Zoology Notes March 23rd 2010

Vocabulary to know:

-Myiasis: Animals that have maggots on them. It's an infection or an infestation of living vertebrates by larval flies.
-Oviparous: Animals that lay eggs as reproduction.
-Vivaparous: Animals that give live birth to their young.
-Larviparous: Animals that have larvae.
-Ectdysis: The shedding of animals skin.

Class Insecta:

Order Diptera (two wings) [Called Halteres]-

*Flies
-There are 7 different kinds of flies that you need to know, they are:

1) *Musca domestica* (The House Fly)
   -These flies are good vectors of disease. (They are vectors of cholera, nematodes-*Ascaris,* Protista, etc.)
   -These flies are synanthropic.
   -Their Life Cycle: Diecious-->eggs-->rotting stuff--> Larvae (Instars)--> Larval Stages (Good for forensics)-->Pupal-->Adult fly.
2) *Aochmermyia leutolea* (The Congo Floor Maggot)
   -This is an ectoparasitic maggot.
   -Life Cycle: Larvae (Maggots)-->Live in floor mat-->feeds on blood--> go back to floor-->Pupates-->Cycle Starts over.
3) *Stomoxys calcitrans* (The Stable Fly)
   -These flies have biting mouth parts.
   -They are a mechanical vector of blood borne diseases.
   -Their larvae live in decomposing vegetation.
4) *Dermatobia hominis* (The Human Bot Fly)
   -This is a tropical fly.
   -This fly occurs in humans.
   -Life Cycle: (Female Catches the biting insect & attaches egg then the animals that it is attached to bites you and the mosquito egg gets under your skin.)
5) *Cochliomyia hominovorax* (The Flesh Fly aka Screw Worm)
   -Initially the cattle industry was not affected by this fly.
   -The late 1800's: Barb wire cut the cattle and then they got infected with the flesh fly.
   -These flies need an open wound for infection to occur.
   -These flies cause larviparous
   -Female flesh flies mate only one time in their life.
   -Male flesh flies mate multiple times in their life.
6) Family Tabanidae (The Horse Flies & Deer Flies)
   -The adult flies feed on blood.
   -They are found in Palearctic Nothern parts, in Nearctic, and in Holarctic.
   -These flies are raptorial feeders.
   -They are good at vectoring blood diseases such as Tularemia and Trypanosomyisis.

7) Family Culicidae (Mosquitos)
-Anopholes mosquitos are a vector of plasmodium (Malaria).

Zoology Notes March 30th 2010

Vocabulary:
-Teragota: insects with wings.
-Ateragota: insects without wings.

Genus Anopheles
Culicidae
-They are found in North America.
-The mosquitos that bite us are bird feeding mosquitos.
-Crepiscular: come out in the evening because thats when birds roost.
-The mosquitos that around here are the following:
1)Culex (Bird Feeder mosquitos)
-These mosquitos transfer Wes Nile & Dirofillaria(dog heart worm).
-They have a salivary gland which is where the viruses, nematodes, and protistans occur.
-When these bite they first inject you with an anticoagulant. As the mosquito brings in your blood, they release water out of their anus onto you.
-They are ansagunation, meaning that all the blood they take in is out of your body.
-The intermediate host is humans.
2)Tree Hole Mosquitos (*Aedes aegypti*)
-These mosquitos transmit yellow fever.
-They also transmit Dengue and Break bone fever (this is very painful)
-These mosquitos occur anywhere that birds live.
-These mosquitos occur on monkeys and on humans.
-Tree hole mosquitos lay their eggs by water. For example on Bromeliae, which is the leaves on a tree that collect water.
-The larvae use their tail to get air when they are in water. (People use to put oil on top of puddles of water so that the mosquito larvae could not breathe. This was one way people used to stop Malaria from spreading.) *The Panama Canal had to stop being made because 50% of the workers died due to yellow fever and dengue.

Order Anaplura: (Biting Lice)
Genus: *Pediculus*
(Nittpicky- this was when people/animals pick lice eggs off one another. this is a grooming technique)
-Nitt: larvae lice
-*Pediculus humanus capitus:* head lice.
-*Pediculus humanus corporus:* body lice.
-*Pthirus pubis:* butterfly of love.

-Facts about lice:
•Lice have no wings.
•Lice transfer Typhus (Bacteria Rickettesoa), DET stops typhus, typhus comes about when people live close together (a lot of people living in one house together)
•Lice have piercing mouth parts.
•They are good vectors of Typhus.
•There was a host switch to humans at one time.
-*Pthirus Pubis* cannot live in hair on someone's head, they live in pubic hair but can sometimes get in facial hair (Don't ask how)

Order Mallophaga: (Chewing Lice)
-These lice eat dried skin and goop on the skin.
-These lice occur on rodents, lagomorphs, other wild animals, and birds.

Order Hemiptera: (True Bugs)
*Stink Bugs
-They have jointed mouth parts for two different bites.
1)Feeding Bite
2)Attaching Bite
-Bed bugs: *Cimex lectularis*
**Human Bed Bugs*
-These occur on humans
-One animals feeds on a sleeping human then make their way back down to the floor and other bed bugs then penetrate the one that bit the human and thats how they feed.

Zoology Notes April 1st 2010

Class Insecta, Subclass Pterygota:
Order: Siphonaptera (Siphons without wings)
*Fleas:
-Fleas transmit bubonic plague.
-They are a vector of *Yersinia pestis* (plague) There are two types of plagues, they are:
1)Pneumonic
2)Bubonic Plague: when the lymph nodes are swollen and filled with plague.
-Plague affected people due to low sanitation & it wiped out 1/4 the population in Europe.
-Plague wiped out all the communication system in Mongolia.
-Proventriculus: the foregut of the flea and other arthropods.
-Life Cycle: Diecious adult-->eggs-->eggs hatch-->vermiform larvae (worm-like) -->Instars-->Pupa waits-->Starts back over again.
(Pupa can wait for up to 10 years.)

-Fleas are synanthropic, meaning they live with us.
-Fleas come on two kinds of rats, they are:
    1) Ratlus norvegicus
    2) Ratlus rattus
-Fleas transfer a parasite called *Dipylidium caninum* (Dog tapeworm)
-Life Cycle of *Dipylidium caninum:* Dog poops-->Tapeworm eggs--> dog poop with eggs--> Flea larvae--> Adult Flea-->*Dog--> Cycle starts over.*