

Ultra-violet reflection pattern in *Polyommatus andronicus* Coutsis & Ghavalas, 1995 and *Polyommatus icarus* (Rottemburg, 1775) (Lepidoptera: Lycaenidae)

John, G. Coutsis & Nikos Ghavalas

Samenvatting. Ultraviolet-reflectie bij *Polyommatus andronicus* Coutsis & Ghavalas, 1995 en *Polyommatus icarus* (Rottemburg, 1775) (Lepidoptera: Lycaenidae)

De onderkanten van *P. andronicus* en *P. icarus* blijken duidelijke verschillen te vertonen wanneer ze met ultraviolet licht worden gefotografeerd: bij *P. andronicus* worden alle lichte delen sterk gereflecteerd terwijl ze bij *P. icarus* weinig of niet reflecteren. Hierdoor lijkt de onderkant van *P. icarus* veel donkerder en minder contrastrijk getekend.

Résumé. Réflexion ultraviolette chez *Polyommatus andronicus* Coutsis & Ghavalas, 1995 et *Polyommatus icarus* (Rottemburg, 1775) (Lepidoptera: Lycaenidae)

La face inférieure de *P. andronicus* et de *P. icarus* montre des différences apparentes quand elle est photographiée avec une source UV. Chez *P. andronicus* toutes les parties claires réfléchissent, alors que chez *P. icarus* une telle réflexion n'est pas constatée, de sorte que le dessous de *P. icarus* apparaît plus sombre et moins contrasté.

Key words: Ultra-violet reflection - *Polyommatus andronicus* - *Polyommatus icarus* - Greece.

Coutsis, J.G.: 4 Glykonos Street, GR-10675 Athens, Greece.

Ghavalas, N.: 30 Karaoli-Dhimitriou Street, GR-12461 Athens, Greece.

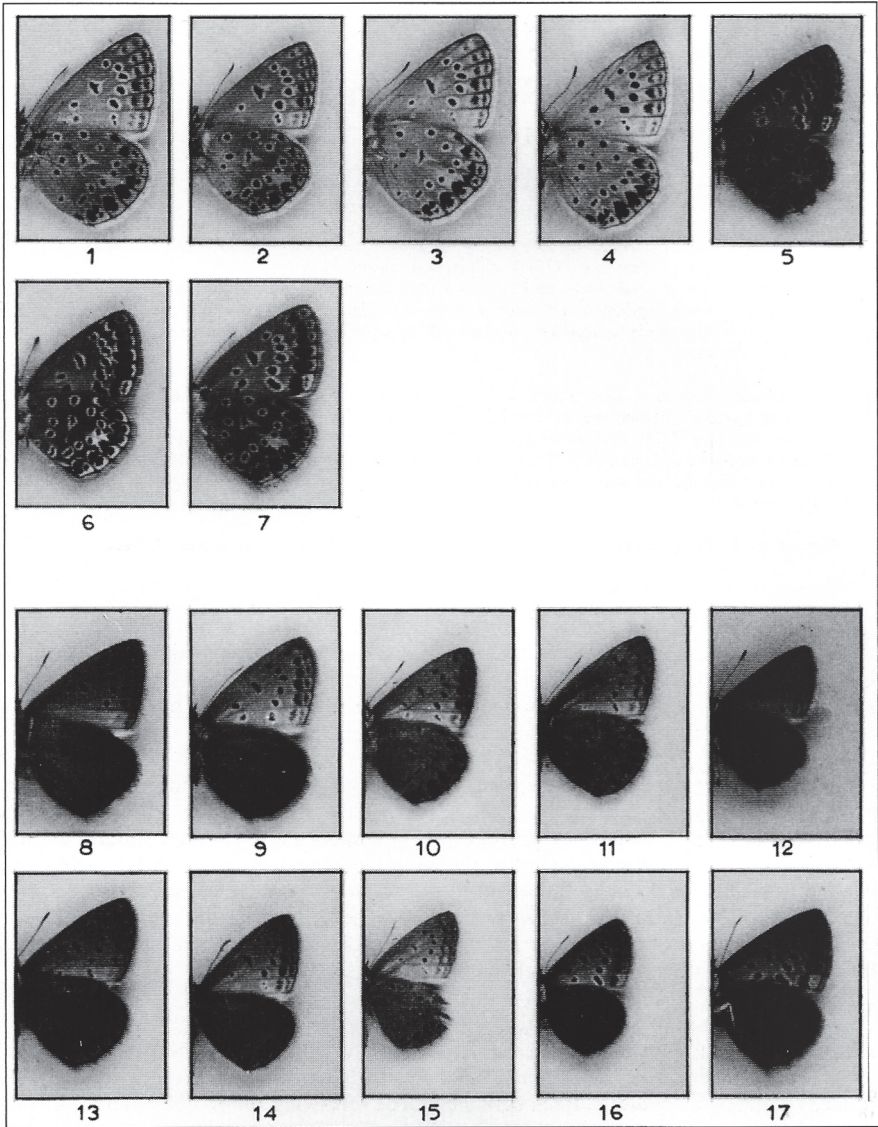
The ultra-violet reflection pattern on the underside of *Polyommatus andronicus* Coutsis & Ghavalas, 1995 and of *Polyommatus icarus* (Rottemburg, 1775), obtained in all cases by using the same fluorescent black-light source, same exposure time and a Schott UG1 light filter, can be described as follows:

In male *andronicus* all white surfaces are highly reflective, making the white rings surrounding the black spots, as well as the white dash on hind-wing, visible. The grey groundcolour is fairly reflective, whereas the black spots and the orange lunules are not. The end result gives the impression that the insects were photographed under visible light conditions and without the use of a light filter, which of course is not the case (figs 1-4). The female differs from the male in that the groundcolour, being less reflective than in the male, appears darker, but here again the impression given is that of insects having been photographed under visible light conditions (figs 5-7).

In male *icarus* all white surfaces on hind-wing have reduced reflection, equal in magnitude to that of the groundcolour. Thus the hind-wing appears relatively dark and the white areas become invisible; the black spots and the orange lunules, being even less reflective, appear as poorly defined dark areas. The fore-wing follows in pattern the hind-wing except for an area along the inner margin that shows more pronounced, graded, reflection (figs 8-16). The female appears to follow the male pattern (fig. 17).

References

Bowden, S. R. & Kay, O. N., 1979. Ultra-Violet Photography of Lepidoptera. — *Nota lepid.* 2: 27-30.



Figs 1-17: Underside U.V. reflection pattern in: 1-7 *Polyommatus andronicus* Coutsis & Ghavalas, 1995 and in 8-17 *Polyommatus icarus* (Rottemburg, 1775) (details see next page) (Photo: J. G. Coutsis).

Figs 1-17: Underside U.V. reflection pattern in:

Polyommatus andronicus Coutsis & Ghavalas, 1995

1. ♂, Greece, Macedonia, Mt. Menikio.
- 2-4. ♀, Greece, Macedonia, Mt. Falakró.
- 5-6. ♀, Greece, Macedonia, Mt. Menikio.
7. ♀, Greece, Macedonia, Mt. Falakró.

Polyommatus icarus (Rottemburg, 1775)

8. ♂, Greece, Macedonia, Rodópi Mts.
9. ♀, Greece, Pelopónissos, Mt. Oligirtos.
10. ♀, Greece, Pelopónissos, Mt. Helmós.
11. ♀, Greece, Náxos island.
12. ♀, Turkey, Niğde, Bolkardağları.
- 13-14. ♀, Caucasus, Teberda, Djamagat canyon.
15. ♀, Cyprus, Tróodos Mt.
16. ♀, Spain, Granada, Sierra de Alfacar.
17. ♀, Greece, Ípiros, Mt. Tómaros.