

Rhopalocera of Turkey. 2. Records of *Satyrium marcidus* (Riley, 1921) and description of *S. marcidus mardinus* n. ssp. (Lepidoptera: Lycaenidae)

by

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ABSTRACT. — The presence of *Satyrium marcidus* in Turkey is confirmed, an extensive description of the species is given, and a new subspecies is described from the province of Mardin. *S. m. alboabdominalis* (Pfeiffer, 1938) is considered to belong to *S. abdominalis* (Gerhard, 1850).

Satyrium marcidus (Riley, 1921) in Turkey

We follow Clench (1978) in using the genus name *Satyrium* instead of *Nordmannia*, *Strymon*, *Thecla*, etc.

Riley (1921) described *Strymon marcidus* on the basis of two females from the Zagros Mts (W. Iran). The holotype is pictured by Peile (1922). Pfeiffer (1938) described a new subspecies, *alboabdominalis*, which he assigned to *marcidus*. De Lesse (1962, 1963) was doubtful about this assignment, and we shall demonstrate that the subspecies actually belongs to *S. abdominalis* (Gerhard). The only other record of *marcidus* is by Koçak (1979, 1980), who mentioned two males from the Turkish province of Konya (Bozkir). This record probably concerns *abdominalis* as well.

We had the good fortune to find two populations of *marcidus* in eastern Turkey, about 200 km apart, viz. in the province of Hakkari and in the province of Mardin. In the latter locality we found two pairs in copula, giving us certainty about the identity of the males. Comparison with the holotype confirmed our identification and the new material enables us to give a more extensive description. The two Turkish populations are clearly different, so that we distinguish them as separate subspecies. Because the eastern population (province of Hakkari) is in good agreement with the type material, it is considered here as the nominate subspecies until new material from W. Iran gives reason for separation. The more western population (province of Mardin) is described as a new subspecies.

Satyrium marcidus marcidus (Riley, 1921); fig. 1.

Male. — Wingspan 20-30 mm, average of 22 specimens 27.5 mm.

Upperside. — Dark brown.

Forewing. — Ciliae brown, clear androconial spots almost identical as in *S. w-album* (Knoch) and in *S. spini* (Denis & Schiffermüller).

Hindwing. — Ciliae brown from apex to tail at vein 2, near tail and up to anal lobe the ciliae are white at the base and black outwards. In anal lobe some orange-yellow scales clearly visible in five specimens, hardly visible in eight and not visible at all in nine. A long black tail at vein 2 with a white tip and with some white scales on side of anal lobe, average length 4.5 mm.

Underside. — Bright greyish-brown, ciliae slightly darker.

Forewing. — A very narrow white marginal line near anal angle and a very indistinct submarginal shadowy band, which gradually vanishes towards the apex. Dark submarginal mark at anal angle, which is typical for *S. abdominalis*, is vaguely recognisable from the submarginal band. A postdiscal band of white linear spots separated by the veins and inwardly margined with dark brown. The spot in 1b is slightly concave with the hollow side facing outwards.

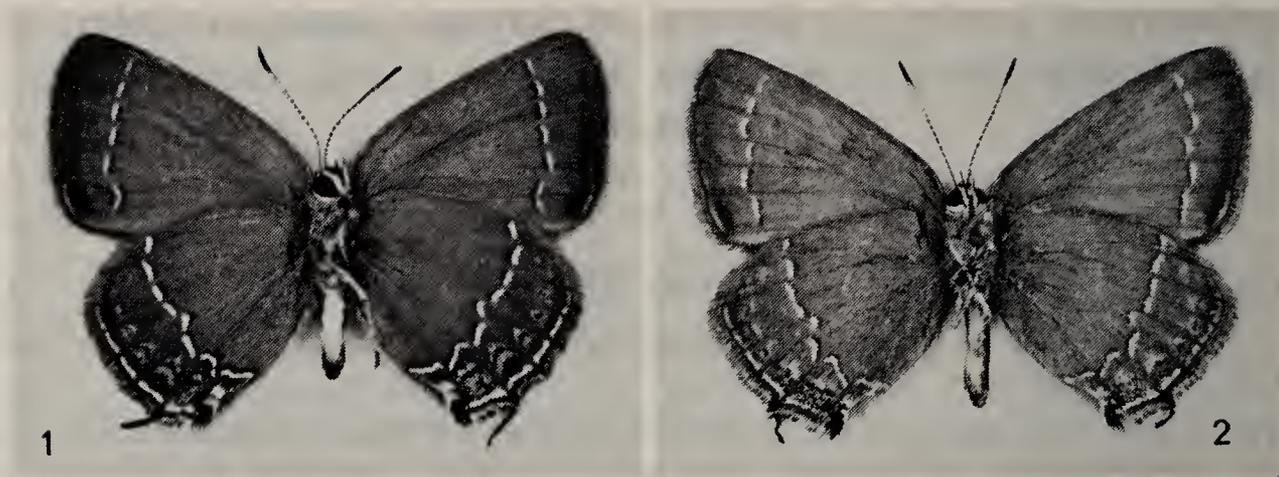


Fig. 1. *S. m. marcidus*, ♂ underside, from province of Hakkari, Turkey.

Fig. 2. *S. m. mardinus* n. ssp., holotype ♂ underside, from province of Mardin, Turkey.

Hindwing. — Ciliae as in forewing, but with white at the basis identical to the hindwing upperside. An almost complete white marginal line (up to vein 6), more pronounced than in forewing, diminishing towards the apex. A similar postdiscal band, more distinct and with the spot in 1c distinctly V-shaped, apex inwards, and those in 2 and 3 variably concave to rudimentary V-shaped. A row of submarginal spots, the largest in 2 is black and inwardly margined yellow-orange, black and white successively. The smaller spots in 3, 4, 5 and 6 diminish successively in intensity from black or brown to shadowy brown and have similar inward margining, which becomes vaguer towards the apex. Submarginal area in 1b filled with blue, black and white scales, and inwardly margined black and whitish successively. Anal lobe black, margined inwards yellow-orange, narrowly black and broadly white successively.

Female. — Wingspan 31 mm. Apart from the absence of androconial spots almost identical to the male. Upperside slightly less dark brown. Underside with V-shape of the postdiscal spot in 1c more pronounced.

Above description is based on: 22 ♂♂ and 1 ♀, all labelled Turkiye, Hakkari, env. Uludere, 1200 m, 9/10.VI.1984, leg. H. & Th. v. Oorschot and H. v. d. Brink, St. 179 (St. stands for station) and 1 ♀, Turkiye, Hakkari, Beytüşşebap, 1220 m, 13.VII.1980, leg. G. Betti.

Variation. — There is hardly any other variation than mentioned above. The holotype, which is in the British Museum (Nat. Hist.) (BMNH), differs slightly from the Hakkari material by a paler tone of the underside (probably due to age) and by a more pronounced V-shape of the postdiscal spots in 1c, 2 and 3 of the hindwing.

Genital. — The shape of the male genital (fig. 3a and b) resembles most that of *Satyrium ilicis* (Esper) (Higgins, 1975). Striking differences are: the overall length which is 1.8 mm in *marcidus* and to about 2.5 mm in *ilicis*, and the transition at the basis of the terminal section of the valve which is smooth in *marcidus* and shows a fold or lobe in *ilicis*. The falces are about vertical as in *ilicis*; this varies up to about 40 degrees from vertical, but the falces are never horizontal as in *S. acaciae* (Fabricius).

Satyrium marcidus mardinus n. ssp.: fig. 2.

The differences with the nominate subspecies, as described on basis of the Hakkari material above, are as follows:

Male. — Wingspan 24-29 mm, average of 76 specimens 27 mm.

Upperside. — A complete absence of orange-yellow scales in the anal lobe.

Underside. — A slightly lighter and duller tone. The postdiscal band of linear spots less pronounced.

Forewing. — Postdiscal spot in 1b less concave, dark submarginal mark at the anal angle still vaguer and hardly recognisable from the submarginal band.

Hindwing. — V-shape of postdiscal spot in 1c less pronounced. Submarginal black spot in 2 absent, of the submarginal markings from 2 to 6 only the inward margining remains, much va-

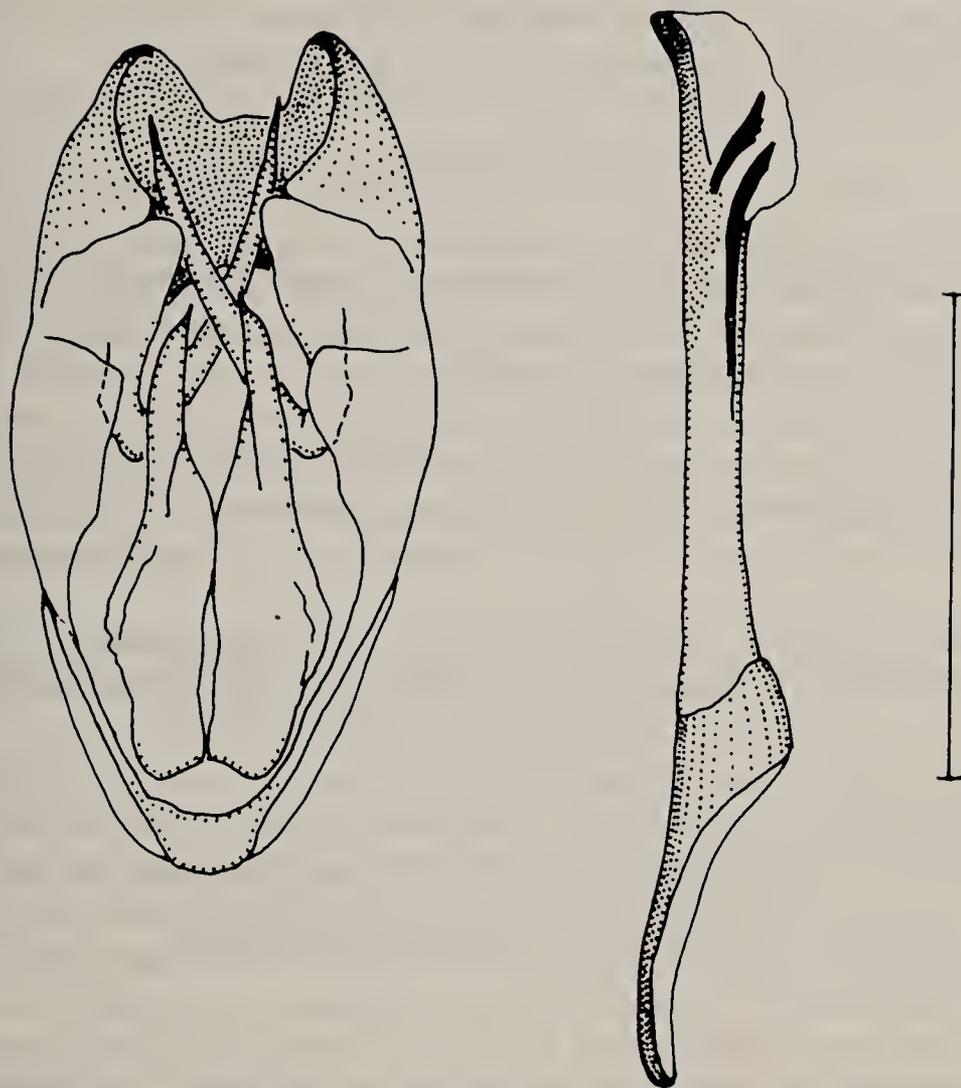


Fig. 3. *S. m. marcidus*: male genitalia, ventral view; aedeagus lateral view. Scale line 1 mm.

guer. The blue of the submarginal area in 1b has a very dull tone. Tail to vein 2 has an average length of 4 mm.

Female. — Wingspan 26-31 mm, average of 17 specimens 29.5 mm. Almost identical to male. Submarginal markings of the hindwing underside slightly more pronounced.

S. m. mardinus n. ssp. differs in particular from the nominate subspecies on the underside by less pronounced submarginal and postdiscal markings and by the absence of the large submarginal black spot in cell 2 of the hindwing.

Variation. — The new subspecies shows little variation. In the underside the postdiscal spots of the forewing and/or the submarginal marking of the hindwing are vague to rudimentary in some specimens. A few specimens have some submarginal black scales in 2 of the hindwing underside, where a clear black spot is always present in the nominate subspecies.

Holotype. — "Turkiye/Mardin/H. & Th. v. Oorschot/H. v. d. Brink/env. Mardin/1000-1100m/6-7.VI.1984/St. 173", ♂.

Paratypes. — Same labelling, 75 ♂♂ and 17 ♀♀. Holotype and most of the paratypes are in the Zoölogisch Museum Amsterdam, some of the paratypes are in the collections of BMNH, Museum Landessammlungen für Naturkunde Karlsruhe, Zoölogische Staatssammlungen München (ZSM), Rijksmuseum Natuurlijke Historie Leiden and in the collection of the authors.

Ecology

We found *S. m. marcidus* on a rocky slope with open brushwood and a rather rich low vegetation, whereas *S. m. mardinus* flew on dry slopes with low vegetation and sparse Dwarf almond (*Prunus tenella* Batsch.) brushwood. We think *S. marcidus* lives on almond, because we collected a number of females and two copulae on or round this brushwood. *S. m. marcidus* has been collected together with *Zerynthia deyrollei* (Oberthür), *Pontia chloridice* (Hübner), *Hipparchia pellucida* (Staudinger), *S. ilicis*, *S. abdominalis* and *Melitaea perseae* (Kollar), whereas

we found *mardinus* together with *S. abdominalis*, *M. persea*, *Pseudochazara pelopea* (Klug), *Ps. telephassa* (Geyer) and *Sublysandra candalus* (Herrich-Schäffer).

Discussion on other records

S. marcidus may be compared to *S. abdominalis* (Gerhard). Most striking differences between *marcidus* and *abdominalis* are: the tuft of hairs at the end of the last segment of the abdomen of the female is brown in *marcidus* and black in *abdominalis*, as in *S. acaciae* (Fabricius); postdiscal linear spots on underside are concave in 1b of the forewing and more or less V-shaped in 1c, 2 and 3 of the hindwing in *marcidus*, they are straight or almost straight in *abdominalis*; the male of *marcidus* has a distinct androconial spot which is absent in *abdominalis*; and finally *abdominalis* shows a typical dark submarginal mark at the anal angle of the forewing underside, which however may be vague or almost absent in some populations, as always in *marcidus*.

We are inclined to place *S. marcidus* nearer to *S. ilicis* (Esper) than to *S. abdominalis* or *S. acaciae* on the basis of: wingshape, marking of the underside and the attitude of the falces in the male genital.

With respect to the two males recorded from the province of Konya by Koçak (1979, 1980) we think these belong to *S. abdominalis*. *Abdominalis* populations in the concerned area of the northern Taurus show some characteristics different from elsewhere: the tone of the underside is lighter, the row of postdiscal linear white spots is more pronounced and the "abdominalis" mark at the anal angle is vague or absent. The description, which Koçak gives comes very close to this form of *abdominalis*. Because he does not mention the existence of androconial spots and moreover his picture does not show the typical concave and V-shaped postdiscal spots, we are convinced that his recorded males do not belong to *S. marcidus* but to *abdominalis*.

We have studied the type material of Pfeiffer's *Thecla marcidus alboabdominalis*, which is in the Zoölogische Staatssammlungen München (ZSM). This type material consists of holotype ♂, allotype ♀, paratype 1 ♀ and 7 specimens (5 ♂♂, 2 ♀♀), which have no type indication, but which all belonged to Pfeiffer's collection. Of this series of ten the allotype, the paratype and 1 ♀ have a tuft of distinct white anal hairs, but in 1 ♀ the tuft is black. We can not trace, whether the latter female was added to this series by Pfeiffer or somebody else. De Lesse (1963) was not complete in giving the presence of the "abdominalis" mark as the only argument for his suspicion of *alboabdominalis* belonging to *marcidus*. The absence of concave and V-shaped postdiscal spots, the presence of the "abdominalis" mark together with the absence of androconial spots in the males have convinced us, that *alboabdominalis* belongs to *S. abdominalis*.

Acknowledgement

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***Dolicharthria punctalis* (Denis & Schiffermüller) in Noordwest-Europa (Lepidoptera: Pyralidae)**

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ABSTRACT. — *Dolicharthria punctalis* (Denis & Schiffermüller) in North-West Europe (Lepidoptera: Pyralidae). The only Dutch recording of *Dolicharthria punctalis* consists of the mention in the 1976 check list of the Dutch Lepidoptera by Lempke. The insertion of the species in the list evidently refers to the only Dutch specimen, which was collected by Van Aartsen near Nieuwkoop (prov. of S.-Holland) on 17.VII.1970. This specimen is now contained in the National Museum of Natural History at Leyden. *Dolicharthria punctalis* is widely distributed in the Mediterranean region and is occasionally found there in abundance. The situation of the locations in N.W.-Europe suggests that *punctalis* belongs to the migrating species, originating from the south or south-east. However, this view contrasts with data according to which *punctalis* is a resident in parts of Britain and also in Sweden. A small number of larvae of *Dolicharthria punctalis* was artificially introduced into our country from Turkey last year, with bulbs of *Fritillaria persica* L. (dr. S. A. Ulenberg, pers. comm.).

Vondsten van *Dolicharthria punctalis* zijn bekend uit Nederland en vrijwel alle in onze buurt liggende Europese landen. Dit gegeven prikkelt nu bepaald niet tot nader faunistisch speurwerk. De aanleiding om toch eens bij deze soort stil te staan is tweërlei. In de eerste plaats het opmerkelijke feit, dat de soort is opgenomen in Lempke's (1976: 38) Naamlijst van de Nederlandse Lepidoptera zonder ooit in de literatuur voor onze fauna te zijn geïntroduceerd. Voorts bleek bij het ordenen van de her en der gepubliceerde faunistische gegevens een verspreidingsbeeld te ontstaan, dat zeker eens de aandacht verdient.

Uit Nederland is slechts één exemplaar bekend: een ♂, dat door de tweede auteur op 17.VII.1970 aan de Nieuwkoopse Plassen, even ten westen van de Woerdense Verlaat (prov. Z.-Holland), op licht werd gevangen. Dit unicum is met een groot deel van de collectie Van Aartsen in het Rijksmuseum van Natuurlijke Historie te Leiden beland. Stellig berust de opname in de Naamlijst van Lempke dan ook op de vondst van dit ene exemplaar. Ook Kuchlein & Gielis (1982: 63) voeren de soort op en geven als no. 169 een kaartje, waarop de vindplaats in het UTM-grid is ingestipt.

Dolicharthria punctalis is gemakkelijk aan het uiterlijk te herkennen en zal in dit deel van Europa dan ook maar zelden met andere soorten worden verward (fig. 1).

De ♂ genitaliën, die zijn afgebeeld door Hannemann (1964) en Marion (1973), zijn karakte-