

THE MOSQUITO—Nature’s Premier Disease “Taxi”

Dr. Paul Cadogan



During the recent Chikungunya epidemic, many Jamaicans expressed the belief that this disease must have been transmitted by direct contact. They felt it spread way too fast to be mosquito-borne. Some still cling to that belief. However, the reality is that it is precisely *because* Chik-V is mosquito-transmitted that it was able to barrel its way through our population sickening people from all walks of life!

Consider that you need to travel directly from your home to another location and you don’t have your own transportation. What is the quickest way to do so? Call a taxi! The cab will pick you up at your home, take you to your destination and let you off there. Inside the cab, you travel in relative safety, protected from the elements, your main risk being the taxi getting into an accident! So it is for disease-causing agents and their mosquito “taxi”.

There are about 3,500 known species of mosquitoes. Many of them do not feed on blood, but of those that do, only the females partake. The most dangerous are the disease vectors like the *Aedes aegypti*, transmitter of Dengue Fever and Chikungunya, *Anopheles sp.*, transmitter of Malaria, and *Culex sp.*, transmitter of West Nile Virus Encephalitis and Tularemia. Multiple species can transmit Heartworm Disease of dogs and cats.



Aedes aegypti—<https://www.vectorbase.org/>

Blood meals are essential for egg production and females will feed repeatedly during their 2 to 4 week lifetime. They feed very sneakily and efficiently and do not always announce their presence with that annoying buzz in your ear. In fact, most of us never even know that we’ve been fed upon by these insect vampires! During feeding, if infected, they pass the disease agent to their victims.

So, back to Chik-V – a disease that made the jump from chimpanzees to humans in Tanzania in the 1950’s and is now spreading wherever the *Aedes aegypti* and *albopictus* mosquitoes exist, in a similar way that Dengue did. Unlike Dengue, which only makes about 20% of the people it infects get sick, Chik-V sickens about 75%. That level of virulence, combined with a naïve (previously unexposed) population and the most efficient vector “taxi” service in the world and we have a recipe for an epidemic.

Be thankful that Ebola doesn’t use the mosquito “taxi”!