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A revised description of the larva of *Homilia leucophaea* (Rambur 1842) (Trichoptera: Leptoceridae) and comparisons with the known western European *Athripsodes* larvae

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Abstract

Co-occurrence of mature larvae and male pharate pupae in benthos samples from the Loire River enabled descriptions of the larva of *Homilia leucophaea*. Using characters of the head capsule, the labrum, the meso- and metanotum, and the pro- and metathoracic legs, we compared *H. leucophaea* with larvae of six western European *Athripsodes* species, including a larval key to these species. The larva of *H. leucophaea* shares characters with some of the six *Athripsodes* species. However, without a phylogenetic analysis including larvae, pupae, and adults of *Homilia* species from the Afrotropical Region, it is currently impossible to decide about a potential synonymy between *Athripsodes* and *Homilia*.

Key words: characters, larval instar V, larval key, synonymy

Introduction

In 1842, Rambur described a new Trichoptera species as *Mystacida leucophaea*, which was caught « le long des rivières, dans les environs de Paris » (i.e., along the rivers around Paris). Three decades later, McLachlan (1877) took into account that the spur formula of this species is 1, 2, 2 instead of 2, 2, 2 and assigned it to the genus *Homilia*. However, *H. leucophaea* (Rambur 1842) is close to species of the genus *Athripsodes*. Therefore, authors such as Botosaneanu & Malicky (1978), Tobias & Tobias (1981), and Malicky (2004) assigned *H. leucophaea* to the genus *Athripsodes*, thus changing its name to *A. leucophaeus*. This change, yet unconfirmed by a phylogenetic analysis, seems premature, however, as Malm & Johanson (2011) emphasize: “The generic difference between *Homilia* and *Athripsodes* has been the absence of one of the foretibial spurs (1,2,2 from 2,2,2), a trait that may have evolved within *Athripsodes*, but more species of both genera are needed to clarify the status of *Homilia*.” Accounting for the argument of Malm & Johanson (2011) and following the Trichoptera World Checklist (Morse 2012), we use *H. leucophaea* as the species name here.

The genus *Homilia* occurs in the western Palearctic Region (in particular in France where a species of this genus was discovered for the first time, see above) and in the Afrotropical Region (11 species). In non-French western Europe, the status of *H. leucophaea* varies. It currently occurs in Spain (Gonzalez *et al.* 1992) but is critically endangered in Latvia (Spuris 1989), the Czech Republic (Chvojka & Komzak 2008), and Germany (Klima 1998). Its last records date from 1949 in Belgium (Stroot 1985), 1932 in Italy (Cianficconi *et al.* 2005), 1944 in Switzerland (Lubini-Ferlin & Vicentini 2005), and 1955 in Romania (Botosaneanu 1955). In France, *H. leucophaea* occurs in several large river basins (Garonne, Loire, Rhône, Seine, and Meuse; data from OPIE Benthos: www.opie-benthos.fr/opie/insecte.php).

The first and so far only description of the *H. leucophaea* larva (Botosaneanu 1955) provided no information about the shape of the ventral apotome, which is an essential character to separate the larvae of *Athripsodes* from those of *Ceraclea* (Morse 1975; Morse & Wallace 1976) and may be important for the diagnosis of *Homilia*.