPOSED SYMPATRY OF THE WESTERN AND EASTERN FORMS

The differences between the western and eastern forms are dealt with below. In this paragraph it suffices to state that there are differences and we will restrict the considerations to the occurrence of both forms in the following countries: Nigeria, Cameroun, Rio Muni, Gabon, Congo-Brazzaville and Zaïre. The data are extracted from the following collections: British Museum (Natural History), London (BM); Coll. Lucas, Rotterdam (CL); National Museum, Nairobi (MN); Muséum National de l'Histoire Naturelle, Paris (MNHN); Musée Royal de l'Afrique Centrale, Tervuren (MRAC); National Museum, Bulawayo (NMB); Naturhistoriska Riksmuseet, Stockholm (NRS); Zoologisches Museum der Humboldt-Universität, Berlin (ZMHB). Observations from the literature appear to be too unreliable to be included.

Nigeria — Western form: throughout the southern part, east to Old Calabar, near the frontier of Cameroun (20 specimens; BM, MN, MNHN). Eastern form: the only observation concerns six specimens mentioned by Evans (1937) from Nigeria. These specimens (BM) turned out to originate from Kumbo, between Bamenda and Kumbo, and Bamenda. This area, situated in the mountain range northeast of Mt. Cameroun, formerly belonged to Nigeria, but now forms part of Cameroun. Thus, only the western form is known within the present boundaries of Nigeria.

Cameroun — A single specimen of the western form labelled "Cameroons, 1917, Thierry Mieg" (MNHN). Eastern form throughout the western, central and southern parts (58 specimens; BM, CL, MNHN, MRAC, NMB, NRS).

Rio Muni — A single specimen of the eastern form (ZMHB).

Gabon — Only the eastern form (four specimens; MNHN, MRAC).

Congo-Brazzaville — A single specimen of the eastern form (MRAC).

Zaïre — Evans (1937) mentioned two specimens of the western form from "Congo". These specimens (BM) are indeed labelled "Congo", without further data. There is no other material of the western form known from the Congo, but the eastern form is abundantly represented in collections from all over the country (81 specimens; BM, MRAC, NMB, MN).

So the assumption of sympatry is actually only based on two specimens of the western form labelled "Congo" and one specimen of the western form labelled "Cameroons". In view of the rich material of the eastern form from Zaïre and Cameroun, I have a shrewd suspicion that the locality labels of these specimens of the western form are false. With that, there is no longer any

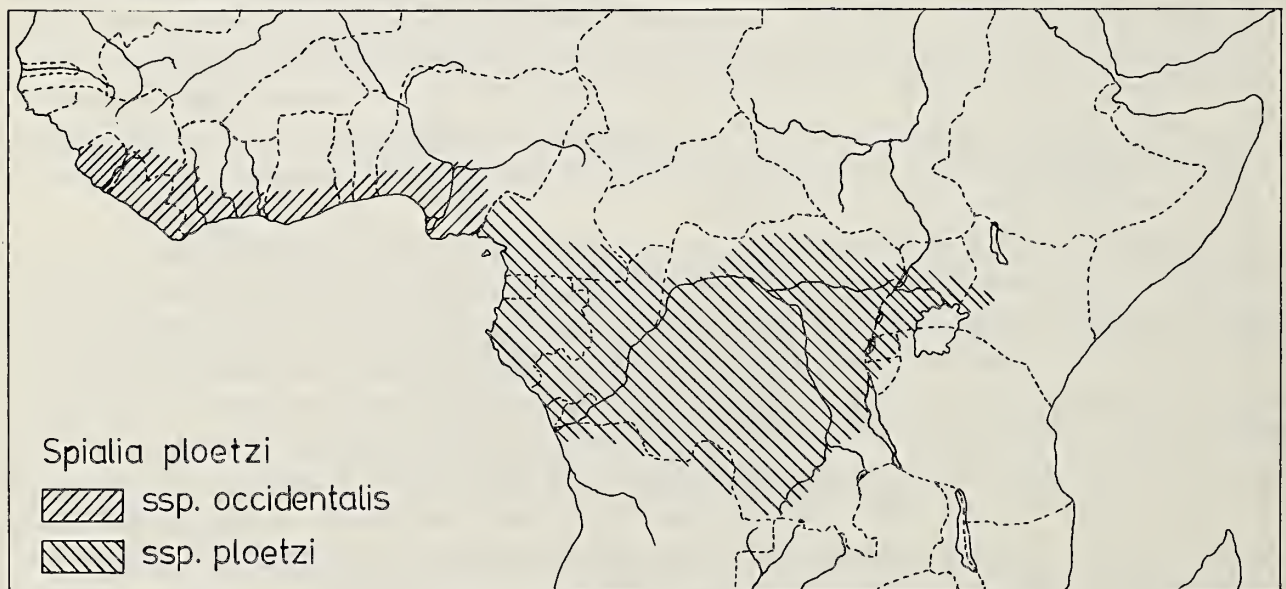


Fig. 1. Distribution of *Spialia ploetzi* (Aurivillius) in West, Central and East Africa.

ground for the supposed sympatry, and we may conclude that the eastern and western forms are allopatric, with the present frontier of Nigeria and Cameroun (or perhaps the west side of the mountain range in W. Cameroun and E. Nigeria) forming the border between these forms. It also means that the main reason for considering both forms separate species does no longer exist.

THE CORRECT APPLICATION OF THE NAME *Hesperia ploetzi* AURIVILLIUS

As the type locality of *Hesperia ploetzi* Aurivillius is "Congo and Cameroun", it is suggested from the above that *ploetzi* is not the western form as generally accepted, but the eastern one. To be quite on the safe side I have attempted to trace the type material or other relevant information. There are three possible sources, viz., a. the collection of Plötz; b. the unpublished figures of Plötz; c. the collection in the Stockholm Museum (material of Aurivillius).

a. For the greater part, the Hesperidae of Plötz are in the museum of München; some material is in the museum of Berlin and an unknown part has probably been sold to private collectors and cannot be traced further. There is no material of *ploetzi* in the known parts of Plötz' collection.

b. Plötz made coloured figures of all species of Hesperidae known to him. At least part of these are in the museum of München (not Berlin, as stated by Evans, 1949). The original figure of *ploetzi* could not be found, but it was reproduced by Aurivillius (1925). On plate 75c the upper- and undersides are given. The underside of the hind wing clearly represents the eastern form (light-coloured veins, oblique streak from median spot 7 to end of vein 5 at termen), but the figure of the upperside cannot be assigned to a particular *Spialia* species.

c. In the museum of Stockholm there are three specimens of the eastern form labelled "Cameroun". One of these bears a second label with the name "Theorin". As Aurivillius dealt with material collected by Theorin when publishing the name *Hesperia ploetzi*, this specimen (a male) can be considered the only remaining specimen of the type series. Therefore, I designate it lectotype and have labelled the specimen accordingly.

By the lectotype designation the name *Hesperia ploetzi* Aurivillius is definitely restricted to the eastern form. Although the locality label of the lectotype only reads "Cameroun", the type locality can be restricted further, as according to Aurivillius the material of Theorin originated from the area along the main branch of the Cameroun River (a large, branched inlet of the sea) from the sea to about 30 km inland, i.e. in the surroundings of Douala.

Thus, *Hesperia ploetzi* Aurivillius, 1891, is the oldest available name for the eastern form and *Hesperia rebeli* Higgins, 1924 (= *Hesperia zebra* Rebel, 1914) is a junior synonym. However, as the name *ploetzi* has to be restricted to the eastern form, the western form is in need of a name. This change of name is regrettable and could easily lead to confusion if the eastern and western forms were separate species. As pointed out above, there is no need to regard them otherwise than as subspecies. So the name *ploetzi* continues being applicable for the western form and I propose to name this form *Spialia ploetzi occidentalis* subspecies nova.

It differs from *Spialia ploetzi ploetzi* as follows:

External characters — Upperside submarginal spots less strongly developed, on fore wing strongly sinuous and often incomplete, on hind wing faint and incomplete, in spaces 5 and 6 not forming obvious white streaks. Hind wing underside without white streak from median spot 7 to end of vein 5 at termen, veins not lighter than ground colour, median spot 2 very distinct.

Male genitalia — Costa of valve extends beyond tip of cucullus.

Female genitalia — Medio-proximal part of ventral sclerites of eighth abdominal segment about as long as broad.

Holotype — ♂, Goudkust (=Ghana) (Rijksmuseum van Natuurlijke Historie, Leiden).

Paratypes — ♀, Ivory Coast, Bingerville, June 14—20, 1915, G. Melou (BM); ♀, Sierra Leone, Afzelius (NRS).

Detailed figures of both subspecies will be provided in a forthcoming paper on *Spialia*. The accompanying figure shows the distribution areas of the subspecies.

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 CELASTRINA ARGIOLUS (LINNAEUS) OP BUDDLEIA (LEP., LYCAENIDAE).

Op zondag 25 juli 1976 zag ik 's middags een sterk gehavend exemplaar van deze soort op *Buddleia*. Het viel me op, dat de vlinder steeds neerstreek op bloemknoppen, die wel reeds paars gekleurd waren, maar nog niet open. Bij nader toezien bleek het een wijfje te zijn, dat eitjes aan het leggen was. Ik probeerde de vlinder te volgen en haalde op die manier vier eitjes tussen de bloemknoppen vandaan. Na enig zoeken met een vergrootglas vond ik er nog twee. Reeds op 30 juli kwamen de eitjes 's middags alle bijna gelijktijdig uit. De rupsjes werden bij elkaar gekweekt en spoedig werden uitwerpselen onder de voedseltwijg gevonden. Al heel gauw bleek één rups echter sneller te groeien dan de anderen, die erg klein bleven. Na ongeveer 10 dagen begon ik regelmatig een rupsje te missen, dat òf niet teruggevonden werd òf door soortgenoten moet zijn opgegeten. De grotere rups was paarsbruin van kleur en viel tussen de knoppen en bloemen nauwelijks op, terwijl een overgebleven kleinere rups lichtgroen gebleven was. Op 21 augustus verpopte de grootste rups, die binnenshuis op 1 september een mooi gaaf ♀ opleverde, dat zoals ik verwachtte een dwergexemplaar bleek te zijn. De overgebleven rups, die evenwel nog niet poprijp was, begon op 22 augustus regelmatig de voedseltak te verlaten én werd een dag later dood aangetroffen. Voor zover ik kon nagaan staat nergens *Buddleia* als voedselplant voor *C. argiolus* vermeld.

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