

# Significant extensions to the known range of *Anthocharis damone* Boisduval, 1836 in Greece (Lepidoptera : Pieridae)

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**Abstract.** The occurrence of *Anthocharis damone* Boisduval in the Taygetos mountains is reported. This comprises the first fully documented account of this species in the Peloponnesos, southern Greece. The presence of *damone* on the Greek island of Corfu (Kerkyra) is also reported. This appears to be the first island record for Greece. Small samples of *damone* taken from the Taygetos and Corfu colonies do not appear to differ significantly from material originating elsewhere in the Balkans. The absence of *Anthocharis gruneri* Herrich-Schäffer from the *damone* site on Corfu is noted with interest. The shared use of *Isatis tinctoria* Linnaeus as a larval host-plant by *Anthocharis damone*, *Pieris ergane* (Geyer) and *Euchloe simplonia* (Freyer) is reported.

**Samenvatting.** Een belangrijke uitbreiding van het gekende verspreidingsgebied van *Anthocharis damone* Boisduval, 1836 in Griekenland (Lepidoptera : Pieridae) *Anthocharis damone* wordt vermeld uit het Taygetos gebergte. Dit is de eerste zekere vermelding voor de soort uit de Peloponnesos, Zuid-Griekenland. Tevens wordt *damone* van het eiland Korfoe vermeld. Het is de eerste maal dat deze soort van een Grieks eiland vermeld wordt. De dieren uit de Taygetos en van Korfoe verschillen niet van de dieren die uit andere streken van de Balkan bekend zijn. Op de vindplaats van *damone* op Korfoe werd *Anthocharis gruneri* Herrich-Schäffer niet vastgesteld. Er wordt vermeld dat de rupsen van zowel *Anthocharis damone*, *Pieris ergane* (Geyer) als *Euchloe simplonia* (Freyer) dezelfde voedselplant hebben: *Isatis tinctoria* Linnaeus.

**Résumé.** Extension importante de l'aire de répartition d'*Anthocharis damone* Boisduval, 1836 en Grèce (Lepidoptera: Pieridae) *Anthocharis damone* est signalée du Mt. Taygetos. Il s'agit là de la première mention certaine de l'espèce dans le Péloponèse. De même, elle est signalée de l'île de Corfou, et c'est la première observation insulaire grecque connue. Les exemplaires ci-dessus mentionnés ne diffèrent nullement de ceux des autres régions des Balkans. *Anthocharis gruneri* Herrich-Schäffer n'a pas été signalé du biotope de Corfou d'*A. damone*. Il est fait mention d'une plante nourricière commune à *A. damone*, *Pieris ergane* (Geyer) et *Euchloe simplonia* (Freyer), à savoir: *Isatis tinctoria* Linnaeus.

**Key words:** *Anthocharis damone* - larval host-plant - *Isatis tinctoria* - faunistics - zoogeography - Corfu - Taygetos - Greece - Albania - Yugoslavia.

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## Introduction

The association of *Anthocharis damone* Boisduval, 1836 with the Parnassos and Ghiona mountains is well known and well documented. Indeed, the environs of Parnassos, and the classical and easily accessible locality of

Delphi in particular, provide so much of special interest to the butterfly hunter in April, that other mainland areas of the country are relatively neglected in early spring. The possibility arises, therefore, of *damone* being more widespread in Greece than present information suggests, as indeed the following accounts tend to confirm.

#### *Anthocharis damone* Boisduval in the Peloponnesos

The only indication of the presence of this species in southern Greece seems to be an unreferenced and unconfirmed report by Brown (1977). This refers to its uncommon occurrence in the area of Mt. Chelmos at about 900m in April and early May.

Whilst searching for Rhopaloceros larvae in the Taygetos mountains at about 750m at the end of April 1992, the first-named author happened upon an abundant colony of *Isatis tinctoria* Linnaeus, the larval host-plant of *damone*. A search for insects quickly secured a fresh male of this species. Within a few hours, 10 more males and 3 females were found, along with numerous ova and some small larvae on the flower buds of the host-plant. Insects from this colony did not appear to differ from those collected previously in Yugoslavia and central Greece. A wider search revealed other colonies between 450m and 1050m over an extensive area of the massif. The occurrence of the host-plant beyond both extremes of this range was noted, and it is recalled that, in 1987, *I. tinctoria* was observed at 1700m in a region of the Taygetos mountain quite remote from the area containing *damone*.

The east-facing biotope comprised steep limestone cliffs and contained a great abundance of flowering Compositae, Cruciferae and Leguminosae. All the Pieridae, with the exception of *Pieris manni* (Mayer, 1851), which are known to fly with *damone* at Delphi, were in evidence; *Pieris krueperi* Staudinger, 1860 was especially common. A single specimen of *Papilio alexanor* Esper, [1799] was tentatively identified: this species was seen commonly at Mistras in the north of the Taygetos massif in the days following the encounter with *damone*. A strongly-flying large blue butterfly was identified, again, only tentatively, as *Iolana iolas* (Ochsenheimer, 1816); whilst the larval host-plant of this species was not noted in this particular vicinity, the presence of *Colutea arborescens* Linnaeus in the general area had been observed previously. This Lycaenid is known to occur in the Taygetos mountains (Rebel 1903).

It is convenient to report here the use of *Isatis tinctoria*, within the *damone* biotope, by ovipositing *Pieris ergane* (Geyer, [1828]), and *Euchloe simplonia* (Freyer, [1829]). Several ova of *E. simplonia* were seen to be laid amongst the flower buds of individual plants of *I. tinctoria*, the normal ovipositing site for *damone*. In the case of *P. ergane*, the underside of the

basal leaves was selected for oviposition. Two *ergane* ova were reared to maturity using both *I. tinctoria* and, depending upon its availability, *Aethionema saxatile* Linnaeus, the more usual host-plant of the species. All other observed oviposition by *ergane* occurred on *A. saxatile*, individual plants of which were shared for this purpose with *Anthocharis gruneri* Herrich-Schäffer.

### Occurrence of *Anthocharis damone* on Corfu (Kerkyra)

The only substantiation of the occurrence of *damone* anywhere in Greece to the north of the Parnassos and Ghiona massifs relates to a record of 2 males and 1 female from Ioannina, Epiros at 600-800m, 17/5/1982 (Ulrich 1985). The report of this discovery is annotated thus: "Bisher nur in Mittelgriechenland, Mazedonien und dem Peloponnes nachgewiesen" (As yet, found only in central Greece, Macedonia and the Peloponnesos). Each of these regions of Greece are fully defined by Ulrich. However, whilst it is clear that central Greece and the Peloponnesos relate to the environs of Parnassos and Chelmos (Brown, loc. cit.) respectively, that part of the statement citing Macedonia is unsupported by faunistic data and, in any case, open to wide zoogeographical interpretation in consequence of the region itself embracing several well-separated locales specified thus:-

#### "1. Mazedonien

- Umgebung Kozane, 600-700m; 30.7.1980
- Umgebung Florina, 700m; 18.5.1982
- Lago Begoritis, 500-600m; 28.7.1980
- Halbinsel Kassandra, Ostkuste, 0-50m; 25.7.1980
- Bor. Pindos, 700-1000m, 18.5.1982"

In the middle of May 1992, a search by the first-named author uncovered an extensive colony of *Isatis tinctoria* at about 700m close to Ioannina, in the western reaches of the Mitzikeli mountains. The plants were in all stages of development, from flower-buds to seeds, but provided no indication of the presence of *damone*.

The discovery of *damone* on the island of Corfu (Kerkyra, Korfoe) in early May 1993 by the second-named author represents a significant extension of the known range of this insect, as well as equating to the first island record for Greece. The proximity of Corfu to Albania does, of course, give rise to the possibility that this island's fauna may have more to do with Greece's north-western neighbour than Greece herself. Whilst modern faunistic records for Albania are still few and far between, it may be relevant to note the concentration of sites for *damone* in western Yugoslav Macedonia, adjacent to the Albanian border (Schaidler & Jaksic 1988).

In the northern part of the island of Corfu, *damone* was noted between 350-600m, the limits of the altitude range investigated, on steep east-facing limestone slopes containing many flowering plants attractive to insects. Sympatric species commonly noted were: *Papilio alexanor* (most specimens male and generally small), *Pieris krueperi*, *Pontia daplidice* (Linnaeus, 1758), *Colias crocea* (Fourcroy, 1785), *Anthocharis cardamines* (Linnaeus, 1758), *Polygonia egea* (Cramer, [1775]), *Vanessa atalanta* (Linnaeus, 1758), *V. cardui* (Linnaeus, 1758) and *Polyommatus icarus* (Rottemburg, 1775). Also present were small numbers of *Lasiommata maera* (Linnaeus, 1758) and *Lasiommata megera* (Linnaeus, 1758).

Of particular interest is the apparent absence of *Anthocharis gruneri* from Corfu, a species found with *damone* in all other known Greek sites. The provisional list of butterfly species compiled by Baldock & Bretherton (1981) for Corfu does not include *gruneri*.

### References

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### Addendum

Subsequent to the submission of this report, confirmation of the presence of *A. damone* in the Mitzikeli mountains was received in personal communication from Herrn Rainer Ulrich. However, the reputed occurrence of this species in Greek Macedonia remains unsubstantiated.