

Class 3: Biodiversity & Extinction

Themes:

- History of life and evolution
- Natural selection, mass extinctions
- Biosphere feedbacks, impact of humans

Articles:

1. D. Jablonski, Lessons from the past: Evolutionary impacts of mass extinctions, *Proc. Natl. Acad. Sci. U.S.A.* 98 (10) 5393-5398, <https://doi.org/10.1073/pnas.101092598> (2001). → <https://www.pnas.org/doi/10.1073/pnas.101092598>

—> **Q1.** *How does Jablonski argue that mass extinctions shape long-term evolutionary trajectories? In what ways do these events differ from “normal” evolutionary processes?*

—> **Q2.** *Jablonski suggests that the aftermath of mass extinctions can promote innovation and diversification. How might this idea challenge or complicate our understanding of extinction as purely destructive?*

2. M.K. Nelson, & G. Reed, Indigenous critiques and recommendations for reclaiming nature-based solutions, *Proc. Natl. Acad. Sci. U.S.A.* 122 (2025). <https://www.pnas.org/doi/10.1073/pnas.2315917121>

—> **Q1.** *What are the main critiques Indigenous scholars raise about current “nature-based solutions”? How do these critiques reveal underlying assumptions about human–nature relationships in Western environmental policy?*

—> **Q2.** *The authors propose integrating Indigenous knowledge into global sustainability efforts. What specific challenges—ethical, political, or institutional—might arise from this integration?*

3. Carrin, M. (2024). Indigenous Knowledge and Sustainability. *The Oriental Anthropologist*, 24(1), 13-31. <https://journals.sagepub.com/doi/full/10.1177/0972558X241227859>

—> **Q1.** *According to Carrin, how does Indigenous knowledge reshape the concept of “sustainability”? In what ways does it differ from mainstream ecological discourse?*

—> **Q2.** Carrin highlights the tension between traditional ecological knowledge and global development frameworks. How might acknowledging these tensions lead to more equitable environmental practices?

Podcasts:

- Episode 55 - The "Sixth Extinction" (Modern Biodiversity Crisis) Saturday Feb 23, 2019
https://commondescentpodcast.podbean.com/e/episode-55-the-sixth-extinction-modern-biodiversity-crisis/?utm_source=chatgpt.com

—>

1. *The hosts discuss whether current species loss qualifies as a true “sixth mass extinction.” What arguments do they present for and against this characterization, and which do you find more persuasive?*
2. *They outline various human-driven causes of biodiversity decline (e.g. habitat destruction, invasive species, climate change). Choose one of these causes and discuss how the podcast suggests we might effectively address it — what challenges or trade-offs does it raise?*

Music:

Listen carefully to the three assigned songs and read through their lyrics. In preparation for class, reflect on the following questions: How do these songs connect to the themes we are exploring this week? In what ways do they highlight social, cultural, or ecological dimensions of the climate crisis? Finally, describe your personal response to the music—what emotions, images, or ideas did it evoke, and why do you think it felt meaningful (or not) in relation to our discussions?

- “The Seed” – Aurora + look for the version of her in the woods with a choir on youtube
- “The Last Resort” – Eagles
- “Crime of the Century” --Supertramp