ANTH 446/546 PRACTICAL ARCHAEOBOTANY
Winter 2022 (CRN 23005/23038)
330 Condon for lecture & 204 Condon for Lab / 12:00-1:50 pm on Tue & Thu

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

Prof. Gyoung-Ah Lee
Office: Condon 254
Office hrs: 2:00-3:00 pm on Tue or by appointment
Contact: galee@uoregon.edu or 541-346-4442

GE. Hyunsoo Lee
Office: Condon 365
Office hrs: 2:00-4:00 pm on Thur
Contact: hlee2@uoregon.edu

READINGS
All readings for the course are available in the Course Canvas > Modules > Readings. Study all the MAIN readings prior to each class for reading summaries (see the ‘Participation’ in p.2). SUPPLEMENTARY readings: a good starting point for reference search for ‘critical reviews’ and ‘active discussion.’

ACCOMMODATION
A range of supports and services are available through the Accessible Education Center to eligible students. Contact to Prof. Lee for further arrangement.

For more information:
https://aec.uoregon.edu/content/support-and-services

ACADEMIC INTEGRITY
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

Class policy: no cell phone use & restricted laptop/tablet use.
COURSE DESCRIPTION

The course is designed as an introduction to archaeobotany (paleoethnobotany), a subdiscipline of archaeology. The topics will include macroscopic plant systematics, co-evolutionary relations between weeds and crops, domestication, and cultural interpretation on past plant use. Students will learn the basic method of recovering plant remains from the field; laboratory procedures; various qualitative and quantitative assessments on plant remains. Through active participation, students will gain basic analytical skills of plant remains and learn how to critically assess published sources of archaeobotany and its application to cultural interpretation.

LEARNING OBJECTIVES

• An understanding of history of archaeobotany as an archaeological discipline
• An understanding of the recent discourse on plant domestication, traditional use of plant resources, early agriculture, etc.
• Familiarity of well-known cases of archaeobotanical investigation
• Gaining the basic analytical skills of archaeobotanical plant remains
• Learning how to use microscopes, digital photography, etc.
• Learning how to write an archaeobotanical analytical report

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. For graduate students the mark is 80 % (B-) or higher for passing.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Undergraduate Students</th>
<th>Graduate Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Quality of performance is outstanding relative to that required to meet course requirements; demonstrates mastery of course content at the highest level. A+ is given rarely for performance that significantly exceeds all requirements and expectations.</td>
<td>20 points due on Feb 3</td>
</tr>
<tr>
<td>B</td>
<td>Quality of performance is significantly above that required to meet course requirements; demonstrates mastery of course content at a high level.</td>
<td>20 points due on Feb 3</td>
</tr>
<tr>
<td>C</td>
<td>Quality of performance meets the course requirements in every respect; demonstrates adequate understanding of course content.</td>
<td>Quiz on Feb 22 (20 points)</td>
</tr>
<tr>
<td>D</td>
<td>Quality of performance is at the minimal level necessary to pass the course but does not fully meet the course requirements; demonstrates a marginal understanding of course content.</td>
<td>Mar 10 in class (20 points)</td>
</tr>
<tr>
<td>F</td>
<td>Quality of performance is unacceptable and does not meet the course requirements; demonstrates an inadequate understanding of course content.</td>
<td>20 points due on 11:59 pm on Mar 17 (Canvas submission)</td>
</tr>
</tbody>
</table>

A' ≥ 97% A ≥ 93% A' ≥ 90% B' ≥ 87% B ≥ 83% B' ≥ 80% C' ≥ 77% C ≥ 73% C' ≥ 70% D' ≥ 67% D ≥ 63% D' ≥ 60% > F

SPECIFICS

| Participation | 20 |
| Critical review | 20 points due on Feb 3 |
| Journal external review | 20 points due on Feb 3 |
| Identification quiz | Quiz on Feb 22 (20 points) |
| Group Presentation | Mar 10 in class (20 points) |
| Analytical report | 20 points due on 11:59 pm on Mar 17 (Canvas submission) |

PARTICIPATION

Attendance, active discussion, and evidence of reading will count towards the participation grade. Each summary should meet the following conditions:

☑️ 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 topics for discussion.

20 points = 10 for Attendance (0.5 each X 20 classes) + 9 for 6 Reading summaries + 1 for Discussion

* Notify the instructor to arrange the alternative option if you miss the lab or class due to the illness (inc. covid related issues). More info on COVID-related issues and responsibilities, click here.
BOTH UNDERGRADUATE & GRADUATE STUDENTS

IDENTIFICATION QUIZ
The quiz consists of 20 questions on the identification of archaeological plant species through microscopic observation in lab class on Feb 22.

ANALYTICAL REPORT
Students will write an analytical report of their group samples INDIVIDUALLY. The report contains the quantitative and qualitative assessment of plant remains, including tables and figures (e.g., maps, graphs, charts, photos) of plant remains. Students need to provide cultural interpretation on data analyzed. Write a 5-page length text and add tables, figures, and references cited. Upload the report by Mar 17 to the folder at Canvas>Modules>Assignments>Analytical Report.

PRESENTATION
Students will present their data as a group for 15 min in class on Mar 10. Grading will be based on both group and individual effort equally, so students will sign their names in each slide that they make. Each group can also use other groups’ data for comparison. In order to do so, each group is required to send a seed count table to the GE by Mar 3. Each group will upload the group presentation file (Powerpoint format) to the folder at Canvas>Modules>Assignments>Group Presentation by 10 am on Mar 10. More information about the presentation will be provided throughout the lab sections.

WRITING SPECIFICS
Use a 12-size legible font and a double space in 1” margin letter papers. A late penalty: 2% of the grade each day, including weekends.

CRITICAL REVIEW FOR UNDERGRADUATE STUDENTS
Undergraduate students will select topics relevant to the course materials for a 3-page length review due on Feb 3. Each review will contain:

✓ Summarize the most important theme(s) in each reading of your selection.
✓ Compare concepts, terms, theories, perspectives, and/or methodologies.
✓ Provide your critical assessment on each argument, theory, perspective, and/or methodology.
✓ Include a ‘Reference Cited’ at the end of the paper. Follow the citation style of the Journal of Archaeological Science.

JOURNAL EXTERNAL REVIEW FOR GRADUATE STUDENTS
Graduate students will review one recently published article on topics relevant to the course materials, as if being a referee to determine whether this article is worthy of publication. Use the ‘Review Form’ and write your assessment in the separate sheet. Review form is available at Canvas>Module>Assignments>Journal Review.

REFERENCE SEARCH
The references should include academic sources (e.g., articles from peer-reviewed journals, books, book chapters published by academic publishers).

Students can use main and supplementary readings for this assignment, but also should find at least two academic publications beyond those given in the syllabus.

Useful source at https://researchguides.uoregon.edu/archaeology.

3
**READINGS**

All readings are uploaded at Canvas>Module>Main Readings & Canvas>Module>Supplementary Readings.

**Week 1**

**Main**

Pearsall, D. M.

Pearsall, D. M. and C. A. Hastorf

**Supplementary**

Marston, J. M., C. Warinner, and J. d’Alpoim Guedes

**Week 2**

**Main**

Fritz, G., and M. Nesbitt

d’Alpoim Guedes, J., and R. Spengler

Gallagher, D. E.

**Supplementary**

Miksicek, C. H.

van der Veen, M.

**Week 3**

**Main**

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


Smith, B. D.

Zeder, M. A.
**Supplementary**

Harris, D. R.

Hastorf, C. A.

Johns, T.

**Week 4**

**Main**

Crawford, G. W.

Kwak, S., H. Obata, and G.-A. Lee

Lee, G.-A., G. W. Crawford, L. Liu, and X. Chen

Yun, H.-P., M.-J. Ko, and G.-A. Lee

**Supplementary**

Kim, M. and H. Yun
2011 The availability and use of wood resources at the multi-period settlement site of Pyeonggeo-dong, Jinju, South Korea. *Vegetation History and Archaeobotany* 20: 67-77.

Lee, G.-A.

Hosoya, L. A.
2011 Staple or famine food?: Ethnographic and archaeological approaches to nut processing in East Asian prehistory. *Archaeological and Anthropological Sciences* 3(1): 7-17.

Yang, X., Z. Ma, J. Li, J. Yu, C. Stevens, and Y. Zhuang

Wang, J., and L. Jiang

**Week 5**

**Main**


Smith, B. D.
**Supplementary**

Ulaş, B., and G. Fiorentino


Zeder, M. A.

**Week 6**

**Main**

Henry, A. G.

Ge, W., L. Liu, X. Chen, and Z. Jin

Wang, J., L. Jiang, and H. Sun
2021 Early evidence for beer drinking in a 9000-year-old platform mound in southern China. PLOS ONE 16(8): e0255833. [https://doi.org/10.1371/journal.pone.0255833](https://doi.org/10.1371/journal.pone.0255833).

Weisskopf, A. R., and G.-A. Lee

**Supplementary**

Gong, Y., Y. Yang, D. Ferguson, D. Tao, et al.

Kitagawa, J., and Y. Yasuda

Wang, J., L. Liu, T. Ball, L. Yu, Y. Li, and F. Xing

**Week 7**

**Main**

Atalay, S., and C. A. Hastorf

Minnis, P. E.

Smith, A.

Wollstonecroft, M. M., P. R. Ellis, G. C. Hillman, D. Q. Fuller, et al.
**Supplementary**
Kim, M.
Lansing, J. S., and J. N. Kremer
Levin, M. J., and W. S. Ayres
Smith, M. L.

**Week 8**

**Main**
Lee, G.-A.
Marston, J. M.
Miller, N. F.
Orton, C.
Popper, V. S.

**Supplementary**
Wang, C., H. Lu, J. Zhang, K. He, and X. Huan
<table>
<thead>
<tr>
<th>Format</th>
<th>Dates</th>
<th>Subjects</th>
<th>Main Readings</th>
<th>Supplementary Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>Jan 6</td>
<td>Research History &amp; current issues in paleoethnobotany</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Jan 11</td>
<td>Initial preparation of samples; Asian crop morphology</td>
<td>Fritz &amp; Nesbitt 2014</td>
<td>Miksicek 1987; van der Veen 2007</td>
</tr>
<tr>
<td>Lecture</td>
<td>Jan 13</td>
<td>Issues in plant preservation, field methods for recovering plant remains</td>
<td>d’Alpoim Guedes &amp; Spengler 2014; Gallagher 2014</td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Jan 18</td>
<td>Morphology of weeds; sample analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Jan 25</td>
<td>Sample analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>Jan 27</td>
<td>Issues in Asian crop domestication; site review</td>
<td>Crawford 2009; Kwak, Obata &amp; Lee 2020; Lee et al. 2007; Yun, Ko &amp; Lee 2016</td>
<td>Hosoya 2011; Kim &amp; Yun 2011; Lee 2017; Yang et al. 2015; Wang &amp; Jiang 2021</td>
</tr>
<tr>
<td>Lab</td>
<td>Feb 1</td>
<td>Morphology of major SW Asian crops, sample analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Feb 8</td>
<td>Sample analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Feb 15</td>
<td>Sample analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Feb 22</td>
<td>Quiz: Sample analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Mar 1</td>
<td>Finishing up identification &amp; sorting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>Mar 3</td>
<td>Practice on quantitative methods; Sample photography</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>Mar 8</td>
<td>Lab wrap up; photography; group discussion on report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture</td>
<td>Mar 10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* A schedule is subject to change.