

Ethology (IIIrd Year of study, VI th Semester)

Credit value (ECTS) 6

Course category

Domain (Imposed)

Course holder:

PhD Prof. Paul Corneliu BOIȘTEANU

Discipline objectives (course and practical works)

During the classes, according to the analytical program, a series of objectives are pursued, including the development of abilities to analyze and correctly interpret the notions of ethology related to behavioral evolution, habitat ecology, behavioral ecology, reproductive systems and sexual selection.

The practical works aim to acquire the basic information by the student, that are necessary to understanding the aspects regarding the different types of related adaptations of some animal species.

Contents (syllabus)

Course (chapters/subchapters)
Behavior evolution: adaptation and behavioral ecology: The final hypothesis on behavior; testing final hypotheses; comparative method; multiple hypotheses; Behavioral ecology of communication signals; the evolution of scams and countermeasures to scams; displays and deception; selection for honest signals.
Habitat ecology: Active habitat selection; choosing the place for the beehive; habitat and fitness preferences for poplar aphids; dispersion from one territory to another: the hypothesis of avoiding inbreeding, the hypothesis of competition, the change of place for reproduction; migration: costs, benefits.
Territoriality; territoriality and reproductive success; territoriality and calories; long-term effects of territoriality on fitness; how large a territory must be; the evolution of interspecific territoriality
Ecology of feeding behavior: Diversity of prey capture techniques; prey detection; prey capture; animals that use tools; group capture of prey.
Ecology of feeding behavior: Optimal predation behavior; reducing predation costs; optimal models - constraints of predation efficiency; predation, competition and foraging; advantages and constraints of varied food consumption.
Reproduction systems: Monogamy; mammalian monogamy; monogamy in birds. Poliginia; polygyny for the defense of females; polygyny for the defense of resources; competitive polygyny; group polygyny (lek) ;. Parental care; why the care of the offspring is more maternal than paternal; discriminatory parental care; nest parasitism; parental favoritism.

Sexual selection: Competition between males; behavioral patterns in females choosing the male; Bateman's principle; Partner competition and male aggression; Sexual selection and tactics of alternative matings.

Practicum
Behavioral adaptations of vision
Behavioral adaptations of hearing
Behavioral adaptations of the chemical sense
Behavioral adaptations of the magnetic sense
Behavioral adaptations of the mechanical sense
Biorhythms
Organizing behaviors

References

1. BBC-Supersenses. Ep.1-6
2. David Attenborough Trials of Life. Ep.1-12
3. Edward Wilson – *Sociobiology the new Synthesis*. Harward Univ.Press, 1974
4. John Alcock – *Animal behavior*. Sinauer Associates Inc. Sunderland, 2001
5. J.R. Krebs& N.B.Davies – *An Introduction to Behavioural Ecology* Third Edition Blackwell Science, 1993

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written exam	70%
Periodic evaluation tests	Assessment during the semester, verification tests	30%

Contact

PhD Prof. Paul Corneliu BOIȘTEANU

Faculty of Food and Animal Sciences – USV Iasi

Mihail Sadoveanu alley, no. 8, Iasi, 700490, România

telephone: +40 232 407495

E-mail: paulb@uaiasi.ro