

**SIGN 26082 / NEHC 20464 / HIST 20310
DID CLIMATE DOOM THE ANCIENTS?**

Winter 2022
Tu & Th, 09:30–10:50 AM
Room TBD

Instructor: Hervé Reculeau (hreculeau@uchicago.edu)

Office Hours: Tue. & Th. 12:00 – 2:00 PM, and by appointment. Office: **Oriental Institute 318.**

Virtual Office Hours: by appointment

Course Description

This course offers a critical introduction to the study of the relationship between human societies and their environment, with a specific focus on situations of rapid climatic change (RCC) in early historical periods. Students will be invited to reflect on discourses about climate and its influence on human societies from Herodotus to the IPCC; on notions such as environmental or social determinism, possibilism and reductionism, societal collapse, and resilience; and on recent academic trends at the crossroads of Humanities, Social Sciences and Environmental Studies. Alternating lectures (Tu) and discussion sessions (Th), the first half of the quarter introduces the notion of “climate,” from its origins in Classical Greece to the present, and how this concept has been (and still is) used to define human groups and their history; it also offers an overview of the theories and methods that shape our current understanding of climate change and its effect on societies (past and present). The second half of the quarter is devoted to case studies, with a specific focus on the Ancient Near East (from prehistory to the first millennium BCE). Students will be asked to present the readings and participate in classroom discussions; write an article summary; and conduct personal research (midterm annotated bibliography and research proposal; final essay) on a topic of their choice, which needs not be limited to the Ancient Near East.

Learning Objectives

Through their essays as well as online and class discussions, students further the skills that they have started developing in the Humanities and Social Sciences Core courses: spoken and written communication; the practice of intellectual debate and collaboration during homework and class discussions; academic and professional reading and writing skills.

By undergoing an in-depth analysis of such prevalent notions as “climate” and “climate change,” as well as historiographical concepts such as “Collapse,” “Dark Ages” and “Intermediate Periods,” students engage critically with the elaboration of academic knowledge and its diffusion to non-academic audiences. By writing an essay on an author or case study not directly addressed in class, they reflect critically on the transferability of their freshly acquired knowledge towards new objects of study.

Course Requirements and Grading

This course combines lectures by the instructor with class discussions of selected readings, from classic authors (in the Western and Non-Western traditions) and current research in History, Archaeology, Anthropology and Environmental Sciences.

Preparation

At the beginning of the quarter, you will be organized into four groups for collaborative work and presentations. There are two types of regular assignments: (1) **mandatory readings** for all students and (2) rotating group assignments. You are expected to have done all the assigned readings before each session. Plan your readings for each week wisely, as the distribution of readings can be quite uneven. **Group assignments appear on Canvas for the dates when your group's assignments are due.** Groups with an assignment on a particular day have a leading role in presenting the readings and fostering discussions for that day. **It is your responsibility and that of your peers in the group to be prepared for class on the days when your assignments are due.**

On average, I would anticipate that you need to allot at least **three hours per class session to reading, and an additional two to three hours for collective preparation when your group assignment is due.** The readings will come from a variety of authors and/or fields to which you probably only have had limited exposure and will be challenging. Your reading needs to be active and engaged. You should **take notes** (whether marginal or in a separate notebook or digital document), **keep track of concepts, personal and place names, look up unfamiliar words, mark interesting passages, etc.** Be prepared to not understand things, and to ask questions of me and of your classmates.

Grading Scheme

The grading scheme for letter grades in this course follows the default one established by the College for equivalencies between percentage points and letters:

Default Grading Scheme		Select Another Scheme  
Name:	Range:	
A	100 %	to 94.0%
A-	< 94.0 %	to 90.0%
B+	< 90.0 %	to 87.0%
B	< 87.0 %	to 84.0%
B-	< 84.0 %	to 80.0%
C+	< 80.0 %	to 77.0%
C	< 77.0 %	to 74.0%
C-	< 74.0 %	to 70.0%
D+	< 70.0 %	to 67.0%
D	< 67.0 %	to 64.0%
D-	< 64.0 %	to 61.0%
F	< 61.0 %	to 0.0%

Evaluation for this course is based on participation (including both in-class and online participation), in-class presentations, a written critical review of one of the readings, and a final essay on a topic of the student's choice.

In-Class and Online Participation (20% of grade)

Participation is based on (i) attendance; (ii) evidence of reading and preparation; (iii) degree of engagement and participation in group work and class discussions.

Critical Review (20% of grade)

By the **first session of Week 8**, students must have submitted to the instructor, via Canvas, a **critical review of one of the scholarly articles** (of their choice) that is part of the readings for Weeks 6 to 10. In **800 to 1,200 words**, this

review shall (i) present in a succinct, clear, and articulated way, the arguments of the author and (ii) offer a critical assessment of the author's position in light of the different theories and methods addressed in the first half of the quarter. Resources regarding the writing of academic reviews are available in a dedicated module on Canvas.

Research Paper (60% of grade)

The main production for the course is the *research paper* (40% of the final grade), which is due, via Canvas, on **Wednesday of Week 10** (Finals Week) at the latest. This essay shall address one case in which climate change has been suggested to impact social behavior in one way or another, in the past or in the present. The research paper should be an original piece of academic inquiry and writing, presenting the case study in its general historical and/or intellectual context, an overview of the existing scholarship on the topic, the material available to address the research question, and the author's personal analysis of the material at hand. The paper is not restricted in size and scope, but you should **aim at ca. 15 pages of text**, titled, typed, paginated, and double-spaced with 1-inch margins all around. Use a 12-point, legible font (*Times* if possible). Appendices (such as bibliography, original texts, illustrations, etc.) are to be added to the main body of the text.

The topic of the paper is at the discretion of the student but needs to be discussed beforehand with the instructor.

It is your responsibility to pro-actively engage with the instructor in due time. Your research paper can address such topics as (i) history of ideas: a classical to early-20th century author's analysis of climate (and/or climate change) and its impact on society; (ii) history: a case-study of an historical episode when climate has (or is suggested to have) had a direct impact on a given society's development (these episodes need not be restricted to Antiquity and the Middle East); (iii) any other topic of your suggestion, provided that the instructor has agreed to it.

The essay topics may not be chosen among the ones discussed in class.

An *annotated bibliography* (10% of final grade) of resources you intend to use for your research paper is due on **Tuesday of Week 5**, and you will be asked to give a short (5 minutes) *presentation* (10% of final grade) of your intended topic to the class on **Thursday of Week 5**.

Class Policies

Inclusion, Diversity, and Class Climate

In my experience, productive discussion and learning arise in an inclusive classroom that is welcoming of diverse perspectives, experiences, and backgrounds. I aim, then, to cultivate such an environment by structuring the course and activities in a manner that is respectful of diversity in all its forms and across all dimensions of identity, social location, and experience. I expect class discussion to proceed in the same spirit. I welcome suggestions on how to enhance the inclusivity of the class, so please do be in touch with any thoughts or questions about this.

Attendance and Late Work

Because class discussion is at the heart of this course, you are required to be in class, and what we do in the course of our class meetings will determine a large portion of your grade. I understand that sometimes emergencies or other unexpected circumstances arise that make attendance that day impossible. If this is the case, please contact me as soon as possible so we can discuss how to get you caught up. If you will be absent from a class for a university-sponsored activity, please make arrangements with me in advance regarding any work you might miss. I will allow **one unexcused absence during the quarter**. In case of two or more unexcused absences, you will have to provide justification, accompanied by a letter from your academic adviser. Without that, I will reduce your grade.

The due dates for all papers are listed above and in the Canvas calendar. **It is your responsibility to be aware of them.** I will tolerate one one-day extension for one of the written assignments in the quarter. Apart from this, for each day that your assignment is overdue, I will deduct 1/3 of a letter grade (e.g., A- becomes a B+). Except under truly extraordinary and justified circumstances, I will not allow incompletes.

Technology in Class

You are welcome to use a laptop or tablet in this class (no phones!), as long as it contributes to your learning. This class, once again, is discussion based. This means that all students are expected to actively listen to one another in order to participate in classroom activities. If you are unable to contribute to the discussion or are otherwise distracted by your electronic device, I will ask that you refrain from using it in class. There may be some class sessions where we will use technology together, and in those instances, all students should make arrangements to bring a laptop or tablet to class. If you have any questions or concerns, please be in touch with me.

Access to the Internet can be a valuable aid to the classroom learning environment to explore concepts related to course discussions and in-class activities. Keep in mind, however, that these technologies can be distracting – not only for you, but to others in the class. Please avoid the temptation of social media, internet surfing, texting, or other off-topic diversions. Our primary purpose in class is to talk with one another about our ideas after carefully reading and analyzing these texts, so any technology use should be in the service of that aim, and should not hinder or distract from it. So, if you use a laptop or tablet, please do so for course purposes only.

Email Policy

It may take me up to 48 hours to respond to email, please do not write to me with urgent, last-minute questions. If you email to inform me of an upcoming absence or that you are taking your optional, one-time extension, you can assume I have seen your message even if I do not respond immediately. Please write your messages as you would other forms of professional communication, opening them with an address (“Dear Professor Reculeau” is fine) and closing them with your full name, for my reference. Make sure I have all the information I would need to understand your message immediately (which class is this about? which assignment?)

Academic Integrity

Please note that an important element of academic integrity is fully and correctly attributing any materials taken from the work of others. Feel free to consult with me before completing assignments if you have concerns about the correct way to reference the work of others. More generally, please familiarize yourself with the [University’s policy](#) on academic honesty, which applies to this course. Of course, I do not anticipate any problems with academic integrity. In the unlikely event that any concerns do arise regarding this matter, I will forward all related materials to the College for further review and action.

Acting with academic integrity means, in brief, not submitting the statements, work, or ideas of others as one’s own. Students are expected to comply with University regulations regarding honest work. If you are in doubt about what constitutes academic dishonesty, speak with me before the assignment is due. Failure to maintain academic integrity on an assignment will result in a penalty befitting the violation, up to and including failing the course and further University sanctions. For more information, consult the [student manual](#).

Accessibility and Accommodations

The University of Chicago is committed to ensuring the full participation of all students in its programs. If you have a documented disability (or think you may have a disability) and, as a result, need a reasonable accommodation to participate in class, complete course requirements, or benefit from the University's programs or services, you are encouraged to contact Student Disability Services as soon as possible. To receive reasonable accommodation, you must be appropriately registered with Student Disability Services. Please contact the office, located at 5501 S. Ellis Avenue. Tel: 773-702-6000; TTY 773-795-1186; e-mail: disabilities@uchicago.edu; website: disabilities.uchicago.edu

Students with disabilities who have been approved for the use of academic accommodations by Student Disability Services (SDS) and need a reasonable accommodation(s) to participate fully in this course should follow the procedures established by SDS for using accommodations. Timely notifications are required in order to ensure that your accommodations can be implemented. Please meet with me to discuss your access needs in this class after you have completed the SDS procedures for requesting accommodations.

Mental Health and Wellness

Your success in this class and overall wellness at the University is important to me, and I recognize that the transition to college poses challenges to all students. Should you feel in need of mental health or wellness support, remember that you have in place here a network of people who are ready and willing to help. Your College Advisor, your Resident Heads and Resident Assistants, and the staff at Student Counseling are available to you should you need or want to talk. You can find a description of the services offered [here](#).

A Note on Sexual Misconduct

The University of Chicago is committed to fostering a safe, productive learning environment. Title IX and our University policy prohibits discrimination on the basis of sex. Sexual misconduct — including harassment, domestic and dating violence, sexual assault, and stalking — is strictly prohibited both in- and outside the classroom.

I encourage anyone experiencing sexual misconduct to talk to someone about what happened, so they can get the support they need and the University can respond appropriately. If you wish to speak confidentially about an incident of sexual misconduct, want more information about filing a report, or have questions about policies and procedures, please contact the Title IX Coordinator, which can be found on our school's website.

The University is legally obligated to investigate reports of sexual misconduct after a formal complaint is filed or signed by the Title IX Coordinator, but a request for confidentiality will be respected to the extent possible.

My door is always open to students who wish to discuss matters that may affect their learning experience at the University. As Faculty, I am an Individual with Title IX Reporting Responsibilities and am required to report all incidents of sexual assault, sexual abuse, sexual harassment, dating violence, domestic violence, and stalking (referred to here as “sexual misconduct”) to the Title IX Coordinator.

For additional information on Title IX and the resources available to students, please visit:

<https://studentmanual.uchicago.edu/university-policies/the-university-of-chicago-policy-on-title-ix-sexual-harassment/>

<https://equalopportunityprograms.uchicago.edu/confidential-resources/>

UChicago Health Pact

All students on campus are required to adhere to the guidelines in the UChicago Health Pact in order to promote a safe environment in the classroom.

- Secure face coverings must be worn appropriately at all times while in University buildings
- Maintain a distance of 6 feet from others whenever possible
- Do not attend and in-person class if you feel unwell or are experiencing COVID-19 related symptoms

The complete text of the UChicago Health Pact along with additional information about COVID-19 protocols can be found [here](#).

Reporting COVID-19 Related Concerns

Any concerns over inappropriate PPE usage, physical distancing, cleaning/disinfection, or other COVID-19 related public health concerns should be directed to [UCAIR](#).

If there is an emergency, call 773-702-8181 or dial 123 on any campus phone.

Reporting COVID-19 Exposure or a Confirmed Case

If you were potentially exposed to COVID-19 or your COVID-19 test results come back positive, reach out immediately to C19HealthReport@uchicago.edu.

COURSE SCHEDULE AND READING LIST

Note: The following schedule and reading lists are subject to change upon instructor's decision; changes will be announced in due time on Canvas.

Week 1 – Introductory Remarks

W1/1 (lecture) – Introduction: Historicizing the Holocene

- Hulme, M. 2011. Meet the Humanities. *Nature Climate Change* 1: 177–179.
- Roberts, N. 2013. *The Holocene: An Environmental History*. 3rd ed. Oxford: Wiley-Blackwell. Chapter 1, pp. 2–7.
- Weart, Spencer R. *The Discovery of Global Warming*. 2nd ed. 2008. Cambridge, MA: Harvard University Press. Introduction and Summary.

Go to: <https://history.aip.org/climate/index.htm> (the website offers an expanded version of the book and is a good summary and history of the development of climate science. I encourage you to explore the website further after reading the introduction and summary)

W1/2 (discussion) – Climate, Weather, and People

- Hulme, M. 2017. *Weathered: Cultures of Climate*. London: SAGE. Chapter 1. “What is Climate?,” Chapter 3 “Knowing Climate,” Chapter 5 “Living with Climate.”
- Degroot, D. et al. 2021. Towards a rigorous understanding of societal responses to climate change. *Nature* 591: 539–550.

Week 2 – Historical Perspectives on Climate and Climate Change

W2/1 (lecture) – Climate(s) before Climate Change

- Herodotus. 5th c. BCE. *The Histories*, Book 2, 34–36 (transl. A. D. Godley, *Herodotus I, Books I-II*, Loeb Classical Library, revised ed. 1975 [1st ed. 1920]. Cambridge (MA) & London: HUP & Heinemann, 315–319.
- Ibn Khaldûn. 14th c. CE. *The Muqaddimah*. An Introduction to History. In: *The Anthropology of Climate Change: An Historical reader*, ed. M. R. Dove. 2014. Malden (MA): Wiley Blackwell, 55–66.

W2/2 (discussion) – Climate Determinism, Past and Present

- Charles de Secondat Montesquieu. 1748. On the Laws in Their Relation to the Nature of the Climate. In: *The Anthropology of Climate Change: An Historical reader*, ed. M. R. Dove. 2014. Malden (MA): Wiley Blackwell, 47–52.
- David Hume. 1758. Of National Characters. In: *Political Essays*, ed. Knud Haakonssen, 78–92. Cambridge Texts in the History of Political Thought. Cambridge: Cambridge University Press, 1994.
- Ratzel, F. 1896–98. Nature, Rise, and Spread of Civilization. In: *The Anthropology of Climate Change: An Historical reader*, ed. M. R. Dove. 2014. Malden (MA): Wiley Blackwell, 107–114.
- Judkins, G., M. Smith & E. Keys. 2008. Determinism within Human-Environment Research and the Rediscovery of Environmental Causation. *The Geographical Journal* 174/1: 17–29.
- Hulme, M. 2011. Reducing the future to climate: a story of climate determinism and reductionism. *Osiris* 26.1: 245–266.

Week 3 – Past and Present Climates of the Holocene

W3/1 (lecture) – Global and Local Climates, and Their Changes Over Time

- Perry, A. 1997. “Mediterranean Climate.” In: *The Mediterranean: Environment and Society*, ed. R. King. London: Arnold Press, 30–44.
- Baede, A.P.M. et al. 2001. The Climate System: an Overview. *International Panel on Climate Change AR3*, 87–98.
- Mayewski, P.A., Rohling, E.E., Stager, J.C., Karlén, W., Maasch, K.A., Meeker, L.D. et al. 2004. Holocene climate variability. *Quaternary Research* 62: 243–255.

W3/2 (discussion) – *Climate Archives and the Dating of Past Episodes of Climate Change*

– <https://opengeology.org/historicalgeology/paleoclimatology-earth-systems-change-through-time/>

- Roberts, N. 2013. *The Holocene: An Environmental History*. 3rd ed. Oxford: Wiley-Blackwell. Chapter 2, pp. 8-54
- Manning, S. W. 2010. Radiocarbon Dating and Climate Change. In: *Climate Crises in Human History*, ed. A. B. Mainwaring, R. Giegengack & C. Vita-Finzi. Philadelphia: Lightning Rod Press, American Philosophical Society, 25–59.

Week 4 – Narratives of Climate and Social Change in the Past

W4/1 (lecture) – *Ancient Societies Facing Climate Change: Collapse, Resilience, or Transformation?*

- Weiss, H. & R. S. Bradley. 2001. What Drives Societal Collapse? *Science* 291: 609–610.
- McAnany, P. A. & N. Yoffee. 2010. Why We Question Collapse and Study Human Resilience, Ecological Vulnerability, and the Aftermath of Empire. In: *Questioning Collapse: Human Resilience, Ecological Vulnerability, and the Aftermath of Empire*, ed. P. A. McAnany & N. Yoffee. Cambridge: Cambridge University Press, 1–17.
- Diamond, J. 2010. Two views of collapse. *Nature* 463: 880–881.

W4/2 (discussion) – *Neo-Determinism and its Critique*

- Middleton, G. D. 2012. Nothing Lasts Forever: Environmental Discourses on the Collapse of Past Societies. *Journal of Archaeological Research* 20(3): 257–307.
- Fauseit, R. K. 2016. Collapse, Resilience, and Transformation in Complex Societies: Modeling Trends and Understanding Diversity. In: *Beyond Collapse: Archaeological Perspectives on Resilience, Revitalization, and Transformation in Complex Societies*, ed. R. K. Fauseit. Carbondale: Southern Illinois University Press, 3–26.
- Weiss, H. 2017. Megadrought, Collapse and Causality. In: *Megadrought and Collapse: From Early Agriculture to Angkor*, ed. H. Weiss. Cambridge: Cambridge University Press, 1–31.
- O'Brien, S. 2017. Boredom with the Apocalypse Resilience, Regeneration, and their Consequences for Archaeological Interpretation. In: *Crisis to Collapse: The Archaeology of Social Breakdown*, ed. T. Cunningham & J. Driessen. Louvain: Université Catholique de Louvain, 296–303.

Week 5 – How People Really Live: The Importance of Regional Climate and Environment

W5/1 (lecture) – *Middle Eastern Historical Environments and Regionalized Climate Histories*

Deadline for Submission of Annotated Bibliographies

- Wilkinson, T.J. 2012. Introduction to Geography, Climate, Topography, and Hydrology. In: *A Companion to the Archaeology of the Ancient Near East*, ed. D.T. Potts. Oxford: Blackwell, 3–26.
- Finné, M., J. Woodbridge, I. Labuhn, C.N. Roberts. 2019. Holocene hydro-climatic variability in the Mediterranean: A synthetic multi-proxy reconstruction. *The Holocene* 29(5): 847–863.

W5/2 – Class Presentations of Research Topics

Week 6 – Early Agricultural Societies and Climate Change

W6/1 (lecture) – *The Complicated Path(s) to Agriculture During the Younger Dryas and Early Holocene*

- Rosen, A. 2007. *Civilizing Climate: Social Responses to Climate Change in the Ancient Near East*. Lanham (MD): Altamira Press. Chapter 6 “From Hunter-Gatherers to Village Farmers: The Role of Climate Change in the Origins of Agriculture,” pp. 103–127.

W6/2 (discussion) – *Assessing the Role of Climate Change in the Early Holocene History of the Middle East*

- Maher, L.A., Banning, E.B. and Chazan, M. 2011. Oasis or mirage? Assessing the role of abrupt climate change in the prehistory of the Southern Levant. *Cambridge Archaeological Journal* 21: 1–29.

- Flohr, P., Fleitmann, D., Matthews, R., Matthews, W. and Black, S. 2016. Evidence of resilience to past climate change in Southwest Asia: Early farming communities and the 9.2 and 8.2 ka events. *Quaternary Science Reviews* 136: 23–29.
- Bar-Yosef, O., Bar-Matthews, M. and Ayalon, A. 2017. 12,000-11,700 cal BP. In: *Megadrought and Collapse: From Early Agriculture to Angkor*, ed. H. Weiss. Cambridge: Cambridge University Press.
doi: 10.1093/oso/9780199329199.001.0001.

Week 7 – Early Complex Societies and Climate Change

W7/1 (lecture) – *The mid-Holocene and the Early Bronze Age in Egypt and Mesopotamia*

- Nicoll, K. 2012. Geoarchaeological Perspectives on Holocene Climate Change as a Civilizing Factor in the Egyptian Sahara. In: *Climates, Landscapes, and Civilizations*, ed. L. Giosan, D. Q. Fuller, K. Nicoll, R. K. Flad & P. D. Clift. Geophysical Monograph 198. Washington, DC: American Geophysical Union, 157–162.
- Clarke, J., Brooks, N., Banning, E.B., Bar-Matthews, M., Campbell, S., Clare, L., et al. 2016. Climatic changes and social transformations in the Near East and North Africa during the ‘long’ 4th millennium BC: A comparative study of environmental and archaeological evidence. *Quaternary Science Reviews* 136: 96–121.

W7/2 (discussion) – *Did the “4.2ka event” Cause the Collapse of Early Bronze Age Societies?*

- Bini, M., Zanchetta, G., Perşoiu, A., Cartier, R., Català, A., Cacho, I. et al. 2019. The 4.2ka BP event in the Mediterranean region: an overview. *Climate of the Past* 15: 555–577.
- Ur, J. 2015. Urban Adaptations to Climate Change in Northern Mesopotamia. In: *Climate and Ancient Societies*, ed. by S. Kerner, R.J. Dann & P. Bangsgaard, Copenhagen: Museum Tusulanum Press, 69–95.
- Moreno Garcia, J.C. 2015. Climatic Change or Sociopolitical Transformation? Reassessing Late 3rd Millennium BC in Egypt. In: *2200 BC – A Climatic Breakdown as a Cause for the Collapse of the Old World? 7th Archaeological Conference of Central Germany, October 23-26, 2014 in Halle (Saale)*, ed. H. Meller, H.W. Arz, R. Jung & R. Risch. Tagungen des Landesmuseums für Vorgeschichte Halles 12/1. Halle (Saale): Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, Landesmuseum für Vorgeschichte, 79–94.
- Weiss, H. 2017. 4.2ka BP megadrought and the Akkadian collapse. In: *Megadrought and Collapse: From Early Agriculture to Angkor*, ed. H. Weiss. Oxford: Oxford University Press, 93–160.
- Michalowski, P. 2020. The Kingdom of Akkad in Contact with the World. In: *The Oxford history of the ancient Near East: Volume I, From the beginnings to Old Kingdom Egypt and the dynasty of Akkad*, ed. K. Radner, N. Moeller & D. T. Potts. Oxford: Oxford University Press, 686–764. [Read only pp. 736–742].

Week 8 – The End of the Bronze Age: A Climate-Induced “Perfect Storm of Calamities” (Cline)?

W8/1 (lecture) – *Changing Perspectives on the End of the Interconnected Late Bronze Age*

- Rohling, E. J., A. Hayes, P. A. Mayewski & M. Kucerah. 2009. Holocene Climate Variability in the Eastern Mediterranean, and the End of the Bronze Age. In: *Forces of Transformation: The End of the Bronze Age in the Mediterranean*, ed. Ch. Bachhuber. & R. G. Roberts. Themes from the Ancient Near East BANEA publication series 1. Oxford: Oxbow & BANEA, 2–5.

W8/2 (discussion) – *The “Collapse of the Late Bronze Age” in Debate*

- Langgut, D., I. Finkelstein & T. Litt. 2013. Climate and the Late Bronze Collapse: new evidence from the southern Levant. *Tel Aviv* 40(2): 149–175.
- Knapp, A. B. & S. W. Manning. 2016. Crisis in Context: The End of the Late Bronze Age in the Eastern Mediterranean. *American Journal of Archaeology* 120(1): 99–149.
- Kaniewski, D. & Van Campo, E. 2017. 3.2ka megadrought and the Late Bronze Age collapse. In: *Megadrought and Collapse: From Early Agriculture to Angkor*, ed. H. Weiss. Oxford: Oxford University Press, 161–182.

Week 9 – The Bronze to Early Iron Age: Collapse, Dark Age, Renaissance, and Collapse—or Not?

W9/1 (lecture) – *The “Dark Ages” of the Early Iron Age and the “Renaissance” of the 8th c. BCE: The View from Assyria*

- Neumann, J. & S. Parpola. 1987. Climatic change and the eleventh-tenth-century eclipse of Assyria and Babylonia. *Journal of Near Eastern Studies* 46: 161–182.
- Sinha, A., G. Kathayat, H. Weiss, H. Li, H. Cheng, J. Reuter, A. W. Schneider, M. Berkelhammer, S. F. Adalı, L. D. Stott & R. L. Edwards. 2019. Role of climate in the rise and fall of the Neo-Assyrian Empire. *Science Advances* 2019;5: eaax6656.

W9/2 (discussion) – *Action or Reaction? Ancient Societies and the Anthropocene*

- Marston, J. M. 2011. Archaeological markers of agricultural risk management. *Journal of Anthropological Archaeology* 30: 190–205.
- Smith, B.D. and M.A. Zeder. 2013. The onset of the Anthropocene. *Anthropocene* 4: 8-13.
- Marston, J. M. 2015. Modeling Resilience and Sustainability in Ancient Agricultural Systems. *Journal of Ethnobiology* 35/3: 585–605.
- Riehl, S. 2015. Understanding the Reasons for Non-Sustainability in Past Agricultural Systems. In: *Climate and Ancient Societies*, ed. S. Kerner, R.J. Dann & P. Bangsgaard. Copenhagen: Museum Tusulanum Press, 291–311.
- Harrison, S.P, B.D. Stocker, K.K. Goldewijk, J.O. Kaplan & P. Braconnot. 2018. Do we need to include anthropogenic land-use and land-cover changes in paleoclimate simulations? *Past Global Changes Magazine* 26(1): 4-5.

Week 10 — Exam Week

Research Paper due on Wednesday