Anthro 3BB3: Ancient Agriculture to Criminal Investigations: Paleoethnobotany in Practice

Instructor: Shanti Morell-Hart <smorell@mcmaster.ca>
Instructional Assistant: Christine J. Cluney <cluneyc@mcmaster.ca>

Meeting Schedule: Mondays 2:30pm- 5:20pm
Meeting Location: Kenneth Taylor Hall, Room B122
SMH Office Hours: 11:00am-1:00pm on Wednesdays
SMH Office Location: Chester New Hall, Room 534
CJC Office Hours: by appointment
CJC Office Location: Kenneth Taylor Hall, Room B128A

Course Description:

How can we use botanical evidence to understand the past, from cold cases to *very* cold cases? What roles did plants play in ancient communities? What aspects of daily life are framed by flora and negotiated through ethnobotanical practice? What happens to plant remains after they become incorporated into the archaeological record, and what are the methods used to study these "ecofacts"? How do paleoethnobotanical interpretations contribute to our understanding of history and structure our public policy? How is botanical forensic evidence used in law enforcement investigations?

This course trains students in laboratory methods and interpretations of botanical evidence through hands-on practice. We explore the major classes of plant remains likely to be encountered in forensic cases and archaeological sites; identify botanical residues and organize the data to make interpretable results; and address major issues within the discipline including preservation, analytical methods, sampling, collection, and interpretation. The course is arranged around 1) exploring the major classes of plant remains likely to be encountered in archaeological sites and court cases; 2) identifying these remains and organizing data to make interpretable results; and 3) addressing major issues within archaeology and forensic botany including preservation, analytical methods, sampling, collection, and interpretation. The broad goals are to:

- Learn about macro- and micro-botanical analysis of deposited plant materials;
- Understand the problems and range of archaeological research using paleoethnobotanical data;
- Understand the utility and pitfalls of botanical research in criminal investigation;
- Gain knowledge of paleoethnobotanical analysis from sampling to interpretation; and
- Consider the broader applications of paleoethnobotanical interpretation, including economics, identity, foodways, politics, symbolism, and historical ecology.

The class will proceed partly as a seminar, with discussions on assigned readings, and partly as a laboratory section, with practicums and field trips. You will be evaluated on consistent participation in class discussion (in the classroom and/or the online forum) (20%), a set of reading responses (20%), a set of laboratory practicums and field activities (25%), a final paper (25%), and a final research presentation (10%).

Required Texts:

Many of the readings will be posted online. However, there is one required book available for purchase online and in the campus bookstore:

Pearsall, Deborah M.
2015 *Paleoethnobotany: A Handbook of Procedures.* 3rd ed. Left Coast Press, Walnut Creek, CA.
ISBN-10: 1611322987
ISBN-13: 978-1611322989

Required Supplies:

In the laboratory, we will supply modern botanical materials to be dissected (such as fruits and seeds), jewel boxes, sorting forms, Bioquip blunt featherweight forceps, weight boats, labels, sorting trays, and index cards. To prepare you for laboratory work, there are several supplies you'll need to bring to the laboratory as a part of your paleoethnobotanical sorting kit:

Recording*:* pencils and erasers, pen, one three-ringed notebook with both plain and graph paper (metric only)
Sorting: a small clear ruler (metric); very fine paintbrushes (00, 000), dissection needle, exacto knives or scalpel, tweezers (Biology dissecting kits contain several of these items, and are sometimes sold at the campus bookstore)

On occasion, when noted in the syllabus, you will also need to bring a notebook/laptop computer with working versions of Excel and PowerPoint.

Course Requirements:

This course meets once per week. Classes will be divided between informal lectures, discussions, and activities. Your grade in the course will be based on your performance in completing the following assignments:

Reading responses: 20% of total grade. *Due each Sunday evening in preparation for class.*

Everyone is responsible for completing all of the assigned readings for each week's discussion. You will also be responsible for a 300 word (roughly ¾ page, double-spaced) response to **one** of the assigned readings-- ***NOT including the Pearsall or For Lab readings***-- the evening before the first class meeting of the week. These are to be posted to the Discussions area of Avenue to Learn, before 8 pm (usually Sunday evening). Each reading response should include the following:

A) Basic information:

- Full citation of the assigned reading at the very beginning of the response (author, year, publication, publisher, etc., following the SAA Style Guide (i.e. the style of references in this syllabus):

https://documents.saa.org/container/docs/default-source/doc-publications/style-guide/saa-style-guide_updated-july-2018c5062f7e55154959ab57564384bda7de.pdf?sfvrsn=8247640e_6

- A set of 5 keywords (list), just below the citation
- Identify the subject, the time period(s), and the location(s) of the study. (1 sentence)

B) Assessment

- What do you think is the theoretical position of the author(s)? That is, what *kinds* of questions are the authors asking (e.g., ecological questions, ritual questions, questions of gender, etc.)? (1 sentence)
- What are the primary research objectives/thesis statements/questions asked of the data by the author(s)? That is, what *specific* questions are the authors asking? Is the author reacting to anything (e.g. missing information, outdated research, a contrary theoretical position)? (3 sentences)
- What types of plant materials/data/evidence are used to address these objectives? (1 sentence)
- What else would you like to see the author address? (A short critique, or a request for more or different types of data.) (2 sentences)
- What questions do you have about the reading? (1-2 sentences)
- *OPTIONAL*: What are your suggestions for re-interpretation, using the same data set or material? How would you have done the study differently?

C) Reflection

- What is one key thing you drew from this reading? (1 sentence)
- What does this make you reflect on-- in the news, your own daily practice, or your own experiences? OR, What other class readings does it remind you of, and why? (1-2 sentences)

The goal of these reading responses is to prepare you for class discussion, with your personal and critical reflections on assigned material at the ready. A secondary goal is to leave you with a set of your own annotations on class readings.

Class Participation: 20% of total grade.

Class participation is based partially on attendance, and partially on contributions to discussion. It is necessary for you to join class dialogue, through substantive questions and comments in the classroom, and/or through posting to the online discussion forums. Online dialogue can be a response to previous postings, or the posting of a new discussion topic.

The goal of class discussion is to draw out your own interests in the course materials, and to regularly and critically engage you, along with your peers, with the central themes of the course.

ALSO REQUIRED: Feedback on the final presentations of two of your colleagues in class.

Laboratory Notebook: 25% of total grade. *Due Nov.25 at end of class.*

The proper recording of laboratory work is a critical aspect of laboratory analysis and interpretation. Your work from each laboratory practicum and field trip activity will be recorded into your lab notebook. Each entry will entail answering a series of questions and/or crafting detailed drawings and descriptions. Your laboratory notebook will be graded on completeness, clarity of information, and accuracy of answers to exercise questions. The bulk of your laboratory notebook will be due **November 25th**, at the end of our class meeting.

Final Paper: 25% of total grade

This assignment will be broken up into two components: an outline (5%), and the final paper itself (20%). Your final paper will include the formulation of an original research question, second-stage

analysis using Excel, SPSS, Access, ArcMap and/or Conoco software, and interpretation that contextualizes your research within the broader literature. Your research will draw on an actual paleoethnobotanical data set from Northwestern Honduras.

Final paper outline: 5% of total grade. Due Friday Nov. 15, by 10 pm.
This is a 2-page assignment that includes a 1-page (single-spaced) outline (roughly 250 words), and a 1-page (single-spaced) list of sources and brief annotations. You will need to include a minimum of 8 readings you are going to cite in your paper. At least 5 of these readings must come from sources outside of assigned class readings.

In your outline, the author and date of a reading you wish to cite will go in parentheses next to every applicable outline subheading. In the list of sources, you will need to provide complete citation information, and a brief (1-sentence) description of how each source will contribute to your paper. I will post an example of a final paper outline online, and talk over the template in class. I will give you feedback on your paper outlines in preparation for your final paper.

Final paper: 20% of total grade. Due Friday Dec. 8th, by 10 pm.
This is a 2400 word assignment (roughly 8-pages of narrative, double-spaced, 12-pt font, 1-inch margins). Be sure to include a title page and bibliography on separate pages (and outside the word count). Again, you will need to use at least 8 sources, 5 of which must be outside of class readings.

Your final paper will need to include an original research question, second-stage analysis using Excel, SPSS, Access, ArcMap and/or Conoco software, and interpretation that contextualizes your research within the broader literature. You will need to include at least two graphics that illustrate your analysis (bar graphs, line charts, pie charts, etc.)

I will post an example of the evaluation sheet I will use for your final paper online, and talk over the format in class, so that you have an idea of how to structure your paper.

Laboratory Research Presentations: 10% of total grade. ***Monday Dec. 2, during class.***
Final research presentations will take place during the last week of the term. You will need to prepare a short (5 min) PowerPoint (or similar graphical) presentation. This will cover your research questions, analysis, and preliminary interpretations as you have prepared them for your final paper. Basically, imagine condensing the text of your paper into 1.5 pages, and then craft roughly 5 slides to graphically illustrate your research. Ensure that you **include at least two analytical graphics** (pie charts, etc.) that you will incorporate into your final paper. Make sure to **upload your presentation to the folder on Avenue by 10pm, Sunday Dec.1.** The goal of the presentations is to make you conversant in your own hard work!

As a reminder: Part of your Class Participation grade is providing feedback on the presentations of two of your peers. This feedback will help them (and you!) polish the final paper.

Expectations and General Guidelines:

Grades:

Grades will be based on the McMaster University grading scale:

Letter[1]	%	GPA[1]	Verbal[2]	Definition[2]
A+	90-100	12	Distinction	Strong evidence of original thinking; good organization; superior grasp of subject matter with sound critical evaluations; evidence of extensive knowledge base
A	85-89	11		
A-	80-84	10		
B+	77-79	9	Superior	Evidence of grasp of subject matter, some evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with literature
B	73-76	8		
B-	70-72	7		
C+	67-69	6	Average	Student who is profiting from his/her university experience; understanding of the subject matter, ability to develop solutions to simple problems in the material
C	63-66	5		
C-	60-62	4		
D+	57-59	3	Marginal	Some evidence of familiarity with subject matter and some evidence that critical analytic skills have been developed
D	53-56	2		
D-	50-52	1		
F	0-49	0	Failure	Little evidence of even superficial understanding of subject matter, weakness in critical and analytic skills; with limited or irrelevant use of literature

[1] See section on General Academic Regulations in McMaster University Undergraduate Calendar 2013/2014;
[2] Definitions by University of Toronto Faculty of Arts and Science

Academic Integrity Statement:

You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behavior can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at www.mcmaster.ca/academicintegrity .

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.

In this course we will be using a software package designed to reveal plagiarism. Students will be required to submit their work electronically so that it can be checked for academic dishonesty.

Requests for Relief for Missed Academic Term Work:

The University recognizes that students periodically require relief from academic work for medical or personal situations. In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar "Requests for Relief for Missed Academic Term Work."

The MSAF policy can be found in the Undergraduate Calendar under General Academic Regulations > Requests for Relief for Missed Academic Term Work:
http://academiccalendars.romcmaster.ca/content.php?catoid=11&navoid=1698#Requests_for_Relief_for_Missed_Academic_Term_Work

For missed academic work worth up to 25% of the course weight, use the MSAF mechanism to report absences due to medical or personal situations that last up to three calendar days. You may submit requests for relief using the MSAF only **once** per term. As per the policy, an automated email will be sent to the course instructor, who will determine the appropriate relief. It is your responsibility to immediately follow up with each of your instructors (normally within two working days) regarding the nature of the accommodation. Failure to do so may negate the relief.
https://www.mcmaster.ca/msaf/index.html

If you are absent for more than 3 days, have missed academic work worth more than 25% of the final grade, or exceed one request per term you MUST visit your Associate Dean's Office. You may be required to provide supporting documentation. It is the prerogative of the instructor in each of your courses to determine the appropriate relief for missed term work.

Privacy Protection:

In accordance with regulations set out by the Freedom of Information and Privacy Protection Act, the University will not allow return of graded materials by placing them in boxes in departmental offices or classrooms so that students may retrieve their papers themselves; tests and assignments must be returned directly to the student. Similarly, grades for assignments for courses may only be posted using the last 5 digits of the student number as the identifying data. The following possibilities exist for return of graded materials:

1. Direct return of materials to students in class;
2. Return of materials to students during office hours;
3. Students attach a stamped, self-addressed envelope with assignments for return by mail;
4. Submit/grade/return papers electronically.

Arrangements for the return of assignments from the options above will be finalized during the first class.

E-mail Communication Policy:
Effective September 1, 2010, it is the policy of the Faculty of Social Sciences that all e-mail communication sent from students to instructors (including TAs), and from students to staff, must originate from the student's own McMaster University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student's responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.

Email Forwarding in MUGSI:
http://www.mcmaster.ca/uts/support/email/emailforward.html
*Forwarding will take effect 24-hours after students complete the process at the above link.

Course Modification:
The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check his/her McMaster email and course websites weekly during the term and to note any changes.

Special accommodations:

If you have any special accommodations, such as additional resource requirements and/or adjustments to your schedule due to Indigenous or spiritual observances, athletic events, or religious holidays, send me an email detailing your needs within the first two weeks of the course. ***It is not necessary to detail the context or background— just describe your necessary accommodations clearly.***

Religious, Indigenous and Spiritual Observances (RISO):
The University recognizes that, on occasion, the timing of a student's religious, Indigenous, or spiritual observances and that of their academic obligations may conflict. In such cases, the University will provide reasonable academic accommodation for students that is consistent with the Ontario Human Rights Code.

Please review the RISO information for students in the Faculty of Social Sciences about how to request accommodation.

Student Accessibility Services:
Student Accessibility Services (SAS) supports students who have been diagnosed with a disability or disorder, such as a learning disability, ADHD, mental health diagnosis, chronic medical condition, sensory, neurological or mobility limitation. Students who require academic accommodation should

contact SAS as early in the term as possible. For further information, consult McMaster University's Policy for Academic Accommodation of Students with Disabilities. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. http://sas.mcmaster.ca

AODA:
If you require this information in an alternate/accessible format, please contact Delia Hutchinson at 905-525-9140 extension 24523 or email hutchin@mcmaster.ca

Additional Student Resources:

Office of Human Rights and Equity Services:
McMaster recently launched MACcessibility, part of the Office of Human Rights and Equity Services, to help advance the University's goal of building an inclusive community with a shared purpose. HRES works with campus and community partners to ensure that McMaster University is a place where all students, staff and faculty are treated equitably and respectfully in all areas of campus life.
http://www.mcmaster.ca/hres/index.html

Personal Counselling and Mental Health at the Student Wellness Center:
If you believe that you are in imminent danger or that harm to yourself or someone else exists, immediately call the police for assistance. For other situations of emotional distress, please contact a health or wellness specialist. The SWC offers individual counselling at the SWC, group programming at the SWC, community referrals, crisis referrals, and connections to community/campus resources.
http://wellness.mcmaster.ca/counselling.html

Writing Support Services:
If you need help researching, structuring, writing, or proofreading your paper, contact Writing Support Services early in the term and consult with them often. Trained upper-year and graduate Writing Assistants are available to provide help with particular assignments or specific questions related to academic writing.
http://studentsuccess.mcmaster.ca/students/academic-skills/writing-support-services.html

Research Help:
A Service Desk is located near the entrance of each library on campus. Students may drop by in person, call or email to get help finding library resources. Students may also get online research help by using the "Ask a Librarian" virtual reference service: https://library.mcmaster.ca/justask

Research Consultations:
Faculty, students and staff who require in-depth information on resources may request a one-on-one consultation with a librarian. Before making a request, ask for help at one of the Service Desks.
https://library.mcmaster.ca/forms/research-consultation-request

Images from the top of syllabus:
Plaster cast of Zea mays *from the site of Joya de Cerén (photo by SMH)*
Collection of Acrocomia mexicana *palm fruits (Illustration by Sarah Davidson)*
Calathea *sp. starch grains recovered from an artifact (photo by SMH)*

Course Schedule:

(Reminder: You are responsible for a 300-word response to **one** of the assigned readings the evening before the first class meeting of the week. **NOTE:** This does not include the Pearsall textbook readings or the "For Lab" readings.)

1. Sep.9: Course introduction

Introductions. Overview of the course trajectory and structure. What is paleoethnobotany? What are plant forensics? What are the methods and applications of each?
Presentation: Overview of the course, expectations, and guidelines.
Laboratory Practicum: Introduction to the Archaeology Teaching Laboratory; paleoethnobotanical equipment and tools; lab safety; basic microscopy
Read: Pearsall Chapter 1: The Paleoethnobotanical Approach; Hall 2012 ("Introduction to Forensic Botany" and "Plants As Evidence" pp.1-21 only) (*not for reading responses*)

2. Sep.16: Overview of botanical residues: analytical methods and approaches

Ethnobotany, Paleoethnobotany, Archaeobotany, and Paleobotany. Plant Forensics and Botanical Forensic Sciences. History of paleoethnobotany and early studies. Ecology, gardens, and phytosociology. Court cases and forensic botany.
Discuss: Bohrer 1986; Carlson 2001; Marston et al. 2015; Pollan 1991
Laboratory Practicum: Basic plant anatomy and succulent fruit anatomy
For Lab: Young section 1: Importance of Plants to Humans; sections 8, 13, 22, 68 and 69 on general botany and identification; Young sections 84, 94, 95 and 96 on fruits

3. Sept.23: Experiments, preservation, and taphonomy

Experimental archaeology. Formation Processes, taphonomy, and preservation. Underground storage tissues: use, preservation, and recovery.
Discuss: Gallagher 2015; Hather 1991; Kubiak-Martens 2002; Miksicek 1987; van der Veen 2007
Presentation: Formation processes
Laboratory Practicum: Wood anatomy and Underground Storage Organ (USO) anatomy
For Lab: Young sections 55, 57, 58, 65, and 66 on woods and wood tissues; sections 61, 63, 64, and 72 on roots and storage tissues; section 97 on seed and fruit dispersal

4. Sep.30: Reference collections and herbaria ("plant libraries")

Assembling and curating reference collections. Experimental charring. Comparing specimens. Developing an ethnobotanical list of major regional species. Preparation of comparative samples (charred and uncharred).
Discuss: Bouchard-Perron 2017; Flaster 2004; Fritz 2015; Lentz et al. 1996
Guest presentation: Rudy Fecteau: "A 5,000 Year History of Plant Use in Ontario"
For Lab: Harrington 1957

****Bring cameras or camera phones to class on Oct.7****

5. Oct.7: Ethnobotany and regional flora

Ethnobotanical surveys. Plant communities. Identifying plants in the field. Collecting and cataloging specimens. Palynology.
Discuss: Pearsall Chapter 4: Pollen Analysis; Martin 1995: Chapters 1, 2, and 4

Laboratory Practicum: A) Field trip to Greenhouse: Modern specimen identification, collection, and curation. B) Dry fruit anatomy; Seed anatomy
For Lab: Harrington 1957 (redux); Young sections 81 and 98 on seeds; sections 78 and 88 on seed-bearing plants; sections 94 and 95 on dry fruit anatomy

**** MID-TERM RECESS: Oct.14 - Oct.18 ****

6. Oct.21: Microbotanical and chemical residues

Analysis of phytoliths, starches, lipids, proteins, DNA, and isotopes in archaeological and forensic settings.
Lecture: Botanical residues from sediments, artifacts, ecofacts, and human remains
Discuss: Pearsall Chapter 5: Phytolith Analysis and Chapter 6: Starch Analysis; Berman and Pearsall 2008; Perry 2004; Warinner et al. 2012
Laboratory Practicum: Microbotanical residues of plants: starches and phytoliths
For Lab: Young sections 92 and 93 on pollination, sections 3 and 56 on cell types

7. Oct.28: Research design, sampling, and processing

Research design, in-field sampling, and field biases. Collection and processing of macrobotanical samples. Recovery techniques using flotation. Macrobotanical sorting and identification. SPOOKY PLANTS: Plants in homicide cases and other investigations.
Discuss: Pearsall Chapter 2: Deposition, Preservation, and Recovery of Macroremains; Bock and Norris 2015 ("Cases Using Evidence from Plant Anatomy" pp.85-94 AND "Plant Taxonomy Cases" pp.103-107 AND "Forensic Plant Ecology Cases" pp.121-127); d'Alpoim Guedes and Spengler 2015; Lennstrom and Hastorf 1995
Presentation: Macrobotanical sample flotation and processing in Northwestern Honduras
Laboratory Practicum: Preparation of macrobotanical samples for analysis
For Lab: Morell-Hart 2011

****Download Honduras data set and explore the database before Nov.4 class****
****Bring computers to Nov.4 class****

8. Nov.4: Analytical pathways

Interpretation: from sampling to analysis. Paleoethnobotany in Mesoamerica. Introduction to the Honduras archaeological data set. Introduction to the Southeast Mesoamerica ethnobotanical data set.
Discuss: Pearsall Chapter 3: Identification and Interpretation of Macroremains; Hall 2012 ("Case Studies in Forensic Botany" pp.174-188) AND Raum 2012 ("Expert Evidence" pp. 79-92); Hageman and Goldstein 2009; VanDerwarker et al. 2015
Presentation: Paleoethnobotanical practice in Northwestern Honduras: routes to interpretation
Workshop: Getting to know the Honduras data set
Laboratory Practicum: Macrobotanical sample sorting and identification
For Lab: Joyce and Henderson 2001

****Bring computers to Nov.11 class****

9. Nov.11: Integrated approaches and quantification

Sampling and implications. Basic quantification. Organization and analysis of paleoethnobotanical data. Visualizing paleoethnobotanical data.

Discuss: Pearsall Chapter 7, Part I: Indicators of Diet and Health; Petchey and Gaston 2002; Tolar et al. 2010; Welch and Scarry 1995
Presentation: Quantification in Paleoethnobotany
Laboratory Practicum: Using Excel for paleoethnobotanical data-- organizing data sets; pivot charts; pie charts, bar graphs, line graphs
For Lab: Morell-Hart et al. 2014

****Final paper outline due Friday, Nov.15, by 10 pm ****

10. Nov.18: Interpreting lifeways and activities

Interpreting evidence. Economic plant use; lifeways; diet and health; cuisine and foodways; agriculture; economy; identity and status.
Discuss: Pearsall Chapter 7, Part II: The Interplay of Dietary Indicators; Fuller 2005; Gumerman 1994; Jacomet 2009
Laboratory Practicum: Macrobotanical sorting and identification
For Lab: Morell-Hart 2015

11. Nov.25: Paleoethnobotany and plant forensics in the modern world

Critical approaches in paleoethnobotanical studies. Applied paleoethnobotany. Environmental concerns, Slow Food movements, government policies, paleodiets, historical ecology and restoration, island environments, ethnopharmacology, extirpations and extinctions, and genetic studies. Pathways in plant forensics.
Presentation: Implications and applications in the modern world
Laboratory practicum: Wrap-up of macrobotanical analysis and preparation of notebooks
Discuss: Bock and Norris 2015 ("Summation and a Look to the Future" pp.149-166); Diekmann et al. 2007; Dunn 2012; Logan 2013; van der Veen 2014

****Turn in lab notebooks at the end of class on Nov.25****

****Upload final presentation to Avenue on Dec.1, by 10pm****

12. Dec.2: Final presentations and feast!

Final Research Presentations
Laboratory Practicum: Identify your food using microscopy

****Final papers due Friday, Dec. 6, by 10 pm****

Course Readings:

Berman, Mary Jane, and Deborah M Pearsall

2008 At the crossroads: starch grain and phytolith analyses in Lucayan prehistory. *Latin American Antiquity*:181-203.

Bock, Jane H., and David O. Norris

2015a Cases Using Evidence from Plant Anatomy. In *Forensic Plant Science*, edited by Jane H. Bock, and David O. Norris, pp. 85-94. Academic Press, London, UK.

2015b Forensic Plant Ecology Cases. In *Forensic Plant Science*, edited by Jane H. Bock, and David O. Norris, pp. 121-127. Academic Press, London, UK.

2015c *Forensic Plant Science*. Academic Press, London, UK.

2015d Plant Taxonomy Cases. In *Forensic Plant Science*, edited by Jane H. Bock, and David O. Norris, pp. 103-107. Academic Press, London, UK.

2015e Summation and a Look to the Future. In *Forensic Plant Science*, edited by Jane H. Bock, and David O. Norris, pp. 149-166. Academic Press, London, UK.

Bohrer, Vorsila L.

1986 Guideposts in ethnobotany. *Journal of Ethnobiology* 6(1):27-43.

Bouchard-Perron, Julie-Anne

2017 Savage Lands, Civilizing Appetites: Power and Wilderness in Quebec City (1535–1900). *American Antiquity*:1-18.

Carlson, Thomas

2001 Language, ethnobotanical knowledge and tropical public health. In *On Biocultural Diversity*, edited by Luisa Maffi, pp. 489-502. Smithsonian Institution Press, Washington, D.C.

d'Alpoim Guedes, Jade, and Robert Spengler

2015 Sampling Strategies in Paleoethnobotanical Analysis. In *Method and Theory in Paleoethnobotany*, edited by Jade D'Alpoim Guedes, John M. Marston, and Christina Warinner, pp. 77-94. University Press of Colorado, Boulder, CO.

Diekmann, L., L. Panich, and C. Striplen

2007 Native American Management and the Legacy of Working Landscapes in California. *Rangelands* 29(3):46-50.

Dunn, R. K.

2012 Human Ancestors Were Nearly All Vegetarians. *Scientific American* 2012.

Flaster, Trish

2004 Survey of medicinal plants in the Main U.S. Herbaria. *Ethnobotany Research and Applications* 2:101-110.

Fritz, Gayle, and Mark Nesbitt
2015 Laboratory Analysis and Identification of Plant Macroremains. In *Method and Theory in Paleoethnobotany*, edited by Jade D'Alpoim Guedes, John M. Marston, and Christina Warinner, pp. 115-146. University Press of Colorado, Boulder, CO.

Fuller, Dorian Q.
2005 Ceramics, seeds and culinary change in prehistoric India. *Antiquity* 79(306):761-777.

Gallagher, Daphne E.
2015 Formation Processes of the Macrobotanical Record. In *Method and Theory in Paleoethnobotany*, edited by Jade D'Alpoim Guedes, John M. Marston, and Christina Warinner, pp. 19-34. University Press of Colorado, Boulder, CO.

Gumerman, George
1994 Feeding Specialists: The Effect of Specialization on Subsistence Variation. In *Paleonutrition: The Diet and Health of Prehistoric Americans*, Vol 22, edited by Kristin D. Sobollik, pp. 80. Center for Archaeological Investigations, Southern Illinois University, IL.

Hageman, John B., and David J. Goldstein
2009 An Integrated Assessment of Archaeobotanical Recovery Methods in the Neotropical Rainforest of Northern Belize: Flotation and Dry Screening. *Journal of Archaeological Science* 36(12):2841-2852.

Hall, David W.
2012a Case Studies in Forensic Botany. In *Forensic Botany: A Practical Guide*, edited by David W. Hall, and Jason Byrd, pp. 174-188. John Wiley & Sons, Oxford, UK.

2012b Introduction to Forensic Botany. In *Forensic Botany: A Practical Guide*, edited by David W. Hall, and Jason Byrd, pp. 1-11. John Wiley & Sons, Oxford, UK.

2012c Plants As Evidence. In *Forensic Botany: A Practical Guide*, edited by David W. Hall, and Jason Byrd, pp. 12-21. John Wiley & Sons, Oxford, UK.

Hall, David W., and Jason Byrd
2012 *Forensic Botany: A Practical Guide*. John Wiley & Sons, Oxford, UK.

Harrington, H.D.
1957 *How to Identify Plants*. Swallow Press.

Hather, Jon G.
1991 The identification of charred archaeological remains of vegetative parenchymous tissue. *Journal of Archaeological Science* 18:661-675.

Jacomet, Stephanie
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