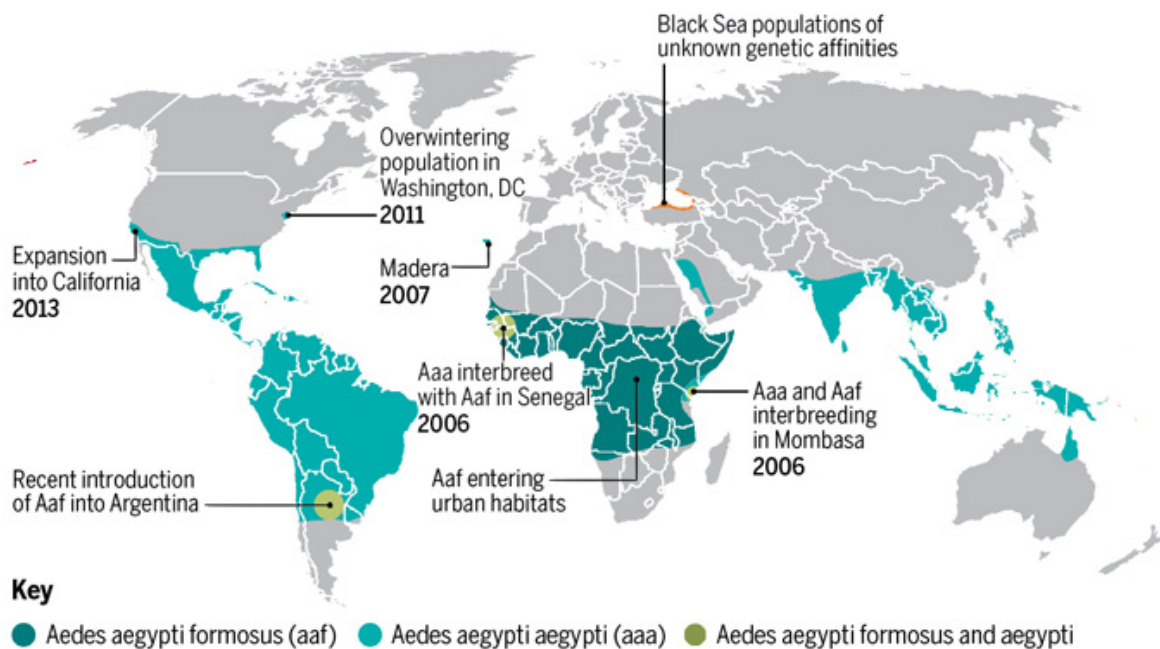


# Zika-bearing mosquitoes quickly invade and adapt to new environments

November 25 2016, by Bill Hathaway

## Changing dynamics

Year of introduction is given for locations newly infested with *Aedes aegypti* since about 2006.



Credit: Yale University

The Zika-bearing mosquito *Aedes aegypti* is not only spreading rapidly but has shown a remarkable ability to adapt quickly to different locales and climates, according to Jeffrey Powell, professor of ecology and

evolutionary biology and environmental health sciences.

The mosquito species, which also transmits [yellow fever](#) and chikungunya, has reached as far north as northern California and southern Georgia, Powell reports in a review of science studies published Nov. 25 in the journal *Science*. A pocket of overwintering [mosquitoes](#) was also discovered in Washington D.C.

"This is a dynamic species that is changing rapidly as it adapts to human activities," Powell said. For instance, *Aedes aegypti* apparently survives colder winters in Washington D.C. by entering sewers, which it does not do in other habitats. In California, the drought may have driven mosquitoes to more populated areas with water sources such as swimming pools. The species often hitchhikes on products such as ornamental plants or used tires, which are shipped to other parts of the world. And a more benign and close genetic cousin found mostly in sub-Saharan Africa appears to be interbreeding with its more aggressive relative, increasing the risk for the spread of yellow fever in those areas, said the Yale researcher.

Powell and colleagues at Yale are studying genetics of the mosquitoes to pinpoint their source of origin.

"We are getting warmer and it won't take much before mosquitoes expand their northern limits," Powell said.

**More information:** J. R. Powell. Mosquitoes on the move, *Science* (2016). [DOI: 10.1126/science.aal1717](https://doi.org/10.1126/science.aal1717)

Provided by Yale University

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