

***AEDES (STEGOMYIA) AEGYPTI* AND *AEDES (STEGOMYIA) ALBOPICTUS* IN RUSSIA**

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Abstract *Aedes aegypti* was first discovered on the territory of the former Soviet Union in Batumi as an introduced species in 1911. High numbers of these mosquitoes have been recorded on the Black Sea coast from Sukhumi to Batumi. Since 1950s, these mosquitoes are not detected in this region (Cherkasskiy, 2000). In August-September of 2001-2005, in the Central district of Sochi a few *A. aegypti* females were found (Ryabova et al., 2005). In 2007, the presence of this mosquito in the Greater Sochi was confirmed. Moreover, this mosquito was registered in the cities of Abkhazia – Gudauta and Sukhumi (Yunicheva et al., 2007). In Russia, *Aedes albopictus* females were first caught in the Greater Sochi (Khosta) in July 2011. Species identification of caught females was confirmed by PCR (Ganushkina et al., 2012). In 2013, in the Central district of Sochi, 100-400 meters from the sea coast, females, larvae and pupae of this species were found. By 2015-2016, range of *A. albopictus* has expanded rapidly, reaching Novorossiysk in the north and border between the Russian Federation and Abkhazia in the south. Recently, much attention is paid to Zika virus transmitted by *Aedes* mosquitoes, in particular, *A. aegypti* and *A. albopictus*. On February 1, 2016 WHO announced Zika as a threat to international public health. Knowledge of insecticide susceptibility of *Aedes* mosquitoes is required for drawing-up a plan on rational use of insecticides in mosquito control programs and for carrying out measures on sanitary protection of the territories of Russia and CIS countries. At the end of XX and beginning of XXI century, *A. aegypti* and *A. albopictus* mosquitoes were introduced on the Black Sea coast, apparently from different countries, and their insecticide susceptibility is not known. In 2016, we carried out the preliminary work for the establishment of diagnostic concentrations of larvicides commonly used for mosquito control in Russia and other countries. After literature analysis of the distribution, insecticide susceptibility of these species and our own experiments on mosquito larvae *A. aegypti* of insecticide-susceptible S_{NID} strain, we obtained the diagnostic concentrations for some larvicides. Concentrations (mg/L) were: DDT – 0.1; temephos (abate) – 0.03; fenthion – 0.06; malathion – 0.155; chlorpyrifos – 0.016; cypermethrin – 0.119; alpha-cypermethrin – 0.086; deltamethrin – 0.048; lambda-cyhalothrin – 0.078; etofenprox – 0.05; larvicides based on *Bacillus thuringiensis* var. *israelensis*: «Larviol-pasta» – 0.013 and «Baktitsid» – 0.09. Diagnostic concentrations obtained for *Ae. aegypti* were used in July 2016 to determine the susceptibility of six sub-populations of *Ae. albopictus* from Loo, Khosta, Adler and Central districts of Sochi (most larvae were collected in cemeteries) by WHO method (1981). Larvae of all the populations studied were susceptible to cypermethrin, chlorpyrifos and larvicides based on *Bacillus thuringiensis* var. *israelensis*.

