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Notes on the bionomy of *Elachista heinemanni* Frey, 1866 (Lepidoptera: Elachistidae)

U. Parenti*

Summary

Male and female genitalia are drawn and described and the first data are given on the bionomy of *Elachista heinemanni* Frey, 1866.

KEY WORDS: Lepidoptera, Elachistidae, genital structures, bionomy, distribution.

Note sulla bionomia di *Elachista heinemanni* Frey, 1866 (Lepidoptera: Elachistidae)

Riassunto

Vengono figurati e descritti i genitali maschile e femminile e forniti i primi dati sulla bionomia di *Elachista heinemanni* Frey, 1866.

PAROLE CHIAVE: Lepidoptera, Elachistidae, strutture genitali, bionomia, distribuzione.

Notas sobre la bionomía de *Elachista heinemanni* Frey, 1866 (Lepidoptera: Elachistidae)

Resumen

Se dibuja y describe la genitalia del macho y de la hembra, y por primera vez, se dan datos sobre la bionomía de *Elachista heinemanni* Frey, 1866.

PALABRAS CLAVE: Lepidoptera, Elachistidae, genitalias, bionomía, distribución.

Elachista heinemanni Frey, 1866
(= *Elachista immolatella* Zeller, 1868)

Lectotypus ♂: "Lectotype" "*E. heinemanni* Frey, Engadin (Sils)" "Frey Coll. Brit. Mus. 1890-62" "B. M. Genitalia Slide ♂ N° 19386" "Lectotypus ♂, *Elachista heinemanni* Frey, Teste U. Parenti 1976"

Morphological notes: Alar expanse 10-12 mm. Palpi -long and thin-, head, tegulae, and thorax

*Research carried out within the research program "Biosystematics of Lepidoptera Elachistidae" (Funds M. U. R. S. T. 60%).

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yellowish white. Antennae: scape and pedicel yellowish white. In the male the flagellum, of a grey colour, is slightly annulate. In the female, instead, the flagellum, thinner than that of the male, has all over an obvious sequence of dark brown and yellowish white rings. Fore wings: on the ochreous coloured background there are sparse light brown scales. In the females the background colour of the fore wing is generally of a lighter ochre colour if compared with that of the male and in some cases it tends to yellowish white, slightly shiny.

Male genitalia (Fig. 1): Lobes of the uncus short and rounded with few very short setae. Gnathos oval well developed. Valva robust, that tapers at the level of the costa in the distal third. Digitate processes: long and rather thin, tapering in the final end. In some cases (Fig. 1 on the left below) in the central part a subtriangular structure emerges. Aedeagus slightly curved, without cornuti, with a deep slit on the distal end, on one side. It tapers distal. At about the half of the aedeagus there is a thin and short funiculum that anchors it to the juxta.

Female genitalia (Fig. 6): Papillae anales elongated, subtriangular. Apophyses posteriores long the double of the anteriores. Antrum wide, cup-wise. Bursa pyriform with two signa placed on different planes and each made of a group of short sharp or slightly blunt teeth (Fig. 6, up on the right).

Biological notes. The only generation of *heinemanni* develops, according to the elevation and to the season, between the second half of June and the first half of August. In the field the larvae were found on *Sesleria albicans* Kit. ex Schultes (PARENTI & VARALDA, 1994).

The larva, of an olive gray colour, reaches at maturity 5-6 mm of length. The tergal prothoracic plates (Fig. 2) are represented by two well sclerified shields having a stumpy L-shape, with the two branches almost of the same length. On the lower subtriangular branch some "craters" are very obvious, bearing poorly sclerified areas spread in an irregular way. The sternal plate (Fig. 3) has the shape of an elongated sandglass that tapers in the distal tract bordering on an area that is showy for its enhanced sclerification. The wide anal plate (Fig. 4) is surmounted by a crown of rounded elements that, by their minute microsculpture and the light halo surrounding them, show out on the background of the cuticle made of robust granules and rods (Fig. 5).

The larvae pupate at the base of the leaves of their host plant. The anterior lobe of the pupa (Fig. 7) does not present any particular ornamentation. The surface of the mesonotum shows two well marked longitudinal crests with many round or elongate concatenated reliefs. The inner crest is long the double of the outer one. The central fracture line is complete. The prolongations of the mesonotum are slightly dentellate and visible up to the end of the second segment. The tenth segment ends with a point. The cremaster is made of few and sparse hooked setae spread both on the ventral and dorsal faces.

Distribution. Currently *E. heinemanni* is known only from localities of the Swiss, Italian, and Austrian Alps, at heights between 800 and 2000 m. In Switzerland it is recorded in the following Cantons: Wallis (Törbel), Saint Gallen, Grison (Tenna, Vättis), and Engadine (Bernina Pass and Sils Maria, the type locality of this species). In Italy it is present on the Tremalzo Pass (Tremosine, Brescia), Novezza (Monte Baldo, Verona), Lessini Mountains (Verona), Sappada (Belluno), Madonna di Campiglio (Pinzolo, Trento), Trafoi (Stelvio, Bolzano), Ortisei (Bolzano) and Raibl (Tarvisio, UDINE) (the type locality of *E. immolatella* Zeller), on the border with Slovenia. In Austria it is recorded in northern Tirol (Finstermünz and Hahntennjoch) and in Kaernten (Möderndorf, St. Ulrich in Gröden-tal, Hermagor).

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BIBLIOGRAPHY

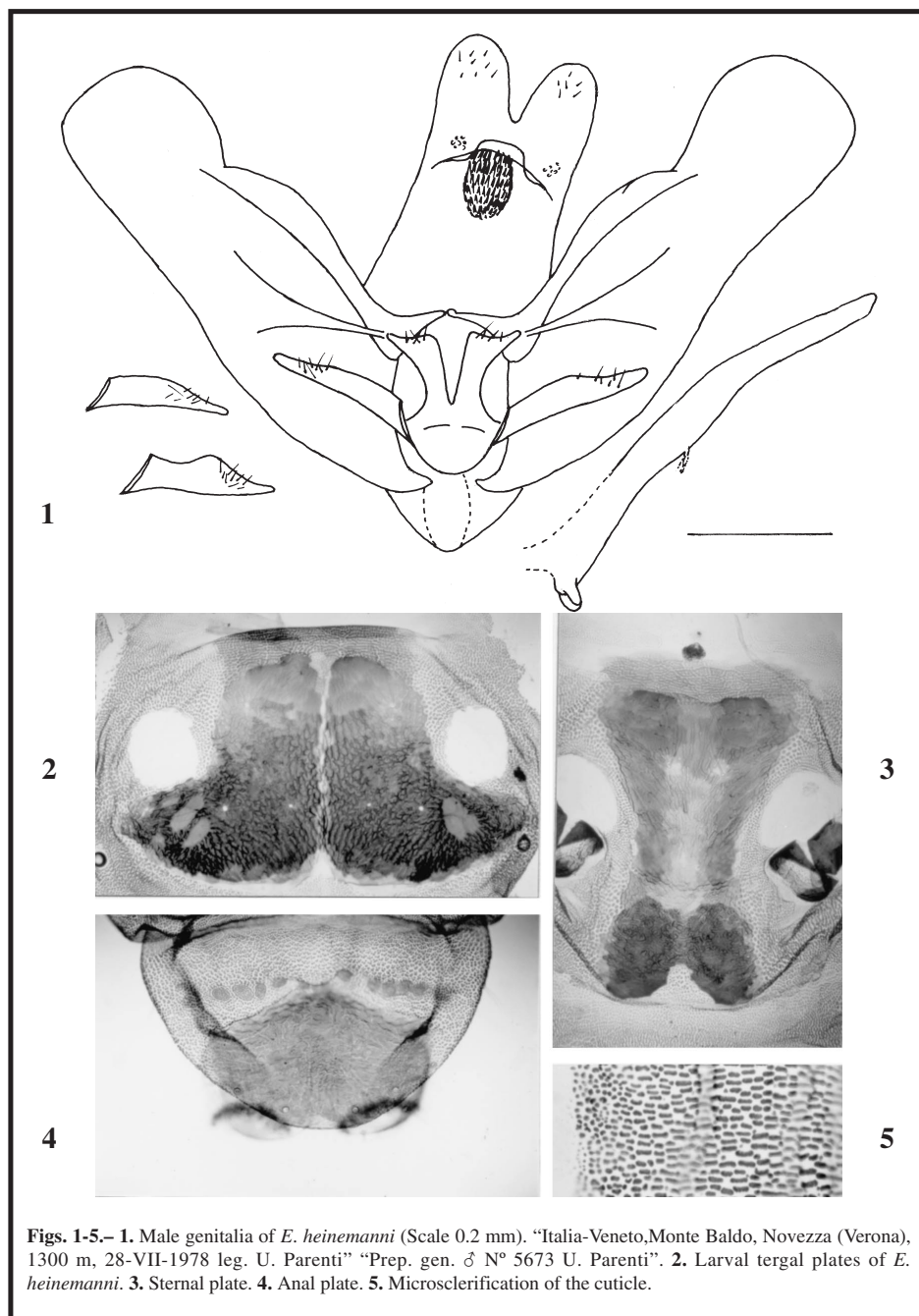
- FREY, H., 1866.— Die schweizerischen Microlepidopteren.— *Mitt. schweiz. ent. Ges.*, **2**: 136-146.
PARENTI, U. & VARALDA, P.G., 1994.— Gli Elachistidi (Lepidoptera, Elachistidae) e le loro piante ospiti.— *Boll. Mus. reg. Sci. nat. Torino*, **12** (1): 73-136.
ZELLER, P. C., 1868.— Beitrag zur Kenntniss der Lepidopteren-Fauna der Umgegend von Raibl in Oberkärnten und Preth im angrenzenden küstengebiet.— *Verh. zool.-bot. Ges. Wien*, **18**: 563-628.

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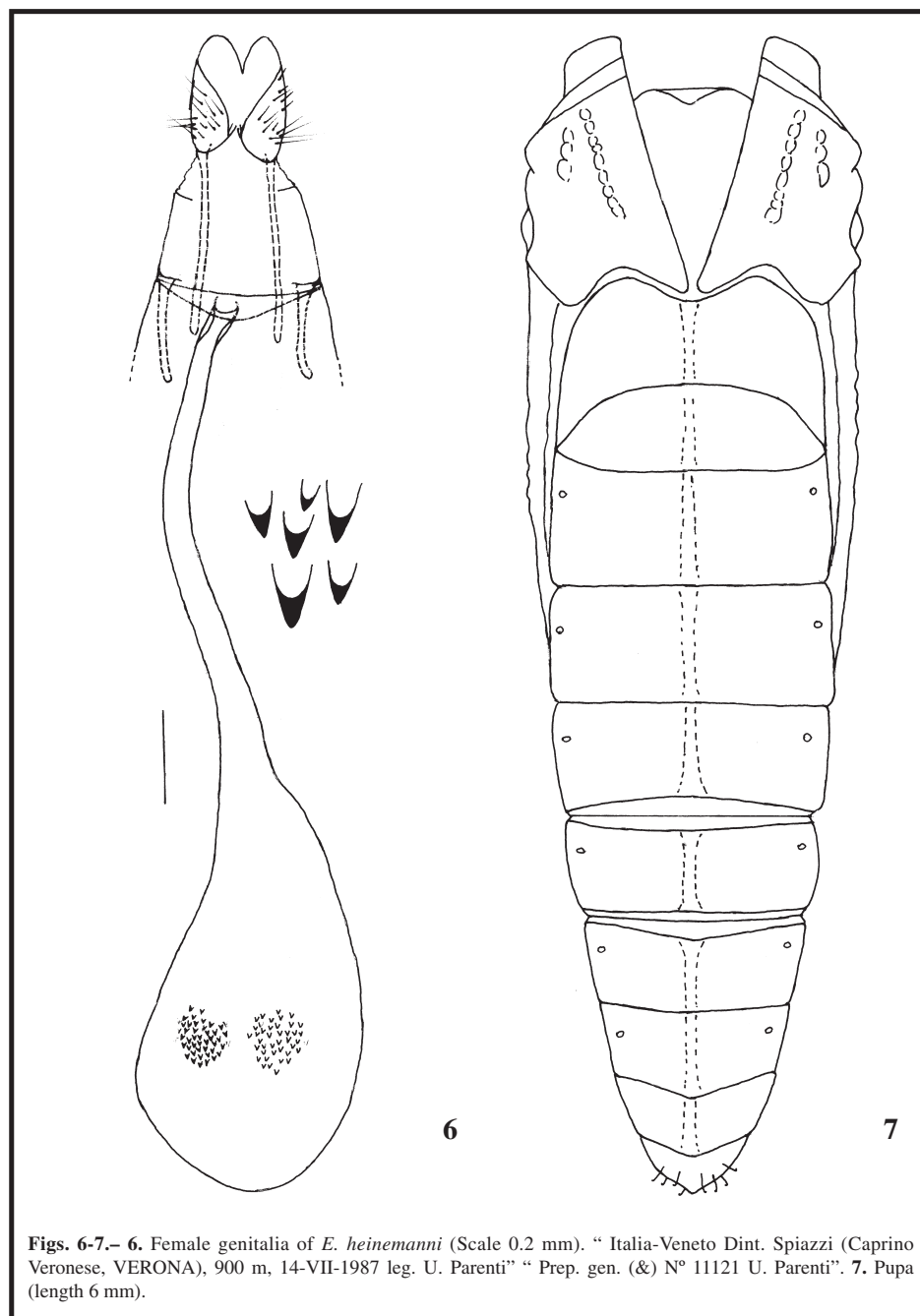
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Figs. 6-7.— 6. Female genitalia of *E. heinemanni* (Scale 0.2 mm). “ Italia-Veneto Dint. Spiazzi (Caprino Veronese, VERONA), 900 m, 14-VII-1987 leg. U. Parenti” “ Prep. gen. (&) N° 11121 U. Parenti”. 7. Pupa (length 6 mm).