

More about *Euphydryas maturna* in Bulgaria (Lepidoptera: Nymphalidae, Nymphalinae)

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Samenvatting. Meer over *Euphydryas maturna* in Bulgarije (Lepidoptera: Nymphalidae: Nymphalinae)

Het voorkomen van *Euphydryas maturna* (Linnaeus, 1758) in Bulgarije wordt besproken. De gekende vindplaatsen in dat land worden opgesomd. De taxonomie en de bionomie van deze soort komen kort aan bod.

Résumé. Informations additionnelles sur *Euphydryas maturna* en Bulgarie (Lepidoptera: Nymphalidae: Nymphalinae)

La présence de *Euphydryas maturna* (Linnaeus, 1758) en Bulgarie est discutée. Les localités connues sont énumérées. La taxonomie et la bionomie de cette espèce sont brièvement communiquées.

Key words: *Euphydryas maturna* – taxonomy – distribution – bionomics – Bulgaria

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Introduction

Until recently (Abadjiev 1995: 74–75) Bulgarian specimens of *Euphydryas maturna* (Linnaeus, 1758) were considered a great rarity in collections and the species was known from only two published localities. Because of the lack of material and field observations it was impossible to make a clear review of the taxonomic status, distribution and bionomics of the species in Bulgaria. In recent years more material and data have been accumulated (from collecting, field observations and museum specimens) and, as a result, some valuable additions to the knowledge of the species in Bulgaria can be made.

Euphydryas maturna maturna (Linnaeus, 1758)

“*Maturna*. 136. *P.[apilio] N.[ymphalis]*” Linnaeus, C., 1758 (Systema Naturae... (Ed. 10) 1: 480).

Melitaea maturna L.: Rebel 1903: 167, footnote 1; Markowitsch 1909: 9; Buresch & Tuleschkow 1929: 162, 197; Buresch 1930: 222, footnote 1.

Euphydryas maturna partiensis Varga & Sántha, 1973: Varga & Sántha 1973: 215, fig. 2; 216, fig. 3.

Hypodryas maturna L.: Higgins & Riley 1984: 126; Ganey 1985a: 116; Ganey 1985b: 118; Higgins & Hargreaves 1985: 135; Whalley 1987: 80; Tolman 1997: 180.

Euphydryas maturna L.: Kudrna 1986: 242.

Euphydryas (Hypodryas) maturna maturna L.: Abadjiev 1995: 11, 16, 74–75, pl. XXX, figs. 1, 2, 127.

Taxonomy

The Bulgarian *maturna* was attributed in 1973 by Varga & Sántha (1972–1973: 215: Abb. 2; 216: Abb. 3) to the subspecies *partiensis* Varga & Sántha, 1973, described after material from Hungary, Romania and Ukraine. It should be noted that this statement was not supported with examined material.

Subsequently, Abadjiev (1995: 74) suggested that Bulgarian populations belong to nominotypical *matura*.

The additional material (21♂, 1♀) available from Bulgaria now supports the latter view. Most of our specimens do not display the taxonomic characters of *partiensis* (e. g. well developed discal and postdiscal patterns, etc.) (see also Figs. 2–3). Apart from this, it should be pointed out that there are no substantial geographical or other environmental barriers between the respective ranges of nominotypical *matura* and ssp. *partiensis* in SE Europe which raises the possibility that *partiensis* may be consubspecific with nominotypical *matura*.

Distribution

The species occurs at low and moderate altitude in the eastern part of the country: the regions of Dobrudzha, Ludogorie, E Stara Planina Range and Black Sea Coast (Fig. 1).

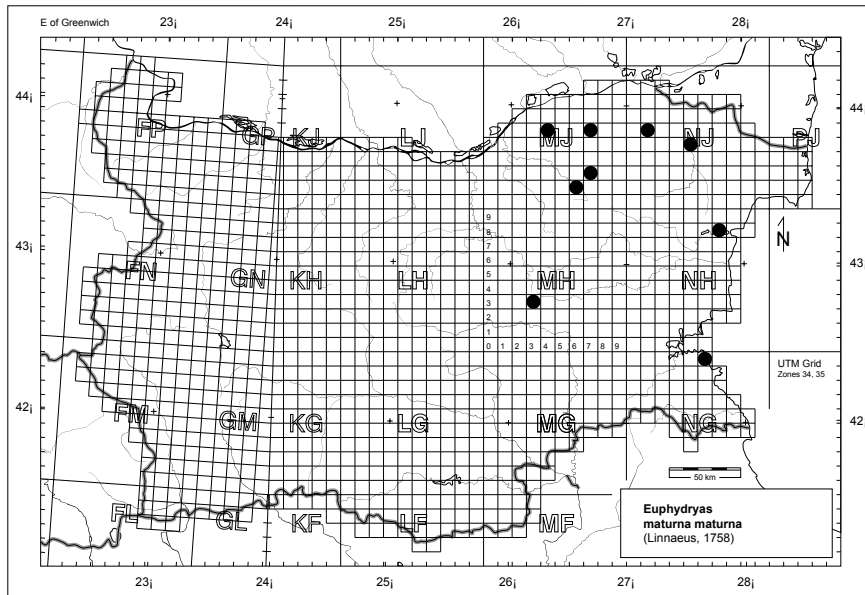


Fig. 1. UTM map of Bulgaria showing the distribution of *Euphydryas matura matura* (Linnaeus, 1758).

Localities and material examined:

Dobrudzha

NJ15: Cherkovna: 7.VI.1999 – 1♂: S. Abadjiev & M. Langourov obs. • NJ44: Dryanovets: 6.VI.1999 – 7♂, 1♀: S. Abadjiev leg. et coll. (3♂ in National Museum of Natural History, Sofia (NMNHS) coll.); 10♂: S. Beshkov leg. et coll. (1♂ in Z. Kolev coll.).

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Figs. 2–3. Males of *Euphydryas maturna maturna* (Linnaeus, 1758), Dobrudzha: Suha Reka: vicinity of Dryanovets: 6.VI.1999 (Photo S. Beshkov).

Fig. 4. Habitat of *Euphydryas maturna maturna* (Linnaeus, 1758), Dobrudzha: Suha Reka: vicinity of Dryanovets: 6.VI.1999 (Photo S. Beshkov).

Ludogorie

MJ45: Kubrat: Seslav game reserve: 2–3.VI.1976 – 1♂: A. Slivov leg.: Institute of Zoology, Sofia (IZS) coll. • MJ61: Razgrad: V.1908 (Markowitsch, 1909: 9; Buresch & Tuleschkow, 1929: 162, 197; Buresch, 1930: 222: footnote 1); (Varga & Sántha, 1973: 215: Fig. 2; 216: Fig. 3; Abadjiev, 1995: 75) • MJ72: 3 km N Samuil: 8.VI.1999 – 1♂: S. Abadjiev leg.: NMNHS coll. • MJ75: Sushevo: 28.VI.1992 – 1♀: I. Stoychev leg. et coll. (Abadjiev, 1995: 75; Pl. XXX: Figs 1, 2; 127).

E Stara Planina

MH33: Cherkovnata Koriya locality N Sliven: Haberhauer (Rebel, 1903: 167: footnote 1); (Buresch & Tuleschkow, 1929: 197). Record requires confirmation; recent extensive collecting in Stara Planina N of Sliven has failed to turn up *maturna* there (Z. Kolev, pers. comm.).

Black Sea Coast

NG59: Veselie Camping: 26.V.1984 – 1♂: A. Slivov leg.: IZS coll. Record requires confirmation in view of the numerous cases of doubtful or plainly erroneous data in A. Slivov's materials (Kolev 2002) and the fact that *maturna* is not known from any other place in S Bulgaria. • NH68: Dobrogled village WNW Varna, 200–250 m, 19.VI.1988 – 2♂: N. Shtinkov leg., Z. Kolev coll.

Bionomics

Euphydryas maturna is univoltine and flies from the end of May (26.V.1984, Veselie) till the end of June (28.VI.1992, Sushevo) (Abadjiev 1995: 75). Near Dryanovets it was located along the fringes of the nearby mixed deciduous forest (consisting mainly of *Fraxinus*, *Quercus*, *Acer* spp.) (Fig. 4), and near Samuil in a forest clearing (with predominance of *Tilia* spp.). Specimens were frequently observed feeding on the salts in moist ground or animal droppings and also resting on the foliage of low bushes. The habitat near Dobrogled is a small, steep-sided gorge in calcareous rock (Z. Kolev, pers. observ.); the two specimens were collected on flowers in a small glade inside a grove of various deciduous tree species near the bottom of the gorge. Despite intensive searches following this discovery, no further specimens have been collected there since (N. Shtinkov, pers. comm. to Z. Kolev). Natural hostplants and early stages still remain unrecorded in Bulgaria.

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References

- Abadjiev, S., 1995. *Butterflies of Bulgaria, Volume 3, Nymphalidae: Apaturinae & Nymphalinae*. — Published by the author, Sofia, 159 pp.
- Buresch, I., 1930. [Zweiter Beitrag zur Schmetterlingsfauna vom Schlosspark Euxinograd, bei der Stadt Varna am Schwarzen Meer.] — *Izv. bulg. ent. Druzh.* **5**: 207–252. [in Bulgarian].
- Buresch, I. & Tuleschkow, K., 1929. [Die horizontale Verbreitung der Schmetterlinge (Lepidoptera) in Bulgarien.] — *Izv. tsarsk. prirodonauch. Inst. Sof.* **2**: 145–250. [in Bulgarian].
- Ganev, J., 1985a. Red list of Bulgarian butterflies and larger moths. — *Entomologist's Gazette* **36**: 115–118.
- Ganev, J., 1985b. Systematic List of Bulgarian Rhopalocera and Grypocera (Lepidoptera). — *Phegea* **13** (4): 115–119.
- Higgins, L. G. & Hargreaves, B., 1985. *The butterflies of Britain and Europe*. — Collins, London, 256 pp.
- Higgins, L. G. & Riley, N. D., 1984. *A field guide to the butterflies of Britain and Europe*. (Fifth edition, revised). — Collins, London, 384 pp.

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- Kolev, Z., 2002. Critical notes on some recent butterfly records (Lepidoptera: Papilionoidea & Hesperioidea) from Bulgaria and their source collection. — *Phegea* **30** (3): 95–101.
- Kudrna, O., 1986. *Butterflies of Europe, Vol. 8, Aspects of the conservation of butterflies in Europe*. — Aula-Verlag, Wiesbaden, 323 pp.
- Markowitsch, A., 1909. Peperudnata fauna v Razgradskata okolnost. [Lepidopteran fauna of the Razgrad District.] — *Sbornik za narodni umotvoreniya, nauka i knizhnina* **25**: 1–38.
- Rebel, H., 1903. Studien über die Lepidopterenfauna der Balkanländer. I Teil: Bulgarien und Ostrumelien. — *Annl n naturh. Mus. Wien* **18** (2–3): 123–347; Taf. III.
- Tolman, T., 1997. *Butterflies of Britain & Europe*. — Harper Collins Publishers, London, Glasgow, New York, Sydney, Auckland, Toronto, Johannesburg, 320 pp., A, B + 104 pls.
- Varga, Z. & Sántha, G., 1972–1973. Verbreitung und taxonomische Gliederung der *Euphydryas maturna* L. (Lep.: Nymphalidae) in SO-Europa (*Euphydryas*-Studien, I.). — *Acta biologica Debrecina* **10–11**: 213–231.
- Whalley, P., 1987. *The Mitchel Beazley pocket guide to butterflies*. — Mitchel Beazley Publishers, London, 168 pp.
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