

# Insectary

NIMR has a well-established insectary since 1977. Different strains of three important vectors of malaria— *An. stephensi*, *An. culicifacies* and *An. fluviatilis* collected from different geographical regions of India are being maintained. Various morphological mutants of *An. stephensi* maintained are *Red eye (re)*, *Black larvae (Bl)*, *Golden yellow (gy)*, *Creamish white eye (cw)*, *Reddish brown eye (rb)*. Resistant and susceptible lines of anophelines to different

insecticides are also being maintained in the insectary.

In addition, there are laboratory colonies of *An. culicifacies* sibling species—A, B and C, *An. fluviatilis* species S, T and U initiated from cytologically identified mosquitoes collected from different parts of the country. This insectary is serving as a biological resource for several basic and applied studies being carried out in the Institute.

## Mosquito Species

### *Anopheles stephensi*

#### *From urban and semi-urban areas*

Nehru Place, Delhi  
Okhla, Delhi  
Chennai, Tamil Nadu

#### *From rural areas*

Ladpur, Haryana

#### *Morphological mutants*

*Red eye (re)* – sex linked recessive  
*Black larvae (bl)* – autosomal semi-dominant  
*Golden yellow (gy)* – autosomal recessive  
*Creamish white eye (cw)* – new mutant  
*Reddish brown eye (rb)* – new mutant

#### *Biochemical variants*

Bahadurgarh (EST-2)

#### *Insecticide resistant lines*

Malathion resistant  
Permethrin resistant  
Lambda-cyhalothrin resistant  
Deltamethrin resistant  
Cyfluthrin resistant  
Fenthion resistant

## *Anopheles culicifacies* Complex

### *Species A*

Dehra, Uttar Pradesh  
Burari, Delhi  
Rourkela, Orissa

### *Species B*

#### *Acrocentric Y-chromosome lines*

Ladpur, Haryana  
Haldwani, Uttarakhand

#### *Submetacentric Y-chromosome lines*

Rameswaram, Tamil Nadu  
Rourkela, Orissa

#### *Insecticide resistant lines*

DDT resistant – Ladpur, Haryana  
Malathion resistant – Ladpur, Haryana

### *Species C*

#### *Submetacentric Y-chromosome line*

Jabalpur, Madhya Pradesh

#### *Insecticide resistant line*

DDT resistant – Jabalpur, Madhya Pradesh

## *Anopheles fluviatilis* Complex

Species S and T – Rourkela, Orissa  
Species T and U – Hardwar, Uttarakhand  
Species T – Haldwani, Uttarakhand

## *Anopheles sundaicus*

Cyclic colonies established from Car Nicobar, Katchal and Tressa (A & N Islands)

## *Anopheles annularis*

Nathupura, Delhi

## *Aedes aegypti*

Delhi

## *Culex quinquefasciatus*

Delhi  
Sonapat, Haryana  
Mewat, Haryana

#### *Insecticide resistant lines*

Malathion resistant – Sonapat, Haryana  
Permethrin resistant – Sonapat, Haryana  
Lambda-cyhalothrin resistant – Sonapat, Haryana  
Deltamethrin resistant – Sonapat, Haryana  
Cyfluthrin resistant – Sonapat, Haryana  
Fenthion resistant – Sonapat, Haryana

#### *Morphological mutants*

Red eye (re)  
Scarlet eye (se)

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