

PLANTS AND PEOPLE

The botany and history of the world's food, spice,
drug and industrial plants
EEOB 502, Winter Quarter 2005

Instructor: Dr. Peter Curtis
Dept. EEOB
292-0835, room 276 Aronoff Laboratory

Lectures: Mon, Wed, Fri 10:30 – 11:18,
Rm 014 Jennings Hall, Call # 19186-6, 4 credits
Email: curtis.7@osu.edu

Office Hours: Wednesday 11:30-12:30,
Thursday 2-3 or by appointment

Prerequisites: 5 credits hours in biological
sciences or consent of instructor

Textbook:
ECONOMIC BOTANY: PLANTS IN OUR
WORLD Third Edition. By B.B. Simpson and
M. Conner-Ogorzaly, 2001, McGraw-Hill.

Other Assigned Readings:

*On reserve in the Biological Sciences/
Pharmacy Library:*

Diamond, J.M. 1997. Guns, germs, and steel:
the fates of human societies. W.W. Norton,
N.Y. Chapters 6, 7, & 9.

Kahn, E.J. Jr. 1992. Profiles. Jungle botanist
(Richard Evans Schultes). The New Yorker
68(15): 35-58.

Furst, P.T. 1975. Introduction. In, In the magic
land of peyote, by F. Benítez. Univ. Texas
Press, Austin.

Mintz, S.W. 1991. Pleasure, profit, and
satiation. In, Viola, H.J. and C. Margolis. Seeds
of Change. A quincennial commemoration.
Smithsonian Inst. Press.

Grading:

Research project outline	10 points
Midterm examination	50 points
Project first draft & peer review	40 points
Project oral presentation	20 points
Project final draft	40 points
Final examination	75 points
Total	235 points

Ethnobotanical Project:

The ethnobotanical project combines library-
based research with hands-on experience of a
particular plant and its derived product. The
'hands-on' component is to locate, in area stores
or elsewhere, the unprocessed (or as close to that
as possible) form of the selected plant and then
to process or transform it into an edible or
otherwise useful product. The 'research'
component involves writing a paper (~ 8 pages)
that presents the relevant botany of the plant
including its geographical origin and history,
describes exactly how the plant was
transformed, and discusses the importance of the
final product to some cultural group. First drafts
of this report will be peer reviewed by class
participants. Ethnobotanical products will be
displayed to the entire class at an end of quarter
symposium, with each student giving an oral
presentation.

Course grade will be assigned on the basis of the
percentage of the total points earned where:
93% or greater = A, 90-92% = A-, 87-89% = B+, 83-
86% = B, 80-82% = B-, 77-79% = C+, 73-76% = C,
70-72% = C-, 67-69% = D+, 60-66% = D, less than
60% = E.

Goals for this Course

- The study of the direct interrelations between humans and plants, and their evolutionary (for plants) and cultural (for humans) consequences.
 - Gain an understanding of the process of plant and animal domestication, from both an evolutionary and an ecological perspective.
 - Study the origin and subsequent dispersal of the major food and beverage plants appearing in our diets today.
 - Appreciate the importance of plant biodiversity in our cultural history as well as in our culinary history.
 - Explore alternative world views as experienced by aboriginal peoples and mediated through their use of plants.
 - Continue to develop skills in written and oral communication.

Recommended Resources

A useful web site directory of links to ethno-botanical and related resources.

<http://www.rbgekew.org.uk/scihort/eblinks/>

Texts: (All on reserve in Bio Sci/ Pharm library)

Diamond, J.M. 1997. Guns, germs, and steel: the fates of human societies. W.W. Norton, N.Y. HM206 D48 MAIN.

Harris, D.R., and G.C. Hillman. 1989. Foraging and Farming: the Evolution of Plant Exploitation. Unwin Hyman. GN799 A4 F67 MAIN

Heiser, C.B.Jr. 1990. Seed to Civilization. The Story of Food. W.H. Freeman. S419 H44 BPL.

Johns, T. 1990. The origins of human diet and medicine. Univ. Arizona Press, Tucson. GN476.73 J64 EHS.

Manniche, L. 1989. An ancient egyptian herbal. Univ. Texas Press, Austin. RS63 .M35 BPL

McGee. H. 1988. On Food and Cooking. The Science and Lore of the Kitchen. Collier. TX651 M37 HEC

Schultes, R.E. and A. Hoffman. 1979. Plants of the Gods: Origins of Hallucinogenic Use. McGraw Hill. QK99 A1 S39 BPL.

Simpson, B.B., and M. Conner-Ogorzaly. 2001. Economic Botany: Plants In Our World. Third Edition, McGraw Hill. SB108 U5 S56 BPL

Viola, H.J. and C. Margolis. 1991. Seeds of Change. A quincentennial commemoration. Smithsonian Inst. Press. S.E112 S45 OHI

Zohary, D. and M. Hopf. 1993. Domestication of Plants in the Old World: the Origin and Spread of Cultivated Plants in West Asia, Europe, and the Nile Valley. 2nd ed. Clarendon Press. GN799 A4 Z64 AGI

Lecture topics and reading assignments

Theme	Wk	Date	Lecture Topic	Lect. #	Readings
<u>Going Beyond Hunting and Gathering</u>					
	1	3-Jan	Origins of Agriculture	1	S 40-52; D ch 6
		5-Jan	Origins of Cultivated Plants	2	S 21-28, 111-115; D ch 7
		7-Jan	Origins of Domesticated Animals	3	D ch 9
<u>The Botanical Basis To Civilization</u>					
	2	10-Jan	The Big Four - Wheat	4	S 107-120
		12-Jan	The Big Four - Rice & Sorghum	5	S 121-126
		14-Jan	The Big Four - Maize	6	S 126-135
	3	17-Jan	No classes		
		19-Jan	Proteins From Plants - Legumes	7	S 135-154
<u>Alternatives to Cereal Grains</u>					
		21-Jan	Starchy Staples - The Potato	8	S 155-166, 180-184
	4	24-Jan	More Starchy Staples - Banana & Yuca	9	S 92-95, 184-187
		24-Jan	RESEARCH PROJECT OUTLINE DUE		
<u>Improving Upon Carbohydrates</u>					
		26-Jan	Fermentation - Its Chemistry and History, Beer	10	S 332-340
		28-Jan	Alcoholic Beverages - Wine & Spirits	11	S 341-354
<u>Exploiting Botanical Diversity</u>					
	5	31-Jan	Sweetness and Power - Sugar Cane	12	S 187-191; Mintz article
		2-Feb	Spice Plants, the Spice Islands, and History I	13	S 192-214
		4-Feb	Spice Plants, the Spice Islands, and History II	14	S 192-214
	6	7-Feb	Big Hits From the New World - Tomato & Peppers	15	S 82-89
		9-Feb	MIDTERM EXAMINATION		
		11-Feb	Stimulating Beverages - Coffee & Tea	16	S 313-331
	7	14-Feb	<i>Theobroma</i> : Food of the Gods (a.k.a., chocolate)	17	S 313-331
		16-Feb	The Mediterranean diet: olives, figs, & dates	18	S 218-242, 90, 95
		16-Feb	PROJECT FIRST DRAFT DUE TO PEER REVIEWERS		
<u>The Mind, The Body, & The Spirit</u>					
		18-Feb	The Old World Pharmacopoeia - Hemp & Opium	19	S 262-312
	8	21-Feb	The New World Pharmacopoeia - Coca & Tobacco	20	S 262-312
		21-Feb	PEER REVIEWS DUE BACK, COPIES TO DR. CURTIS		
		23-Feb	Entheogens I - Peyote	21	S 262-312; Kahn article
		25-Feb	Entheogens II - Psilocybe & Caapi	22	S 262-312
	9	28-Feb	Ethnobotanical videos	23	Furst article
<u>Home, Hearth, & Industry</u>					
		2-Mar	Textiles - Cotton & other fibers	24	S 355-372
		4-Mar	Fragrance & Dye Plants	25	S 215-217, 372-377
	10	7-Mar	Paper & Rubber	26	S 243-261, 378-398
		9-Mar	PROJECT ORAL PRESENTATIONS: 10:30-11:30, 7:00-9:00 pm		
		11-Mar	PROJECT ORAL PRESENTATIONS: 10:30-11:30, 7:00-9:00 pm		
	11	14-Mar	PROJECT WRITTEN REPORT FINAL DRAFT DUE		
		14-Mar	FINAL EXAMINATION - 9:30-11:18 am		