

# MOSQUITO BIOLOGY



Vector Disease Control, Inc.

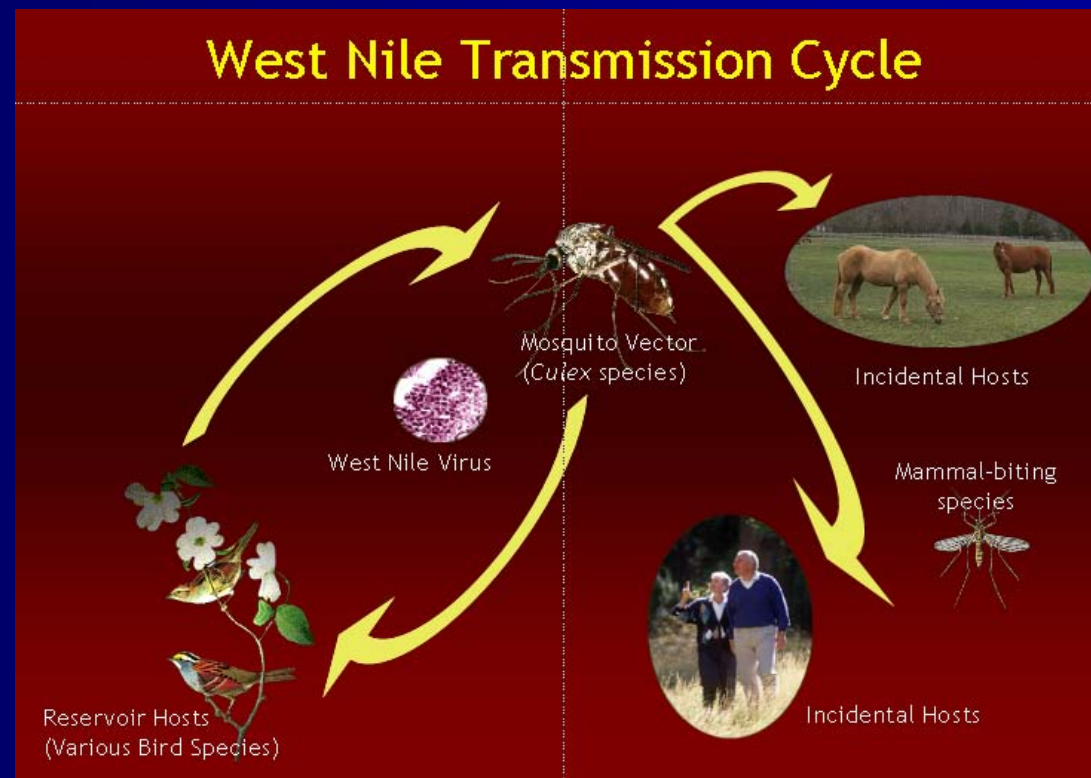
Mosquito Control Program

1-800-413-4445

[www.vdci.net](http://www.vdci.net)

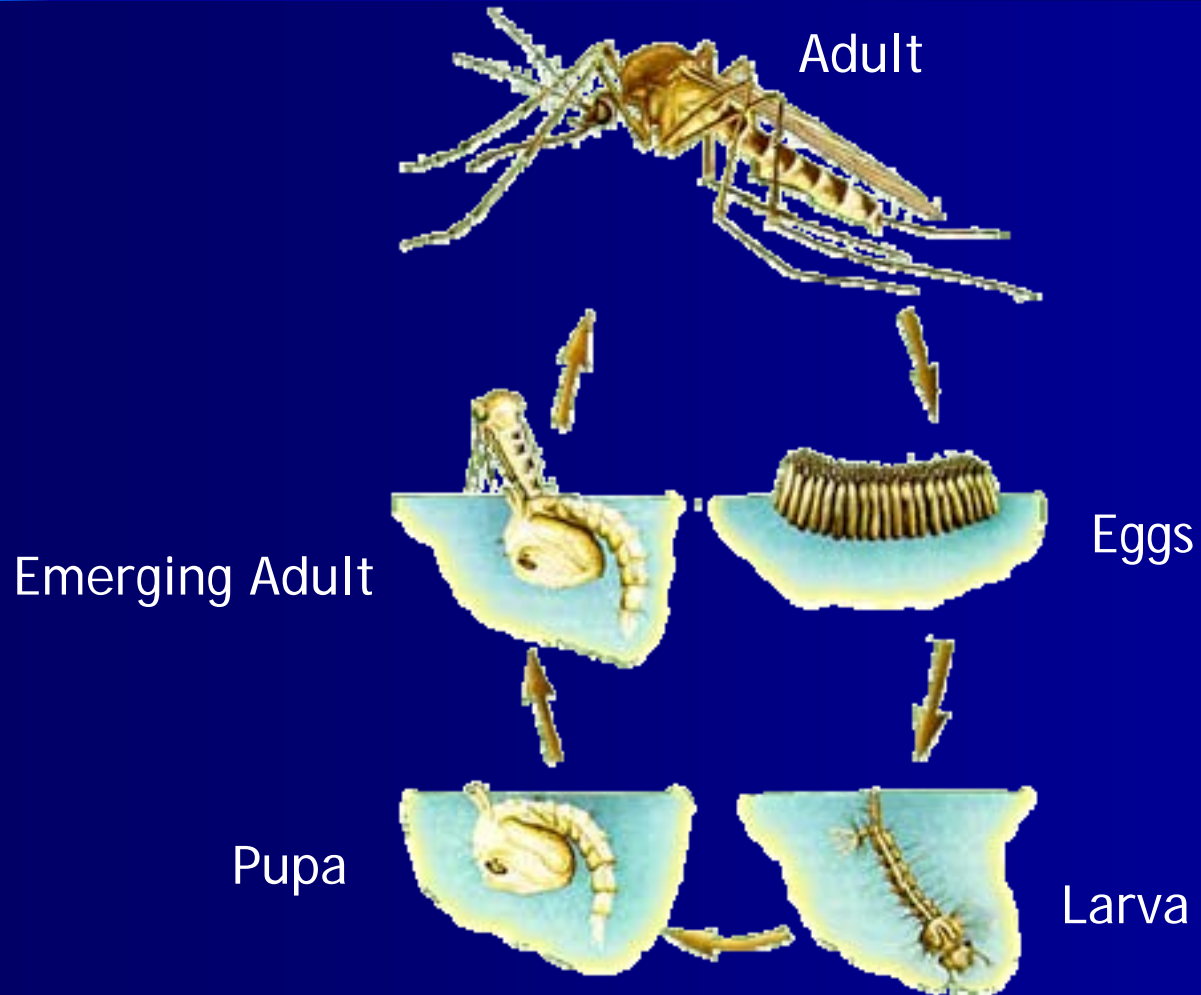
# The Importance of Mosquitoes

## Protecting the Public's Health



*Mosquitoes transmit several diseases in our area.*

# Must Know Mosquito Biology



# Females Take a Bloodmeal

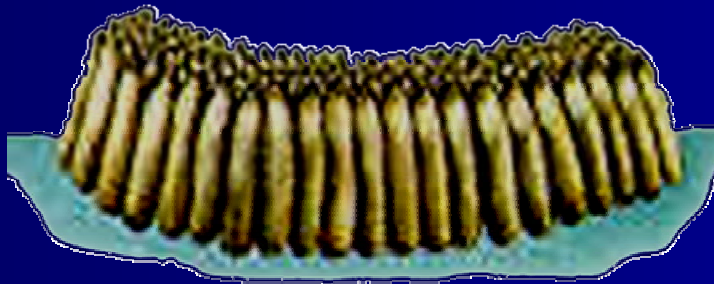
Females lay 100 - 300  
eggs after each  
bloodmeal.

Between bloodmeals  
they feed on nectar.



# Eggs are Laid On or Near Water

Eggs are laid in clusters called "boats" or "rafts"; or they are laid individually, depending upon the species of mosquito.



# Larvae Emerge



Larvae feed on decaying plant material.

Larvae have four stages or instars and pass through all four instars in a few days to a few months, depending upon water temperature.



# Pupae Are A Non-feeding Stage

Inside the pupal case, the adult mosquito is forming.



# Adult Mosquitoes Emerge

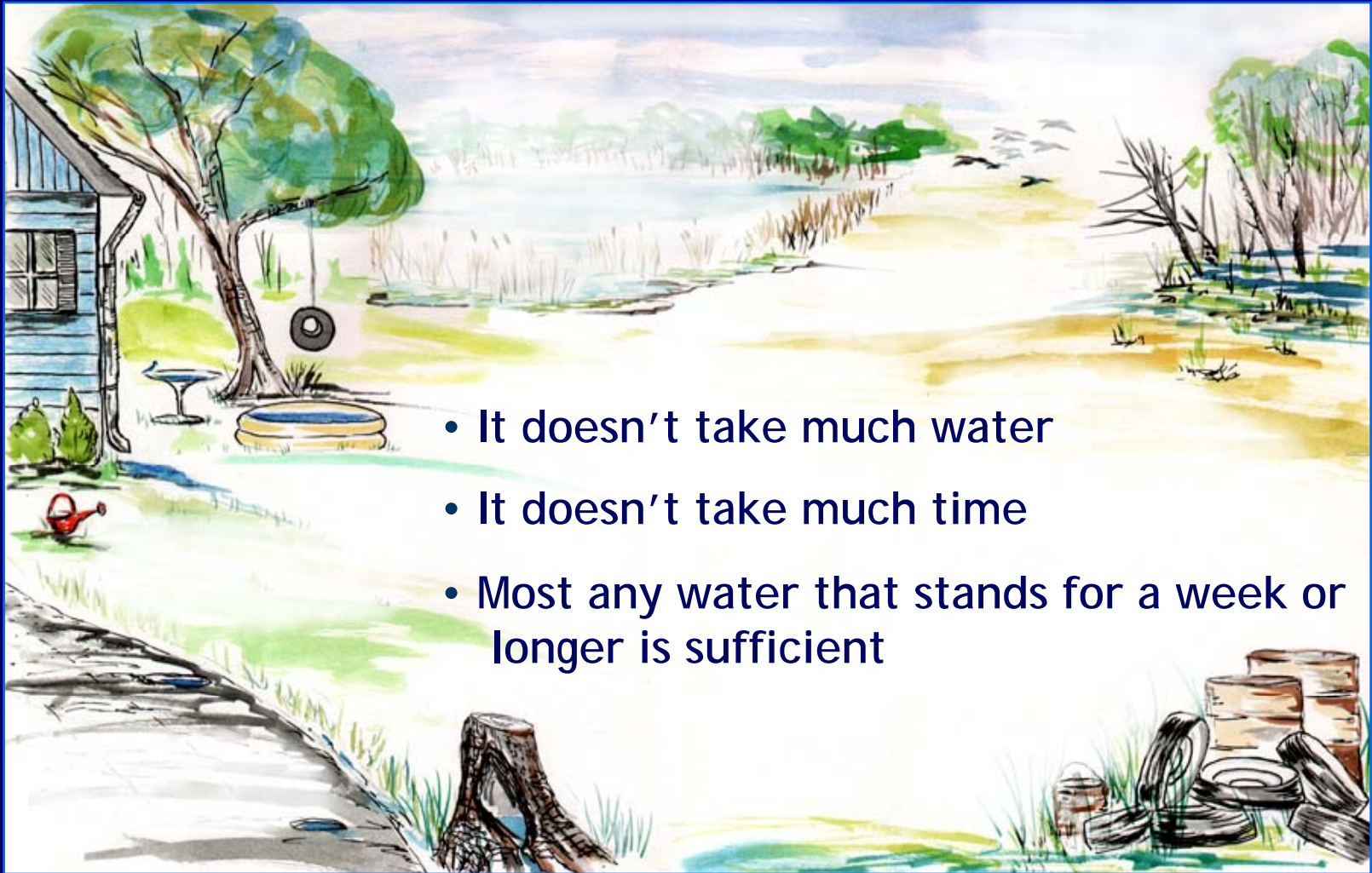
Males  
emerge first



Females rest for a few  
days before seeking a  
bloodmeal.



# Mosquito Habitat



# Freshwater Marshes, Pools and Swamps

Ponds/swamps clogged with vegetative growth and lacking natural predators can maintain large numbers of mosquitoes. Cattail marshes provide ideal habitat for certain mosquito species.



- *Anopheles* spp.
- *Culex* spp.

- *Coquilletidia perturbans*



# Temporary Pools

Shallow, temporary pools are common in woodland and grassy areas during the spring and wet summers. A variety of mosquito species are common in these areas.



- *Ochlerotatus canadensis*
- *Ochlerotatus vexans*



# Roadside Ditches and Catch Basins

These areas can hold water for extended periods of time and provide suitable habitat for *Culex* mosquitoes.



- *Culex pipiens*
- *Culex restuans*



# Tree Holes and Natural Containers

Tree holes and other natural containers, such as pitcher plants, serve as a good spot for breeding mosquitoes.

- *Ochlerotatus triseriatus*
- *Wyeomyia smithii*



# Artificial Containers

Many mosquitoes that prefer natural containers have adapted to using man-made containers.



- Buckets, cans, bottles
- Barrels, trash Cans
- Tires, Tires, Tires

- *Aedes albopictus*
- *Aedes japonicus*
- *Culex pipiens*



- Swimming Pools
- Gutters
- Recycle Containers



# Neglected Swimming Pools

Swimming pools that are Neglected and left to collect rainwater and debris can produce tremendous mosquito populations.

- *Aedes* spp.
- *Ochlerotatus* spp.
- *Culex* spp.
- *Anopheles* spp.



# Personal Precautions



- Limit outdoor evening activity, when mosquitoes are most active
- Wear protective clothing

- Use insect repellents
  - DEET is the only proven product to repel mosquitoes
  - Read the repellents directions for use
- Reduce mosquito populations by eliminating or treating all standing water in your backyard



# Things To Homeowner Can Do To Reduce Mosquitoes on their Property

- All standing water should be eliminated.
- Dispose of all useless containers and those that are saved should be turned upside down.
- Tires, especially, can readily breed thousands of mosquitoes.
- Recycling containers should have holes drilled into their bottom to allow for drainage of rainwater or tight-fitting lids.
- Roof gutters and drainage ditches should be maintained and cleared of debris.
- Fish will readily eat mosquitoes and, therefore, should be placed in ornamental ponds.
- The water in bird baths, fountains, and troughs should be changed weekly.
- Swimming pools and wading pools should be kept emptied when not in use and covered so that water cannot collect in them (or the cover).
- Canoes and other boats should be covered or turned over for storage.
- Properly grade property and smooth out tire ruts to allow for water drainage.





Thank You