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Notes on the Distribution and Subspecies of Euchloe charlonia DONZEL (Lep. Pieridae)

von

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The main conclusions of the recent paper in this journal by BACK & EITSCHBERGER are valid and give an excellent overview of the situation concerning a most interesting butterfly. However, one or two additional comments appear to be called for.

The populations of the Lebanon and the Antilebanon are correctly attributed to ssp. *penia* FREYER. Their southern limit in the Antilebanon is on the Mt. Hermon while the frontier is somewhat further to the north in the Lebanon range of mountains. Specimens from here are generally larger than nominate *charlonia*, of much lighter ground colour, with more rounded forewings, and with a small cell

spot on the UPFW*. Ssp. *penia* clearly developed in a Pontomediterranean refuge area (sensu de LATTIN, 1967) and its presence in Lebanon is not surprising (LARSEN, 1974).

GRAVES (1925) pointed out that material from Palestine was much closer to nominate material than to Lebanese *penia*. HEMMING (1932) in his paper on the Transjordan butterflies agreed with this view and proceeded to describe ssp. *elisabethae* which was distinguished from nominate *charlonia* through a slightly more greenish ground colour on the upper and under sides and a somewhat less extended black apical patch on the UPFW. Having observed both *penia* and *elisabethae* in the field and in collections I can vouch for the clear-cut differences between the two in respect of average size (*penia* is larger), morphology (*penia* is lighter and has more rounded wings), habits (*elisabethae* settles much more readily on the ground and has a faster and more erratic flight), and habitat (*elisabethae* is subdesertic). Synonymising *elisabethae* with *penia*, as was done by BACK & EITSCHBERGER, in my view not is not only erroneous but obscures a most interesting zoogeographic relationship.

Although the northernmost colonies of *elisabethae* are only some 100 km south of the southern outposts *penia*, the two are in fact completely allopatric. Were they ever to meet, I have little doubt that differing ecological preferences would rule out exact sympatry. Ssp. *elisabethae* is locally quite common in the Irano-Turanian vegetation zones of Israel and Jordan, and it also occurs in the Hejaz of Saudi Arabia (WILTSHIRE 1952). The species appears to be entirely missing from the Central Sinai and the Suez Canal Zone till the area west of Alexandria. Thus *elisabethae* may also be separated from nominate *charlonia* though the two must have been in recent contact. Whether one wishes to maintain *elisabethae* as a valid subspecies or to synonymise it with *charlonia* is a matter of taste. What really matters is its North African affinities, much in the same manner as *Melitaea deserticola* OBERTHÜR and *Carcharodus stauderi* REVERDIN, both of which have distinct subspecies in the Levantine zone. An even closer parallel in terms of distribution is *Euchloe falloui* ALLARD which is found over most of North Africa, in the Sinai and Israel (NAKAMURA & BENJEMINI 1973), in Jordan (LARSEN 1975) and in the Hejaz (GABRIEL 1954).

BERNARDI (1962) quotes a few food plants which were not mentioned in the article in question: *Diplotaxis pendula* D.C. (= *harra* BALL) and *Diplotaxis acris* FORSSKAAL.

It is interesting to note that *E. charlonia amseli* GROSS & EBERT was captured in Sharjah in 1966 and at Khasab in Oman by Mr. K.M. GUICHARD. There is also a series in the British Museum of Natural History from Muscat in Oman (Ltd. Col. JAYAKAR leg.) (LARSEN, 1977). The Arabian desert precludes any contact between the white form in Oman and the yellow form in the Hejaz.

* Upperside of the forewing

Finally it is worth mentioning that the chromosome number of *Euchloe charlonia* is 30–32 according to LORKOVIĆ (quoted in ROBINSON, 1971) while that of *E. lessei* is 27–28. In a paper from 1967, DE LESSE emphasizes that he restudied the karyotype of *lessei* to ensure that there was no mistake since at the time it was the only known member of the genus to have a figure different from 31.

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