Melanargia larissa (Lepidoptera: Nymphalidae, Satyrinae) confirmed from the Greek Cycladic island of Andros, located in the Aegean Sea, additional butterfly records from this island and a general overview of its butterfly composition

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Abstract. The existence on Ándros Island, Greece, of *Melanargia larissa* is confirmed, butterflies new to the island are recorded, a general overview of the island's butterfly fauna is given and possible, future new records are listed.

Samenvatting. *Melanargia larissa* (Lepidoptera: Nymphalidae, Satyrinae) bevestigd voor het griekse Egeïsche eiland Ándros in de Cycladen, bijkomende dagvlindergegevens van dit eiland en een algemeen overzicht van de dagvlinderfauna van Ándros.

Résumé. La présence de *Melanargia larissa* (Lepidoptera: Nymphalidae, Satyrinae) sur l'île grecque d'Ándros (Mer égéenne, Cyclades) est confirmée, de nouvelles espèces pour cet île sont mentionnées en la composition de la faune de papillons sur cet île est discutée.

Key words: Greece – Ándros Island – Hesperioidea – Papilionoidea – *Melanargia larissa* – *Nymphalis polychloros* – faunistics – distribution.

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Introduction

The only existing record of *Melanargia larissa* (Geyer, 1828) from Ándros Island is that of a single male specimen deposited in what used to be the "Vlaamse Vereniging voor Entomologie" collection, presently dismantled—the largest part deposited in the Zoological Museum of Amsterdam—, but the validity of this record has been doubted by Olivier (1987). Past collecting by the author in the western, central and northern part of the island in late June had failed to produce this species, and it was generally assumed that *larissa* was absent from Ándros and that the recorded specimen was mislabeled. Recent collecting, however, carried out in early June 2006, established that the butterfly is locally common, its distribution being restricted along the south-western side of the island, on south-western-facing slopes, from sea level to about 100 m in altitude.

The paucity of published butterfly records from the island and the painstaking job of tracking them down made it desirable to list all known butterfly records from Ándros in a single paper and to add to it all recent records that are new to the island. The checklist that follows is by no means complete, but it gives, however, a fairly good idea of the island's butterfly composition, while at the same time it reveals its faunal specialties that set it apart from the other Cycladic islands.



Fig. 1. Map of Greece showing location of Ándros Island.

Geography

The geographic coordinates of Ándros, roughly at its center, are: N 37°51'54" and E 024°50'10". It is the northernmost island in the Kikládes (= Cyclades) island-group, which also comprises the islands of Tínos, Míkonos, Dílos, Náxos, Páros, Antíparos, Íos, Santoríni (= Thíra), Amorgós, Anáfi, Folégandros, Kímolos, Mílos, Sífnos, Síros, Sérifos, Kíthnos and Tziá (= Kéa), and is the second largest after Náxos. Its length is about 40 km and spreads NW to SE, its widest width about 16 km and its area about 400 km². Its terrain is mountainous, the highest peak having an altitude of almost 1000 m. Its closest distance from the island of Évvia (not included in the Cyclades island-group) is about 12 km and from the Cycladic island closest to it, Tínos, a little over 1.5 km.

Geology

Ándros is mainly composed of schist and limestone, the latter often in the form of marble. Its subsoil contains iron, manganese, nickel, lead, copper, asbestos and talcum.



Fig. 2. Map of Ándros Island indicating sampling localities.

The mountainous nature of the island and its geological structure have resulted in the formation of natural, underground water reservoirs that supply water to a vast network of springs and streams that remain well-watered even during the hot and dry summer months. In this respect the island is quite unique when compared to the other Cycladic islands.

Flora

The island's flora is Mediterranean and mainly xeric. Vast areas are covered by guarrigue and maquis, while in some restricted locations there are remnants of Mediterranean deciduous forest, the latter being evident mostly upland and in well watered situations, and harboring trees such as *Platanus*, *Quercus* and *Acer*.

Where feasible, there are also areas with terraced olive groves and vineyards. In wind-protected, mostly flat areas orchards and cereal fields are to be met with. Everywhere in evidence there are also short plant and grass communities, parched during summer months, but luxuriously green in late winter and early spring.

Checklist of recorded butterflies

All specimens, unless otherwise stated, recorded by Coutsis (1985).

Carcharodus alceae (Esper, 1780). Also recorded by Rebel (1937) from "Andros 3.vi." and by Reisser (1940) as "*Carcharodus alceae australis* Z. – Andros".

Carcharodus orientalis Reverdin, 1913.

Thymelicus acteon (Rottemburg, 1775). Also recorded by Rebel (1937) from "Andros 2.vi." as "*Adopaea actaeon* Rott.".

Papilio machaon Linnaeus, 1758.

Iphiclides podalirius (Linnaeus, 1758).

Zerynthia polyxena (Denis & Schiffermüller, 1775). Katákilos, 200–250 m, 23.iii.1990; the specimens belong to the yellow morph. Also recorded by Rebel (1937) from "Andros (Petrofos) (Kykladen) 4.vi.". In the Cyclades restricted to Ándros.

Leptidea sinapis (Linnaeus, 1758). In the Cyclades restricted to Ándros.

Euchloe ausonia (Hübner, 1804). Katákilos, 200–250 m, 23.iii.1990; new to the island.

Pieris brassicae (Linnaeus, 1758).

Pieris rapae (Linnaeus, 1758). Árni, 200–250 m, 24.vi.1986; new to the island.

Pontia edusa (Fabricius, 1777). Recorded by Coutsis (1985) as "*Pontia daplidice* Linnaeus.".

Gonepteryx cleopatra (Linnaeus, 1767).

Lycaena phlaeas (Linnaeus, 1761).

Pseudophilotes vicrama (Moore, 1865). Ágios Ioánnis, ca. 80 m, 3.vi.2006. Also recorded by Rebel (1937) from "Andros 2.vi." as "*Lycaena baton* (Bergstr.) (*vicrama* Moore) *schiffermülleri* Hemming".

Polyommatus icarus (Rottemburg, 1775).

Melanargia larissa (Geyer, 1828). Pláka, Ágios Ioánnis and Kalamáki, 3/4.vi.2006. Specimens with reduced black markings and large, reminiscent of the Síros Island population (Coutsis 1994). Single doubtful older record of a male from "Ándros <<Eginia>>, 12.v.1984." (Olivier 1987) confirmed. Presently unknown from any other Cycladic island except Síros.



Fig. 3. *Melanargia larissa* (Geyer, 1828), upper-side. Greece, Andros Island, Pláka, 95 m, 3.vi.2006, J. G. Coutsis leg. Top, male. Bottom, female. Scale bar = 1 cm.

Maniola jurtina (Linnaeus, 1758).

Pararge aegeria (Linnaeus, 1758). In the Cyclades restricted to Ándros. *Lasiommata megera* (Linnaeus, 1767). Also recorded by Rebel (1937) from "Andros 3.vi." as "*Pararge megaera lyssa* B".

Hipparchia senthes (Fruhstorfer, 1908). Recorded by Coutsis (1985) as "*Hipparchia aristaeus* Bonelli".

Nymphalis polychloros (Linnaeus, 1758). One male recorded at Pláka, ca. 90 m, and two females at Árni ca. 200 m, 3/4.vi.2006. All specimens were very fresh, suggesting recent emergence in Ándros, where it undoubtedly breeds; new to the island and as yet unknown from any other Cycladic island.

Vanessa atalanta (Linnaeus, 1758). Árni, 200–250 m, 4.vi.2006; new to the island.

Vanessa cardui (Linnaeus, 1758).

Argynnis paphia (Linnaeus, 1758). In the Cyclades restricted to Ándros.

Discussion

The 24 species recorded from Ándros attest to the island's rather poor lepidopterological fauna, a situation common to all Cycladic islands. The existence there, however, of *Z. polyxena*, *L. sinapis*, *A. paphia* and *N. polychloros*, all of which are unknown from the other Cycladic islands, makes this island unique, and may be explained by the island's proximity to the large island of Évvia, which possesses all the above mentioned species (Coutsis & Ghavalás 2006), to its being well-watered and to its still harboring remnants of deciduous forests.

Other species to be expected

Judging from the butterfly fauna on other Cycladic islands, it is expected that the following species will also be recorded from Ándros in the future:

Gegenes pumilio (Hoffmansegg, 1804). Presently known from Tínos, Sífnos, Páros and Santoríni.

Colias croceus (Fourcroy, 1785). Presently known from Tínos, Míkonos, Síros, Páros, Náxos, Sífnos, Mílos and Santoríni.

Callophrys rubi (Linnaeus, 1758). Presently known from Síros, Páros, Náxos, Sífnos and Santoríni.

Lampides boeticus (Linnaeus, 1767). Presently known from Páros, Náxos and Santoríni.

Leptotes pirithous (Linnaeus, 1767). Presently known from Páros, Antíparos, Sífnos and Santoríni.

Celastrina argiolus (Linnaeus, 1758). Presently known from Tínos and Páros.

Glaucopsyche alexis (Poda, 1761). Presently known from Míkonos, Síros, Páros, Náxos, Sífnos and Mílos.

Aricia agestis (Denis & Schiffermüller, 1775). Presently known from Náxos. Polygonia egea (Cramer, 1775). Presently known from Páros, Sífnos, Íos and Santoríni.

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