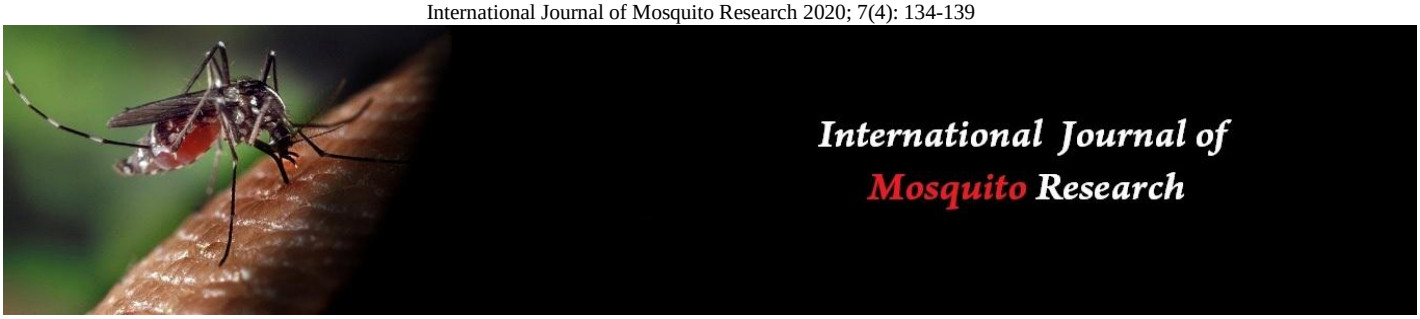

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Influence of nature in controlling filarial transmission: A study in slums of Burdwan

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Abstract
Purpose: Lymphatic filariasis is a crippling disease which affects the health status as well as economic condition of a person and also the society. Many attempts are made by scientists all over the world to control the filarial worm as well as vector. But nature plays important role in controlling the filariasis.
Methods: To have some clear picture on how nature helps to control transmission of filarial disease, four slums of Burdwan (Hatgobindapur, Pandaveswar, Jamuria and Memari) were sampled for Daily survival rate (DSR), Daily Mortality Rate (DMR), Presumptive Mortality Rate (PMR) and Ovariolar dilatatations.
Results: Lack of synchronization between the highest vector density and transmission disease, fall in parasitic load, mortality between two successive gonotrophic cycles, rise and fall in temperature and humidity is noticed in all the four slums which help to keep the check on transmission level of filaria by nature itself.
Conclusions: Factors behind the natural phenomena of control is reflected in this article which perhaps helps to adopt strategies for effective control.

Keywords: Filaria, control, burdwan, slums, nature

Introduction
The lymphatic filariasis is a public health problem, and it is of great concern today. It is a painful, disfiguring disease. It is debilitating diseases and affects the socioeconomic status of human as most of the affected persons are morbid. The main parasites are *Wuchereria bancrofti, Brugia malayi* and *Brugia timori.* The main vectors are the species of the genera *Culex,* and *Mansonia*. At least 1307 million people in 83 countries including 553.7 million people in India are at risk [1-2].

Information regarding the epidemiology of filaria is recorded from different parts of West Bengal by different scientists from time to time [3-13].

Effects related with environmental change profound in modulating natural ecosystems. Climate change coupled with rapid urbanization is stimulating unprecedented change in population dynamics and status of mosquito borne diseases [14]. Scientists over different parts of the world trying their best to control the filarial parasites by applying different modes of control mainly by reducing both the vector and parasite populations through different means. But still the outcome of the program is not so much satisfactory. But nature itself plays important role in controlling the parasites [15-16]. So, we can avail ourselves of natural control of filariasis simply by controlling indiscriminate urbanization, controlling deforestation, proper sanitization and reducing the source of vector mosquito to breed. Ecological transformations, rapid and uncoordinated urbanizations of rural area mainly due to the construction of dams, irrigation canals, poor design and lack of maintenance of sewage water, water storage tanks and urban subsistence agriculture can facilitate increase of vector population transmitting filaria and other vector borne diseases [17-18]. In the year 1975 the proportion of urban dwellers in the least developed countries was only 27% which rose to 40% by the year 2000. Fifty percent of the world's urban population is concentrated in Asia. Currently, the annual growth rate in Asian cities is 2.7% [19]. This implies that in the future, an increasing number of habitats with organically polluted water will be available for *Culex* vectors [20].

This paper highlights on how nature plays important role in controlling the filarial outbreak in slums (Hatgobindapur, Pandaveswar, Jamuria and Memari) of Burdwan District, West Bengal, India.