Chapter 12

*Aedes aegypti* and *Aedes albopictus* Surveillance and Management

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**Key words:** new tools, control, dengue, paradigms

1. Introduction

Dengue has now become the most widespread vector borne disease globally and currently the incidence of dengue has increased 30-fold. Some 50–100 million new infections are estimated to occur annually in more than 100 countries [1]. *Aedes aegypti* and *Aedes albopictus* (fig. 1 and 2) are the main vectors and these two mosquitoes are also responsible for the transmission of Chikungunya, West Nile virus and other viral diseases [2]. In the absence of a vaccine and suitable drugs for the treatment of dengue, vector control remains as the main tool for the prevention of dengue transmission.

The biology of both these mosquitoes makes them efficient vectors. These mosquitoes are container breeders and breed in man-made containers like bath tubs, flower vase, roof gutters or in natural containers like tree holes, axils and bamboo stumps (fig. 3). The eggs of these mosquitoes can withstand desiccation and they are easily dispersed from one place to another when the containers are transported by humans.

They are both day biting mosquitoes and *Ae. aegypti* is very anthropophilic compared to *Ae. albopictus* which was thought to be a more generalist. However, recent studies have shown that *Ae. albopictus* are also anthropophilic [3,4]. *Aedes aegypti* is easily disturbed while feeding and thus will take multiple blood meals during one gonotrophic cycle [5]. It is also known that an infected