

المحاضرة الأولى

كلية علوم

الفرقة الأولى – العلوم البيولوجية

د. ريهام خليفة

Instructions

- **Read the following text page 86**
- **The highlighted terms are those terms which you should study carefully. The definition of some of these terms are underlined.**
- **If you face any difficult words, contact me on WhatsApp
010660365892**

UNIT NINE

HARMFUL ANIMALS

The harmful animals are those that cause injury to plants and domestic animals. Human beings are affected directly or through bites or stings or by transmission of various kinds of pathogens. The nature of harmful insects ranges from simple nuisance value of cockroaches to spreading of epidemic diseases, such as malaria, by mosquitos. Harmful animals could be grouped under the following categories namely disease causing organisms, poisonous animals, fouling organisms and pests.

DISEASE CAUSING ORGANISMS - VECTORS

Some insects are injurious to man as vectors of human diseases. Through the ages millions of people have died of diseases transmitted by insects. There are

a number of insect-borne diseases, and they may be transmitted in different ways.

HOUSEFLY - MUSCA DOMESTICA

House flies are **cosmopolitan in distribution**. They are closely associated with humans and thrive best where people are careless in the disposal of wastes.

Adult flies are **non-parasitic**. **They feed on all kinds of decaying and decomposing matter**. It is an important mechanical vector in the transmission of diseases like typhoid (*Salmonella typhosa* - a bactericum). The housefly cause diseases through food contaminations.

CONTROL: Housefly control is normally done in 3 different ways, namely sanitary, mechanical and chemical methods. Populations of houseflies can be controlled by proper disposal of manure, garbage, sewage, food waste, human excreta and other organic

materials. Mechanical practices such as screening, using of traps or sticky paper or baits can be valuable in excluding houseflies. Insecticides may be used.

SAND FLIES

Give examples of the diseases caused by the sand flies?

These flies are 4 mm long. Only the female possess piercing-sucking mouth parts. The males are non-parasitic, feeding on moisture. They are small slender insects with hairy bodies. Through biting this fly transmits the disease called Leishmania, a parasitic protozoan. During the day time the flies remain hiding. At night they come out to feed. The sand fly attacks during night times. The insect sucks the parasite from an infected person, along with blood. Inside the body of the fly, the parasite undergoes changes. When an

infected fly bites man, the parasites pass into the blood and fresh infection is caused. The parasites mostly concentrate on the capillaries of spleen, liver and bone marrow. The disease is characterized by the symptoms like anaemia and emaciation.

CONTROL: Spraying of 5 % DDT / BHC easily kills the flies. The pyrethrum ointment used on exposed part of the body works as a repellent.

RAT FLEAS

What are the dangers caused by rat fleas?

The insect parasite is commonly known as the Asiatic rat flea. Both male and female fleas take in the parasites from infected rats during feeding. This rat - flea is responsible for the transmission of plague from man to man, or from rat to man. When this bacterium is introduced into the skin, the lymph glands become

inflamed. The bite of the flea causes scratching and the bacilli are introduced into the blood when the skin is scratched.

CONTROL: Destruction of rats and other rodents is an effective method.