

A massive West Nile virus epizootic in Germany, 2018/19

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Central Europe experienced remarkably hot and dry summers in the last two years. These extremely favorable climatic conditions most likely triggered the expansion and the efficient propagation of the zoonotic arthropod-borne West Nile virus (WNV) from Southern/Southeastern to Central Europe. WNV is a mosquito-borne viral pathogen of global importance. Until July 2018, WNV was not detected in Germany. However, first WNV infections were detected in resident wild and aviary birds as well as in equines in Eastern and Southeastern Germany since August 2018. The causative WNV strain belonged to the central European subclade II. Phylogeographic analysis indicated a single introduction event, most likely in 2016 from the Czech Republic. These initial outbreaks were followed in 2019 by an even larger epizootic inflicting a broad variety of wild and aviary bird species (58 fatal cases), horses (15 clinical cases, thereof 2 fatalities) and even two humans (one case of severe encephalitis) (data as of 23.9.19). Phylogenetic data indicate overwintering of the 2018 isolate as well as new virus introductions into Germany. WNV hotspot areas are in Saxony, Saxony-Anhalt, Berlin, and some regions in Brandenburg. Available epidemiological data indicate that an even further spread to more areas in Germany and more animal and human WNV cases/fatalities