CHARACTERISTICS OF DISEASES CARRYING MOSQUITOES

There are four major Mosquito borne diseases in Sri Lanka. They are namely Malaria, Filariasis, Dengue and Japanese Encephalitis. Not one single mosquito species is responsible for spreading all four diseases but different species. Though there are 16 types (Genera) comprising more than 140 species of Mosquitoes in Sri Lanka, disease carriers are limited to a few. That is also to their females. It such happens that these female mosquitoes need human blood meals to mature their eggs.

Male mosquitoes do not need blood meals but feed on plant juice, nectar and fruit juice. The number of disease carrying mosquitoes in Sri

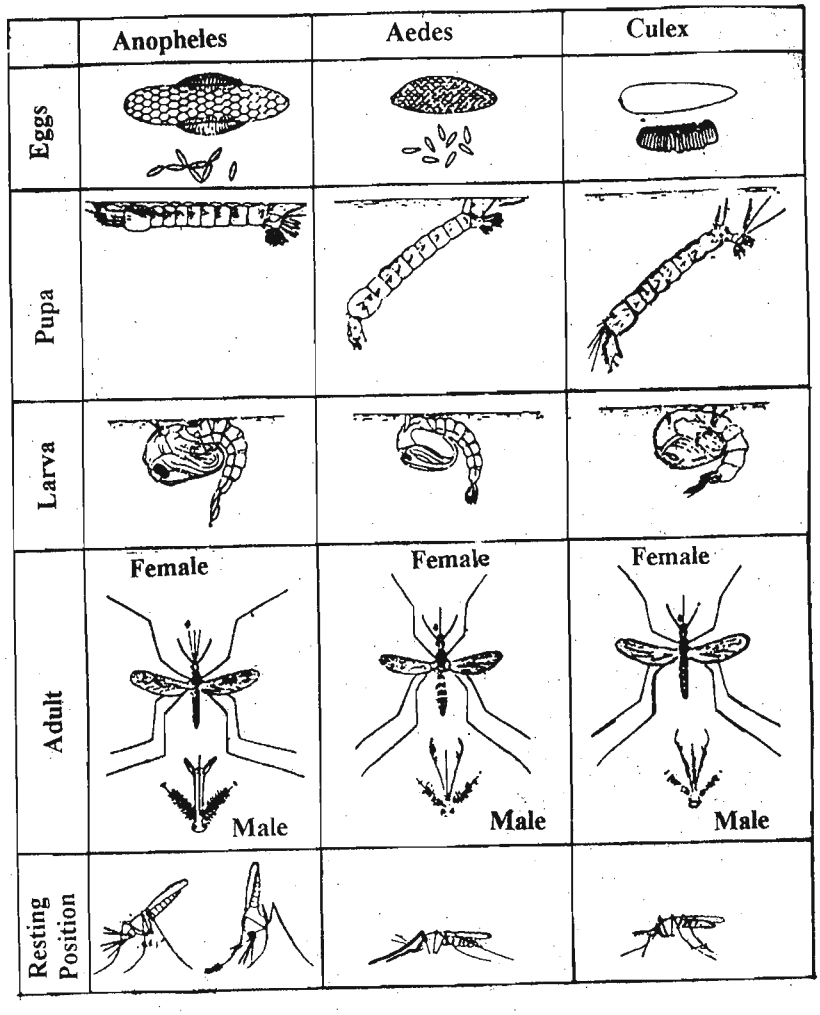

Figure 1: Phenotypic variation among life stages of mosquito genera

Lanka are only about 16. To prevent the spread of mosquito borne diseases one has to study the life cycle of Mosquitoes. It is important to understand the characteristic features of the four stages i.e. the egg, larva, pupa and the adult stage of different mosquito species. Figure-1 gives the differences, in the life cycles of the main mosquito species.

There are two main groups of mosquitoes in Sri Lanka. They are called Anophylines and Culicines. The major difference that could be noted is the way they rest. The adult anophyline mosquito keeps its body at an angle to the resting surface, while its larva stays parallel to the water surface. The adult culicine mosquito rests with its body parallel to the resting surface while the larva hangs down from the water surface.

Table 1: Characteristic differences in Lifestyle of various Mosquito species.

STAGE OF THE LIFE CYCLE	GENUS		
	Anophelines	Culicines	
	Anopheles	**Aedes**	**Culex**
Eggs	Floats singularly in water	Floats as a collection of Eggs	Floats as a collection (about 100 eggs together)
Breeding Places	Pools formed in river and stream beds during droughts, margins of slow flowing irrigation channels, water collected in brick pits and abandoned gem pits rain water collections, non polluted water and in paddy fields, marshes etc.	Water collections in discarded tins, pots coconut shells, blocked rain gutters, flower vases, ant traps discarded tyres (container breeders)	Polluted waters in cess pits, arecanut pots, coconut shell pits, blocked drains, marshes etc.
Larvae	Swims parallel to water surface	Swims with an angle to water surface	Swims with an angle to water surface
Adults	Small in size. Forms an angle to the surface when resting. Black in colour. Black spots on the wings.	Normal in size. Rests parallel to the surface. Usually black in colour. Far end looks sharpened. No black spots on the wings. Characteristic white patterns seen on the thorax	Normal in size. Rests parallel to surface. Dark brown and light brown in colour.
Active Period	6.00 p.m. – 10.00 p.m. 4.00 a.m. - 6.00 a.m.	Day time 7.00 a.m. – 9.00 a.m. 3.00 p.m. - 5.00 p.m.	6.00 p.m. – 4.00 a.m. 4.00 p.m. - 10.00 p.m.
Preferred Meal	Cattle blood	Human blood	Pig, goat and cattle blood

(Reference: Dr Mervin B. Wickramasinghe, "Disease carrying mosquitoes" SAPATHA, 1990, Vol. 31(1-4), 9-11 pp.)