

Life in the Anthropocene

ANTH 345 S23

Mondays and Thursdays, 1:30 to 2:45 p.m., DEAL

This course counts for graduation requirements in **Sustainability Investigations (SNIV)**, **Global Diversity** and **Social Science**. It is a 300-level elective course for the **Anthropology** major and minor; an elective for the **Archaeology** major in Area B; an **Environmental Studies** Disciplinary Specialization course; and a **WiD** course.

Professor, James Ellison (ellisonj@dickinson.edu), phone/voicemail: 717-245-1902

Office hours: Denny 307, and individual meetings via Zoom through the link on Moodle; Mondays, 3:00–4:30 p.m., Fridays, 8:30–10:00 a.m., and by appointment

Course Description and Goals

Increased attention to human influences on Earth's climates and geology has given rise to a much-discussed Anthropocene epoch. Whether we locate the start of the epoch thousands of years ago with the origins of agriculture, with the industrial revolution, or more recently with nuclear bomb technologies, we can understand the label through rapid successions of record high temperatures and severe weather events, polar ice melts and rising sea levels, and astonishing numbers of extinctions, all of which play out in disparate ways across the globe. These changes call for new ways to understand how humans live in the world. In this course we examine what it means to be human in these times, and how people live in mutual and dynamic relationships with technologies, environments, and other species in ways that shape these processes and that are shaped by them. Our organizing frame will be ethnography, with examples drawn from throughout the world. Sustainability will be a persistent question during the semester.

The course has two main parts. In the first half of the semester, we focus on infrastructures and technologies that are integral to Anthropocene life. We will consider forms of energy and energy infrastructures, how people interact with them, and what they bring about. We examine infrastructures such as ports and landfills to understand commodity chains, distribution, consumption, and waste and to consider how technologies and infrastructures are agential and entangled with Anthropocene environments and ontologies. The second half of the semester refocuses on human interactions with other species. Through multispecies ethnography, with examples involving mammals, trees and plants, fungi, birds, arthropods, and microbes, we will explore relationships shaped in damaged landscapes and the more-than-human entanglements in care that are crucial to understanding life in the Anthropocene.

Course learning goals: After completing this course, you should be able to do the following:

- Explain ways the Anthropocene is defined, theorized, and experienced
- Analyze infrastructures and technologies in relation to Anthropocene conditions
- Apply multispecies ethnography approaches to Anthropocene questions
- Use knowledge and methods from the course to critically analyze a problem of sustainability and the Anthropocene and different responses
- Articulate connections between anthropology and sustainability
- Use writing conventions in anthropology in an effective and recursive writing process.

Technology expectations. We will rely a lot on our course Moodle site, and so at the start of the semester you should become familiar with how to access Moodle through the college Gateway and how to locate and navigate our course site.

Course Structure and Grading

Be there and participate (20%). Your active involvement is important! I expect you to enter each meeting on time and prepared to discuss readings assigned for that day. After each class meeting, I will record for you one of three marks: “2” for being there and participating substantively; “1” for being there but with insubstantial participation; or “0” for not being there, not participating, or doing things that hinder shared opportunities for learning. If you arrive late, I may start this scale at 1. You can show participation by speaking, attentiveness, and apparent involvement in discussions. Although we may use internet resources during class, I expect you to limit your attention to class materials; using social media, texting, emailing, doing other work, etc. will reduce your participation grade. If you miss more than two weeks of class, cumulatively, without approved excuses, you will receive a failing grade for the course. Repeated or extended departures from class will count as absences.

Lead a reading discussion, collaboratively (5%). Once during the semester, on dates marked with a section sign (§) in the schedule, you and two fellow students will lead discussion of issues raised in the week’s assigned readings. Discussion leaders will prepare questions based on assigned readings and informed by journal entries and distribute them to the class through Moodle by 6:00 p.m. the day before discussion. Grades are based on the quality and appropriate submission of questions and on leading discussion. (A grading rubric is posted on Moodle.) You are welcome to discuss your plans with the professor. Students not leading discussion are graded for participation.

Write ten journal entries (20%). By class time on ten days of your choosing—five before spring break, and five after, excluding theory paper deadlines—you will write informal journal entries that convey your thinking about the day’s readings. (You may write more than ten entries, if you like.) Journal entries are helpful for the theory papers and your project. Each entry should be a minimum of 200 words. My comments will concern content and a dialogue about your work, not editorial matters. Each entry will receive 2 points for substantive effort, 1 point for minimal effort (e.g., not addressing all readings), or 0 points for a submission off topic.

Experience the Anthropocene. This class includes four trips woven into to our topics. In February, we will visit a port to learn about its relationship to “Post-Panamax” standards and “Green Port” sustainability efforts. In late February, we will tour a landfill to learn about infrastructures of waste. In late March, we will have a trip that focuses on ruderal city ecologies. Lastly, in April, we will visit the college farm to learn about multispecies mutualities and care, with an eye toward futures. These experiences will contribute to the theory papers.

Write four theory discussion papers (15%). You will write four formal papers, 3–4 pages each, addressing theories in current readings and applying them to the most recent Anthropocene experience. You can rewrite these for regrading. You must complete all four papers to earn full credit, but I will only count your three top scores toward your final grade. In these papers, you should develop arguments about the theories, identify authors’ arguments, and establish dialogues among the sources and the Anthropocene experiences.

Complete an ethnography of the Anthropocene project (30%). You will complete a two-phase project exploring aspects of the Anthropocene in ways informed by our ethnographic perspectives. This work starts with an ungraded topic proposal and individual meetings. The project's first phase (15%) examines a technology, infrastructure, or institution as it relates to the Anthropocene. A wide range of possibilities exists for this phase, e.g., food production, distribution, consumption; industry approaches to sustainability; carbon capture; water systems; science and activism, or activist-science; art/activism nexuses; plastic or petrochemicals in our lives; commodity and/or distribution chains; the cloud. First phase papers will receive comments and will be resubmitted for grading. The second phase (15%), which will also start with individual meetings, will bring a multispecies ethnography focus to the topic. That exact focus will depend on your topic. Think creatively about your project; it is an opportunity to explore something that interests you and to have fun doing it.

Present your work (10%). In the last week of the semester, you will prepare a seven-minute presentation about your research findings. We will use a "PechaKucha" format, in which you will show 20 slides, each for 20 seconds, to tell the story of your project. This is a fun format for sharing what you've learned, and you can use any presentation software you like. Your script and the presentation will be graded as items in a rubric.

For all formal written work, use a clear 12-point typeface (e.g., Times New Roman or Calibri), double spacing, and one-inch margins and submit it in .docx or .rtf format via Moodle. Use the *Chicago Manual of Style*, current edition, available electronically through the library. Resolve technical difficulties through the helpdesk. Failure to submit a paper correctly does not excuse a late submission. I only accept late work with appropriate supporting documentation. I do not tolerate plagiarism or cheating. As a human with routine and reliable internet access, you are free to play with generative AI (like ChatGPT) but using any output from such a system in work you submit as your own, without the professor's explicit approval, would be a form of cheating. Always ask if you have any questions.

Readings. Complete reading assignments by class times to understand and participate in discussions. Required books are available through the bookstore. Three (Tsing et al., Moore, and Tsing) are also available online through the library. All other readings are on Moodle.

Books we will use

Hetherington, Gregg, ed. 2019. *Infrastructure, Environment, and Life in the Anthropocene*. Durham: Duke University Press. ["IELA" in the schedule.]

Tsing, Anna, Heather Swanson, Elaine Gan, and Nils Bubandt, eds. 2017. *Arts of Living on a Damaged Planet*. Minneapolis: University of Minnesota Press. ["ALDP" in the schedule.]

Bond, David. 2022. *Negative Ecologies: Fossil Fuels and the Discovery of the Environment*. Berkeley: University of California Press.

Millar, Kathleen M. 2019. *Reclaiming the Discarded: Life and Labor on Rio's Garbage Dump*. Durham: Duke University Press.

Tsing, Anna Lowenhaupt. 2015. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton: Princeton University Press.

Grading breakdown

Be there and participate	20%
Lead discussion	5%
Write ten journal entries	20%
Write four theory discussion papers	15%
Complete an ethnography of the Anthropocene project	30%
Present your work	10%
Total course grade	100%

Grading scale

A = 93–100%	B = 83–86%	C = 73–76%	D=63–66%
A- = 90–92%	B- = 80–82%	C- = 70–72%	D- = 60–62%
B+ = 87–89%	C+ = 77–79%	D+ = 67–69%	F = 59% and below

Email replies. I will strive to reply to your email messages quickly, usually within one weekday (Monday through Friday). If your email message is time sensitive, and I have not replied within one weekday, you are welcome to send a follow-up email. You should also communicate with me directly during office hours or after class.

Accommodating Students with Disabilities

If you experience any difficulty with the accessibility of class materials or the class design, please communicate with Professor Ellison as soon as is possible.

Dickinson values diverse types of learners and is committed to ensuring that each student is afforded equitable access to participate in all learning experiences. If you have (or think you may have) a learning difference or a disability—including a mental health, medical, or physical condition—that would hinder your access to learning or demonstrating knowledge in this class, please contact Access and Disability Services (ADS). They will confidentially explain the accommodation request process and the type of documentation that Dean and Director Marni Jones will need to determine your eligibility for reasonable accommodations. To learn more about available supports, go to www.dickinson.edu/ADS, email access@dickinson.edu, call (717)245-1734, or go to the ADS office in Room 005 of Old West, Lower Level (aka "the OWLL").

If you've already been granted accommodations at Dickinson, please follow the guidance at www.dickinson.edu/AccessPlan for disclosing the accommodations for which you are eligible and scheduling a meeting with me as soon as possible so that we can discuss your accommodations and finalize your Access Plan. If you will be using any test-taking accommodations in this class, be sure to enter all test dates into your Access Plan in advance of our meeting.

SOAR: Academic Success Support and More

Students can find a wealth of strategic academic success tools (like weekly planners, semester calendars, and much more) by going online to www.dickinson.edu/SOAR or to Old West's Lower Level (aka "the OWLL"). SOAR stands for Strategies, Organization, & Achievement Resources, and there you'll find apps, tips, and other resources related to organization, study skills, memory strategies, note-taking, test-taking, and more. You'll find strategies for managing

your time and well-being, as well as information about academic success workshops offered throughout the semester. If you'd like to attend a workshop or request one-on-one assistance with developing a strategy for a manageable and academically successful semester, email SOAR@dickinson.edu.

A Note on Class Meetings, Learning, and Privacy

Our classroom is a place of mutual respect for all learners to grow, develop, and work together. This may require us to share personal experiences, talk candidly about our concerns or questions, say things that are the result of curiosity and learning, and record ourselves talking and presenting. To maintain the classroom as a place of mutual respect, I require that you do not share outside the classroom anything from the class that could identify me or your peers, including but not limited to recordings, information shared by others with a presumption of respect and privacy, and personal identifiers. I also ask that you do not share any teaching and learning materials, including but not limited to lectures, assignments, and resources.

Laptop use during class is by permission only. If an accommodation allows you to record class meetings, you must communicate with me before you commence recording.

Life in the Anthropocene, detailed schedule. We will discuss any changes in class, on Moodle, and/or by email.

Complete required reading and assignments prior to the class meeting for which they are assigned.

Week	Date	Class Topics	Readings	Due Dates
Week 1	Jan 23	Welcome to the Anthropocene		
	Jan 26		Lewis and Maslin "Defining the Anthropocene" Subramanian, "Humans versus Earth" Heatherington, "Key Words" (IELA)	
Week 2	Jan 30	"The Conflict is Ontological"	Yusoff, "Golden Spikes and Dubious Origins" De la Cadena, "Uncommoning Nature"	
	Feb 2		Gan et al., "Haunted Landscapes" (ALDP) Carse and Lewis, "How to Think about Ships"	Topic proposal
Week 3	Feb 6	"Limits of Figure/Ground Separations"	Bond, Introduction Ballesterio, "Underground as Infrastructure" (IELA)	Port of Maryland (Tuesday)
	Feb 9		Bond, Chapters 1–2	Theory paper 1 Project meetings
Week 4	Feb 13	"Petrochemical Fallout"	Bond, Chapters 3–4 Jensen, "Here Comes the Sun?" (IELA)	
	Feb 16		Bond, Chapter 5–end Gordillo, "The Metropolis" (IELA)	§
Week 5	Feb 20	"In the Midst of Damage"	Barad, "No Small Matter" (ALDP) Brown, "Nuclear Spelunking" (ALDP)	
	Feb 23		Millar, Introduction and Chapter 1	§
Week 6	Feb 27	"What Does It Meant to Live Well?"	Millar, Chapter 2 Carse, "Dirty Landscapes" (IELA)	County Landfill
	Mar 2		Millar, Chapters 3–4	Theory paper 2

Week 7	Mar 6	Does Garbage Ever End?	Millar, Chapter 5 and Conclusion Bubandt, "Haunted Geologies" (ALDP)	
	Mar 9		Allais and Meggers, "Concrete is One Hundred Years Old" Myers, "Gardens against Eden" (IELA)	Phase 1 papers
<i>Spring Vacation: 5:00 p.m. Friday, March 10, to 8:00 a.m. Monday, March 20</i>				
Week 8	Mar 20	"Ruins are Now Our Gardens"	Swanson et al., "Bodies Tumbled into Bodies" (ALDP) Stoetzer, "Botanical Encounters"	
	Mar 23		Tsing, 1–54	Phase 1 revisions
Week 9	Mar 27	"After Progress"	Tsing, 55–106 Mathews, "Ghostly Forms" (ALDP)	Ruderal trip
	Mar 30		Tsing, 109–44	§
Week 10	Apr 3	"Ethnography of Life Forms"	Tsing, 149–213 Hartigan, "How to Interview a Plant"	
	Apr 6		Tsing, 217–48	Theory paper 3 Project meetings
Week 11	Apr 10	"Luckily There Is Still Company"	Tsing, 251–88 Funch, "Synchronies at Risk" (ALDP)	
	Apr 13		McFall-Ngai, "Noticing Microbial Worlds" (ALDP) Gilbert, "Holobiont by Birth" (ALDP)	§
Week 12	Apr 17	"In a Moment of Mutual Vulnerability"	Gordon, "Without Planning" (ALDP) Lien, "Unruly Appetites" (ALDP)	College Farm
	Apr 20	Happy Earth Day!	Zhang, "Circularity and Enclosure" Giaimo, "Fruit Flies are Essential to Science"	§

Week 13	Apr 24	Anthropocene Futures	Wanderer, "Care of the Pest" Bird Rose, "Shimmer" (ALDP) Parker, "Remembering in Our Amnesia" (ALDP)	
	April 27		Masco, "The Crisis in Crisis" (IELA) Sagan, "Beautiful Monsters" (ALDP) Le Guin, "Deep in Admiration" (ADLP)	Theory paper 4
Week 14	May 1	Presentations		
	May 4	Presentations		
Friday, May 5, Last Day of Classes Final papers are due at the end of the scheduled final exam time, Tuesday, May 9, 5:00 p.m.				

Life in the Anthropocene Reading List

Week One, January 23–26: Welcome to the Anthropocene

Lewis, Simon L., and Mark A. Maslin. 2015. "Defining the Anthropocene." *Nature* 519 (12 March): 171–80.

Subramanian, Meera. 2019. "Humans Versus Earth." *Nature* 572 (8 August): 168–70.

Hetherington, Gregg. 2019. "Introduction: Key Words of the Anthropocene," in *Infrastructure, Environment, and Life in the Anthropocene*, edited by Gregg Hetherington, 1–13. Durham: Duke University Press.

Week Two, January 30–February 2: "The Conflict is Ontological"

Yusoff, Kathryn. 2018. "Golden Spikes and Dubious Origins," in *A Billion Black Anthropocene's or None*, 23–64. Minneapolis: University of Minnesota Press.

de la Cadena, Marisol. 2019. "Uncommoning Nature: Stories from the Anthro-Not-Seen," in *Anthropos and the Material*, edited by Penny Harvey, Christian Krohn-Hansen, and Knut G. Nustad, 35–58. Durham: Duke University Press.

Gan, Elaine, Anna Tsing, Heather Swanson, and Nils Bubandt. 2017. "Introduction: Haunted Landscapes of the Anthropocene," in *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, G1–G14. Minneapolis: University of Minnesota Press.

Carse, Ashley, and Joshua A. Lewis. 2017. "Toward a Political Ecology of Infrastructure Standards: Or, How to Think about Ships, Waterways, Sediment, and Communities Together." *Environment and Planning A* 49, no. 1: 9–28.

Week Three, February 6–9: "Limits of Figure/Ground Separations"

Bond, David. 2022. *Negative Ecologies: Fossil Fuels and the Discovery of the Environment*, 1–92. Oakland: University of California Press.

Ballesterio, Andrea. 2019. "The Underground as Infrastructure? Water, Figure/Ground Reversals, and Dissolution in Sardinal," in *Infrastructure, Environment, and Life in the Anthropocene*, edited by Gregg Hetherington, 17–44. Durham: Duke University Press.

Week Four, February 13–16: "Petrochemical Fallout"

Bond, David. 2022. *Negative Ecologies*, 93–end.

Jensen, Casper Brun. 2019. "Here Comes the Sun? Experimenting with Cambodian Energy Infrastructures," in *Infrastructure, Environment, and Life in the Anthropocene*, edited by Gregg Hetherington, 216–35. Durham: Duke University Press.

Gordillo, Gastón. 2019. "The Metropolis: The Infrastructure of the Anthropocene," in *Infrastructure, Environment, and Life in the Anthropocene*, edited by Gregg Hetherington, 66–94. Durham: Duke University Press.

Week Five, February 20–23: “In the Midst of Damage”

- Barad, Karen. 2017. “No Small Matter: Mushroom Clouds, Ecologies of Nothingness, and Strange Topologies of Spacetime-mattering,” in *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, G103–G120. Minneapolis: University of Minnesota Press.
- Brown, Kate. 2017. “Marie Curie’s Fingerprint: Nuclear Spelunking in the Chernobyl Zone,” in *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, G33–G50. Minneapolis: University of Minnesota Press.
- Millar, Kathleen M. 2019. *Reclaiming the Discarded: Life and Labor on Rio’s Garbage Dump*, 1–66. Durham: Duke University Press.

Week Six, March 1–4: “What Does It Mean to Live Well?”

- Millar, Kathleen M. 2019. *Reclaiming the Discarded*, 67–150.
- Carse, Ashley. 2019. “Dirty Landscapes: How Weediness Indexes State Disinvestment and Global Disconnection,” in *Infrastructure, Environment, and Life in the Anthropocene*, edited by Gregg Hetherington, 97–114. Durham: Duke University Press.

Week Seven, March 8–11: Does Garbage Ever End?

- Millar, Kathleen M. 2019. *Reclaiming the Discarded*, 151–end.
- Bubandt, Nils. 2017. “Haunted Geologies: Spirits, Stones, and the Necropolitics of the Anthropocene,” in *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, G121–G141. Minneapolis: University of Minnesota Press.
- Allais, Lucia, and Forrest Meggers. 2021. “Concrete is One Hundred Years Old: The Carbonation Equation and Narratives of Anthropogenic Change,” in *Writing Architectural History: Evidence and Narrative in the Twenty-first Century*, edited by Aggregate Architectural History Collective, 75–89. Pittsburgh: University of Pittsburgh Press.
- Myers, Natasha. 2019. “From Edenic Apocalypse to Gardens against Eden: Plants and People in and after the Anthropocene,” in *Infrastructure, Environment, and Life in the Anthropocene*, edited by Gregg Hetherington, 115–48. Durham: Duke University Press.

Week Eight, March 22–25: “Ruins Are Now Our Gardens”

- Swanson, Heather, Anna Tsing, Nils Bubandt, and Elaine Gan. 2017. “Introduction: Bodies Tumbled into Bodies,” in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M1–M12. Minneapolis: University of Minnesota Press.
- Stoetzer, Bettina. 2022. “Botanical Encounters,” in *Ruderal City: Ecologies of Migration, Race, and Urban Nature in Berlin*, 35–63. Durham: Duke University Press.

Tsing, Anna Lowenhaupt. 2015. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, 1–54. Princeton: Princeton University Press.

Week Nine, March 29–April 1: “After Progress”

Tsing, Anna Lowenhaupt. 2015. *The Mushroom at the End of the World*, 55–144.

Mathews, Andrew S. 2017. “Ghostly Forms and Forest Histories,” in *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, G145–G156. Minneapolis: University of Minnesota Press.

Week Ten, April 5–8: “Ethnography of Life Forms”

Tsing, Anna Lowenhaupt. 2015. *The Mushroom at the End of the World*, 149–248.

Hartigan, John. 2017. “How to Interview a Plant,” in *Care of the Species: Races of Corn and the Science of Plant Biodiversity*, 253–81. Minneapolis: University of Minnesota Press.

Week Eleven, April 12–15: “Luckily There Is Still Company”

Tsing, Anna Lowenhaupt. 2015. *The Mushroom at the End of the World*, 255–88.

Funch, Peter. 2017. “Synchronies at Risk: The Intertwined Lives of Horseshoe Crabs and Red Knot Birds,” in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M143–M154. Minneapolis: University of Minnesota Press.

McFall-Ngai, Margaret. 2017. “Noticing Microbial Worlds: The Postmodern Synthesis in Biology,” in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M51–M69. Minneapolis: University of Minnesota Press.

Gilbert, Schott F. 2017. “Holobiont by Birth: Multilineage Individuals as the Concretion of Cooperative Processes,” in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M73–M89. Minneapolis: University of Minnesota Press.

Week Twelve, April 19–22: “In a Moment of Mutual Vulnerability”

Gordon, Deborah M. 2017. “Without Planning: The Evolution of Collective Behavior in Ant Colonies,” in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M125–M139. Minneapolis: University of Minnesota Press.

Lien, Marianne Elisabeth. 2017. “Unruly Appetites: Salmon Domestication ‘All the Way Down’,” in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M107–M124. Minneapolis: University of Minnesota Press.

Zhang, Amy. 2020. “Circularity and Enclosures: Metabolizing Waste with the Black Soldier Fly.” *Cultural Anthropology* 35, no. 1: 74–103.

Gialimo, Carla. 2020. "Fruit Flies are Essential to Science. So Are the Workers Who Keep Them Alive." *New York Times* 14 December, <https://nyti.ms/2K7fvr5>

Week Thirteen, April 26–29: Anthropocene Futures

Wanderer, Emily. 2020. "The Care of the Pest and Animal Betrayals," in *The Life of a Pest: An Ethnography of Biological Invasion in Mexico*, 43–69. Berkeley: University of California Press.

Masco, Joseph. 2019. "The Crisis in Crisis," in *Infrastructure, Environment, and Life in the Anthropocene*, edited by Gregg Hetherington, 236–60. Durham: Duke University Press.

Parker, Ingrid M. 2017. "Remembering in Our Amnesia, Seeing in Our Blindness," in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M155–M167. Minneapolis: University of Minnesota Press.

Bird Rose, Deborah. 2017. "Shimmer: When All You Love Is Being Trashed," in *Arts of Living on a Damaged Planet: Ghosts of the Anthropocene*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, G51–G63. Minneapolis: University of Minnesota Press.

Sagan, Dorion. 2017. "Coda: Beautiful Monsters: Terra in the Cyanocene," in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M169–M174. Minneapolis: University of Minnesota Press.

Le Guin, Ursula K. 2017. "Deep in Admiration," in *Arts of Living on a Damaged Planet: Monsters and the Arts of Living*, edited by Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M15–M21. Minneapolis: University of Minnesota Press.