Biodiversity of Sand Dunes

Spring 2021

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4 day field trip, 6 lessons, 3 credits

Course description

Biodiversity

The aim of this course is to provide the students with a hands-on experience in studying biodiversity. The world-wide sharp decline in biodiversity is a human made crisis that ecologists are trying to solve. Some of the important questions are "What and how many species exist?"; "How do we evaluate the abundance and the richness of species?"; Why is biodiversity so important? "How do we set priority regions for conservation based on biodiversity?"

Sand dunes

Sand dunes are especially vulnerable and their biodiversity is under extinction processes. We will learn about the ecosystem changes of sand dunes including natural and anthropogenic processes. We will also learn about the development threats to the dunes and the politics behind it. These questions and others will be dealt with before, during and after sampling several taxonomic groups on sand dunes.

Requirements:

The students will be required to be able to asses the species turnover between habitats at where they will compare one of the largest conservation problems: the mining of dunes The students in this course will take part in a long-term monitoring research of the sand dunes. In Samar Dunes they will take part in a long term monitoring by the Arava institute together with Haifa University.

The course is composed of four introduction lessons of 1.5 hours as preparations and then a

4 day field trip to the Samar sand dunes in Arava area (returning to Ketura every day). Then there will be one lesson with an explanation of how to write the paper. At the end of the trip the students will be required to write a paper comparing dunes at different locations. Project can be on reptiles, rodents, insects and plants (depending on the seasonality).

Course Schedule

Lesson	topic
1	Introduction to BDOSD
2	Geology of sand dunes
3	Evolution of animals
4	What is biodiversity
5	**Expedition**
6	How to analyze data
7	How to write a paper

Expedition:
5 days of field work including field and lab work morning and afternoon and oral presentations.

Grade Components

Class attendance 10%

Participation in expedition 20%

Class assignments 20%

Final report 50%