



USAID
FROM THE AMERICAN PEOPLE



U.S. President's Malaria Initiative



Session 27

REVIEW ACTIVITY

What role do mosquitoes play in malaria?

Mosquitoes – specifically, females of the certain species of the genus *Anopheles* mosquitoes – are the carriers and transmitters of the malaria parasite to humans.



Multiple Choice

What are the main malaria-carrying Anopheles mosquitoes in Africa?

- A. *An. gambiae*
- B. *An. funestus*
- C. *An. darlingi*
- D. *An. albopictus*
- ✓ E. A and B
- F. C and D
- G. All of the above



Why is it important for us to monitor local mosquitoes?

- A. Determine whether male *Anopheles* mosquitoes threaten our crops by feeding on nectar
- B. Inform selection of right ways to control malaria-carrying mosquitoes
- C. Determine if malaria-carrying mosquito control activities are working
- ✓ D. B and C above
- E. All of the above



True False

***Aedes* mosquitoes prefer lay their eggs in clear, unpolluted, sunny pools of water: rice fields, water in animal hoof prints, temporary puddles from rainfall, and borrow pits.**

A. True

✓ *B. False*



Multiple Choice

Which of these is an *Anopheles* larvae?

A. A

✓ B. B

C. C



A



B



C



Multiple Choice

What information do entomologists need to determine if the vector control activities are working?

- A. Are we killing the right mosquitoes?
- B. Is the number of eggs and larvae in the areas where those mosquitoes breed going down?
- C. Is the number of malaria-infected mosquitoes staying the same or rising after an insecticide has been applied?
- D. A and B above
- ✓ E. All of the above

***Anopheles* larvae have a siphon and hang down from the surface of the water.**

- A. *True*
- ✓ B. *False*



Multiple Choice

Which of these is an *Aedes* larvae

A. A

B. B

✓ C. C



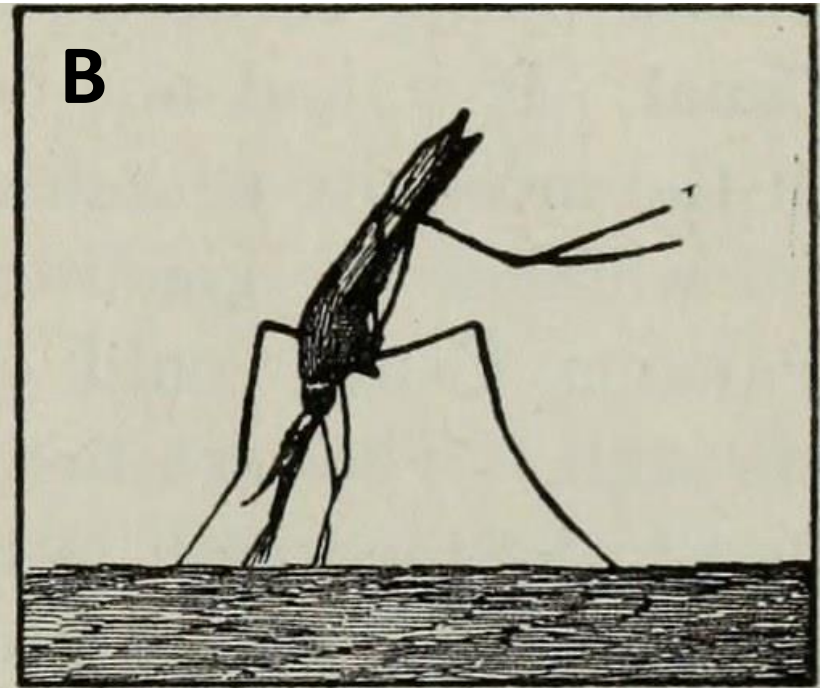
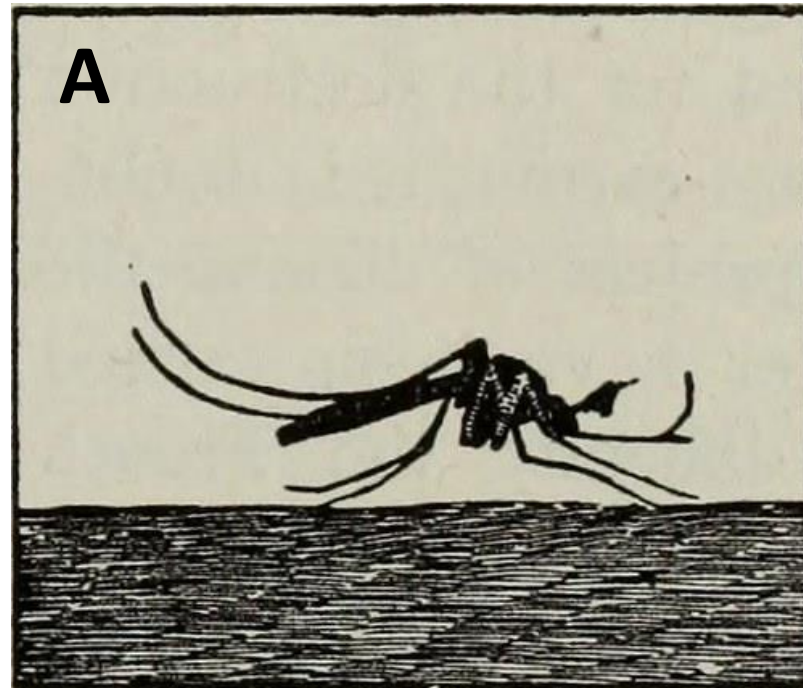


Multiple Choice

Which image is the *Anopheles* mosquito in a rest position?

A. A

✓ B. B





Name one other way to tell the difference between *Anopheles* and Culicine mosquitoes.

The palps of female *Anopheles* mosquitoes are as long and straight as the proboscis, while the palps of female Culicine mosquitoes are considerably shorter.

Which one of these is an *Aedes* mosquito?



✓ A



B



True or False

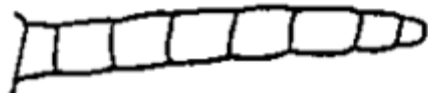
On the female mosquito, the hairs on the antenna are very few and short, while on the male mosquito, the hairs are long and bushy moustache-like appearance.

- ✓ *A. True*
- B. False*

Match the blood digestion stages:



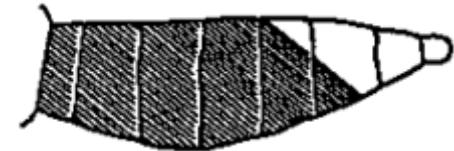
C



A



D



B

A. Unfed

B. Freshly-fed

C. Half-gravid

D. Gravid

What are the steps for setting up the CDC Light Trap to collect adult mosquitoes?

1. Gather the components
2. Test the light trap - connect the back and red cable on the battery
3. Check the photo-sensor and disconnect the battery after testing
4. Connect the net bag to the body of the container
5. Hang the trap 5-6 feet above the ground in the area selected away from other light sources but near persons
6. Reconnect the battery
7. Leave the light on over night
8. Return to the trap the next morning
9. Collect the mosquitos



Multiple Choice

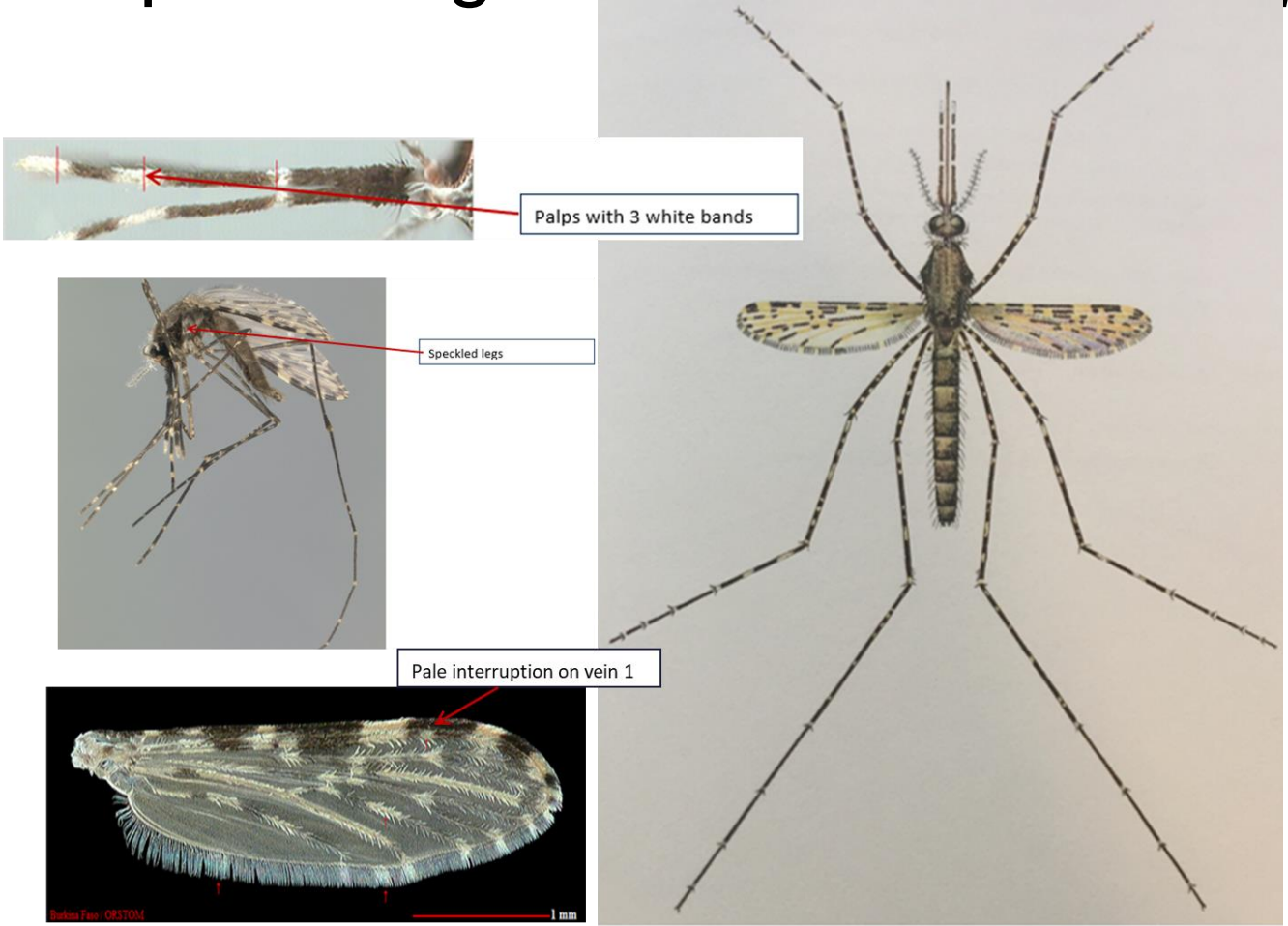
How you do you preserve mosquitoes identified as *An. gambiae* s.l. and *An. funestus* s.l. for further species identification and laboratory analysis?

- ✓ A. In Eppendorf tube in Silica gel
- B. In a group of five mosquitoes in Eppendorf tube
- C. In a mosquito cage



Identify the Mosquito

Using your pictorial guide, identify this *Anopheles* mosquito:



Answer:

Anopheles gambiae s.l.

What information should you include on the vial of a mosquito specimen?

- When it was collected
- Where it was collected
- House number
- Sex of mosquito
- Type of mosquito (genus or species, as applicable)

What information should you include on a data collection form? *(To include but not exhaustive list)*

- When the mosquitoes was collected
- Where were mosquitoes collected, to include GPS coordinates
- Time mosquitoes were collected
- House number and house owner's name
- Type of collection method
- Type of roof, type of wall materials
- Total number of mosquitoes collected
- Types of mosquitoes collected (sex, genus, species, if applicable)
- Numbers of mosquitoes by abdominal stage