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Description of *Cyaniris semiargus tartessus* subspec. nov. from the National Park of Doñana (SW. Spain)

(Lepidoptera, Lycaenidae)

by

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Abstract: We hereby describe a new subspecies of *Cyaniris semiargus* (ROTTEMBURG, 1775): ***tartessus* subspec. nov.** was taken in the south-west of the Iberian peninsula (Doñana National Park, Huelva province, Spain), which is located at the southern limit of its continental distribution. ♀♀ have a blue suffusion spreading over a considerable proportion of their wings, are the largest of all known subspecies (being this a constant feature), and on average are much larger than the ♀♀ of ssp. *maroccana* LUCAS from Morocco. Blue scales extend over the basal and discal areas of all four wings and also over the post-discal area of the hind wings. Alongside the characteristic ground colour on the underside of both sexes, the very small size of the black spots is noticeable, these being very faintly outlined in white, and the silver-blue basal suffusion is also remarkably reduced in this subspecies. The aforementioned features distinguish this new taxa from all other Palearctic populations of *C. semiargus* (ROTT.).

Resumen: Se describe una nueva subespecie de *Cyaniris semiargus* (ROTTEMBURG, 1775): ***tartessus* subspec. nov.** , procedente del SW. Iberian peninsula (Parque Nacional de Doñana, provincia de Huelva, España), localizada en el límite meridional de su distribución continental. Las hembras de esta nueva subespecie presentan en su anverso, de un modo constante, la mayor difusión azul conocida para las hembras de esta especie (promedio superior a la existente en las hembras de la ssp. *maroccana* LUCAS, from Morocco), extendiéndose por la zona basal y discal (en alas anteriores y posteriores) y postdiscal (en alas posteriores). En el reverso de ambos sexos, de un color de fondo característico, los puntos negros existentes son claramente reducidos, muy poco orlados de blanco, y la zona azul-plateada de la zona basal es muy reducida. Las anteriores características distinguen a este nuevo taxón de las poblaciones de *C. semiargus* (ROTT.) existentes en la región paleártica.

Zusammenfassung: Aus dem Südwesten der Iberischen Halbinsel (Doñana National Park, Huelva Provinz, Spanien), von der südlichen Verbreitungsgrenze der Art auf dem Kontinent, wird *Cyaniris semiargus* ***tartessus* subspec. nov.** beschrieben und mit den andrene Unteratrten verglichen.

Introduction: The nominate subspecies of *C. semiargus* (ROTT.) has a widespread distribution in Europe. The upperside of the ♀♀ (Fig. 1, specimen 'E') is uniformly dark brown in colour and rarely exhibit even partial blue scaling towards the base of the wings.

C. semiargus transiens (MELCON, 1910) -type locality: Ucles (Cuenca province, central Spain)- is the dominant subspecies throughout the major part of the Iberian

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peninsula. ♀ specimens collected from the Puerto de San Glorio (Santander and Leon provinces, N. Spain) "are occasionally dusted with blue scales on the upperside of the basal half of the wings", as described by MANLEY & ALLCARD (1970:97). A ♀ of this subspecies taken at Sierra Nevada (Granada province, S. Spain) is shown in Fig. 1, specimen 'C'

Up until now the Moroccan subspecies *C. semiargus maroccana* (LUCAS, 1920) has been considered to be that which has a large area of blue suffusion on the upperside of the ♀ wings. According to TENNENT (1993:42) the upperside is usually "widely flushed (with) blue basally"; occasionally the "blue flush (is) reduced but (is) rarely lacking" TENNENT illustrated a series of specimens of this taxa on plate 12, figures 52 to 56. Its distribution in Morocco (TARRIER, 2000) is limited to the High Atlas (altitude 2300-2700m) and the Middle Atlas (1600m, type locality), shown in Fig. 2 (p. 187).

The distribution of *C. semiargus* (ROTT.) in the south of the Iberian peninsula (in the Andalusia Region: 87.595 square kilometres) is limited to three widely separated localities: a).- Sierra Nevada -2000-2500m altitude- and Sierra Alfacar -1400m- (MANLEY & ALLCARD, 1970), in the south; b).-Sierra de Maria and Sierra de Orce (GIL-T., 2000), 1400-1600m, in the south-east; and c).- Doñana National Park (FERNANDEZ HAEGER et al., 1976; HUERTAS & SANCHEZ, 1977), at sea level, in the south-west (Fig. 3, p. 187, right: in UTM 10 x 10 square km). MANLEY & ALLCARD (1970) have suggested that the first two localities (in mountainous areas) hold *C. s. transiens* (MELCON, 1910), while the third (being located in the southern limit of its continental distribution), because of morphological differences within the imagos and its distinct ecology (habitat, altitude and host plant), is here described as a new subspecies:

Cyaniris semiargus ***tartessus*** GIL-T. & HUERTAS **subspec. nov.**

Holotype ♀ (colour plate 6: 4a): National Park of Doñana, near El Rocio, SE. Huelva province (Fig. 2, p. 187), SW. Andalusia Region (Spain), at sea level, 1/V/04 (in coll. F. GIL-T.). Paratypes: 5 ♂♂, 5 ♀♀ (30/IV/77, 6-20/V/77+78) in coll. F. GIL-T.; 14 ♂♂, 7 ♀♀ (15-30/IV/77-78, 6-20/V/77-78) in coll. M. HUERTAS. All from the same locality (holotype).

Description and diagnosis

Upperside ♀: a strong blue suffusion spreads outwards from the basal and discal zone of the fore wings, and also from the basal, discal and post discal zone of the hind wings (colour plate 6: 4a, 1, the four specimens labelled with a 'T'). In fresh specimens (as in colour plate 6: 4a) the very dark ground colour clearly differentiates this subspecies from others. The amount of bluish scaling in *Cyaniris semiargus* ***tartessus*** **subspec. nov.** is notably larger when compared to the average found in ♀♀ of *C. s. maroccana* (LUCAS), which in some cases is reduced to a patch in the base of the wings, although it is quite similar to those markings found on some individuals of the Iberian subspecies transiens (colour plate 6: 1, specimen 'C').

Upperside ♂: While there is some variability in the marginal borders and in the blue ground colour, ♂♂ generally have broad black marginal borders on both fore and hind wings (colour plate 6: 4; 5, specimens 'T'). This feature distinguishes *C. s. maroccana* (LUCAS) (colour plate 6: 5, specimen 'A') and *C. s. transiens* (MELCON, 1910) (colour plate 6: 5, specimen 'B' from the Sierra Maria and specimen 'C' from the Sierra Nevada).

Underside: Very characteristic. The black spots on the underside of the wings of both sexes (colour plate 6: 6, bottom row) are all of a smaller diameter than those present in

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other subspecies and, moreover, these are only faintly bordered in white (principally on those of the forewings); the basal silver-blue suffusion is greatly reduced; and the overall ground colour of the wings is totally different when compared with specimens of *C. s. maroccana* (LUCAS) (colour plate 6: 6: 'A') and *C. s. transiens* (MELCON, 1910) (colour plate 6: 6, 'B', from Sierra Maria and specimen 'C' from Sierra Nevada).

Ecology: The habitat of *C. s.* ***tartessus*** **subspec. nov.** consists of vegetation associated with shallow water within the Doñana National Park, close to the sandy areas and dunes located at sea level. This population is totally isolated and distant from the other localities already mentioned (see Introduction), all of which are clearly located in mountainous areas where both geological substratum and climatic conditions differ substantially.
C. s. ***tartessus*** **subspec. nov.**, is fairly abundant in its known locality and its biology is well known (RODRIGUEZ et al., 1991). In spite of this, its particular characteristics and morphological differences have apparently been overlooked until the present work.
In the European and African continents (TENNENT, 1993), *C. semiargus* (ROTT.) feeds on a wide range of host plants of Leguminosae (mainly *Trifolium* spp.). In contrast, *C. s.* ***tartessus*** **subspec. nov.** only utilises Plumbaginaceae *Armeria velutina* (RODRÍGUEZ et al., 1993).

Derivatio nominis: The name of Tartessus or Tartessos (which means a city, an empire, or a river) dates from 1000 BC and was used by the ancient Romans and Greeks when referring to a lost kingdom, this being one of the great mysteries of the ancient world. The German archaeologist ADOLPH SHULTEN thought that Tartessus was the historical Atlantis and set about searching for the ruins. Of course, he never did find the ancient city and it remains undiscovered to this very day. It is concluded that the city was formerly located in south-western Spain (W. Andalusia). The area is now protected as the National Park of Doñana.

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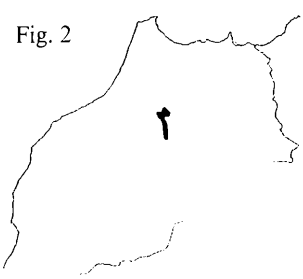

Fig. 2: Distribution of *C. semiargus maroccana* in Morocco.
Fig. 3: Distribution of *C. s.* ***tartessus*** subspec. nov.. in Huelva province, National Park Doñana.

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Colour plate 6 (page 312)
Fig. 1: ♀♀ of *C. semiargus*: E= ssp. *semiargus*; C=ssp. *transiens*; T=***tartessus*** **subspec. nov.**
Fig. 4, 4a: ♂ and ♀ (holotype) of *C. s.* ***tartessus*** **subspec. nov.**
Fig. 5: ♂♂ of C. semiargus: A=ssp. *maroccana*; T=***tartessus*** **subspec. nov.**.; B/C=ssp. *transiens*.
Fig. 6: Underside: top: A=ssp. *maroccana*, B/C=ssp. *transiens*; bottom: all ***tartessus*** **subspec. nov.**

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Colour plate 6/ Farbtafel 6

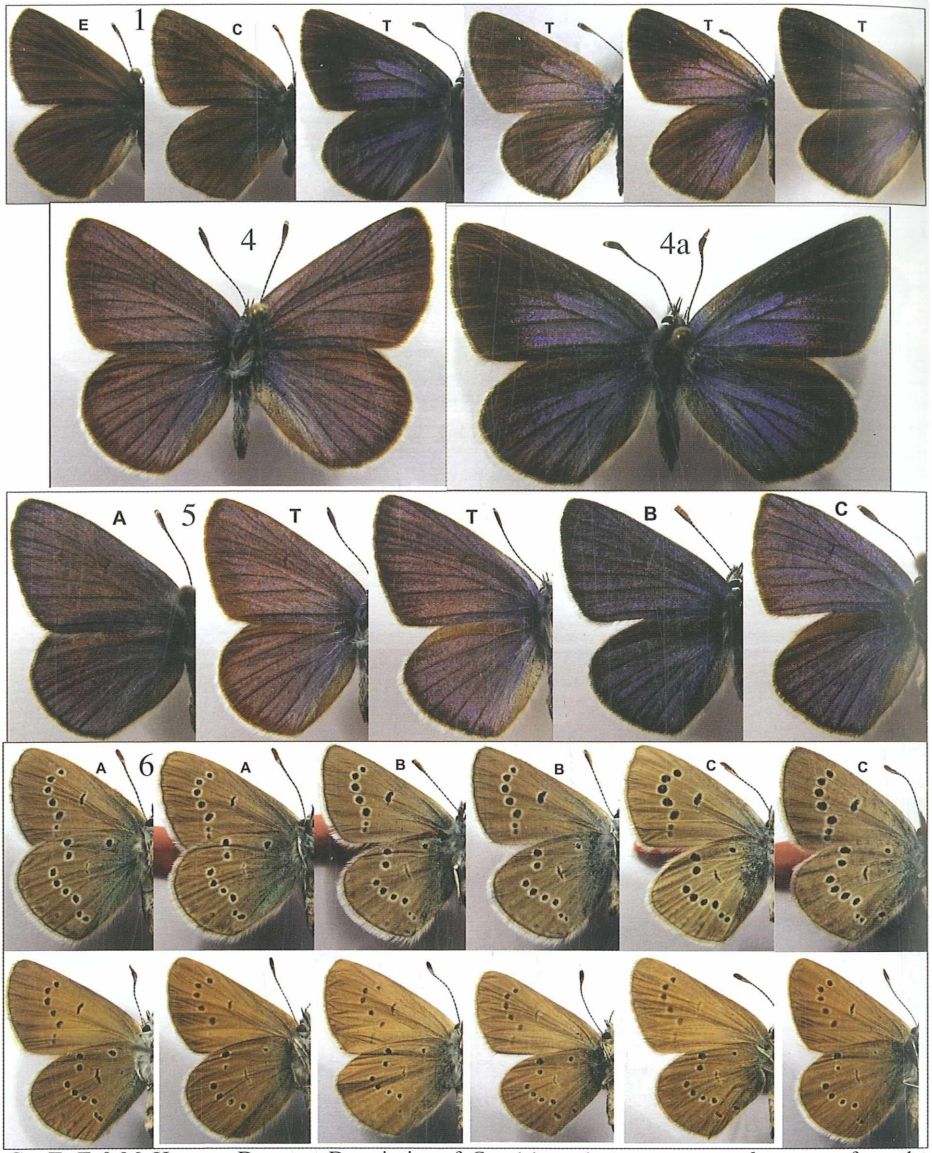

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Fig. 4, 4a: ♂ and ♀ (holotype) of *C. s.* ***tartessus*** subspec. nov.

Fig. 5: ♂♂ of C. semiargus: A=ssp. *maroccana*; T=***tartessus*** subspec. nov.; B/C=ssp. *transiens*.

Fig. 6: Underside: top: A=ssp. *maroccana*, B/C=ssp. *transiens*; bottom: all ***tartessus*** subspec. nov.

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