ON SOME EUROPEAN LEPTOPHLEBIIDAE

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Summary. In Europe, the family Leptophlebiidae includes seven genera. Two of them present high taxonomical problems: Habrophlebia Eaton and Habroleptoides Schöenemund.

According to the main important works of Peters and Edmunds /1970/ and Peters /1975/ the validity of these two genera is confirmed and they are regarded as close but separate.

The status of the following species is discussed: Habroleptoides auberti Bianch., H. berthelemyi Thomas, H. ner-vulosa Etn., Habrophlebia umbratilis Etn.

The male imago of <u>H</u> <u>auberti</u> from the Swiss Jura is redescribed in comparison with <u>H</u> <u>berthelemyi</u> from the French Pyrenees. These two species are well distinct from <u>H</u> <u>modesta</u> Hag by the shape of the first article of the male genital forceps, which possesses a median convex process. Furthermore, <u>H</u> <u>auberti</u> and <u>H</u> <u>berthelemyi</u> show some important differences in their geographical and ecological habits.

If <u>H. auberti</u> is found until 1,400 m and often in the same biotope as <u>H. modesta</u>, on the other hand, <u>H. berthe-lemyi</u> may occur at altitude of over 2,000 m in rivers arose from high altitude lakes, and scarcely live in the same localities as <u>H. modesta</u> /Thomas 1968/.

Concerning <u>H_ nervulosa</u> and <u>H_ umbratilis</u>, Eaton described these two species in 1884 without any drawings, this caused much subsequent confusion.

A figure of a paralectotype of <u>H. nervulosa</u> was published in 1960 by Kimmins. After verification of this specimen as well as the lectotype, this species belongs to the genus <u>Habroleptoides</u>.

H. umbratilis was redescribed by Biancheri in

1954 from material caught in the topotype. For her, this species is related to the genus <u>Habroleptoides</u>. Kimmins published in 1960 a figure of a paralectotype, which is a <u>Habrophlebia</u>. After verification of the lectotype, this one is without any doubt conformed to Biancheri's species, i. e. it is a <u>Habrole-ptoides</u>!

Kimmins' paralectotype belongs to another species / Habrophlebia eldae sp.n., in prep./ and its status will be discussed later by Jacob and Sartori /in prep./.

Data about the distribution of \underline{H}_{\bullet} nervulosa in Portugal and Spain are rather too fragmentary. The same problem arises for \underline{H}_{\bullet} umbratilis which presence out of the Italian Peninsula needs to be confirmed.

Short bibliography

- Biancheri, E. 1954. Una nuova specie di Habrophlebia e ridescrizione di H. umbratilis Eaton, 1883. Mem. Soc. Ent. Ital., 33: 155 - 166.
- Eaton, A. E. 1883 1888. A revisional monograph of recent Ephemeridae or mayflies. Trans. Linn. Soc. Lond., 3: 1 352.
- Kimmins, D.E. 1960. The Ephemeroptera types of species described by A.E. Eaton, R. McLachlan and F. Walker. Bull. Brit. Mus. Nat. Hist. Ent., 9: 269 318.
- Peters, W.L. 1975. Taxonomic status and phylogeny of Habrophlebia and Habroleptoides /Leptophlebiidae; Ephemeroptera/. In: Pasternak, K. and Sowa R. /eds./: Proc. 2nd Intern. Confer. Ephemeroptera. Krakow. 1975. p. 51 - 56.
- Confer. Ephemeroptera, Krakow, 1975, p. 51 56.

 Peters, W.L. and Edmunds, G.F., Jr. 1970. Revision of the generic classification of the Eastern Hemisphere Leptophlebi-idae. Pac. Insects, 12: 157 240.

 Thomas, A. 1968. Habrophlebia /Habroleptoides/ n.sp. des Pyré-
- Thomas, A. 1968. Habrophlebia /Habroleptoides/ n.sp. des Pyrénées. Annls Limnol.;4: 219 - 224.