

## An overview on the trapping systems used in Southern Belgium for the monitoring of *Culicoides* (biting midges) populations

B. Losson<sup>1</sup>, J.-Y. Zimmer<sup>2</sup>, C. Fassotte<sup>3</sup>

<sup>1</sup> Dpt of Infectious and Parasitic Diseases, Faculty of Veterinary Medicine, University of Liège, Liège, Belgium <sup>2</sup> Functional and Evolutionary Entomology, Gembloux Agro-Bio Tech (ULg), Gembloux, Belgium and <sup>3</sup> Plant Protection and Ecotoxicology Unit, Walloon Agricultural Research Centre, Gembloux, Belgium

Biting midges are important vectors of animal diseases (BTV, SBV, AHSV). In 2006, BTV was responsible for economic losses in the sheep and cattle industry in Europe. Consequently, between 2006 and 2011 the monitoring of *Culicoides* populations was mandatory (AFSCA/EFSA). This survey was performed throughout Belgium by different Belgian institutions mainly through the use of OVI (Onderstepoort Veterinary Institute) traps which are black light devices attracting *Culicoides* at night. Other types of attractive light or light/chemical traps were used such as CDC, Belagri™ and CO<sub>2</sub>-electric bulb. Additionally white or yellow sticky tapes were also evaluated. Two passive systems were widely used, Rothamsted suction traps (RST - 12 m high) and emergence traps (ground level). Biting midges were trapped with all the tested devices although in very different numbers. Some traps were able to catch many different species (for example RST). However, each type of trap has its own technical advantages and weaknesses.

The combined use of these different trapping systems allowed to up-date the Belgian species list of *Culicoides*, to assess their relative numerical importance, to determine their phenology over 6 successive years, to show the high variability of captures in relation with the year of monitoring, but also according to the climatic conditions, the locality and the localization of the different traps. Finally this work has provided biological material allowing the identification of some competent vectors of BTV and more recently SBV. This acquired expertise could be advantageous in future with regard to the introduction of other *Culicoides*-associated pathogens.