

Humboldt State University
Digital Commons @ Humboldt State University

Botanical Studies

Open Educational Resources and Data

2017

Plant Domestication

James P. Smith Jr

Humboldt State University, james.smith@humboldt.edu

Follow this and additional works at: http://digitalcommons.humboldt.edu/botany_jps



Part of the [Botany Commons](#)

Recommended Citation

Smith, James P. Jr, "Plant Domestication" (2017). *Botanical Studies*. 47.

http://digitalcommons.humboldt.edu/botany_jps/47

This Economic Botany - Ethnobotany is brought to you for free and open access by the Open Educational Resources and Data at Digital Commons @ Humboldt State University. It has been accepted for inclusion in Botanical Studies by an authorized administrator of Digital Commons @ Humboldt State University. For more information, please contact cyril.oberlander@humboldt.edu.

PLANT DOMESTICATION

GENERAL REFERENCES

- Alford, J. 1970. Extinction as a possible factor in the invention of New World agriculture. *Prof. Geogr.* 22(3): 120-124.
- Badgley, C. 1998. Can agriculture and biodiversity coexist? *Wild Earth* 8(3): 39-47.
- Baker, H. G. 1971. Human influences on plant evolution. *BioScience* 21: 108.
- Barigozzi, C. 1986. The origin and domestication of cultivated plants. Elsevier Science Publishers. Amsterdam. The Netherlands. 218 pp.
- Bray, F. 1994. Agriculture for developing nations. *Sci. American* 271(1): 30-37.
- Burke, J. & R. Ornstein. 1995. The axemaker's gift: a double-edged history of human culture. G. P. Putnam's Sons. New York, NY. 348 pp.
- Carter, G. F. 1977. A hypothesis suggesting a single origin of agriculture. In, Reed, C. A. (editor). *Origins of Agriculture*. Mouton. The Hague. Pp. 89-133.
- Carver, G. W. 1894. Plants as modified by man. B. A. thesis. Reprinted in 1981 in the Iowa State J. Research 55: 209-217. [Yes, this is George Washington Carver.]
- Cavalli-Sforza, L. L. 1983. The transition to agriculture and some of its consequences. In, Ortner, D. J. (editor). *How humans adapt: a biocultural odyssey*. Smithsonian Press. Washington, D. C.
- Cleveland, D. A. et al. 1994. Do folk crop varieties have a role in sustainable agriculture? *BioScience* 44(11): 740-751.
- Cohen, J. E. 1995. Population growth and earth's human carrying capacity. *Science* 269: 341-346.
- Cohen, M. N. 1977. The food crisis in prehistory. Overpopulation and the origins of agriculture. Yale University Press. New Haven, CT. 342 pp.
- Conklin, H. C. 1961. The study of shifting cultivation. *Current Anthropol.* 2: 27-61.
- Crosby, A. W., Jr. 1972. *The Columbian exchange: biological and cultural consequences of 1492*. Greenwood Press. Westport, Ct. 268 pp.
- Crosby, A. W., Jr. 1986. *Ecological imperialism: the biological expansion of Europe, 900-1900*. Cambridge Univ. Press. Cambridge, England.
- Crosby, A. W., Jr. 1993. Native American crops and European history: the influence of American on Europe. In, Natives & newcomers: challenges of the encounter. Cabrillo Hist. Assoc. San Diego, CA. Pp. 45-57.
- Crosby, A. 1994. *Germs, seeds & animals: studies in ecological history*. M. E. Sharpe. Armonk, NY. 214 pp.
- Darwin, C. R. 1868. *The variation of animals and plants under domestication*. Two volumes. Orange Judd & Co. New York, NY. 494 pp. and 568 pp.
- De Candolle, A. L. 1886. *The origin of cultivated plants*. Second edition. Reprinted by Hafner Publ. Co. New York, NY. 468 pp.
- Diamond, J. 1987. The worst mistake in human history. *Discover* 8(5): 64-66.
- Diamond, J. 1994. How to tame a wild plant. *Discover* 15(9): 100-106.
- Diamond, J. 1994. Spacious skies and tilted axes. *Nat. Hist.* 103(5): 16, 18-23.
- Diamond, J. 1997. Location, location, location: the first farmers. *Science* 278: 1243, 1244.
- Diamond, J. 1997. *Guns, germs, and steel: the fates of human societies*. W. W. Norton. New York, NY. 480 pp.
- Diamond, J. 2002. Evolution, consequences and the future of plant and animal domestication. *Nature* 418: 700-707.
- Diamond, J. & P. Bellwood. 2003. Farmers and their

- languages: the first expansions. *Science* 300: 597-603.
- Dimbleby, G. 1967. Plants and archaeology. Humanities Press. New York, NY. 187 pp.
- Dressler, R. L. 1953. The Pre-Columbian cultivated plants of Mexico. *Bot. Mus. Leaflets Harvard Univ.* 16: 115-72.
- Ehrlich, P. R. 2000. From seeds to civilization. In, Human natures: genes, cultures, and the human prospect. Penguin Books. New York, NY. Pp. 227-252.
- Ellstrand, N. C., H. C. Prentice, & J. F. Hancock. 1999. Gene flow and introgression from domesticated plants into their wild relatives. *Ann. Rev. Ecol. Syst.* 30: 539-563.
- Ember, C. R. 1978. Myths about hunter-gatherers. *Ethnology* 17: 439-448.
- Farrington, I. S. & J. Urry. 1985. Food and the early history of cultivation. *J. Ethnobiol.* 5(2): 143-157.
- Flannery, K. V. 1973. The origins of agriculture. *Ann. Rev. Anthropol.* 2: 271-310.
- Fritz, G. J. 1995. New dates and data on early agriculture: the legacy of complex hunter-gatherers. *Ann. Missouri Bot.* 82(1): 3-15.
- Frost, F. J. 1993. Voyages of the imagination. *Archaeology* 46(2): 42-51.
- Gilbert, R. I. & J. H. Mielke. (editors). 1985. The analysis of prehistoric diets. Academic Press. Orlando, FL. 436 pp.
- Gillis, A. M. 1993. Keeping traditions on the menu. *BioScience* 43(7): 425-429.
- Gremillion, K. J. 1997. People, plants, and landscapes: studies in palaeoethnobotany. Univ. Alabama Press. Tuscaloosa.. 271 pp.
- Grove, R. H. 1995. Green imperialism: colonial expansion, tropical island Edens and the origins of environmentalism, 1600-1860. Cambridge Univ. Press. New York, NY.
- Gunn, S. 1991. Banking for the future [Kew's seed bank]. *Friends Kew Mag.* Spring: 16-21.
- Harlan, J. R. 1971. Agricultural origins: centers and noncenters. *Science* 174: 468-74.
- Harlan, J. R. 1992. Crops & man. Second edition. American Soc. & Crop Sci. Soc. America. Madison, WI. 284 pp.
- Harlan, J. R. 1976. The plants and animals that nourish man. *Sci. Amer.* 235(3): 89-97.
- Harlan, J. R. 1976. Plant and animal distribution in relation to domestication. *Phil. Trans. Royal Soc. London* 275: 13-25.
- Harlan, J. R. 1977. The origins of cereal agriculture in the Old World. In, Reed, C. A. (editor). Pp. 357-383.
- Harlan, J. R. 1995. The living fields: our agricultural heritage. Cambridge Univ. Press. Cambridge, England. 271 pp.
- Harlan, J. R. & J. M. J. de Wet. 1973. On the quality of evidence for origin and dispersal of cultivated plants. *Current Anthropol.* 14(1-2): 51-62.
- Harris, D. R. 1977. Alternative pathways toward agriculture. In, Reed, C. A. (editor). Pp. 179-243.
- Harris, D. R. & G. C. Hilman (editors). 1989. Foraging and farming: the evolution of plant exploitation. Unwin Hyman. London, England. 733 pp.
- Hawkes, J. G. 1970. The origins of agriculture. *Econ. Bot.* 24: 131-3.
- Hawkes, J. G. 1983. The diversity of crop plants. Harvard Univ. Press. Cambridge, MA. 184 pp.
- Hawkes, K. 1993. Why hunter-gatherers work: an ancient version of the problem of public goods. *Curr. Anthropol.* 34: 341-361.
- Hawkes, K. et al. 1997. The behavioral ecology of modern hunter-gatherers, and human evolution. *Trends Ecol. Evol.* 12(1): 29-32.
- Heiser, C. B., Jr. 1985. Seeds, sex, and sacrifice: religion and the origin of agriculture. In, Plants and people. Univ. of Oklahoma Press. Norman. Pp. 190-220.
- Heiser, C. B., Jr. 1988. Aspects of unconscious selection and the evolution of domesticated plants. *Euphytica* 37: 77-81.

- Hutchinson, J. et al. 1976. The early history of agriculture. Oxford Univ. Press. 212 pp.
- Hyamms, E. 1971. Plants in the service of man: 10,000 years of domestication. J. M. Dent & Sons, Ltd. London. 222 pp.
- Jackson, D. L. & L. L. Jackson. 2002. The farm as natural habitat: reconnecting food systems with eco-systems. Island Press. Washington, D. C.
- Kimber, C. 1978. A folk context for plant domestication: or the dooryard garden revisited. *Anthrop. J. Canada* 16: 2-11.
- Lee, R. B. & R. Daly (editors). 1999. The Cambridge encyclopedia of hunters and gatherers. Cambridge Univ. Press.
- Leonard, J. N. 1973. The emergence of Man: the first farmers. Time-Life Books. New York, NY. 160 pp.
- Lewin, R. 1988. New views emerge on hunters and gatherers. *Science* 240: 1146-1148.
- Lewin, R. 1988. A revolution of ideas in agricultural origins. *Science* 240: 984-986.
- Li, J.-L. 1970. The origin of cultivated plants in southeast Asia. *Econ. Bot.* 24: 3-19.
- MacNeish, R. S. 1965. The origins of American agriculture. *Antiquity* 39: 87-94.
- Merrill, E. D. 1938. Domesticated plants in relation to the diffusion of cultures. *Bot. Rev.* 4: 1-20.
- Meyers, J. T. 1971. The origins of agriculture: an evaluation of three hypotheses. In, Struever, S. Prehistoric agriculture. Natural History Press. Garden City, New York.
- Monastersky, R. 1998. Paleoscatology: prying DNA from dated dung. *Science News* 154(3): 38.
- Nabhan, G. P. 1979. Cultivation and culture. *The Ecologist* 9(8-9): 259-263.
- Nabhan, G. P. & R. S. Felger. 1985. Wild relatives of crops: their direct uses as food. In, Wickens, G. E., J. R. Goodin, and D. V. Field. Plants for arid lands. George Allen & Unwin. London. Pp. 19-34.
- Pearsall, D. M. 1989. Palaeoethnobotany: a handbook of procedures. Academic Press. London,
- England.
- Pickersgill, B. 1972. Cultivated plants as evidence for cultural contacts. *American Antiq.* 37: 97-104.
- Power, J. F. & R. F. Follett. 1987. Monoculture. *Sci. American* 256(3): 78-86.
- Prescott-Allen, R. & C. 1983. Genes from the wild: using wild genetic resources for food and raw materials. An Earthscan Paperback. London. 101 pp.
- Prescott-Allen, R. & C. 1990. How many plants feed the world? *Conservation Biology* 4(4): 365-374.
- Price, T. D. & A. B. Gebauer (editors). 1995. Last hunters, first farmers. Advanced Seminar Series. School of American Research. Santa Fe, CA.
- Pringle, H. 1998. The slow birth of agriculture. *Science* 282: 1446-1450.
- Raamsdonk, L. W. D. van. 1993. Wild and cultivated plants: the parallelism between evolution and domestication. *Evol. Trends in Plants* 7(2): 73-84.
- Reed, C. A. (editor). 1978. Origins of agriculture. Papers from a conference, 1973. Mouton. The Hague. 1014 pp.
- Reinhard, K. J. & V. M. Bryant. 1992. Coprolite analysis: a biological perspective on archaeology. In, Schiffer, M. B. (editors). Archaeological method and theory. Univ. Arizona Press. Tucson, AZ. 4: 245-288.
- Renfrew, J. M. 1969. The archaeological evidence for the domestication of plants: methods and problems. In, Ucko, P. & G. W. Dimbleby (editors). The domestication and exploitation of plants and animals. Aldine Publ. Co. Pp.149-72.
- Rhoades, R. E. 1991. The world's food supply at risk. *Natl. Geogr.* 179(4): 74-105.
- Rindos, D. 1984. The origins of agriculture. An evolutionary perspective. Academic Press. Orlando, FL. 325 pp.
- Rogers, D. & S. M. Wilson (editors). 1993. Ethnohistory and archaeology: approaches to postcontact change in the Americas. Plenum. New York, NY. 237 pp.
- Sage, R. F. 1995. Was low atmospheric CO₂ during the Pleistocene a limiting factor for the origin of agriculture? *Global Change Biol.* 1: 93-100.

- Sauer, C. O. 1947. Early relations of man to plants. *Geogr. Rev.* 37: 1-25.
- Sauer, C. O. 1952. Agricultural origins and dispersal. *American Geogr. Soc.* New York, NY. 110 pp.
- Sauer, C. O. 1969. Seeds, spades, hearths, and herds: the domestication of animals and foodstuffs. Second edition. MIT Press. Cambridge, MA. 175 pp.
- Schultze-Motel, J. 1988. Paleoethnobotanik und ihr Beitrag zur Evolutionsforschung bei Kulturpflanzen. *Die Kulturpflanzen* 36: 237-246.
- Schwanitz, F. 1966. The origin of cultivated plants. Harvard Univ. Press. Cambridge, MA. 175 pp.
- Shell, E. R. 1990. Seeds in the bank could stave off disaster on the farm. *Smithsonian* 20(10): 94-105.
- Shepard, P. 1973. The tender carnivore and the sacred game. Charles Scribner's Sons. New York, NY. 302 pp.
- Shulman, S. 1986. Seeds of controversy. *BioScience* 36(10): 647-651.
- Smith, B. D. 1995. The emergence of agriculture. *Sci. American Library.* New York, NY. 230 pp.
- Smith, B.D. 1998. Between foraging and farming. *Science* 279: 1651, 1652.
- Smith, C. E., Jr. 1969. From Vavilov to the present. *Econ. Bot.* 23: 2-19.
- Sokolov, R. 1987. Columbus's biggest discovery. *Nat. Hist.* August: 66, 67.
- Solbrig, O. T. & D. J. Solbrig. 1994. So shall you reap: farming and crops in human affairs. Shearwater Books. Washington, D. C. 284 pp.
- Solheim, W. G. III. 1982. An earlier agricultural revolution. *Sci. Amer.* 226(4): 34-41.
- Stearn, W. T. 1965. The origin and later development of cultivated plants. *J. Roy. Hort. Soc.* 90: 279-341.
- Struever, S. (editor). 1971. Prehistoric agriculture. Natural History Press. Garden City, NY. 733 pp.
- Trepl, L. 1995. Anthropogenic migration of plants and naturalisation. In, Sukopp, H. et al. (editors). *Urban ecology.* Acad. Publ. The Hague. Pp. 75-97.
- Trigg, H. B. et al. 1994. Coprolite evidence for prehistoric foodstuffs, condiments, and medicines. In, Etkin, N. L. (editor). *Eating on the wild side.* Univ. Arizona Press. Tucson. Pp. 210-223.
- Ucko, P. J. & G. W. Dimbleby. 1969. The domestication and exploitation of plants and animals. Aldine Publ. Co. 581 pp.
- Vasey, D. E. 1992. An ecological history of agriculture: 10,000 B. C. - A. D. 10,000. Iowa State Univ. Press. Ames. 363 pp.
- Vavilov, N. I. 1926. Studies on the origin of cultivated plants. *Bull. App. Bot.* 16: 139-248.
- Vavilov, N. I. 1951. The origin, variation, immunity and breeding of cultivated plants. Translated from the Russian by K. Starr Chester. Ronald Press Co. New York, NY. 364 pp.
- Vavilov, N. I. 1992. Origin and geography of cultivated plants. Translated by D. Löve. Cambridge Univ. Press. Cambridge, England. 498 pp.
- Wilke, P. J., R. Bettinger, T. F. King, & J. F. O'Connell. 1972. Harvest selection and domestication in seed plants. *Antiquity* 46: 203-208.
- Wright, H. E., Jr. 1977. Environmental change and the origin of agriculture in the Old and New Worlds. In, Reed, C. A. (editor). *Origins of agriculture.* Pp. 281-318.
- Zeist, W. van & W. A. Casparie (editors). 1983. Plants and ancient man. Studies in palaeoethnobotany. Proc. 6th Symp. International Work Group of Palaeobotany. Groningen. The Netherlands. 344 pp.
- Zeven, A. C. & P. M. Zhukovsky. 1975. Dictionary of cultivated plants and their centres of diversity. Centre for Agric. Publ. and Documentation. Wageningen. 219 pp.
- Zhukovsky, P. M. 1962. Cultivated plants and their wild relatives. Translated from the Russian by P. S. Hudson. Farnham Royal (Commonwealth Agric. Bureau). 107 pp.
- Zhukovsky, P. M. 1968. New centres of origin and new gene centres of cultivated plants including specifically endemic microcentres of species closely allied to cultivated species. *Bot. Zh.* 53: 430-460.
- Zohary, D. 1970. Centers of diversity and centers of

- origin. In, Frankel, O. H. and E. Bennet (editors). Genetic resources in plants -- their exploitation and conservation. Pp. 33-42.
- Zohary, D. 1984. Modes of evolution in plants under domestication. In, Grant, W. (editor). Plant biosystematics. Academic Press. Montreal. Pp. 579-586.
- Zohary, D. 1999. Monophyletic vs. polyphyletic origins of the crops on which agriculture was founded in the Near East. *Genetic Res. & Crop Evol.* 46: 133-142.
- VAVILOV & LYSENKO**
- Cohen, B. M. 1991. Nikolai Ivanovich Vavilov: the explorer and plant collector. *Econ. Bot.* 45(1): 38-46.
- Cuvasina, N. P. 1988. N. I. Vavilov -- Personlichkeit und Mensch. *Die Kulturpflanze* 36: 55-60.
- Dobzhansky, T. 1947. N. I. Vavilov, a martyr of genetics. *J. Heredity* 38(8): 227-232.
- Gershenson, S. M. 1990. The grim heritage of Lysenkoism: four personal accounts. IV. Difficult years in Soviet genetics. *Quart. Rev. Biol.* 65(4): 447-456.
- Glass, B. 1990. The grim heritage of Lysenkoism: four personal accounts: I. Foreward. *Quart. Rev. Biol.* 65(4): 413-421.
- Haldane, J. B. S. 1940. Lysenko and genetics. *Sci. Soc.* 4: 433-437.
- Harris, D. R. 1990. Vavilov's concept of centers of origin of cultivated plants: its genesis and its influence on the study of agricultural origins. *J. Linnean Soc.* 39(1): 7-16.
- Hawkes, J. G. 1988. The Vavilov centenary: a personal view of the man and his work. *Plants Today* 1(4): 107, 108.
- Hawkes, J. G. 1990. N. I. Vavilov -- the man and his work. *Biol. J. Linnean Soc.* 39(1): 3-6.
- Johnston, B. A. 1998. Nicolay Ivanovich Vavilov, plant explorer extraordinaire. *HerbalGram* 44: 14, 15.
- Joravsky, D. 1970. The Lysenko affair. Harvard Univ. Press. Cambridge, MA. 459 pp.
- Krementsov, N. 1996. A "second front" in Soviet genetics: The international dimension of the Lysenko controversy, 1944-1947. *J. Hist. Biol.* 29: 229-250.
- Lysenko, T. D. 1956. Stalin and Michurinist agrobiology. *J. Heredity* XLVII(2): 56; 104.
- Mather, K. 1942. Genetics and the Russian controversy. *Nature* 149: 427, 430.
- Medvedev, Z. A. 1969. The rise and fall of T. D. Lysenko. Columbia Univ. Press. New York, NY. 284 pp.
- Popovsky, M. 1984. The Vavilov affair. Shoe String Press. Hamden, CT. 216 pp.
- Smith, C. E. 1969. From Vavilov to the present. *Econ. Bot.* 23: 2-19.
- Soyfer, V. N. 1994. Lysenko and the tragedy of Soviet science. Rutgers Univ. Press. New Brunswick, NJ. 379 pp.
- Theunissen, B. 1996. A 'second front' in Soviet genetics: the international dimension of the Lysenko controversy, 1944-1947. *J. Hist. Biol.* 29(2): 229-250.
- Vitkovskij, V. L. 1988. Leben und Werk N. I. Vavilov. *Die Kulturpflanze* 36: 43-53.
- Zirkle, C. 1956. L'affaire Lysenko. *J. Heredity* 47(2): 47.
- DOMESTICATION: OLD WORLD**
- Ambrosoli, M. 1997. The wild and the sown: agriculture and botany in western Europe, 1350-1850. Cambridge Univ. Press. Cambridge, England. 512 pp.
- Ammerman, A. J. & L.. L.. Cavalli-Sforza. 1971. Measuring the rate of spread of early farming in Europe. *Man* 6: 674-688.
- Burkhill, I. H. 1953. Habits of man and the origins of the cultivated plants of the Old World. *Proc. Linn. Soc.* 164: 12-42.
- Chang, K. C. 1970. The beginnings of agriculture in the Far East. *Antiquity* 44: 175-185.
- Chorley, G. P. H. 1981. The agricultural revolution in northern Europe, 1750-1880: nitrogen, legumes,

- and crop productivity. *Econ. Hist. Rev.* 34: 71-93.
- Clark, J. D. 1976. Prehistoric populations and pressures favoring plant domestication in Africa. In, Harlan, J. R. et al. (editors). *Origins of African plant domestication*. Mouton Press. The Hague. Pp. 67-105.
- Clark, J. D. and S. A. Brandt. 1984. From hunters to farmers: the causes and consequences of food production in Africa. Univ. California Press. Berkeley. 433 pp.
- Harlan, J. R., J. M. J. de Wet, & A. Stemler (editors). 1976. *Origins of African plant domestication*. Mouton World Anthropol. Series. The Hague. 498 pp.
- Harris, D. R. (editor). 1996. *The origin and spread of agriculture and pastoralism in Eurasia*. Univ. College London Press. London, England.
- Helbaek, H. 1959. Domestication of food plants in the Old World. *Science* 130: 365-72.
- Kerr, R. A. 1998. Black Sea deluge may have helped spread farming. *Science* 279: 1132.
- Lee, R. 1979. *The !Kung San: men, women and work in a foraging society*. Cambridge Univ. Press. Cambridge, England
- Lev-Yadun, S., A. Gopher, & S. Abbo. 2000. The cradle of agriculture. *Science* 288: 1602, 1603.
- Murray, J. 1970. *The first European agriculture, a study of the osteological and botanical evidence until 2000 BC*. Edinburgh Univ. Press. Edinburgh, Scotland. 380 pp.
- Renfrew, J. M. 1973. *Palaeoethnobotany: the prehistoric food plants of the Near East and Europe*. Columbia University Press. New York, NY. 247 pp. + plates.
- Solecki, R. 1975. Shanidar IV, a Neanderthal flower burial in northern Iraq. *Science* 190: 880, 881.
- Vavilov, N. I. 1931. The role of Central Asia in the origin of cultivated plants. *Bul. Appl. Bot., Genetics and Plant Breeding* 26: 3-44. (In Russian).
- Wendorf, F. et al. 1992. Saharan exploitation of plants 8,000 years BP. *Nature* 359: 721-724.
- Wright, H. E., Jr. 1976. The environmental setting for plant domestication in the Near East. *Science* 194: 385-389.
- Zhukovsky, P. M. 1965. Main gene centres of cultivated plants and their wild relatives within the territory of the U.S.S.R. *Euphytica* 14(2): 177-88.
- Zohary, D. & M. Hopf. 2001. *Domestication of plants in the Old World*. Third edition. Oxford Univ. Press. New York, NY. 316 pp.

DOMESTICATION: NEW WORLD

- Carter, G. F. 1950. Plant evidence for early contacts with America. *Southwest J. Anthropol.* 66: 161-82.
- Chomko, S. A. and G. W. Crawford. 1978. Plant husbandry in prehistoric eastern North America: new evidence for its development. *American Antiquity* 43: 405-408.
- Clement, C. R. 1989. A center of crop genetic diversity in western Amazonia. *BioScience* 39: 624-631.
- Cook, O. F. 1925. Peru as a center of domestication. *J. Heredity* 16: 33-46; 95-110.
- Denevan, W. M. 1970. Aboriginal drained-field cultivation in the Americas. *Science* 169: 647-654.
- Denevan, W. M. 1992. The pristine myth: the landscape of the Americas in 1492. *Ann. Assoc. American Geogr.* 82: 369-385.
- Erlandson, J. M. 1994. *Early hunter-gatherers of the California coast*. Plenum. New York, NY. 336 pp.
- Heiser, C. B., Jr. 1965. Cultivated plants and cultural diffusion in nuclear America. *Amer. Anthropol.* 67: 930-49.
- Heiser, C. B., Jr. 1979. Origins of some cultivated New World plants. *Ann. Rev. Ecol. Syst.* 10: 309-26.
- Hills, W. H. 1989. *Early prehistoric agriculture in the American Southwest*. Univ. Washington Press. Seattle. 184 pp.
- Hurt, R. D. 1994. *American agriculture: a brief history*. Iowa State Univ. Press. Ames. 412 pp.
- MacNeish, R. S. 1964. The food-gathering and incipient agricultural stage of prehistoric Middle America. In, West, R. C. (editor). *Natural environments and early cultures. Handbook of Middle American Indians*. Univ. Texas Press. Austin.

- 1: 413-26.
- MacNeish, R. S. 1964. The origins of New World civilization. *Sci. American* 211(5): 29-37.
- Mangelsdorf, P. C., R. S. MacNeish, & G. R. Willey. 1965. Origins of agriculture in Middle America. In, *Handbook of Middle American Indians*. Univ. Texas Press. Austin. Pp. 427-45.
- McLaughlin, S. P. 1985. Economic prospects for new crops in the southwestern United States. *Econ. Bot.* 39(4): 473-481.
- Merrill, E. D. 1950. Observations on cultivated plants with reference to certain American problems. *Ceiba* 1: 3-36.
- Nabhan, G. P. 1985. Native crop diversity in Aridoamerica: conservation of regional gene pools. *Econ. Bot.* 39(4): 387-399.
- Nabhan, G. P. 1989. Enduring seeds: native American agriculture and wild plant conservation. North Point Press. San Francisco, CA. 225 pp.
- Pickersgill, B. 1977. Taxonomy and the origin and evolution of cultivated plants in the New World. *Nature* 268: 591-595.
- Pickersgill, B. & C. B. Heiser, Jr. 1977. Origins and distribution of plants domesticated in the New World tropics. In, Reed, C. A. (editor). Pp. 803-835.
- Piperno, D. R. & D. M. Pearsall. 1998. The origins of agriculture in the lowland neotropics. Academic Press. San Diego, CA. 400 pp.
- Sanders, W. T. 1976. The agricultural history of the Basin of Mexico. In, Wolf, E. (editor). *The valley of Mexico*. Univ. New Mexico Press. Albuquerque. Pp. 101-160.
- Sauer, C. O. 1936. American agricultural origins: a consideration of nature and culture. In, *Essays in anthropology*, presented to A. L. Kroeber. Univ. California Press. Pp. 279-97.
- Sauer, C. O. 1959. Age and area of American cultivated plants. *Actas 33d Internationales Congreso Americanistes* 1: 215-29.
- Sauer, C. O. 1965. Cultural factors in plant domestication in the New World. *Euphytica* 14(3): 301-6.
- Sauer, C. O. 1965. American agricultural origins: a consideration of nature and culture. In, Leighly, J. (editor). *Land and life. A selection of the writings of Carl Ortwin Sauer*. Univ. California Press. Berkeley. Pp. 121-144.
- Smith, B. D. 1989. Origins of agriculture in eastern North America. *Science* 246: 1566-1571.
- Smith, B. D. 1992. Rivers of change: essays on early agriculture in eastern North America. Smithsonian Inst. Press. Washington, D. C. 302 pp.
- Smith, C. E., Jr. 1966. Bibliography of American archaeological plant remains. *Econ. Bot.* 20(4): 446-460.
- Smith, C. E., Jr. 1968. The New World centers of origin of cultivated plants and archeological evidence. *Econ. Bot.* 22: 253-66.
- Toll, H. W. (editor). 1995. Soil, water, biology and belief in prehistoric and traditional southwestern agriculture. New Mexico Arch. Council. Albuquerque, NM. 373 pp.
- Vavilov, N. I. 1931. Mexico and Central America as the principal centres of origin of cultivated plants in the New World. *Bull. Appl. Bot. Genet. Pl. Breed.* 26: 135-199. (In Russian).
- Weatherford, J. 1988. Indian givers: how the Indians of the Americas transformed the world. Crown Books. New York, NY. 272 pp.
- Whitney, G. G. 1994. From coastal wilderness to fruited plain. Cambridge Univ. Press. Cambridge, England. 451 pp.
- Wright, K. 1999. First Americans. *Discover* 20(2): 52-58, 60, 62, 63.

DOMESTICATION: OCEANIA

- Barrau, J. 1963. Plants and the migrations of Pacific peoples. Bishop Museum. Honolulu, HI. 136 pp.
- Carter, G. F. 1953. Plants across the Pacific. *Amer. Antiquity (Mem.)* 18(No. 3 pt. 2): 62-71.
- Denham, T. P. et al. 2003. Origins of agriculture at Kuk Swamp in the highlands of New Guinea. *Science* 301: 189-193.
- Neumann, K. 2003. New Guinea: a cradle of agriculture. *Science* 301: 180, 181.

Yen, D. E. 1985. Wild plants and domestication in Pacific islands. In, Miscara, V. N. & P. Bellwood (editors). Recent advances in Indo-Pacific prehistory. Oxford and IBP. New Delhi, India. Pp. 315-326.