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MOSQUITOES - VECTORS OF ARBOVIRUSES IN CROATIA

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Summary

Vector potential of mosquitoes in Croatia has emerged in recent years with the occurrence of dengue in 2010 (in southern Dalmatia) and arboviral infections in humans and animals caused by West Nile (WNV) and Usutu (USUV) virus (in continental Croatia since 2011 to date). In Croatia, 52 mosquito species have been detected so far, which includes two invasive species: *Aedes albopictus* and *Aedes japonicus*. Tiger mosquito, *Ae. albopictus* was recorded for the first time in 2004 in Zagreb. The following year, 2005, numerous findings were detected in Istria and Dalmatia. Today, *Ae. albopictus* is well-established and the most common mosquito species in the coastal area and on the islands. It is also established in the Zagreb area, and in recent years, this species has spread in other counties of continental Croatia. By the end of 2017, the species was recorded in all Croatian counties. *Aedes japonicus* was recorded for the first time in Croatia in 2013, in Krapina-Zagorje County (Đurmanac and Macelj), and since then it has been invasively spreading in continental Croatian regions. The spread of invasive mosquitoes in Croatia increased the concerns and engagement of public health workers in the surveillance of invasive and other mosquito species, the control of mosquito-related diseases as well as the implementation of mosquito disinfestation and education of citizens.

In the period from 2015 to 2017, mosquitoes were tested for the presence of arboviruses. USUV RNA was detected in one of 80 tested mosquito pools (2,459 individuals) of the *Ae. albopictus* from the Zagreb area. Twenty-five mosquito pools (648 individuals) of the *Culex pipiens* complex from the Zagreb and Međimurje County were tested for the presence of USUV RNA. USUV RNA was detected in one mosquito pool collected in Međimurje County (Prelog).

Keywords: mosquitoes, invasive species, vectors, Croatia