

Significance of Study of Animal Behaviour

Animal behavior is recognized as one of the most important research in the field of zoology. Ethology makes a bridge between different branches of biology like cell biology and ecology, organism and environment and neurology and ecology etc.

It has significant contribution to the science of zoological field like environmental biology, sociobiology, psychology, anthropology, human behavior, animal welfare etc. Therefore the students of behavior have to be familiar with the structure (anatomy) and function(physiology) of these mechanisms of the animals.

Animal Behaviour and the Environmental conservation

By studying the behavior of animals, the students of behavior will learn more about the relationship between them and their environment, the physiological processes that determine their behavior, and some of the reasons of their abundance and distribution.

The knowledge of behaviour of animals provides the information about environmental degradation. We can take measures by to protect the environment by observing the declining animal populations. Studies of natural behaviour in the field are vital to provide baseline data for environmental monitoring. For example, the Environmental Protection Agency uses changes in swimming behavior of minnows as an index of possible pesticide pollution. With the increasing importance of environmental programs dealing with populations of rare species, both in captivity and in the natural habitat, animal behaviour research has become increasingly important. Reintroduction of animals was not possible without the knowledge of behavior. To develop the effective protection measures for the endangered species, we must know their natural behavior like migratory patterns, home range size, interaction with different groups, communication etc. So most of the world's known conservationists have a background in animal behaviour or behavioural ecology. Basic knowledge of behavior has important economic implications. For preserving salmon industry, research on the migration route of them is necessary. An understanding of **foraging** behaviour in animals has led to an understanding of forest regeneration.

Animal Behaviour and Neurology

Neuroethology, the combination of animal behaviour and the neurosciences, provides important framework for illuminating the neural mechanisms. Sir Charles Sherrington, (1954) a Nobel Prize Winner, developed a model for the structure and function of the nervous system based on close behavioural observation on animals. Careful behavioural data gathered on animals help neurobiologists to focus on relevant studies for the benefit for human. Behavioural studies of poisonous and venemous animals, then subsequent extraction of neurotoxic chemicals and their use in various medicines has benefit mankind. Animal studies show that the quality of the social and behavioural environment have a direct effect on **immune system** functioning "Behaviour of cells" is a common term of cancer, Aids and hepatitis.

Animal Behaviour and Animal Welfare

Another purpose of the study of animal behaviour is to apply behavioural information to the care and management of both wild as well as domestic animals. Some animals are maintained as pets primarily because of their behaviour ; this is

true of cats, dogs and horses. The more we know about their behaviours, the happier we will be with them as pets. Likewise, with the livestock that are kept for economic use, we can use behavior to our advantage or disadvantage. Animal welfare without the knowledge of animal's behaviour is impossible. Improved conditions for farm animals, breeding of endangered species, proper training and care of companion animals for blind and disabled all require a strong behaviour data base.

Animal Behaviour and Science Education

Importantly science students have little knowledge of behavior as because there is much emphasis on cell and molecular biology and very little on Wildlife and Animal behavior in the curriculum of zoological science. Ethology has recently been included in Indian universities. In near future, Animal behavior, Wildlife Biology, Conservation, Management, Animal husbandry and welfare studies will get sufficient importance in all educational level.

Animal Behaviour and Human Society

Most of the problems and troubles in human society are related to the interaction of environment and behaviour or genetics and behaviour. Socioecology, behavioural genetics and behavioural ecology helps in dealing such type of problems.

Recent methodology for studying animal behavior has remarkable impact on social sciences. Without the study of animal research human behavior cannot be understood. So Desmond Morris has written many books in which he explains the human behavior with the help of animal behavior. Research on chimpanzees and monkeys have illustrated the need of forming social groups. Human societies have gradually evolved from animal societies. So by understanding animal behavior we can solve many problems of our societies. We can learn to minimize aggression through knowing woolly spider's monkey way of avoiding aggression. Research on circadian and other endogenous rhythms in animals has led to research relevant to human factors and productivity in areas such as coping with jet-lag or changing from one shift to another in an industry. Pheromones and hormones study on animals helps to understand about maternal and reproductive behavior in human beings which also help in perfume industry. Parental care by males in California mouse, marmosets, birds give the significance of father's involvement in child care. Again ontogeny of communication in birds and animals have had direct influence on the development of theories and the research directions in the study of child language.

