

Paper X – Behavioural Ecology

Unit I

Ecological aspects of behaviour : Habitat selection; Food selection; Optimal foraging theory; Homing; Dispersal; Territoriality.

Unit II

Prey-predator relationships: Predator versus cryptic prey; warning colouration; Predator –prey arms races; Brood parasites and their hosts.

Unit III

Sociobiology : Social and sexual behaviour, Selfishness, Cooperation, Altruism, Kinship, Inclusive fitness, Reciprocal altruism, Concepts of selfish genes.

Unit IV

Reproductive behaviour : Evolution of sex and reproductive strategies; Mating systems; Courtship; Sperm competition; Sexual selection; Parental care.

Unit V

Genetic and environmental components in the development of behaviour.

Recommended Text Books :

- Drickamer, L.C., Vessey, S.H. and Jacob, E.M. 2002. Animal Behaviour: Mechanisms, Ecology, Evolution. 5th edn. New York: McGraw Hill.
- Krebs, J.R. and Davies, N.B. 1993. An Introduction to Behavioural Ecology. 3rd Edn. Oxford Blackwell.
- Wilson, E.O. 1975. Sociobiology: The New Synthesis. Cambridge, Massachusetts : Harward University Press.

Recommended Reference Books :

- Gadagkar, R. Survival Strategies. 1997. Hyderabad : University Press.
- Goodenough, J., McGuire, B and Wallace, R.A. 2001. Perspective on Animal Behaviour. 2nd edn., New York: J.Wiley.
- Krebs, J.R. and Davies, N.B. 1997. Behavioural Ecology: An Evolutionary Approach. 4th edn., Oxford : Blackwell.
- Stutchbury, B.J.M. and Morton, E. 2001. Behavioural Ecology of Tropical Birds. San Dieco : Academic Press.
- Trivers, R.L. 1971. The evolution of reciprocal altruism. Quarterly Review of Biology Vol.46: 35-57.
- Wynne-Edwards, V.C. 1962. Animal Dispersion in relation to Social Behaviour. Edinburgh: Oliver & Boyd.