On the occurrence of exotic mosquito species in Belgium: the tip of the iceberg?

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Ongoing eco-climatic changes and increasing worldwide transport create suitable conditions for the (re)emergence of mosquito-borne diseases in Europe. Recent events show the need for a better knowledge of the biodiversity of both endemic and invading mosquitoes. In this context a 4 year project (MODIRISK) was started in 2007. Mosquitoes were collected by use of Mosquito Magnet Liberty Plus traps in more than 900 randomly selected sites and 60 'mosquito-import risk areas'. These consisted out of harbours, airports, used tyre retailers and nature reserves. Potential breeding habitats (artificial containers and natural habitats) were checked for larvae. During MODIRISK the presence of the potential vector species Ochlerotatus *japonicus japonicus* at two tyre companies in Southern Belgium was confirmed. The species was probably introduced through the international trade in second-hand tyres. Based on the currently available data the species seems to be established in Belgium, but no clear indications exist that this exotic species actively spreads. Aedes albopictus, a known invasive species, has been observed in Belgium in 2000, new investigations made in the framework of the MODIRISK project did not confirm its presence, suggesting that is was not able to establish. However, seen its current European distribution and invasive status in surrounding countries it is likely that the species will re-appear in Belgium. Pointing to the importance of monitoring of exotic mosquito species the implications of the presence of these exotic species in Belgium will be discussed.

Schaffner et al. 2004. First record of *Aedes (Stegomyia) albopictus* in Belgium Versteirt et al. Introduction and establishment of the exotic mosquito species *Aedes japonicus japonicus* (Diptera: Culicidae) in Belgium



