

K. T. S. P. Mandal's
Hutatma Rajguru Mahavidyalaya
Rajgurunagar, 410 505.

Department of Zoology

T. Y. B. Sc.

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ZO 361: Medical & Forensic Zoology

Chapter 1

By

Prof. D. R. Borhade.

Introduction :

Definition :-

It is the branch of science that deals with the disease producing parasitic animals in relation to human beings.

There have many animals that are beneficial to man and on the other hand many of them are quite harmful to man. The harmful animals affect the Humane Society in various ways. Some of them are used to damage the food crops and food, some of them are destroying the domestic animals and even the parasite in animals and as a result causing diseases to man. **Medical zoology** deals with the scientific study of such vectors & animals.

In the human body the parasitic animals get entry either move the drinking water and food or sometimes directly to the body and as a result the human beings the human beings suffer from some disease. *Entamoeba histolytica*, a microscopic protozoon when entered in to the body either through the contaminated food or drinking water and causes a disease to a human being known as **Amoebiasis**. *Giardia intestinalis* which causes the disease **Giardiasis**, gets entry to the human body mainly through the contaminated food; but the Hook worm caused by *Ancylostoma duodenale* belonging to the phylum gates entry to the human body directly to the ruptured skin of the foot and ultimately resides in these small intestine of human body. This worm causes anemia as they sucks blood from the intestine of human beings. The medical zoology keeps on study of such type of diseases. Not only to hook worm, people are also suffered from different kinds of tapeworms and roundworms.

It may be observed their some parasitic animals with the help of other email get entry and the human body. Various kinds of parasitic animals are being carried by insects and these insects are helping the parasites to make the entrance to the human body. As an example the disease named **Kala-azar** is caused by a protozoon parasite named as *Leishmania donovani*, and the parasite is transmitted to the human body by female Sandfly. Peoples of African countries suffer from a disease which is known as **sleeping sickness**. The causative parasite of these diseases is a protozoon known as *Trypanosome gambiense*. The conveyor of these

parasite to the human body is the infected **Testse fly** of what is six by the bites. In these disease the impacted person wants to sleep constantly. The branches of biology which is called medical zoology keeps on constant study about such insects as well as the parasites.

Importance of Medical Zoology :

Medical Zoology is the multidiscipline that knits together those various -ologies that were artificially sundered by dichotomizing applied/basic biology. Medical Zoology as the multidisciplinary study of zoonotic disease, i.e. those caused by pathogens that are reservoir in wild populations but spill over into human populations. These diseases present major challenges to public health across the globe, and their complex nature involving arthropod vectors, wild vertebrate reservoirs, human hosts and all their associated physiologies, immunologies, genetics, ecologies, etc.–requires multidisciplinary cogitation.

- 1) It include the study of disease causing organisms, vectors of pathogens and their life cycle inside the body of host and out side the body of host.
- 2) Medical Zoology is also very important for the study of physiology and the physiological changes after the infection on disease causing organism.
- 3) It is also important to immunological studies and immune responses of the body of host after the infection of pathogen.
- 4) Medical Zoology also includes the interdisciplinary study of genetics & genetical changes takes place in pathogen.
- 5) It is also important in the ecological studies and ecological changes which are create the favorable condition for the multiplication, transmission, infection of the pathogenic organism to the host.

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