

peak occurring 5 to 6 days later. Insemination begins 2 days after emergence and virtually all the females of a brood are inseminated by the 5th day. Since these females blood-feed 2 to 3 days after emergence, it appears that insemination is not a prerequisite for blood-feeding as is sugar-feeding. *Cx. nigripalpus* has an annual shift in its blood-feeding pattern, feeding mainly on avian hosts in the winter and spring, and then shifting to an equal or greater proportion of feeding on mammals in the summer and fall. This shift in feeding is probably influenced by the afternoon rain showers during the summer and fall that cause *Cx. nigripalpus* to leave its wooded habitat and invade the adjacent open areas where mammalian hosts are more likely to be found. Multiple blood-feeding is rare during the summer and early fall, but is commonly observed in the winter and early spring. Parous females appear 6 to 7 days after emergence.

Under certain conditions, *Cx. nigripalpus* has a tendency for autogenous egg development. But in such females, fully developed eggs are seen only rarely. Instead, the partially developed follicles are either resorbed or they degenerate. Females that have ovaries with resorbed follicles are found year-round, but are more common in the winter and spring. This is influenced by the frequency of rainfall since females actively feed on blood sources at regular intervals during the rainy season. This results in most of the blood-seeking females being either nulliparous or parous, with only a very small percentage having resorbed ovarian follicles.

The daily survival rate of females varies from 65% in the dry season to 80% or above in the rainy season. A higher daily survival rate and a greater proportion of the females blood-feeding and ovipositing regularly results in a several-fold increase in the population. In general, longer survival of females leads to a larger number of infective mosquitoes in the population, since most viruses and parasites require 12 to 15 days after ingestion to reach the infective stage. All epidemics are associated with the presence of large populations of adult mosquitoes. The chances of an epidemic are greatly increased when viruses and parasites are in circulation and frequent rainfall increases the mosquito population. A combination of environmental factors, especially frequent rain showers that increase the population of *Cx. nigripalpus* along with the circulation of the viruses or parasites, would make it a very good vector. This might explain the sporadic occurrence of SLE and EEE viruses in Florida, both of which are associated with *Cx. nigripalpus*.