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A study on diversity of mosquito fauna in Thanjavur urban, Tamilnadu, India.

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Abstract
Mosquitoes are pestiferous insect which is responsible for the transmission various dreadful diseases. In the study diversity of mosquito fauna on Thanjavur urban, Tamilnadu, India. During the year (July 2012 to July 2013). The larval samples were collected from different selected sites. The result of 12 species of mosquitoes which are grouped 3 genera, namely *Aedes*, *Anopheles*, *Culex* recorded in all the regions of the study area. *Culex* was the most dominant genus with 7 species followed by *Aedes* (3) and *Anopheles* (2).

Keywords: Mosquito biodiversity, *Culex, Anopheles, Aedes.*

1. Introduction
Mosquito constitutes the most important single family of insects that affect the human and other animals [1]. Mosquitoes are found in all types of environments associated with lentic aquatic habitats for breeding such as sewage water, stagnant water, septic tanks etc. [2] and natural and artificial containers such as pools, gutters, coconut shells, tree holes, bamboo stumps, leaf axils, water tanks and so on [3-4].
The breeding habitat is crucial for mosquito population dynamics, because it is the location where many important life cycle processes are development of larva, emergence of adults, resting, swarming and mating of adults [5].
Diptera represents one of the largest orders of insects with more than 85,000 species including a large number of disease vectors. Prominent among these are mosquitoes, which are placed under the sub-order Nematocera and family Culicidae. More than 3100 species of mosquitoes belonging to 34 genera have been recorded under three subfamilies, namely, Anophelinae, Culicinae and Toxorhynchitinae [6].
The most important disease transmits and nuisance causing mosquitoes belong to the genera *Anopheles, Culex, Aedes, Mansonia, Haemagogus, Sabithes* and *Psorophora.* Various species of *Anopheles, Culex, Aedes* and *Mansonia* are important as carriers of diseases. Malaria, Filariasis, Japanese Encephalitis (JE), Dengue fever and Dengue hemorrhagic fever (DHF) are the major mosquito borne diseases in India [7]. Hence, an attempt has been made to survey the mosquito fauna in selected sites of Thanjavur urban, Tamilnadu, India.

2. Materials and Methods
2.1 Study site
Different spots were randomly selected in Thanjavur urban of Tamilnadu, India, during the year (July 2012 to July 2013).

2.2 Methodology
The mosquito larva collection was carried out in the selected sites using standard methods [8]. Larvae of mosquito were collected from different habitats both natural and artificial using plankton nets, dippers, and pipettes. All the sampling sites were visited periodically. Collections from each site were maintained separately in suitable containers and allowed them to emerge [9]. Adult specimens first of all narcotized with petroleum ether and identified using systematic keys and catalogues [10-14].

3. Result and discussion
Mosquito survey was conducted on Thanjavur urban selected site for one year (July 2012 to July 2013). Larvae were collected from various habitats in selected sites of the study area.

Altogether species belonging to genera were identified and recorded (Table. 1). *Culex* was the most dominant genus with 7 species followed by *Aedes* (3) and *Anopheles* (2) respectively. World wild more than 3200 species of mosquitoes belonging to 37 genera recorded so for only more than 100 species capable of transmitting to different vector borne disease. The Indian mosquito fauna include 255 species grouped under 16 genera.58 species belong to genus *Anopheles*, 57 species to *Culex* 111 species to *Aedes* and 7 species to *Mansonia* [15]. Manimegalai [16] reported mosquito species such as *Culex quinquefasciatus, C. pseudovishnu, C. gelidus* and *Armigeres subalbatus* in three areas of Coimbatore city. Mathurai there are 27 species of mosquitos belonging to the genera *Aedes, Anopheles, Armigeres, Culex* and *Mansonia* [1]. 10 species of mosquito recorded belonging to the genera *Aedes, Anopheles* and *Culex* in three site of Athoor taluk, Dindigul district [17]. Amala *et al* [18] studied in Rajasthani Kottai village were 17 mosquito species collected these mosquito species belonging to the genus *Aedes, Anopheles, Armigeres* and *Culex.*

Chandrasekar *et al* [19] studied on the density of mosquitoes in a dry area from Keela Arunachalapuram. Totally 11 species of mosquitoes belong to four genera *Aedes, Anopheles, Armigeres* and *Culex* was recorded. 30 different species belong to 5 different genera such as *Aedes, Anopheles, Armigeres, Culex* and *Mansonia* was recorded in Irinjalakuda municipal area [20]. The present study proofed to live the different mosquito species in Thanjavur. Hence the risk factors for the spread and transmission of vector borne disease are globalization.

4. Conclusion

This problem is more severe in the urban area because high population, poor sanitation facilities, poor environment, development activities, human behavior and human migration that enhance the density of the mosquitoes, and mosquito-borne disease. Hence successful implementation of vector management programs, adequate knowledge on the special diversity and density is essential.

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Table 1: List of mosquito species in study area

S.no	Genus	Species
1.	*Anopheles*	*subpictus*
		vagus
2.	*Culex*	*quinquefasciatus*
		physocephala
		nishnuni
		pseudovisnui
		tritaeniorhynchus
		bitaeniorhynchus
		fascanus
3.	*Aedes*	*aegypti*
		albopictus
		vittatus

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