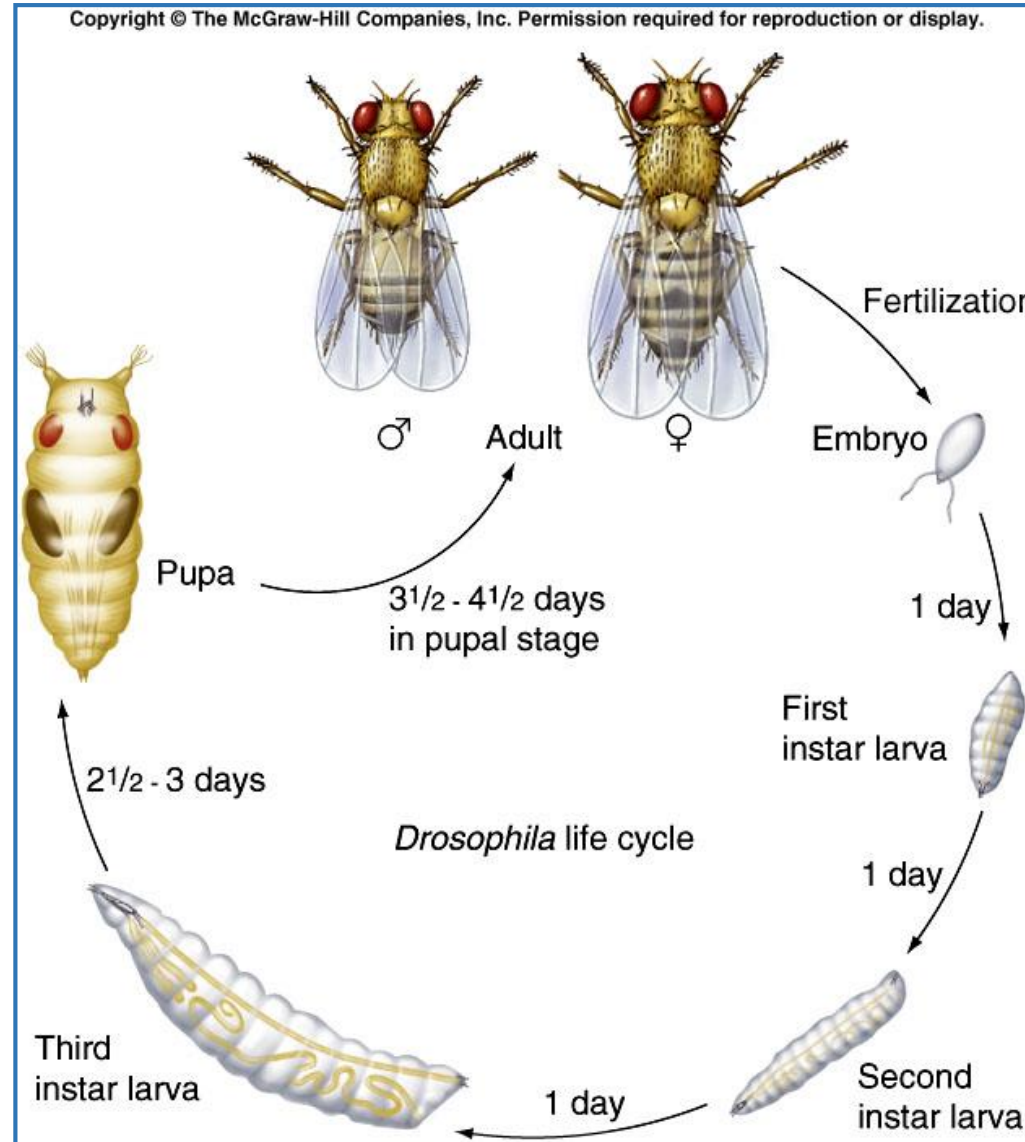


# Lab # 2: Genetics of Drosophila



# The Life Cycle of *Drosophila*

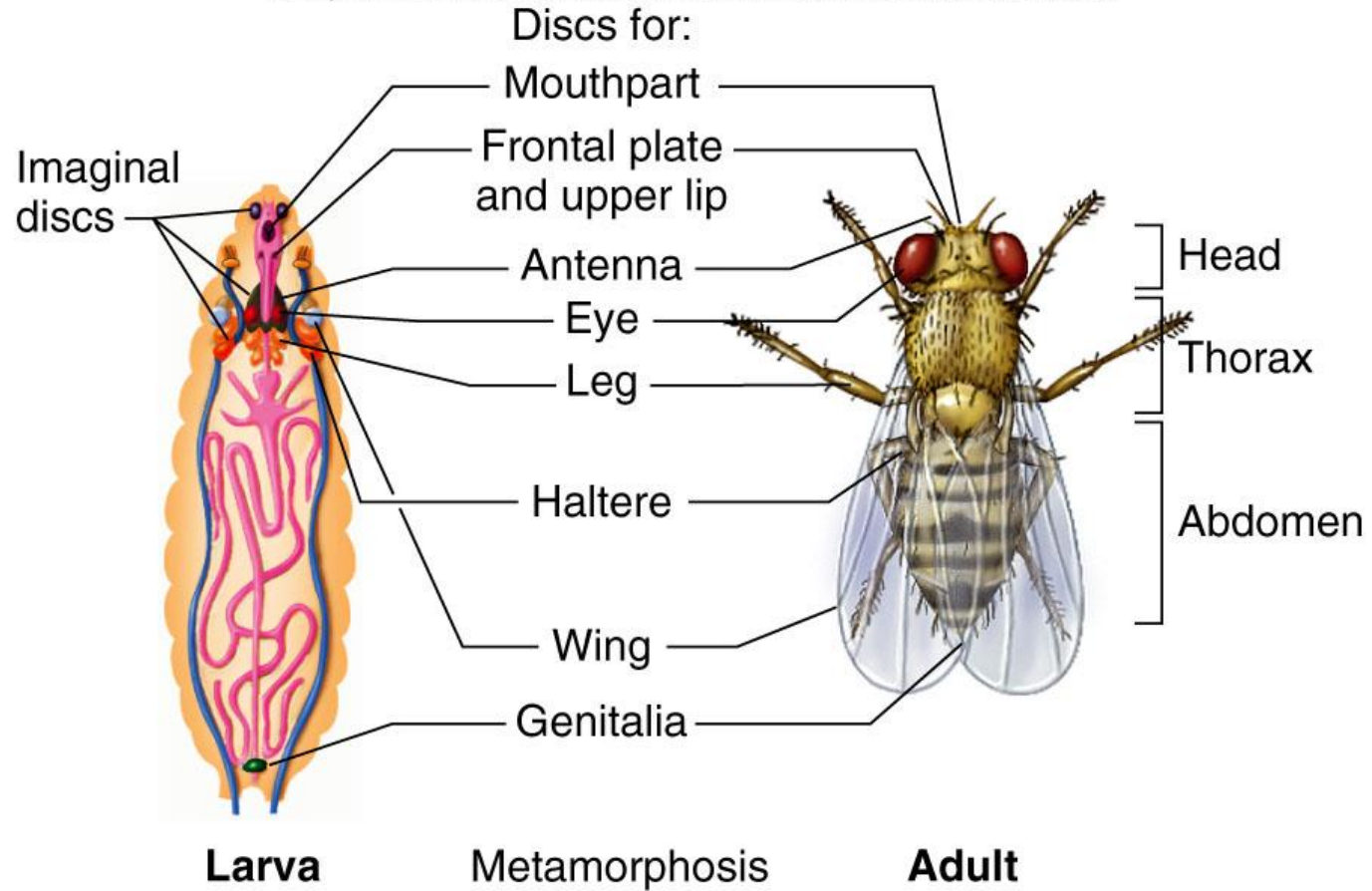


Full development:  
10-12 days

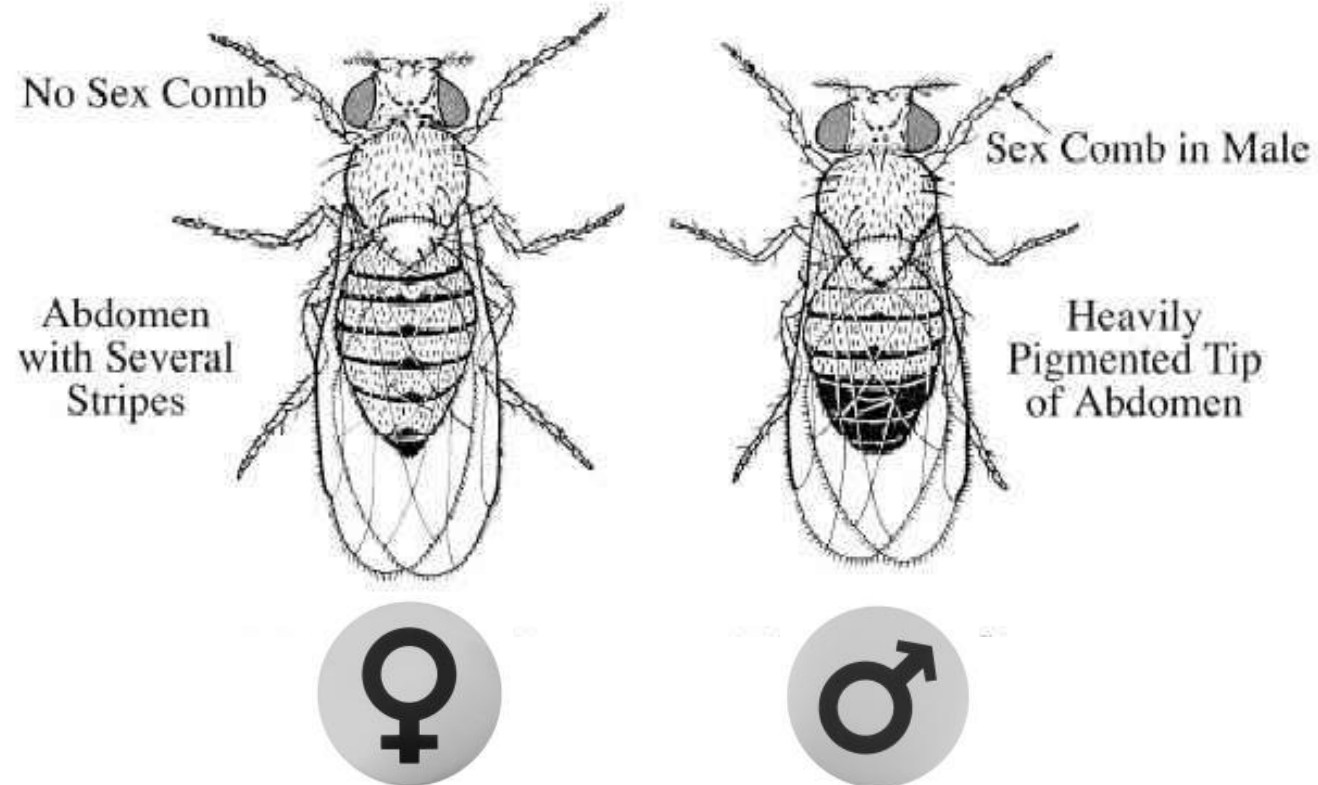
Mating:  
In 10 hours after  
emergence from  
pupae (females)

# Drosophila Body Parts

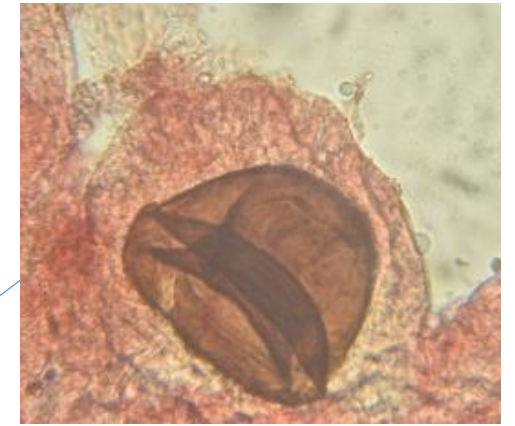
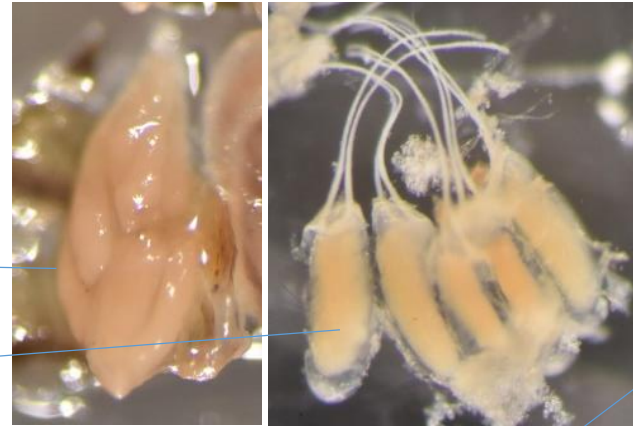
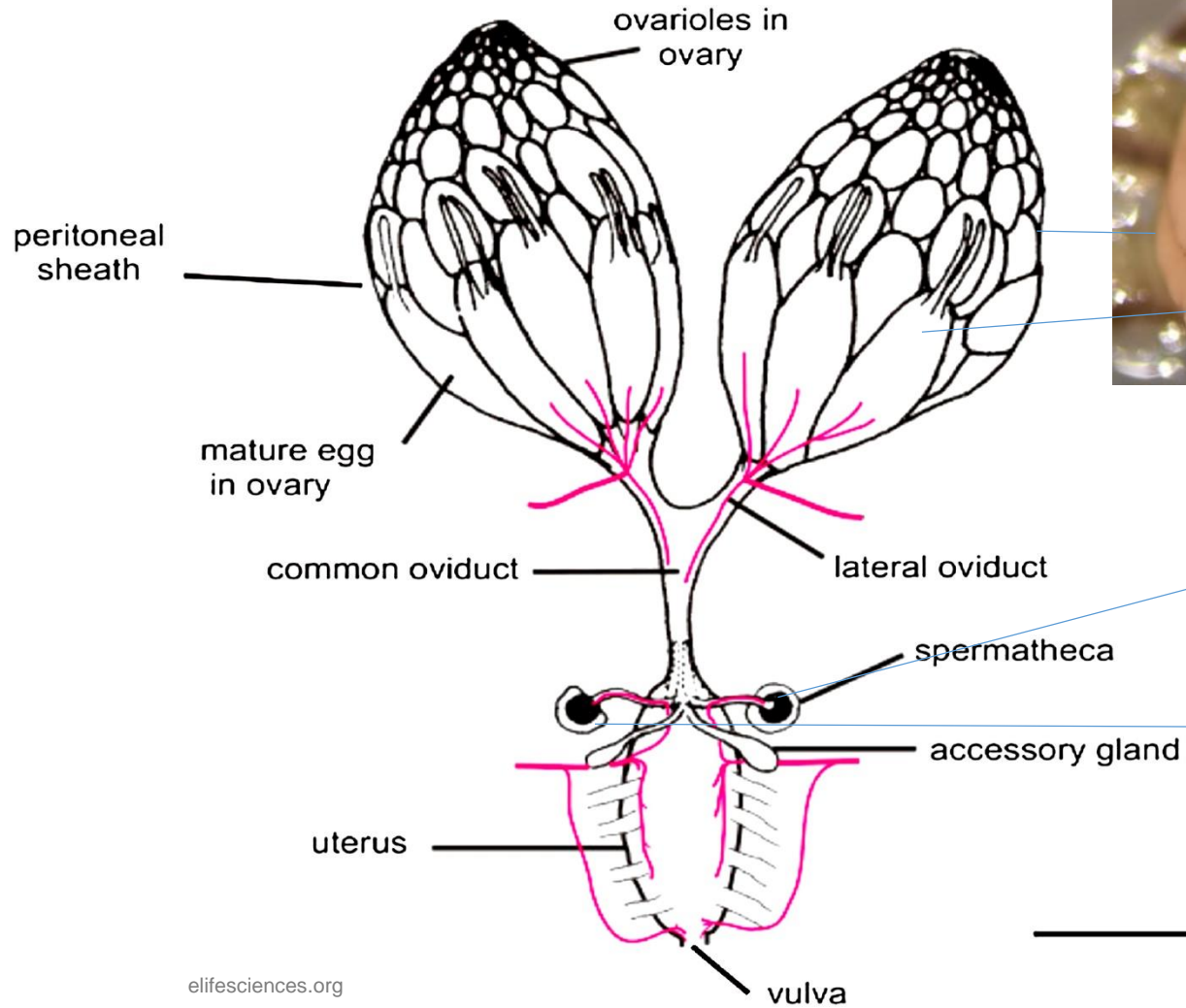
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# Males vs. Females



# The Importance of Virgin Flies



Spermatheca of a virgin female



Spermatheca of a mated female

# Interesting Facts

- Females can store sperm for about two weeks
- Sperm usage is on "last in-first out" basis
- *D. melanogaster* sperm are 1.76 mm (length of the male fly; about 300 times longer than human sperm)
- *D. bifurca* sperm are 58 mm long (over 20 times the length of the male fly)
- Females can mate before their stored sperm is used up
- Spermathecae can contain sperm from more than 1 male
- There is a sperm competition; but there is no absolute winner (some sperm compete better in some females than in other females)
- Fertilization doesn't occur until the eggs are about to be laid

# Lab Flow

- Exploring flies (Lab packet p. 14; please make sure you've seen all fly types)
- Differentiating between males and females (Lab packet p. 16)
- Understanding how to collect virgin flies (Lab packet p. 16-17)
- Emptying vials
- Ask any questions!

## Homework for 1/18/17:

- Reading (Lab #1: "Genetics of Drosophila", pp. 11-19)
- Check vials
- Write a note (sign up sheet is on the shelf with baskets)