

Skippers, Butterflies, Burnets and Harvesters from the Greek island of Límnos, a Skipper new to the Greek island of Santoríni and two Butterflies new to the Greek island of Síros (Lepidoptera: Hesperioidea, Papilionoidea, Zygaenidae)

John G. Coutsis

Samenvatting. Dagvlinders en Zygaenidae van het Griekse eiland Límnos, een nieuwe Hesperioidea voor het Griekse eiland Santoríni en twee dagvlindersoorten nieuw voor het Griekse eiland Síros (Lepidoptera: Hesperioidea, Papilionoidea, Zygaenidae)

Een becommentarieerde soortenlijst van dagvlinders (Hesperioidea & Papilionoidea) en Zygaenidae van het Griekse eiland Límnos wordt gepresenteerd, gebaseerd op persoonlijke waarnemingen van de auteur (oktober 1999, april, juni en september 2000), aangevuld met literatuurgegevens. 31 dagvlinders en 2 Zygaenidae worden opgesomd: slechts twee eerder door Olivier (1988) vermelde soorten, alsook twee andere twijfelachtige meldingen door Koutsaftikis (1970), werden door de auteur niet waargenomen. De beperkte soortenrijkdom op Límnos wordt in verband gebracht met de kleine oppervlakte van het eiland, de sterke isolatie ervan alsook de zeer geringe diversiteit aan landschapstypen, met bovendien een sterke overbegrazing en veelvuldige branden. De fauna van het eiland vertoont duidelijk affiniteiten met die van het Griekse vasteland, en niet met die van Klein-Azië (cf. Olivier 1988). Enkele persoonlijke individuele waarnemingen op de eilanden Santoríni en Síros worden eveneens behandeld. Hierbij worden resp. 2 en 1 soort als nieuw voor deze eilanden vermeld.

Résumé. Papillons diurnes et Zygaenidae de l'île grecque de Límnos, un Hespéride nouveau pour l'île grecque de Santoríni et deux espèces de papillons diurnes nouvelles pour l'île grecque de Síros (Lepidoptera: Hesperioidea, Papilionoidea, Zygaenidae)

Une liste commentée d'espèces de papillons diurnes (Hesperioidea & Papilionoidea) et de Zygaenidae de l'île grecque de Límnos est présentée, basée sur les observations personnelles de l'auteur (octobre 1999, avril, juin et septembre 2000), complétées des données de la littérature. 31 papillons diurnes et 2 Zygaenidae sont dénombrés: seul deux espèces précédemment rapportées par Olivier (1988), ainsi que deux autres, mention douteuse par Koutsaftikis (1970), n'ont pu être retrouvées par l'auteur. La diversité restreinte d'espèces à Límnos est reliée à la superficie réduite de l'île, sa forte isolation, ainsi que la faible diversité des habitats, avec de surcroît, un surpâturage intensif et de fréquents incendies. La faune de l'île a une affinité marquée avec celle de la Grèce continentale, et non pas avec celle d'Asie Mineure (cf. Olivier 1988). Quelques observations personnelles individuelles faites aux îles de Santoríni et de Síros sont également traitées. Ainsi, resp. 2 et 1 espèces sont mentionnées pour la première fois comme présentes en ces îles.

Key words: butterflies – Zygaenidae – Límnos – Santoríni – Síros – faunistics.

Coutsis, J. G.: 4 Glykonos Street, GR-10675 Athens, Greece (kouts@otenet.gr).

1. Límnos

Introduction

The Greek island of Límnos (also known as Lemnos) lies in the northern part of the Aegean sea, at a latitude of approximately 40°N and a longitude of approximately 25°E, and its area is about 470km². The geological origin of the island is volcanic, probably dating as far back as the Oligocene period. At present it consists of a series of rounded hills (highest point: 374m), the majority

Phegea 29 (1) (1.III.2001): 9

of which occur in its western part, as well as of a number of plains that extend mostly over its central, southern and eastern part.

The island is relatively dry, having few and sparsely situated streams. Trees are to be met with only near these streams, in gullies, in gardens and in some cultivated areas, while the major part of the island supports a low vegetation, consisting of a mixture of shrubs and grasses in hilly terrain and mostly of cereal cultivations and vineyards in the plains. Level areas where cultivations have been temporarily suspended are as a rule transformed into flowery meadows, but these areas are few and usually short-lived.

Límnos island also supports a large population of cattle and is being constantly heavily overgrazed. This condition together with frequent fires, suggests that a severe degradation of its original flora and fauna may have taken place over time.

Collecting history

The first published accounts on the lepidoptera of Límnos are by Mathew (1898), who personally collected there, and by Rebel (1934, 1937), who based his accounts on the material collected by the herpetologist Franz Werner. The first systematic survey of the butterflies of the island is by Koutsaftikis (1970), who apparently collected the material himself. The most recent and complete overview of the butterflies of Límnos is by Olivier (1988), who presents his own collecting records, together with an account of all the records previously published by others.

Further to this there are works by Bernardi (1961, 1971), by Koutsaftikis (1973a, 1973b, 1974a, 1974b), by Tauber & Tauber (1968) and by Olivier (1993) that basically constitute compilations of previously published records on the skippers and butterflies of Límnos.

List of recorded species

The list of species now being presented is derived from personal collecting experiences carried out on 16–18 October 1999, 20–24 April 2000, 1–4 June 2000 and 6–9 September 2000:

Hesperiidae

1. *Thymelicus sylvestris* (Poda, 1761). Common throughout the island, primarily in fields and meadows, in June. Previously recorded by Rebel (1934) and Olivier (1988).

2. *Thymelicus acteon* (Rottemburg, 1775). Common throughout the island, primarily in fields and meadows, but also in more xeric situations, in June. Previously recorded by Olivier (1988).

3. *Gegenes nostradamus* (Fabricius, 1793). Two males captured by the sea, near Evreókastro, in September. Identification confirmed by the genitalia. A first record for Límnos.

4. *Carcharodus alceae* (Esper, [1780]). In fair numbers locally, especially at edges of fields and meadows and at the bottom of gullies.

Collected in April, June, September and October. Collecting sites: halfway along the road between Mírina and Káspakas; Ágios Athanásios; near Sardés; near Ágios Dimítrios; near Diapóri. Previously recorded by Koutsaftikis (1970) and by Olivier (1988).

5. *Carcharodus orientalis* Reverdin, 1913. In small numbers, particularly near streams, at edges of fields and meadows and at the bottom of gullies. Collected in April, June and October. Collecting sites: halfway along road between Mírina and Káspakas; near Sardés; near Ágios Dimítrios; Ágios Ioánnis; halfway along road between Sardés and Dáfni; halfway along road between Thános and Kondiás. Identification confirmed by the genitalia. Previously recorded by Olivier (1988).

6. *Spialia orbifer* (Hübner, [1823]). Few specimens recorded, all at the bottom of gullies, in garrigue situations. Found in April and June. Collecting sites: halfway along road between Mírina and Káspakas; near Sardés; halfway along road between Sardés and Dáfni; near Diapóri. Previously recorded by Olivier (1988).

Papilionidae

7. *Papilio machaon* Linnaeus, 1758. Found in small numbers over the whole of the island, being a strong flyer and wanderer. Recorded in April, June and September. Previously also recorded by Mathew (1898) and Koutsaftikis (1970).

Pieridae

8. *Colias crocea* (Fourcroy, 1785). Found in fair numbers everywhere. Recorded in April, June and October. Previously recorded by Mathew (1898), Koutsaftikis (1970) and Olivier (1988).

9. *Euchloe ausonia* (Hübner, [1804]). Recorded as common in April (first brood) and in small numbers in June (second brood), mostly in fields, flowery meadows and waste places. Collecting sites: halfway along road between Mírina and Káspakas; Ágios Athanásios; near Sardés; near Ágios Dimítrios. Previously recorded by Olivier (1988) as *E. simplonia* (Freyer, 1829) [sic!].

10. *Aporia crataegi* (Linnaeus, 1758). Worn specimens recorded in small numbers in June, especially over fields and meadows as well as in orchards. Collecting sites: near Ágios Dimítrios; near Katálakos. Previously also recorded by Olivier (1988).

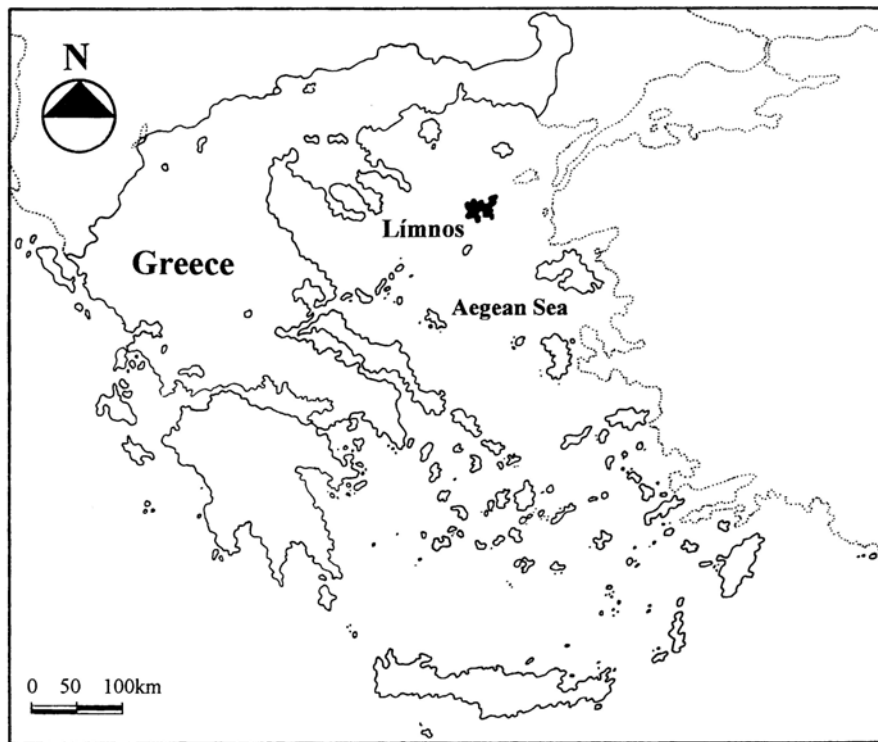


Figure 1: Situation of the island of Limnos in the Aegean Sea.

11. *Pontia edusa* (Fabricius, 1777). Recorded as fairly common in April, June, September and October, especially in fields, meadows and waste places. Collecting sites: Stavρός, S of Diapóri; near Ágios Dimitrios. Previously also recorded by Koutsaftikis (1970) and by Olivier (1988), in both cases as *P. daplidice* (Linnaeus, 1758) [sic!].

12. *Pieris brassicae* (Linnaeus, 1758). Recorded commonly throughout the island in April, June, September and October, especially in orchards, gardens, fields and meadows. Previously also recorded by Koutsaftikis (1970) and by Olivier (1988).

13. *Pieris rapae* (Linnaeus, 1758). Recorded in April, June, September and October, primarily in orchards, gardens, fields and meadows, but nowhere as common as *brassicae*. Collecting sites: halfway along road between Mírina and Káspakas; near Ágios Dimitrios. Previously also recorded by Koutsaftikis (1970) and by Olivier (1988).

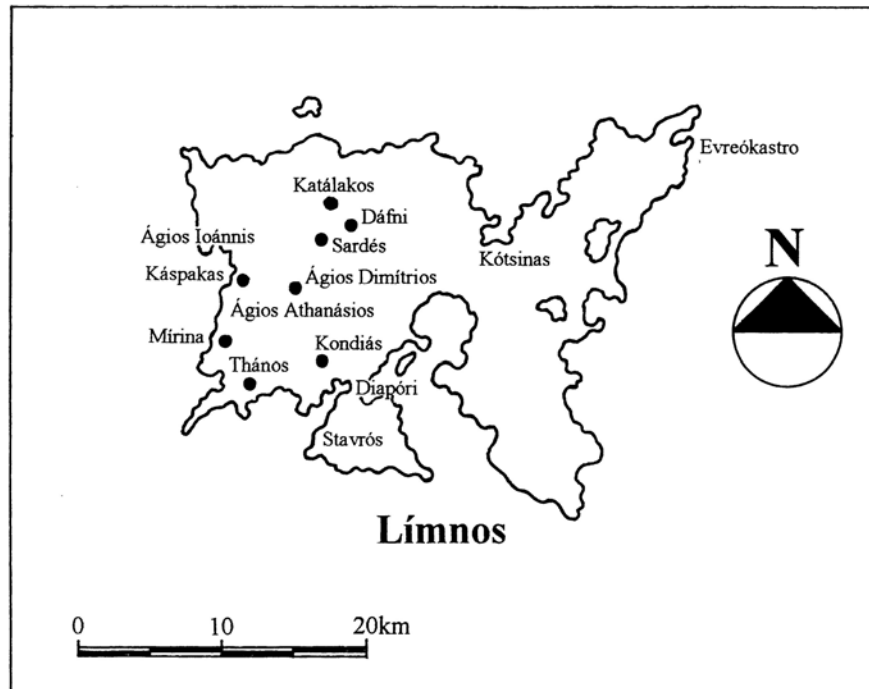


Figure 2: The island of Límnos with collecting sites.

Lycaenidae

14. *Lycaena phlaeas* (Linnaeus, 1761). Recorded in very large numbers in April and June and in small to fair numbers in September and October. Found mostly at edges of fields, in flowery meadows and at the bottom of gullies. Collecting sites: halfway along road between Mírina and Káspakas; near Ágios Dimítrios; Ágios Athanásios; near Sardés. Previously also recorded by Mathew (1898), Rebel (1937), Koutsaftikis (1970) and Olivier (1988).

15. *Satyrium ilicis* (Esper, [1779]). Found to be locally fairly abundant in June in an area supporting bushes of *Quercus ilex*, near Ágios Dimítrios. Previously also recorded by Olivier (1988).

16. *Leptotes pirithous* (Linnaeus, 1767). Recorded in small numbers in September and in very large numbers in October, especially near coastal areas. Collecting sites: Mírina; halfway along road between Mírina and Káspakas; near Kátalakos. **A first record for Límnos.**

17. *Celastrina argiolus* (Linnaeus, 1758). Found singly in April and in fair numbers in September, in both cases fresh. Recorded in the vicinity of streams with dense vegetation. Collecting sites: near Ágios Dimitrios; near Katálakos. **A first record for Límnos.**

18. *Pseudophilotes vicrama* (Moore, 1865). Recorded in June in small numbers, nearly always in the vicinity of *Thymus* bushes. Collecting sites: Ágios Ioánnis; near Ágios Dimitrios. Previously also recorded by Rebel (1934) and by Olivier (1988).

19. *Glaucopsyche alexis* (Poda, 1761). Only three specimens recorded in April at a wet spot, near Katálakos. Previously also recorded by Olivier (1988).

20. *Aricia agestis* ([Denis & Schiffermüller], 1775). Recorded in fair numbers in April, June and October. Found primarily at edges of fields, in flowery meadows and at the bottom of gullies. Collecting sites: near Ágios Dimitrios; near Thános; halfway along road between Mírina and Káspakas; Ágios Athanásios; Ágios Ioánnis; near Sardés; near Katálakos. Previously also recorded by Koutsaftikis (1973b) and by Olivier (1988).

21. *Polyommatus icarus* (Rottemburg, 1775). Recorded in April, June, September and October, always abundant. Found primarily in fields and flowery meadows, at road edges and at the bottom of gullies. Collecting sites: halfway along road between Mírina and Káspakas; near Ágios Dimitrios; near Katálakos; near Thános; halfway along road between Thános and Kondiás; near Sardés; halfway along road between Sardés and Dáfni; Ágios Ioánnis; Ágios Athanásios. Previously also recorded by Mathew (1898), Rebel (1937) and Olivier (1988).

Nymphalidae

22. *Lasiommata megera* (Linnaeus, 1767). Recorded in April, June, September and October. Found to be locally fairly abundant, especially at edges of fields, roadsides, hillsides and the bottom of gullies. Collecting sites: near Ágios Dimitrios; halfway along road between Mírina and Káspakas; Ágios Athanásios; near Katálakos; near Sardés; halfway along road between Sardés and Dáfni; near Thános. Individuals of spring brood quite dark on upperside and relatively large, reminiscent in flight of *L. maera* (Linnaeus, 1758). **A first record for Límnos.**

23. *Maniola jurtina* (Linnaeus, 1758). Found practically everywhere in June and in some places (bushy roadsides, gullies with lush vegetation and flowery meadows) the numbers were astronomical. A few, especially females, still flying in worn condition in September. Identification confirmed by the genitalia. Previously also recorded by Rebel (1934), Tauber & Tauber (1968), Koutsaftikis (1970) and Olivier (1988).

24. *Melanargia larissa* (Geyer, [1828]). Found everywhere in large numbers in June. Previously also recorded by Rebel (1934) and Olivier (1988).

25. *Hipparchia fatua* Freyer, 1843. Few individuals observed and only two worn females captured in September, suggesting the butterfly was well on its way out. Collecting sites: near Ágios Dimitrios; near Katálakos. Previously also recorded by Koutsaftikis (1970).

26. *Limnitis reducta* Staudinger, 1901. A single specimen recorded in June at a wet spot, by a stream, about 8km NE of Mírina and near Ágios Dimitrios. Previously also recorded by Olivier (1988).

27. *Vanessa atalanta* (Linnaeus, 1758). Recorded in small numbers in June and October, predominantly in gardens and areas with large bushes and trees, mostly in the vicinity of Mírina and Ágios Dimitrios. Previously also recorded by Olivier (1988).

28. *Vanessa cardui* (Linnaeus, 1758). Recorded in small numbers almost everywhere in June, September and October. Previously also recorded by Mathew (1898) and by Olivier (1988).

29. *Polygonia egea* (Cramer, [1775]). Recorded in small numbers in September and October. Collecting sites: halfway along road between Mírina and Káspakas; near Katálakos. Previously also recorded by Koutsaftikis (1970).

30. *Melitaea didyma* (Esper, [1778]). A few recorded in June in a flowery meadow, 8km NE of Mírina and near Ágios Dimitrios; one female observed near Kótsinas. Previously also recorded by Olivier (1988).

31. *Argynnis pandora* ([Denis & Schiffermüller], 1775). Recorded as fresh and quite numerous in June and as worn and less numerous in September, always in the vicinity of trees and, as a rule, near streams. Collecting sites: near Ágios Dimitrios; near Katálakos. Previously also recorded by Olivier (1988).

Zygaenidae

32. *Jordanita graeca* (Jordan, 1907). A few, male and female, recorded in June in a flowery meadow, 8km NE of Mírina and near Ágios Dimitrios. Identification established on the basis of the genitalia. **A first record for Límnos.**

33. *Zygaena punctum* Ochsenheimer, 1808. Recorded in small numbers in June, in a flowery meadow, 8km NE of Mírina and near Ágios Dimitrios. Previously recorded by Olivier in 1987 from Mírina, but the record was never published. **A first published record for Límnos.**

Discussion

The number of taxa reported here is relatively small when compared to that of the Greek mainland and this should be attributed to the island's small land mass, its geographic isolation, its lack of habitat diversity, its poor flora and its biotope destruction through overgrazing and frequent fires. It is of interest to note that all resident taxa are to be found also on the Greek mainland and that no single one of them is exclusively of Asia Minor origin. Species having a vast distribution on the other islands of the Aegean, such as *Iphiclides podalirius* (Linnaeus, 1758), *Gonepteryx cleopatra* (Linnaeus, 1767) and *Hipparchia senthes* (Fruhstorfer, 1908), were found to be totally absent from Límnos.

Taxa not noticed by the present author, but recorded previously by others include the following:

Lycaenidae: *Callophrys rubi* (Linnaeus, 1758) and *Cupido osiris* (Meigen, 1829), both recorded by Olivier (1988).

Nymphalidae: *Coenonympha pamphilus* (Linnaeus, 1758) and *Lasiommata maera* (Linnaeus, 1758), both recorded by Koutsaftikis (1970).

The presence of *C. pamphilus* on Límnos island is seriously doubted both by Olivier (1988) and the present author, as, despite extensive search for it at various times of the warm season, the butterfly was nowhere to be found. The same also applies to *maera*, but in this particular instance the dark spring form of the closely related and relatively abundant *megea* may have been mistaken for it on the wing by Koutsaftikis.

2. Santoríni

During a recent visit to this island between 1 and 4 September 2000, two specimens (a male and a female), of a *Gegenes* species were captured while feeding on the flowers of *Lantana* bushes in the town of Firá, at an altitude of about 300m. These were eventually dissected and their genitalia showed them to be *Gegenes pumilio* (Hoffmansegg, 1804), a first record of this taxon for Santoríni island (cf. Coutsis 1992, 1994, 1996).

3. Síros

This island was visited between 28 September and 2 October 2000 and despite the almost total absence of butterflies there, two species, *Lampides boeticus* (Linnaeus, 1767) and *Leptotes pirithous*, both constituting new additions to the island's fauna (cf. Coutsis 1994, 1996), were recorded in very limited numbers near Posidonia.

References

- Bernardi, G., 1961. Biogéographie et spéciation des Lépidoptères des îles méditerranéennes. — *Colloques int. Cent.natn.Rech.scient.* **94**: 181–215, 5 figs. (cartes).
- Bernardi, G., 1971. Biogéographie des Lépidoptères Rhopalocères des îles égéennes. — *C.r.somm.Séanc.Soc.Biogéogr.* **1971**: 21–32, 3 cartes.
- Coutsis, J. C., 1992. Butterflies on the Greek island of Santoríni (Thera), end August 1991 (Lepidoptera: Hesperioidea & Papilionoidea). — *Phegea* **20**(2): 79–80.
- Coutsis, J. C., 1994. Butterflies from the Greek islands of Síros, Náxos and Santoríni (Lepidoptera: Hesperioidea & Papilionoidea). — *Phegea* **22**(4): 157–160, 1 fig.
- Coutsis, J. C., 1996. Additional butterfly records from the Greek islands of Santoríni and Síros (Lepidoptera: Papilionoidea). — *Phegea* **24**(1): 13–16, 2 pls., 6 figs.
- Koutsafükis, A., 1970. Vergleichend zoogeographische Untersuchung über die Lepidopterenfaunen der Nordägäischen Inseln Thassos, Samothraki und Limnos. — *Diss.Math.Natw.Fak.Univ. Saarlandes*, 134 S. 5 Tab., 23 Abb. (unpublished PhD thesis).
- Koutsafükis, A., 1973a. Die Papilioniden Griechenlands. — *Annl.Mus.Goulandris* **1**: 239–244, Taf. XXXIII–XXXIV.
- Koutsafükis, A., 1973b. Ökologische und zoogeographische Untersuchungen der Lycaenidae Griechenlands (Lepidoptera). — *Biol.Gallo-Hellen.* **5**: 167–179.
- Koutsafükis, A., 1974a. Ökologische und zoogeographische Beiträge zur Kenntnis der Pieridae Griechenlands (Lepidoptera). — *Ber.ArbGem.Ökol.Graz.* **4**: 1–5.
- Koutsafükis, A., 1974b. Zur Ökologie und Chorologie der Satyriden - Fauna Griechenlands (Lepidoptera: Satyridae). — *Z.ArbGem.öst.Ent.* **25** (1973): 120–128.
- Mathew, G. F., 1898. Notes on Lepidoptera from the Mediterranean. — *Entomologist* **31**: 77–84, 108–116.
- Olivier, A., 1988. The butterflies of the Greek island of Límnos (Lepidoptera: Hesperioidea & Papilionoidea). — *Phegea* **16**(2): 33–42, 1 tab., 1 fig., 2 maps.
- Olivier, A., 1993. *The butterflies of the Greek island of Ródos: taxonomy, faunistics, ecology and phenology with a tentative synthesis on the biogeography of the butterflies of Kriti (Crete), Kárpáthos, Ródos, the Eastern Aegean islands and Kípros (Cyprus) (Lepidoptera: Hesperioidea & Papilionoidea)*. — Vlaamse Vereniging voor Entomologie, Antwerpen, 250 pp., 17 tabs., 6 pls. (2 in col.) (incl. 46 figs.), 21 text figs.
- Rebel, H., 1934. Griechische Lepidopteren III. — *Z.öst.EntVer.* **19**: 55–56, 63–66.
- Rebel, H., 1937. Griechische Lepidopteren IV. — *Z.öst.EntVer.* **22**: 63–67.
- Tauber, A. F. & Tauber, W., 1968. Die Gattung *Maniola* (Lep. Satyridae) in der Ägäis. — *Ent.NachBl., Wien* **15**: 78–86.