CHAPTER: 1

INTRODUCTION

Parasitologists have now a challenging task in the 21st century to understand the practical reasons for incomplete capabilities to compact the parasite means follow the recent advances in searching the ultimate answer for eradication of parasites from animal population and for saving human population from such parasitic diseases transmitted through animals. It is not possible to try to developed sustainable control measures for parasitic diseases without the knowledge of their epidemiology, the ecological and sociological factors besides pathology, biochemistry, pharmacology and clinical aspects.

Understanding the molecular biology of the host-parasite relationship in particular relevant to the development of Parasitology. The parasites are also responsible for a number of Zoonotic diseases in tropics particularly in developing countries.

Parasitic diseases are associations with nutritional deficiencies are the primary killers of humans. We are also witnessing the emergence of new disease agents. Therefore today veterinary parasitologists play an important role in epidemiological investigations examining the biological cycles, dynamic of parasites development and contributing to the global eradication of communicable disease.

Parasites thus offer an endless source of both theoretical and applied interest. Further there is an area within Parasitology to interest every biologist. It opens up many opportunities, approaches and subdivisions that any one who is interested in biological research can find a lifetime carrier in Parasitology.

Basic of Parasitology likes definition with examples, a broad outline of systematic of different parasites of veterinary importance, silent morphological features of those parasites in group/ division (and not individual species in detail. Which will take much time). besides a brief history of the parasites should be thought to provide enough
knowledge about the parasite to the workers in the field of Parasitology. Life cycle and transmission of parasites and their effect on health of livestock and birds should be explained pathogenesis and symptoms and parasitic diseases should be dealt in detail and equal importance should be given for methods of diagnosis treatment and control. In short the applied aspects of veterinary student, majority of who will work in the field and face parasitic problems regularly.

Today, the parasitogy has developed into a multidisciplinary subjects embracing the field of physiology, Biochemistry, cell biology, Immunology and pharmacology to maintain a few of great importance in parasitologist is the study of relationship between the host and parasites. Host parasites relationship is a complex physiological phenomenon. By continual interchange of materials of physiological and immunological importance through the parasite interface, a steady state between two elaborate and viable components host and parasite is maintained. For a deeper insight into this complex phenomenon on the study of chemical composition of parasites is of great value, parasites are emerging as valuable models for the study of fundamental biological phenomenon because during their life cycle many species of parasites undergo remarkable morphological, physiological, cytological and biological adaptation related to different environments encountered.

Biochemical studies have revealed importance of metabolic differences obtained between parasites and hosts have successfully exploited for instance in the control of T. curri, which causes cheng disease in mice in South Africa.

This is a classic illustration of an application of fundamental biology to a practical end. Antiprotozoal and antihelminthic drugs, which are increasingly used as biochemical profiles, are revealing new facts of biochemistry of parasites and such knowledge is very essential in developing a rational approach to design of new drugs.

Tapeworms infact almost all the vertebrates but the question as to why they resort to parasitic mode of life, still remains to be answered satisfactorily. It can be expected
due to many reasons like nutritional needs, lack of an enzymes system and blocking a metabolic pathway etc. But it will not be possible to pinpoint the reason for a particular parasite, loss a detailed knowledge of its various physiological and biological activities are available. Further the study of enzyme activity help a great deal in giving deeper insight into vital phase of metabolic pathways, it also helps in chemotherapy. Detailed studies of intracellular food resources like, Carbohydrates, Proteins, Fats and requirements of inorganic substances, vitamins, trace elements etc, help a better understanding of survivability of parasites.

The present study of seasonal variation of cestode parasite from Fishes and Amphibia includes application of statistical methods to understand to the distribution and the seasonal variation of cestode parasites in two annual cycles.

A careful elucidation was given from the observed data of changes incidence, intensity and density of the cestode parasites.

Population investigation can provide data for the prediction of integrated method to achieve the regulation of a numbers of harmful parasites kennedy (1975-1978).

I hope the discipline of Parasitology continuous to attract students as an their field of research and carrier to find solution of parasitic problems of our economic livestock in the new millennium.