

BIOL/ENVR 336 | Biology and the Wild: Ancient Perspectives, Modern Challenges

June 22 – July 18, 2026

Summer Session II

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Course Description

Conservation Biology has emerged in recent decades as one of the most urgent and integrative scientific fields, drawing on ecology, evolutionary biology, environmental ethics, and public policy. At its core, it asks two pressing questions: *How can we understand the living world in its complexity?* and *How can we sustain it in the face of human impact?* This course takes a unique approach by situating conservation within a much longer intellectual tradition, extending back to the origins of natural philosophy in the Mediterranean world.

Ancient Greek thinkers such as Thales, Anaximander, Hippocrates, Aristotle, Theophrastus, and Plato laid the groundwork for many of the ecological concepts still central today. They reflected on the relationships between climate and health, classified organisms in relation to their environments, and warned of ecological degradation through deforestation, soil erosion, and overuse of resources. Later Byzantine traditions continued this lineage through agricultural manuals and sacred grove protections, offering practical models of stewardship. By juxtaposing these ancient perspectives with modern conservation science, students will see how ecological thought has evolved across millennia while grappling with enduring challenges of human–environment relations.

The course combines close reading of classical texts with modern scientific literature, case study analysis, seminar-style discussion, and field experiences in Greek landscapes. Students will gain a deep appreciation for conservation biology as both a modern science and a longstanding cultural dialogue about living well with the natural world.

Learning Objectives

By the end of the course, students will be able to:

- **Recognize and explain** the conceptual foundations of conservation biology and their precedents in ancient Mediterranean thought.
- **Analyze and interpret** primary sources from antiquity, comparing and contrasting them with modern ecological theories and conservation challenges.
- **Evaluate** historical drivers of Mediterranean environmental change and **apply** this knowledge to current conservation case studies and planning.
- **Demonstrate and discuss** practical skills in biodiversity monitoring, ecological data collection, and population analysis gained through field experiences.
- **Reflect on and integrate** cultural, ethical, and scientific perspectives in developing conservation strategies.
- **Create** a research-based review paper that synthesizes ancient and modern approaches to a conservation issue of their choice.

Course Requirements

This course combines reading, writing, discussion, and fieldwork to integrate ancient perspectives with modern conservation science. Assignments are designed to develop interpretive, analytical, and applied skills across a range of formats.

Readings: Students are expected to complete all assigned readings (approx. 40–50 pages/week) before class meetings. Each class session pairs one or more ancient texts with modern scientific or conservation literature. Students should come prepared to discuss key concepts and respond to guiding questions.

Case Studies: (36%) Small groups will complete in class, **three case study assignments** (3–4 pages equivalent – 12% each), analyzing paired ancient and modern materials. Case studies may include simulated ecological data, maps, or policy scenarios. Groups may need to present a short (10 min) synthesis of their findings in class.

- **Due Dates:** June 26, July 2, July 13

Journal Reflections: (24%) Students will write **eight journal entries** (250–350 words – 3% each) in response to prompts given in lecture that connect personal reflection with course readings and experiences. Entries will be submitted via Moodle by midnight of the due date.

- **Due Dates:** June 23, June 26, June 30, July 3, July 7, July 10, July 14, July 16

Participation: (15%) This includes attendance, engagement in seminar discussions, contribution to group work, and active involvement in field research (Hymettus and Peloponnese trips). Students must come prepared with

readings completed, safety equipment ready for fieldwork, and a willingness to collaborate. Unexcused absences or lack of engagement will reduce this grade.

Final Exam: (25%) A single exam will be given at the end of the course. It will consist of short-answer identifications, passage analysis (ancient + modern texts), and one integrative essay. Students may use their notes and readings (open-book, 3 hours).

- **Exam Date:** July 17

Field Research

Fieldwork is a cornerstone of this course. On Hymettus Mountain, students will monitor the health and population of marginated tortoises in fire-affected habitats, gaining hands-on experience with techniques such as population surveys, habitat assessment, and basic health checks. In Kyparissia Bay, they will contribute to loggerhead sea turtle conservation by documenting nesting activity and habitat conditions. These experiences train students in applied ecological methods while deepening their understanding of Mediterranean conservation challenges.

Physical and Mental Preparedness

This Mediterranean field course will require a good level of physical fitness and resilience. Students should be prepared for long days in hot weather, hiking uphill on uneven off-trail terrain, and participating in activities such as swimming and extended outdoor work. The course is rewarding, but it is also physically and mentally demanding, so please plan accordingly.

The Field Code of Conduct

Fieldwork is central to this course and will take place in both terrestrial and coastal habitats of the Mediterranean. Students should be prepared for rugged terrain, hot and variable weather, and the presence of potentially hazardous wildlife (e.g., snakes, scorpions, marine organisms). Safety depends on teamwork, awareness of surroundings, and respect for local regulations and conservation guidelines. Our fieldwork involves living organisms, fragile ecosystems, and collaboration with conservation professionals. Students are expected to act responsibly, respectfully, and ethically in every setting.

- **Wildlife Handling:** Animals (e.g., tortoises, sea turtles) are only to be handled under direct instructor or project leader supervision. Always minimize stress to the animal—no unnecessary contact, photographs, or prolonged holding.
- **Habitat Respect:** Do not collect plants, disturb nests, or move natural objects unless instructed for sampling. Stay on designated paths whenever possible to avoid trampling vegetation.
- **Team Safety:** Work in pairs or groups; no solo wandering in the field. Communicate regularly with the team and notify instructors of any concerns.
- **Professional Behavior:** Respect local communities, conservation staff, and cultural sites. Punctuality and preparedness are part of your professional conduct.
- **Leave No Trace:** Pack out all trash, avoid single-use plastics, and ensure sampling areas are left as undisturbed as possible.

Violations of these guidelines compromise both conservation work and student safety and will not be tolerated.

Recommended Field Equipment

- Sturdy closed-toe walking/hiking shoes
- Lightweight, breathable long pants and long-sleeved shirt (sun and insect protection)
- Wide-brimmed hat and sunglasses
- Refillable water bottle (1–2 liters minimum)
- Sunscreen (reef-safe preferred)
- Portable and rechargeable neck Fan
- Insect repellent
- Waterproof notebook and pencils/pens
- Small backpack/daypack
- Personal first-aid kit (band-aids, antiseptic wipes, any personal medications)
- Headlamp or flashlight (for dawn/dusk surveys)
- Optional: snorkeling mask/fins for marine observations (if permitted)

A Note from ARCHELON

Location: Kyparissia Bay

Dates: July 6th to July 10th 2026

In this unique 4-day program, you will become an integral part of **ARCHELON's mission to protect the loggerhead sea turtle (*Caretta caretta*)**, the largest nesting population in the Mediterranean. You will actively participate in field conservation, engage with experts, and contribute directly to the survival of an internationally protected species. You will do the following:

- Work side-by-side with conservation experts and international volunteers.
 - Dedicate **4–5 hours each day** to practical conservation tasks.
 - Participate in **daily 1–1.5-hour lectures and discussions** led by ARCHELON field leaders.
- You will rotate through daily shifts, gaining firsthand experience in all aspects of turtle conservation:
- **Morning Survey:** You will rise before sunrise to monitor the beach, collect nesting data, locate and mark new nests, and protect them from natural and human threats.
 - **Night Survey:** You will witness and record nesting activity under the stars, observing sea turtles as they lay their eggs and learning about their behavior.
 - **Equipment Maintenance & Preparation:** You will repair and prepare equipment used for nest protection and light pollution reduction and maintain protective signage.
 - **Interactive Beach Walks:** You will design and lead a 30-minute educational walk for visitors, learning how to communicate conservation messages effectively.

You will deepen your knowledge through interactive lectures and discussions:

- You will explore the biology of sea turtles and the challenges they face in the Mediterranean.
- You will study this Natura 2000-protected coastal ecosystem and its significance for both humans and nesting turtles.
- You will learn how 40+ years of continuous fieldwork has supported population recovery in Kyparissia Bay.
- You will understand how global collaboration has shaped ARCHELON's success and where your contribution fits into this legacy.

You will not only gain practical conservation skills but also contribute to the long-term protection of a species at risk. By the end of this program, you will have:

- Collected and contributed to vital conservation data.
- Engaged in meaningful dialogue with leading experts.
- Developed communication skills for conservation outreach.
- Immersed yourself in the natural and cultural beauty of Greece.

Remember this is more than just a field trip, you will play an active role in securing a future for loggerhead sea turtles.

CYA Regulations and Accommodations

Attendance Policy

CYA regards attendance in class and on-site (in Athens or during field study trips) as essential. Absences are recorded and have consequences. Illness or other such compelling reasons which result in absences should be reported immediately to the Student Affairs Office, via the form available in the Student Portal. Missed assignments are expected to be made up and unless excused will result in a late grade penalty depending on the work.

ePolicy on Original Work

Unless otherwise specified, all submitted work must be your own original work. Any ideas taken from the work of others must be clearly identified as quotations, paraphrases, summaries, figures etc., and accurate internal citations and/or captions (for visuals) as well as an accompanying bibliography must be provided.

Use of Laptops

In-class or onsite use of laptops and other devices is permitted if this facilitates course-related activities such as note-taking, looking up references, etc. Laptop or other device privileges will be suspended if devices are not used for class-related work.

Classroom Expectations

This course meets daily to go over core concepts, engage students in dialogue and delve into field research and conservation efforts and activities via field excursions. Class activities are outlined in the schedule below. It is expected that you will come to class prepared, work hard, and actively participate in class. You are required to complete assigned readings ahead of class, and to engage in all homework and group activities to your fullest potential.



The **marginated tortoise** (*Testudo marginata*) is Europe’s largest tortoise, once symbolically important in ancient art and myth. Today, it remains a flagship species for conservation and a symbol of the threats that wildfires pose to biodiversity.

The **loggerhead sea turtle** (*Caretta caretta*) nests widely on Greek beaches, revered in antiquity as a symbol of the sea. Today, it is central to Mediterranean conservation as an endangered species threatened by habitat loss and fisheries.



Class Schedule

Class	Date	Topic or Activity / Readings / Assignments Due
1	Mon, Jun 22	<ul style="list-style-type: none"> • Check-in CYA apartments, • Orientation to CYA, • Welcome Dinner
2	Tues, Jun 23	<p>Topics: What is Conservation Biology? Linking Ancient Thought to Modern Ecology Practice.</p> <p>Readings: Thales, Anaximander, Empedocles (fragments); Hughes (Ch.1), Sutherland et al. (2023)</p> <p>Assignments Due: Journal Reflection 1</p>
3	Wed, Jun 24	<p>Topics: Ancient and Modern Links between Environmental and Human Health (One Health Initiatives in Conservation)</p> <p>Readings: Hippocrates, Airs, Waters, Places; Tangredi (2022), Buttke et al. (2015)</p> <p>Assignments Due: None</p>
4	Thurs, Jun 25	Ymittos Field Research
5	Fri, Jun 26	<p>Topics: The Rise of Mediterranean Biodiversity and Rewilding Wildlife in Europe</p> <p>Readings: Aristotle, History of Animals I & VIII; Atauri and DeLucio (2001) Koutalonis et al. (2023)</p> <p>Assignments Due: Journal Reflection 2, Case Study 1</p>
	Sat, Jun 27	<i>Free Time to Explore: Don't get in trouble</i>
	Sun, Jun 28	<i>Free Time to Explore: Don't get in trouble</i>
6	Mon, Jun 29	<p>Topics: Deforestation, Soil Erosion and Urbanization. The Footprints of Civilization</p> <p>Visit to the Acropolis and the Ancient Agora</p>

		<p>Readings: Plato, Critias; Hughes, Ch.2 Aristotle, Politics I; Theophrastus, Enquiry into Plants I-II; Liordos et al. (2021)</p> <p>Assignments Due: None</p>
7	Tues, Jun 30	<p>Visit to Anavyssos (ANIMA Rehabilitation Centre)</p> <p>Assignments Due: Journal Reflection 3</p>
8	Wed, Jul 1	<p>Topics: Ancient Maritime Knowledge and the Ecology of the Coast</p> <p>Readings: Oppian (Halieutica), Pliny the Elder (Natural History), Coll et al (2010)</p> <p>Assignments Due: None</p>
9	Thurs, Jul 2	<p>Topics: The Biology of Space, and Complexity of Land Protections (Natura 2000 and other Transnational Networks)</p> <p>Visit to the Temple of Poseidon at Sounion (and Swimming in the Sea)</p> <p>Readings: Pausanias, sacred groves; Cassianus Bassus, Geoponika; Pires et al. (2025)</p> <p>Assignments Due: Case Study 2</p>
10	Fri, Jul 3	<p>Ymittos Field Research</p> <p>Assignments Due: Journal Reflection 4</p>
	Sat, Jul 4	<p><i>Free Time to Explore: Don't get in trouble</i></p>
	Sun, Jul 5	<p><i>Free Time to Explore: Don't get in trouble</i></p>
11	Mon, Jul 6	<p>Departure for Kyparissia</p>
12	Tues, Jul 7	<p>Marine Conservation of Sea Turtles with ARCHELON</p> <p>Assignments Due: Journal Reflection 5</p>
13	Wed, Jul 8	<p>Marine Conservation of Sea Turtles with ARCHELON</p>
14	Thurs, Jul 9	<p>Marine Conservation of Sea Turtles with ARCHELON</p>
15	Fri, Jul 10	<p>Arrival to Athens</p> <p>Assignments Due: Journal Reflection 6</p>
	Sat, Jul 11	<p><i>Free Time to Explore: Don't get in trouble</i></p>
	Sun, Jul 12	<p><i>Free Time to Explore: Don't get in trouble</i></p>
16	Mon, Jul 13	<p>Topics: Climate Awareness and Global Change</p> <p>Readings: Aristotle Meterologica, Hassoun et al. (2025)</p> <p>Assignments Due: Case Study 3</p>
17	Tues, Jul 14	<p>Visit to Glyfada (ARCHELON – Sea turtle rescue center)</p> <p>Assignments Due: Journal Reflection 7</p>
18	Wed, Jul 15	<p>Ymittos Field Research</p>
19	Thurs, Jul 16	<p>Topics: Religion, Stewardship and Sustainability</p> <p>Readings: Pliny, Natural History XII; Della Dora (2016) Part II – Land (Gardens, Wilderness)</p> <p>Assignments Due: Journal Reflection 8</p>
20	Fri, Jul 17	<p>Exam</p>
	Sat, Jul 18	<p>Check-out CYA apartments</p>

N.B.: The course schedule, in terms of subjects and readings, may be subject to change to benefit student learning and to keep up to date with current research or unexpected occurrences.

COURSE BIBLIOGRAPHY **Subject to additions/substitutions with advance notice*

Historical Texts ** Most of these will involve reading specific excerpts*

- Aristotle. (4th c. BCE). History of Animals (Books I & VIII). In A. L. Peck (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.
- Aristotle. (4th c. BCE). Meteorologica. In H. D. P. Lee (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.
- Aristotle. (4th c. BCE). Politics I. In H. Rackham (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.
- Cassianus Bassus. (6th c. CE). Geoponika. A Byzantine compilation of Roman and Greek agricultural writings.
- Empedocles. (5th c. BCE). Fragments. In Diels, H., & Kranz, W. (Eds.), Die Fragmente der Vorsokratiker (DK 31). Berlin: Weidmann.
- Hippocrates. (5th c. BCE). Airs, Waters, Places. In W. H. S. Jones (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.
- Oppian of Cilicia. (2nd c. CE). Halieutica. In A. W. Mair (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.
- Pausanias. (2nd c. CE). Description of Greece. In W. H. S. Jones (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.
- Plato. (4th c. BCE). Critias. In W. R. M. Lamb (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.
- Pliny the Elder. (1st c. CE). Natural History. In H. Rackham, W. H. S. Jones, & D. E. Eichholz (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.
- Thales & Anaximander. (6th c. BCE). Fragments. In Diels, H., & Kranz, W. (Eds.), Die Fragmente der Vorsokratiker. Berlin: Weidmann.
- Theophrastus. (4th c. BCE). Enquiry into Plants (Books I–II). In A. F. Hort (Trans.), Loeb Classical Library. Cambridge, MA: Harvard University Press.

Modern Syntheses **You will focus on key aspects of these papers for discussions*

- Atauri, J. A. and De Lucio, J. V. (2001). The role of landscape structure in species richness distribution of birds, amphibians, reptiles and lepidopterans in Mediterranean landscapes. *Landscape Ecology*, 16, 147–159
- Buttke DE, Decker DJ, Wild MA. The role of one health in wildlife conservation: a challenge and opportunity. *J Wildl Dis.* 2015 Jan;51(1):1-8. doi: 10.7589/2014-01-004. PMID: 25375941.
- Coll, M., Piroddi, C., Steenbeek, J., Kaschner, K., Ben Rais Lasram, F., Aguzzi, J., Pauly, D. (2010). The biodiversity of the Mediterranean Sea: Estimates, patterns, threats. *PLoS ONE*, 5(8), e11842.
- Della Dora, V. (2016). *Landscape, nature, and the sacred in Byzantium*. Cambridge University Press.
- Hassoun, A. E. R., Mojtahid, M., Merheb, M., Lionello, P., Gattuso, J.-P., & Cramer, W. (2025). Climate change risks on key open marine and coastal Mediterranean ecosystems. *Scientific Reports*, 15, 24907.
- Hughes, J. D. (2014). *Environmental problems of the Greeks and Romans: Ecology in the ancient Mediterranean* (2nd ed.). Baltimore: Johns Hopkins University Press.
- Koutalonis, I., Mylonas, M., & Papadopoulos, D. (2023). Two decades of wildlife rehabilitation in Greece: Analysis of admissions, threats, and conservation implications. *Journal for Nature Conservation*, 78, 126–137.
- Liordos, V., Kotsiotis, V. J., Eleftheriadou, I., Telidis, S., & Triantafyllidis, A. (2021). Wildlife Value Orientations and Demographics in Greece. *Earth*, 2(3), 457-467.
- Pires, M. B., Lomba, A., & Pereira, H. M. (2025). Greek protected areas fail to fully capture shifting biodiversity hotspots under climate and land-use change. *Biological Conservation*, 314, 109640.
- Tangredi (2022) *The Mediterranean diet and One Health: A study in Synergies*. CABI One Health. 2791-223X