

A morphological study of *Leptidea* (Lepidoptera: Pieridae) species from south-western Bulgaria

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Abstract. The author presents the morphological observations of three males and two females of a species from the genus *Leptidea* (Pieridae).

Samenvatting. De auteur presenteert de morfologische vergelijking van drie mannetjes en twee vrouwtjes van een soort uit het genus *Leptidea* (Pieridae).

Résumé. L'auteur présente la comparaison morphologique de trois mâles et deux femelles d'une espèce du genre *Leptidea* (Pieridae).

Key words: Bulgaria — *Leptidea* — Morphology.

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Introduction

I have been observing for seven years the Lepidoptera species in southwestern Bulgaria. My special attention was focused on the genus *Leptidea* (Pieridae) because of the observed morphological variability of butterflies depending on the location of capture (Jakšič 1998; Slamka 2004; Tolman & Lewington 2008; Kudrna *et al.* 2015). In this short note, I intend to make clear that in the genus *Leptidea* a small morphological variability is observed in genitalia depending upon the location of capture of the specimens.

Material and methods

Approximately sixty specimens of the genus *Leptidea* were studied in detail during my seven years of research. The location of capture was carefully noted while photo-

graphing a specimen, also the date of capture, and GPS coordinates. The selected specimens from different localities were dissected and the ratio of uncus/valva was measured in detail.

Results

The results are presented in the illustrations (Figs 1–6).

Discussion and conclusion

I noticed a slight morphological variability in the *Leptidea* specimens that I have examined. The use of the ratio uncus length/valval length might be a useful character in the studies of the *Leptidea* species. My observations are in line with the conclusions presented in the article by Dapporto *et al.* (2022).

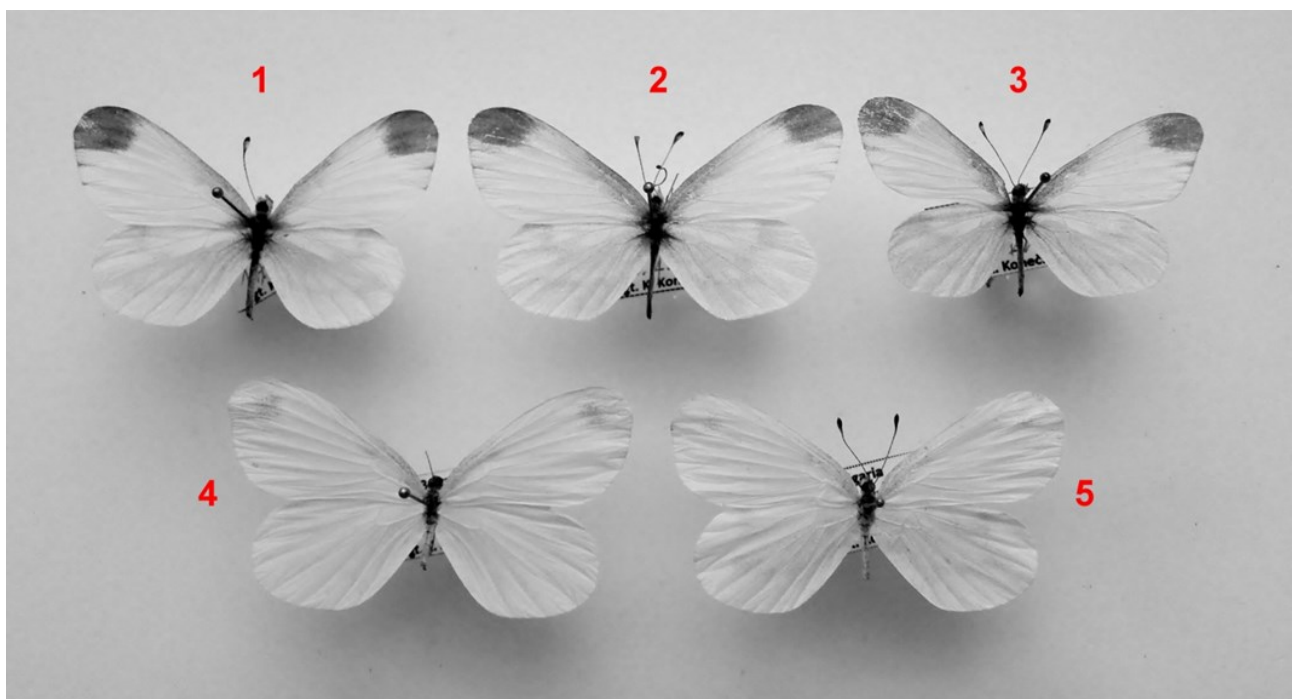


Fig. 1. The upper side of the *Leptidea* species collected in Bulgaria.

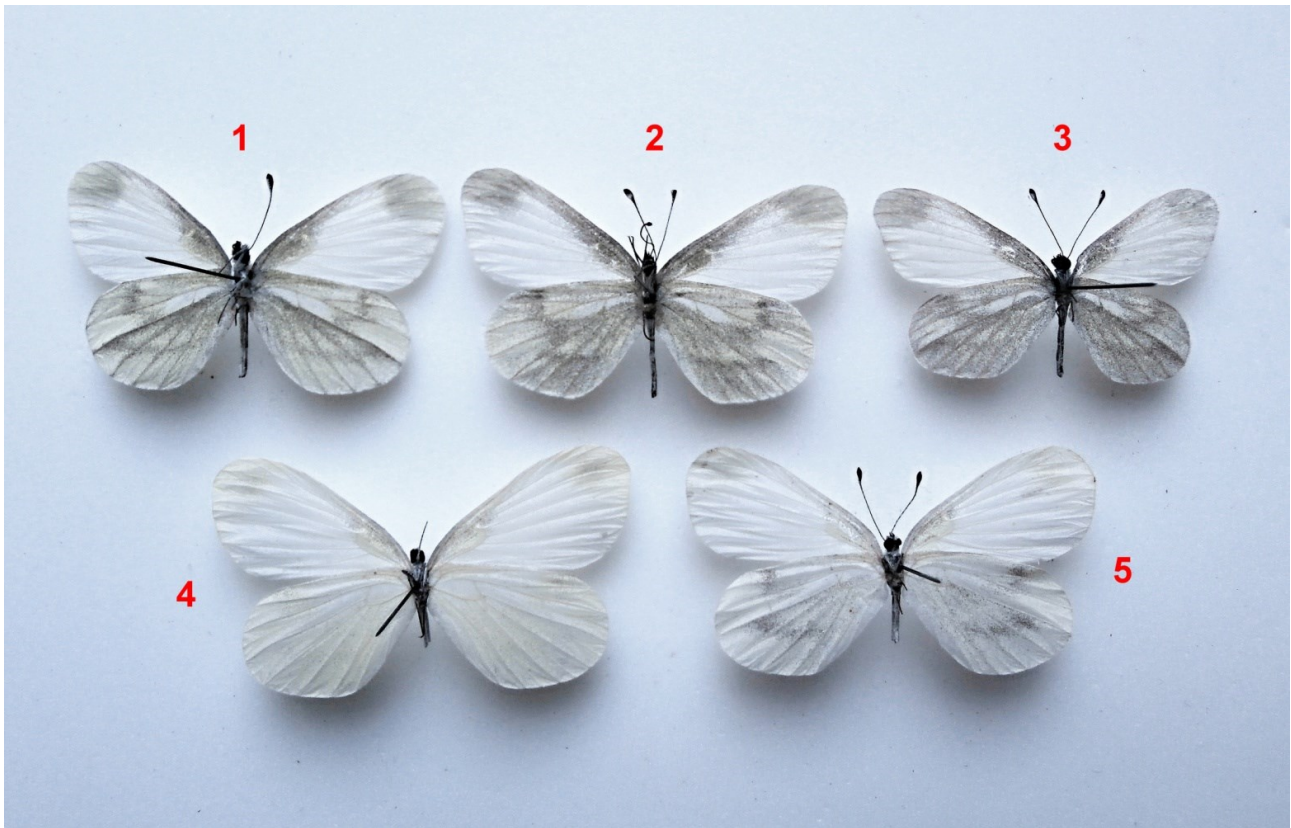


Fig. 2. The underside of the *Leptidea* species collected in Bulgaria.

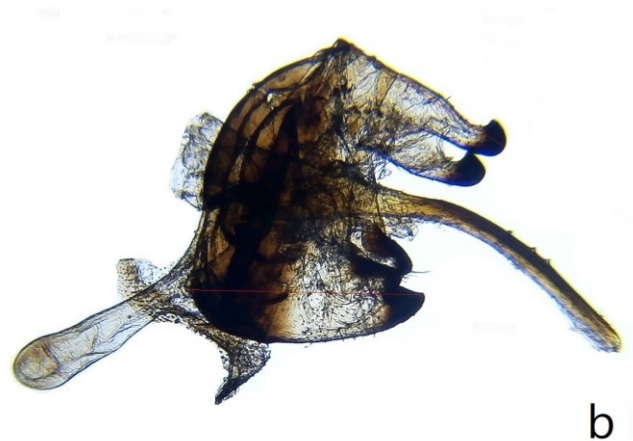


Fig. 3. Specimen 1 ♂, a, valley of river Lebnice, Bulgaria, 14.v.2017; b, male genitalia ratio uncus length/valval length $69,22 \mu\text{m}/80,98 \mu\text{m}=0,855$.

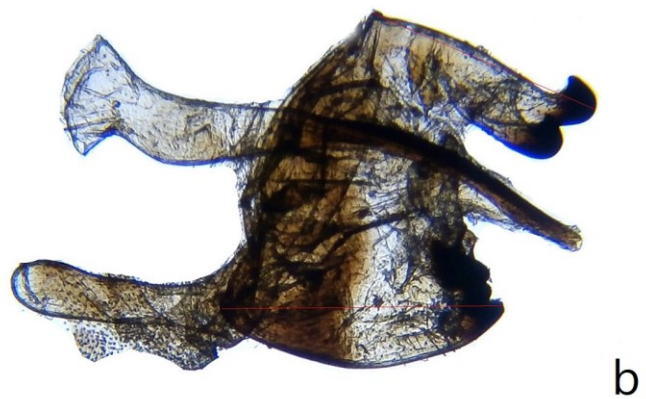


Fig. 4. Specimen 2 ♂, a, north-east of Ilindentsi, alt. 550 mm, Bulgaria, 08.vi.2015; b, male genitalia ratio uncus length/valval length $71,30 \mu\text{m}/82,06 \mu\text{m}=0,868$.



Fig. 5. Specimen 3 ♂, a, south-west of Ploski, alt. 550 mm, Bulgaria, 18.v.2017; b, male genitalia ratio uncus length/valval length 64,89 μm/75,75 μm=0,856.



Fig. 6. Specimens 4, 5 ♀♀, a, Petrovo, 3km směr Izvora, Bulgaria, 21.vi.2018, 28.vi.2019; b, female genitalia of the specimen collected on 21.vi.2018.

Literature

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Supplement file

Video: Butterfly research in south-western Bulgaria
<https://vimeo.com/803864502>

27 min