UAB
Universitat Autònoma de Barcelona

Management and Applications for Animal Diversity

Code: 42918
ECTS Credits: 6

Degree	Type	Year	Semester
4313774 Land Ecology and Biodiversity Management	OT	0	1

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Teachers

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Use of languages

Principal working language: spanish (spa)

Prerequisites

A working knowledge of the material of the course "Bases for the management and conservation of biodiversity" is required

Objectives and Contextualisation

There are many perspectives about the management of the fauna, and this module will address several of them. One of the best known is the management of threatened wildlife. In the module "Bases for the Management and Conservation of Biodiversity", the student acquires a basis to understand and to analyze the different strategies of conservation of threatened fauna. The objective of this module is to provide the student with a deeper knowledge and experience on wildlife conservation from the practical point of view. To do this, we will study various cases of wildlife conservation programs given by professionals from the administration and other institutions that are carrying out wildlife management and conservation programs in our closest environment. Likewise, the aim is to introduce the student to the study and analysis of hunting management and the health problems that it entails, as well as fishery management in the marine environment. In both cases, we will explain the theoretical bases of management and we will give to the student the tools for the development of the strategies used for this management. Finally, the module also analyzes two applications of the fauna. On the one hand, we study the use of animals (predators, parasitoids and entomopathogens) as biological control agents both within the framework of agroecosystems with Integrated Pest Management and with organic production. On the other hand, we will analyze the fauna as bioindicator, with special emphasis on fauna as a bioindicator of environmental stress.

Content

1. Fauna Management:

A. Experiences in management of threatened fauna: Conferences and debates with specialists in fauna management in Catalonia:

- Conservation of the Bonelli's eagle (*Aquila fasciata*) in Catalonia
- Management and conservation of steppe birds: the case of steppe areas in Catalonia.
- Using reptiles as a model for identifying priority areas for conservation: the example of the Cape Verde Archipelago.
- Conservation of the brown bear (*Ursus arctos*) and management of the wolf (*Canis lupus signatus*) in Catalonia
- Field practice: Study of the management of the black vulture (Aegypius monachus) and other necrophagous birds as well as the management of livestock in the natural area of the Muntanyes d'Alinyà.

B. Hunting Management and health problems:

- Hunting Management as a strategy for wildlife management: Management mechanisms, Strengths - Opportunities - Weaknesses - Threats.
- Ecopatology and Health Management. Ecological consequences of the management of animal populations: the hunting management. Sanitary monitoring of wildlife. Diseases of wildlife.
- Field practice: Study the long-term monitoring program of two populations of Pyrenean chamois (*Rupicapra pyrenaica pyrenaica*) in the National Game Reserve of Freser-Setcases.

C. Fisheries management in the marine environment:

- Evaluation of fishing resources: from the mono-specific vision to the holistic management.
- Practical cases of modelling of fish stocks according to different bio-economic models through specific software (MECON, MEFISTO, among others).
- Management tools: discussion of the different management strategies with current practical cases.

2. Fauna Applications:

A. Animals as biological pests control agents:

- Introduction to Biological Control. Strategies in the use of natural enemies.
- Use of predators and parasitoids.
- Use of entomopathogenic nematodes.

B. The fauna in relation to the quality of the habitat:

- Bioindicators: types and characteristics. Selection of useful bioindicators.
- Systems of monitoring the quality of the environment and methods.
- Biomarkers.