

Untold Stories in Geosciences:

Social and Historical Contexts of the Development of Geosciences as a Discipline

Reading list developed by Jeemin H. Rhim for a First-Year Seminar (EARS07) that was offered at Dartmouth College during Winter 2022. Many of the references were taken from the resources from [Unlearning Racism in Geoscience \(URGE\)](#) and [GeoContext](#).

Unit 1: Extraction and Oppression During the Early Development of Geosciences

Week 1. Introduction / Warm-up readings

- [Earth Science Has a Whiteness Problem](#) (Goldberg, 2019)
- [Scientists from historically excluded groups face a hostile obstacle course](#) (Berhe et al., 2021)

Week 2. Exploitation of Land, Resources and People

- [Our past creates our present: a brief overview of racism and colonialism in Western paleontology](#) (Monarrez et al., 2021)
- [The Darker Side of John Wesley Powell](#) (Pico, 2019)
- [Minik and the Meteor](#) (Meier, 2013)

Additional readings:

- [Caught in the Middle: the Tragic Life of Minik Wallace](#) (Perry-MacMillan Arctic Museum, Bowdoin College, 2020)
- [Robert E. Peary and the Cape York Meteorites](#) (Huntington, 2002)
- [Troubled treasure](#) (Sokol, 2019)
- [The Human Cost of Amber](#) (Gammon, 2019)

Week 3. Scientific Racism and Colonialism

- [The American School and Scientific Racism in Early American Anthropology](#) (Dewbury, 2007)
- [Morton, Agassiz, and the Origins of Scientific Racism in the United States](#) (Menand, 2002)
- [There's No Scientific Basis for Race—It's a Made-Up Label](#) (Kolbert, 2018)

Additional readings:

- [The fault in his seeds: Lost notes to the case of bias in Samuel George Morton's cranial race science](#) (Mitchell, 2018)
- [Nathaniel S. Shaler and racial ideology](#) (Livingstone, 1982)

- *Looking for Louis Agassiz: A Story of Rocks and Race in Maine* (McInnes, 2019)
- *Louis Agassiz, Under a Microscope* (Iqbal, 2021)
- *Race and Soil: Geography, Ethnology, and Nazism* (Kophamel, 2021)
- *Maury for Modern Times: Navigating a Racist Legacy in Ocean Science* (Hardy & Rozwadowski, 2020)

Week 4. Sexism and Ableism in Geosciences

- *Women in glaciology, a historical perspective* (Hulbe, Wang and Ommanney, 2010)
- *Trends in the Representation of Women Among US Geoscience Faculty From 1999 to 2020: The Long Road Toward Gender Parity* (Ranganathan et al., 2021)
- *Creating Spaces for Geoscientists with Disabilities to Thrive* (Marshall & Thatcher, 2019)
- *Professionally held perceptions about the accessibility of the geosciences* (Atchison & Libarkin, 2016)
- *'Nothing about us without us:' The perspectives of autistic geoscientists on inclusive instructional practices in geoscience education* (Kingsbury et al., 2020)

Additional readings:

- *Between a rock and a workplace* (Lawrence, 2021)
- *Glaciers, gender, and science: A feminist glaciology framework for global environmental change research* (Carey et al., 2016)

Unit 2: Modern-day Manifestations of Racism and Colonialism in Geosciences

Week 5. Continued Impacts on Indigenous People

- *Theory and Practice: The Case of the Navajo-Hopi Land Dispute* (Cheyfitz, 2002)
- *The Dakota Access Pipeline, Environmental Injustice, and U.S. Colonialism* (Whyte, 2017)
- *From Ice Sheets to Main Streets: Intermediaries Connect Climate Scientists to Coastal Adaptation* (Ultee et al., 2018)
- *Climate Change, Environmental Justice, and Vulnerability: An Exploratory Spatial Analysis* (Wilson, 2010)
- *Climate Change, Vulnerability, and Responsibility* (Cuomo, 2011)
- *The impact of climate change on tribal communities in the US: displacement, relocation, and human rights* (Maldonado et al., 2013)

Week 6. Where the Geoscience Community Stands Today

- *Minorities in the geosciences* (Bromery et al., 1972)
- *Minorities in the Geosciences: Beyond the Open Door* (Gillette, 1972)
- *No progress on diversity in 40 years* (Bernard and Cooperdock, 2018)
- *Hostile climates are barriers to diversifying the geosciences* (Marín-Spiotta et al., 2020)
- *Safe fieldwork strategies for at-risk individuals, their supervisors and institutions* (Demery and Pipkin, 2020)
- *Ten Steps to Protect BIPOC Scholars in the Field* (Anadu, Ali and Jackson, 2020)
- *The Challenges of Fieldwork for LGBTQ+ Geoscientists* (Olcott and Downen, 2020)

Additional readings:

- *An investigation of accessible and inclusive instructional field practices in US geoscience departments* (Carabajal & Atchison, 2020)
- *Six simple steps towards making GEES fieldwork more accessible and inclusive* (Lawrence & Dowey, 2021)

Week 7. How Inequity Impacts Women and BIPOC in Geosciences

- *Faculty Service Loads and Gender: Are Women Taking Care of the Academic Family?* (Guarino and Borden, 2017)
- *Racism and Mental Health: the African American experience* (Williams and Williams-Morris, 2000)
- *Doctoral Women of Color Coping with Racism and Sexism in the Academy* (Ramos and Yi, 2020)
- *Responding to Racism and Racial Trauma in Doctoral Study: An Inventory for Coping and Mediating Relationships* (Truong and Museus, 2012)

Unit 3: Building Anti-Racist Culture and Practices in Geosciences

Week 8. Opportunities for Equitable Solutions

- *How to include Indigenous researchers and their knowledge* (Gewin, 2021)
- *Indigenous frameworks for observing and responding to climate change in Alaska* (Cochran et al., 2012)
- *Sámi traditional ecological knowledge as a guide to science: Snow, ice and reindeer pasture facing climate change* (Riseth, 2010)
- *Decolonizing geoscience requires more than equity and inclusion* (Liboiron, 2021)

Week 9. Paths Toward a Diverse, Inclusive, and Equitable Geoscience Community

- *Race and racism in the geosciences* (Dutt, 2020)
- *Combating Racism in the Geosciences: Reflections From a Black Professor* (Morris, 2021)
- *Does Our Vision of Diversity Reduce Harm and Promote Justice?* (Keisling et al., 2020)
- *Ten simple rules for building an antiracist lab* (Chaudhary and Berhe, 2020)
- *Students of colour views on racial equity in environmental sustainability* (Schusler et al., 2021)
- *How the Model Minority Myth Harms Us All* (Wang, 2021)

Additional readings:

- *Applying an intersectionality lens to expand equity in the geosciences* (Núñez, Rivera & Hallmark, 2019)
- *A framework for addressing the lack of diversity in the Geosciences through evaluating the current structure of institutional efforts* (Guhlincozzi & Cisneros, 2021)
- *An actionable anti-racism plan for geoscience organizations* (Ali et al., 2021)
- *Counteracting Systemic Bias in the Lab, Field, and Classroom* (Cooperdock et al., 2021)
- *Universal Design for Learning in the Geosciences for Access and Equity in Our Classrooms* (Higgins & Maxwell, 2021)