

BIOL 453/453L *Natural History of Spain*
College of Charleston
Fall Semester 2018
Course meeting times and place: Trujillo, Spain

Instructor: Erik Sotka, Professor (sotkae@cofc.edu).

Instructional Objectives: Natural history is often defined as intensive study of a particular place or region. Ideally, this study is holistic and considers how the many components of an ecosystem interact with special attention to the flora and fauna. In part, this course is intended to explore the reasons why organisms live where they do, with an emphasis on Mediterranean climates and habitats. Because we are located on the Iberian Peninsula for this course, we will use examples from Spain and Portugal as much as possible, both in lectures and field-trips. This course is also intended to increase your observational skills. A significant part of the study of natural history is knowing the organisms in a particular environment. This semester you should learn to integrate information from multiple fields including but not limited to: Geology, Physics, Chemistry, Anthropology, and within biology the synthetic disciplines of Evolution and Ecology. You will not become an expert in all of these fields in this course, but you to be able to make connections between them to better understand why organisms and communities are located where we find them.

The course is designed to encourage peer-exchange through weekly topics, lectures, group discussion, activities and field trips that overlap with the Conservation Biology and Environmental Sustainability classes held during the same semester.

Course co-requisite or pre-requisite: BIOL 111/BIOL 111L, BIOL 112/BIOL 112L, BIOL 211/BIOL 211D, and BIOL 305. MATH 250 or equivalent course in statistics

Course meeting time and place

Classes will generally meet on Mon for a Lecture, Wed for a Discussion and all-day Thursday for a field trip / discussion of papers. Most Thursdays there will be a full-day field trip to locations within an hour drive (approx.). There are two multi-day field trips during the semester. For many of these trips an early start is needed. Be prepared to leave by 0800; in some cases earlier. Also, you will need to pack a lunch (your host family should be able to help with this).

Student Learning Outcomes. We will use the perspectives of the fields of inquiry above to

1. describe patterns of biological diversity on the landscape
2. understand the underlying mechanisms producing those patterns.

These objective will require you to evaluate data critically using tools you already possess and tools that I will teach you. As an additional and perhaps most important objective, I will also expect you to be able to read and discuss primary literature on a weekly basis.

Attendance: Attendance is mandatory for all classes.

Grading policy

Midterm take-home exam (10%)

Final take-home exam (20%)

Weekly discussion (30%) – lead two discussions (paired) + participation

Laboratory notebook (40%)

Required materials:

- Lecture materials will be available on OAKS. These will include notes from each lecture, primary literature we will read and discuss, and other course material (e.g., assignments).
- Laboratory text: *Birds of Europe*, 2nd edition (2009) by Svernnsson. This book is published by Princeton University Press and is available most affordably through Amazon.com.
- Lab notebook: One time-honored, effective and fun way to learn natural history is to keep a lab notebook. In it this course, you will make an electronic lab notebook. For this you will need:
 - A way to take digital photos (e.g., GoPro, smartphone)
 - Color pencils
 - Regular pencils
 - Pencil sharpener
 - Make yourself comfortable on long hikes in lots of weather (rain, heat, cold)
 - Composition notebook (CofC will purchase these)

OTHER: We will make accommodations for students with disabilities whenever possible. All students will be expected to adhere to the CofC Honor code (<http://studentaffairs.cofc.edu/honor-system/studenthandbook/>)

Schedule

Monday.Date	Lecture Topics		Reading
9/10/18	Setting the stage / dehesa	Walk near Trujillo	TBD
9/17/18	Mediterranean vegetation	Villuercas geopark (Mediterranean forest)	TBD
9/24/18	Alpine climate	Gredos - Alpine (granite) habitats + goats	TBD
10/1/18		SOUTH COAST - Donana Nat'l Park, Parakeets in Seville, Tarifa; Estuaries and Rocky IT, whale watch	TBD
10/8/18	FALL BREAK	FALL BREAK	TBD
10/15/18	Mediterranean birds	Bird Rehab centre & Steppe walk	TBD
10/22/18	Dehesa – land use	Monfrágue Nat'l Park (Savannah forest) + birding	TBD
10/29/18	Dehesa – climate change	Jamon factory; Vineyard; industrial ham (Navidul)	TBD
11/5/18	Fire ecology	Merida	TBD
11/12/18		NORTH COAST - Aquaculture, La Coruna estuaries & rocky IT; fire ecology	TBD
11/19/18	Wetlands - Migration	Cranes - agricultural habitats; Alcorin reservoir	TBD
11/26/18	TBD	Solar farm / nuclear power plant	TBD
12/3/18	TBD	TBD	TBD
12/10/18	Final due		