[INTRODUCTION TO MOSQUITOES]

Mosquitoes are small, flying insects that belong to the family _____. These small nuisances are found on every continent except Antarctica and can be found in every landscape except permanently dry and permanently cold regions. As well as being bothersome, they can pose a significant threat to _____ _____. All over the world there are _____ genera of mosquitoes and more than _____ species, 176 of which are found in the United States. Mosquito species are extremely diverse in their feeding and behavioral habits.

Mosquitoes are prone to being _____ species when introduced to a new location. This is problematic with the fact that many invasive species are vectors of diseases not seen in a region before. Native species will have no immunity to these new diseases. Before European settlers came to _____ in the 1800s there were no mosquitoes. After mosquitoes were introduced, many bird species went extinct and many others were severely damaged, only birds high up in the mountains sustained little damage. *Why is this?*

Not all mosquitoes are nuisances or capable of transmitting diseases. Below are some characteristics that make some genera more of a problem than others.

Aedes:

Location:

Preferred meal:

Feeding time:

Larval habitat:

Some pathogens it transmits:

Active time:

Culex:

Location:

Preferred meal:

Feeding time:

Larval habitat:

Some pathogens it transmits:

Active time:

Diet—

All mosquitoes need sugar in some form. Most of the time they drink _____ _____. Only females of _____ species drink blood.

Autogenous:

Anautogenous:

Females of certain species need blood meals in order to produce _____. Mosquitoes have poor eyesight and rely heavily on olfaction (_____). During blood feeding, females will inject _____ to prevent _____. The itchy bump on the skin from a mosquito bite is the result of _____.

Development—

All mosquitoes need water to be present in order to lay eggs, however, modes of oviposition (_____) vary. Directly on water, on aquatic plants, in mud, and on container walls are all common places for different kinds of mosquitoes to lay their eggs. *Aedes* mosquitoes lay their eggs on container walls. The eggs go into _____ when dried and only begin developing when soaked.

Diapause:

Invasive mosquito collection goals—

With the threat of a new disease in the United States, it is important to have knowledge of mosquito species distributions throughout the U.S. Knowing where certain vector species are located will help public health officials know where preventative measures need to be focused most.

Mosquito-borne diseases—

Pathogens transmitted from animal to animal by mosquitoes. Mosquitoes are vectors and are not commonly affected. Pathogens are transferred through mosquito _____.

Dengue fever:

Chikungunya:

West Nile virus:

Canine heartworm:

Lymphatic filariasis:

Why does location affect the type and number of eggs?

In what ways do invasive species impact ecosystems?

How does knowing species distributions of invasive mosquitoes help public health?