ANTH 341 FOOD ORIGINS
Winter 2018 (CRN 26905)
125 McKenzie/ 10:00-11:20 pm on Tue & Thur

Clockwise from top left: Bronze plate with farming motif, Korea; Neolithic millet seeds, China; foxtail millet starch grains; Neolithic grinding slabs, Korea.

Prof. Gyoung-Ah Lee
Office: Condon 254
Office hours: 11:30 am-12:30 pm on Tue & Thur
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GE. Sophie Miller
Office: Condon 365
Office hours: 2:30-4:30 pm on Thur
Contact: smiller3@uoregon.edu

READINGS
Course Canvas> Modules>Readings

Study all the MAIN readings prior to each class for reading summaries (see the Participation in p.3). SUPPLEMENTARY readings: a good starting point for reference search for class discussion and ‘group presentations.’

Copies are available at the UO Book Store.

ACCOMMODATION
A range of supports and services are available through the Accessible Education Center to eligible students. Contact Prof. Lee for further arrangement.
For more information:
https://aec.uoregon.edu/content/support-and-services

ACADEMIC INTEGRITY
A respectful environment is key for successful learning.
Check how to avoid academic misconduct and plagiarism at
http://dos.uoregon.edu/conduct
https://researchguides.uoregon.edu/citing-plagiarism
COURSE DESCRIPTION
The course introduces archaeological and scientific data on plant domestications and origins of agriculture worldwide. It engages up-to-date perspectives on why and how some hunter-gatherers became farmers/herders and the aftermath that brought social, cultural, and environmental changes in the past, which still resonate in our time. Students will gain the updated knowledge on the transition to agriculture in the primary origins of domestication. Students are expected to demonstrate the core knowledge on the transition to agriculture in discussions in-class and sections, written exams, group presentations, and write-ups. Museum visits and film watching will be arranged to enhance learning.

LEARNING OBJECTIVES
The course aims to make students aware of critical research on the subjects and to prepare them to apply the knowledge to their own academic interests. Students will gain the updated knowledge on the transition to agriculture in the primary origins of domestication. Students will compare major theories on the cultural and biological processes involved with the transition to agriculture. Topics are varied in each lecture but the following subjects will reoccur throughout the course:
- Socio-cultural characteristics before and after the emergence of agriculture
- Regional environmental conditions/changes before and after the emergence.
- Biological processes of each domesticated species.
- Cultural roles of domesticated species.

EVALUATION SCHEMES
No CURVE for this class. Final letter grades will be configured as follows. If the course is taken P/NP, 70% (C-) or higher is required to pass the class.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Scores</th>
<th>Specifications</th>
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<tbody>
<tr>
<td>A</td>
<td>15 points</td>
<td>Lecture participation</td>
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<tr>
<td>A'</td>
<td>15 points</td>
<td>Tutorial participation</td>
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<tr>
<td>A</td>
<td>20 points</td>
<td>Exam 1 / Feb 1</td>
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<tr>
<td>B</td>
<td>20 points</td>
<td>Exam 2 / Mar 15</td>
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<tr>
<td>B'</td>
<td>10 points</td>
<td>Annotated bibliography / Feb 23</td>
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<tr>
<td>C</td>
<td>20 points</td>
<td>Group presentation / Mar 2 or 9</td>
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<tr>
<td>C'</td>
<td>10 points</td>
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<tr>
<td>D</td>
<td>15 points</td>
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<td>D'</td>
<td>15 points</td>
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<td>F</td>
<td>60%</td>
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COURSE POLICY
- No cell phone use during the class & tutorials.
- Very restricted laptop/tablet use. Contact me for permission to use the gadget.
- A late reading summary is only worth of 50% of the total point (that is 0.5).
- A late annotated bibliography can be handed in up to 2 days late for 1-point per day penalty.
- If you miss Exam 1, you must contact me and a GE on the same day of the exam to schedule a makeup exam. You should bring a documented and legitimate reason: i.e., religious holiday, medical emergency, or family crisis. Makeup exam questions and format can be different from the original exam.
- No makeup exam will be granted for Exam 2. Instead it will be graded as 60% of your Exam 1: Exam 2 score = Exam 1 score * 0.6.
LECTURE PARTICIPATION

Class attendance, active discussion, and evidence of reading will all count towards the participation grade. A summary of the weekly reading assignments is worth of 1 point out of 20 participation marks. Upload summaries onto the ‘Canvas>Assignments>Reading Summaries’ throughout the term before the lecture of your choice. Each summary should describe:

- Describe key themes in all MAIN READINGS per lecture within 300 words.
- Add questions and topics for discussion at the end of summary. A word limit (300) does not include questions and discussion topics.

15 points total = 9 for attendance (0.5 each X 18 classes) + 6 for reading summaries

TUTORIAL PARTICIPATION

Tutorials consist of lab/museum visits, discussion, worksheet, and lectures, depending on the topics of the week. Students will work on 5 worksheets in selected tutorials (see the ‘weekly schedule’), which will be worth 1 point each. Student will submit their worksheet at the end of the tutorial. A grade for tutorials will be configured as below. For each laboratory there will be a written component.

15 points = 8 for attendance (1 per tutorial * 8)+5 for worksheet (1 per worksheet) + 2 for participation

EXAMS 1 & 2

Exams 1 and 2 will take place in class (Feb 1, Mar 15) and will be open book. Essay-based exams will require you to integrate and synthesize the course material and learning. Each exam (20 points in total) will consist of 3 short-answer questions (4 points each, half-page of the provided answer sheets) and 1 long-answer question (8 points, 1 page). The lecture contents, main readings, and tutorial contents will be the subject of the questions. The topics covered after Exam 1 (that is, from February 6) will be the subject of Exam 2—the exams are not cumulative. You are required to bring your photo ID (e.g., UO ID, driving license) to the exams.

ANNOTATED BIBLIOGRAPHY

Students are individually responsible for producing an annotated bibliography for their research on the presentation (due on February 23). Tutorial class on February 2 will be devoted to guiding students on how to build annotated bibliography.

The annotated bibliography should summarize 10 or more references in total, including at least 5 references of your own search. Each bibliography will summarize key contents of the reading and its relevance to your presentation in 400 to 500 words.

GROUP PRESENTATION

Groups of 4 students will present their projects in 16 min during the tutorials either on Mach 2nd or 9th at the Visualization Lab- Allan Price Science Commons- Research Library.

A focus of this assignment is improving your research and public presentation skills as well as building knowledge on the subject.

More information about this assignment will be provided in tutorials on February 2 and 16. Check the ‘Presentation Guide and Rubric’ in Canvas. The presentation subjects are broadly defined as above, but should be relevant to course materials:

- Select a food item(s) and research its origins in the archaeological records.
- Compare, contrast, and identify the plausibility and strength of two or more theories/perspectives on the origins of agriculture with regional archaeological data.
- Identify social, cultural and/or environmental impacts of plant or animal domestication and agriculture (e.g., gender and cultural identity, social inequality, state formation, environmental changes, migrations).
### WEEKLY READINGS

#### Week 1

**Harris, D.**

**Film:**
Bishop, J. M. and N. H. Bishop

#### Week 2

**Boivin, N. L., M. A. Zeder, D. Q. Fuller, A. Crowther, et al.**

**Larson, G. et al.**

**Smith, B. D.**

**Supplementary readings:**

Johns, T.

#### Week 3

2016  Regional diversity on the timing for the initial appearance of cereal cultivation and domestication in southwest Asia. *PNAS* 113(49): 14001-14006.

**Zeder, M.**

**Supplementary readings:**

Pearsall, D. M. and Hastorf, C.


#### Week 4

**Crawford, G. W.**

**Aikens, C. M. and G.-A. Lee**

**Jones, M. and Liu, X.**

**Wang, C., H. Lu, J. Zhang, K. He, and X. Huan**
2016  Macro-process of past plant subsistence from the Upper Paleolithic to middle Neolithic n China: a quantitative analysis of multi-archaeobotanical data. *PLOSONE* DOI:10.1371/journal.pone.0148136
**Supplementary readings:**

Zhao, Z.  

**Week 5**

Bryant, V. M.  
2007   Microscopic evidence for the domestication and spread of maize. *PNAS* 104 (50):19659-60

Crawford, G. W.  

Crawford, G. W. and Lee, G.-A.  

Ranere, A. J., Piperno, D. R., Hostl, I., Dickau, R. and Iriate, J.  

**Supplementary readings:**

Kitagawa, J. and Yasuda, Y.  
2008   Development and distribution of *Castanea* and *Aesculus* culture during the Jomon period in Japan. *Quaternary International* 184: 41-55.

Lee, G.-A.  

Matsu, A. and M. Kanehara  

**Week 6**

Smith, B. D.  

Speller, C. F., B. M. Kemp, S. D. Wyatt, C. Monroe et al.  

Larson, G. and D. G. Bradley  

Larson, G. and F. Fuller  

**Week 7**

Atalay, S. And C. A. Hastorf  


Peterson, J. D.  
A calorie is not necessarily a calorie: technical choice, nutrient bioaccessibility, and interspecies differences of edible plants. PNAS 109(17): E991.

Supplementary readings:
Smith, M. L.

Week 8
Bettinger, R., Richerson, P. and Boyd, R.
Cohen, M. N.
Gremillion, K.J. et al.
2014a Particularism and the retreat from theory in the archaeology of agricultural origins, Proceedings of the National Academy of Sciences of the USA 111: 6171-6177.
—. 2014b Reply to Smith: on distinguishing between models, hypotheses, and theoretical frameworks. Proceedings of the National Academy of Sciences of the USA 111.
—. 2014c Reply to Zeder: maintaining a diverse scientific toolkit is not an act of faith. Proceedings of the National Academy of Sciences of the USA 111.
O’Brian, M.J., Laland, K.N.
Smith, B. D.
2014 Failure of optimal foraging theory to appeal to researchers working on the origins of agriculture worldwide. Proceedings of the National Academy of Sciences of the USA 111.
Zeder, M.A.
2014 Alternative to faith-based science. PNAS 111. doi/10.1073/pnas.1408209111

Week 9
Bender, B.
Hastorf, C. A.
Cohen, M. N.
Diamond, J.
Hayden, B.
Hodder, I.
Stiner, D.
<table>
<thead>
<tr>
<th>WEEK/DATE</th>
<th>SUBJECTS</th>
<th>READINGS</th>
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| **1** | **Jan 9** | Course Introduction  
- Overview of course schedules and assignments  
- History of research on agricultural origins | Textbook (Ch.1) |
| | **Jan 11** | Classifying subsistence  
- Modes of subsistence; foraging, food production, agriculture  
- Film watching: Subsistence systems | Textbook (Ch.2: pp. 16-24); Harris 2007  
Film: Bishop & Bishop 2008 |
| | **Jan 12** | Film discussion and review for Worksheet1; forming presentation groups & guide to how to read articles |
| **2** | **Jan 16** | Origins of Crop domestication in a global view  
- Primary origins and global spread | Boivin et al. 2016; Larson et al. 2014 |
| | **Jan 18** | Methods for documenting domestication  
- Scientific, archaeological methods of detecting plant domestication | Textbook (Ch. 3); Smith 2011a  
Supplementary readings: Pearsall & Hastorf 2011 |
| | **Jan 19** | Domestication in terms of detoxification and flavor; Worksheet 2 | Supplementary readings: Johns 1990 |
| **3** | **Jan 23** | Crop origins in Southwest Asia  
- Cultural and biological perspectives  
- Archaeological evidence of early plant management | Textbook (Ch.4); Arranz-Otaegui et al. 2016 |
| | **Jan 25** | Agricultural spread in Europe  
- Spread of domesticated crops  
- Animal domestication & spread: SW Asian package  
- Miriam Rigby’s demo on reference search | Textbook (Ch. 5 pp. 92-106); Zeder 2008  
Supplementary readings: Rowley-Conwy 2011 |
| | **Jan 26** | Archaeobotany Laboratory (Condon 265)  
Supplementary readings: Pearsall and Hastorf 2011. Worksheet 3 |
| **4** | **Jan 30** | Domestication of Asian crops  
- Wet rice agriculture in South China  
- Early millet farming in North China | Aieknis & Lee 2013; Crawford 2009;  
Supplementary readings: Zhao 2011 |
| | **Feb 1** | Exam 1 in class |
| | **Feb 2** | Discussion on presentation topics; How to build annotated bibliography and to cite them  
[https://researchguides.uoregon.edu/citing-plagiarism](https://researchguides.uoregon.edu/citing-plagiarism) |
| **5** | **Feb 6** | Hunter-Gatherer & Farmer Interactions in Asia  
- Theories on agricultural dispersal beyond origins  
- Beyond cereal crops: arboriculture Socio-economic consequences of agricultural adoption | Crawford 2008; Crawford & Lee 2003  
Supplementary readings: Kitagawa & Yasuda 2008; Lee 2011; Matsui & Kanehara 2006 |
| | **Feb 8** | Origins of Agriculture in Central-South America  
- Domestication of the Columbian Trio  
- Origins of tubers  
- Domestication of draft herds in the Andes | Textbook (Ch. 7, pp. 146-181); Bryant 2007; Ranere et al. 2009 |
| | **Feb 9** | Introduction to Zooarchaeology: Worksheet 4 |
| **6** | **Feb 13** | Prehistoric Plant management in Eastern North America  
- Indigenous Eastern crop complex  
- Transition to maize agriculture  
- Turkey domestication | Textbook (Ch. 8. pp. 184-200); Smith 2011b; Speller et al. 2011 |
| | **Feb 15** | Animals-Plants-Humans  
- Symbiosis of crop domestication & animal husbandry  
- Companion animal domestimations | Larson & Bradley 2014; Larson and Fuller 2014 |
| | **Feb 16** | Discussion on presentation; how to prepare the presentation |
| **7** | **Feb 20** | Beyond Calorific Needs  
- Social role of food  
- Luxury food and social status in archaeological record | Atalay & Hastorf 2006; Curet and Pestle 2010; Wollstonecroft et al. 2012 |
| | **Feb 22** | Food Preparation, Performance, and identity  
- Procuring, fermenting, cooking, feasting in archaeological record  
- Food preference and identity | Jennings et al. 2005  
| | **Feb 23** | Annotated bibliography due / Farming and gender: Peterson 2007. Worksheet 5 |
### Feb 27
Theories on the transition to food production I
- Environmental models
- Population-resource imbalance models

Bettinger, Richerson & Boyd 2009; Cohen 1975

### Mar 1
Theories on the transition to food productions II
- System theory
- Ecological, co-evolutionary perspectives
- Niche construction theory


### Mar 2
**Presentations at the Visualization Lab-Science Library**
[https://library.uoregon.edu/price-science-commons-research-library](https://library.uoregon.edu/price-science-commons-research-library)

### Mar 6
Theories on the transition to food productions III
- Social relation perspectives: Marxist, Individualism
- Post-processual, ideological models


### Mar 8
Looking to the future
- Sustainability of agriculture in the past and present
- Traditional Ecological knowledge and biodiversity
- Impact of agriculture on health and societies

Cohen 2008; Diamond 2002; Stiner 2004

### Mar 9
**Presentations at the Visualization Lab-Science Library**

### Mar 13
Wrap-up
- Discussion on group presentations
- Overview of Exam 2

### Mar 15
Exam 2 in class

### Mar 16
Native Garden tour: Meeting at the entrance of the Museum of Natural & Cultural History at 1680 E 15th
[http://natural-history.uoregon.edu/](http://natural-history.uoregon.edu/)

- A schedule is subject to change.