

Harlan II: An International Symposium



Biodiversity in Agriculture: Domestication, Evolution, & Sustainability

14–18 September 2008 • University of California, Davis

Anticipated Attendance

- ◆ Scientists engaged in research on genetics, ecology, anthropology, and archaeology of crop and animal domestication and evolution.
- ◆ Representatives of organizations responsible for increasing crop and livestock productivity, including governments, universities, IARCs, and NGOs.
- ◆ Agricultural producers.
- ◆ Teachers, educators, and public information specialists.

Venue

The campus of the University of California, Davis in the Central Valley of California, 12 miles (19 km) west of Sacramento, the capital city, and 75 miles (121 km) east of San Francisco. Davis is served by the Sacramento International Airport (22 miles/35 km) and rail and bus service, see web-site for details (<http://HarlanII.ucdavis.edu>).

Program Presentations are organized around three themes and the third has a special focus with a review of the plant and animal breeding contributions of UC Davis (and the California Agricultural Experiment Station) to California agriculture.

Day 1 Sunday (14 September)

Reception and Keynote Presentation

Chance or Destiny in the Local Origins of Agriculture—
Jared Diamond (USA)

Day 2 Monday (15 September)

Plant and Animal Domestication Processes

Genetics of Farm Animal Domestication—
Leif Andersson (Sweden)

Evolutionary Genomics of the Dog and Dog-Like Carnivores—
Robert Wayne (USA)

New Archaeological Methods and Information Involving Microre-
mains—**Dolores Piperno** (USA)

'New Archaeological Information'—**Dorian Fuller** (UK)

The Genetic Basis of Crop Evolution: Insights From Sunflower—
John Burke (USA)

'Ecological Approaches to the Study of Crop Domestication'—
Doyle McKey (France)

Gene Flow and Genetic Isolation in Crop Evolution—
Susan McCouch (USA)

Day 3 Tuesday (16 September)

Processes of Agricultural Evolution

'Introductory Overview'—**David Harris** (UK)

The Adoption of Cultivation by Late Pleistocene/Early Holocene
Hunters in the Northern Levant—**George Willcox** (France)

Pathways to Animal Domestication—**Melinda Zeder** (USA)

From Foraging to Farming in Western and Eastern Asia—
Ofer Bar-Yosef (USA)

How and Why Did Agriculture Spread?—
Peter Bellwood (Australia)

Land Architecture in the Central Maya Lowlands: Implications for
Sustainability—**Bill Turner** (USA)

Indigenous Peoples Conserving, Managing, and Creating Biodi-
versity—**Jan Salick** (USA)

Malaria and Ricketts Represent Selective Forces for the Convergent
Evolution of Adult Lactase Persistence—**Loren Cordain** (USA)

Evening Gala and Keynote Presentation

A Journey to the Origins of Food: Retracing Vavilov's Footsteps
Through The Centers of Food Diversity—**Gary P. Nabhan** (USA)

Day 4 Wednesday (17 September)

Global Implications of Agricultural Biodiversity and Sustainability of California Agriculture

California Indian Proto-Agriculture: Its Characterization and
Legacy—**M. Kat Anderson** (USA)

'Global Genetic Resources and California Perspectives'—
Calvin Qualset (USA)

'Genetic Resources for Aquaculture'—**Dennis Hedgecock** (USA)

'Genetic Resources of Farm Animals'—**Juan Medraño** (USA)

Biodiversity of Native Bees and Crop Pollination with Emphasis on
California—**Robbin Thorp** (USA)

'Genetic Resources of Yeast and Other Micro-Organisms'—
Charles Bamforth (USA)

The Introduction and Dispersal of *Vitis vinifera* into California: A
Case Study of the Interaction of Man, Plants, Economics, and
Environment—**James Lapsley** (USA)

'New Crops for California (Food, Fuel, Fiber, Feed)'—
Stephen Kaffka (USA)

Biodiversity and Ecosystem Services: Assessments in Agricultural
Landscapes in California—**Louise Jackson** (USA)

'Dynamic California Cuisines'—**Karen Caplan** (USA)

Day 5 Thursday (18 September)

Post-Symposium Tours

1. Birds of the Cosumnes River Preserve –
Riparian Forests and Managed Wetlands
2. Napa County Wine Country
3. Petaluma Poultry History and Sonoma Tour
4. Fish Farms of the Sacramento Valley
5. Germplasm Facilities of UC Davis and Environs
6. Native Biodiversity and Plant/Pollinator interactions in
Agricultural Systems

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Symposium Concept

Our knowledge of the processes that affect agricultural biodiversity, in both plants and animals, has increased considerably in the recent years since an international symposium was held in Aleppo, Syria in May 1997 [*The Origins of Agriculture and the Domestication of Crop Plants in the Near East*], dedicated to Jack R. Harlan, 1917–1998, evolutionary biologist and plant explorer]. Examples include:

- ♦ The origin of domestication and the inheritance of the domestication syndrome of crop plants and domestic animals are now being investigated with powerful genomic tools.
- ♦ Increasingly, domestication constitutes a model to study evolution in general and the molecular and genetic bases of adaptation.
- ♦ The discovery and characterization of micro-remains allow archaeologists to explore the origins of agriculture in a broader range of environments.
- ♦ The role of farmers in maintaining agricultural biodiversity has received increasing attention.
- ♦ The utilization of geographic information systems in the characterization of agricultural biodiversity has become commonplace.

- ♦ The parallel evolution of beneficial microorganisms and pathogens in both crop and animal domestication has provided an added dimension to the field.
- ♦ The study of agricultural biodiversity is becoming an increasingly multidisciplinary field, combining the approaches of a wide range of disciplines in the natural and social sciences.
- ♦ Conserving and utilizing agricultural biodiversity is seen as an integral part of the sustainable management of agricultural and natural ecosystems.

The objectives of this new Symposium, Harlan II, are to review this progress, assess the current status of agricultural biodiversity, and chart directions for its future.

Products of the Symposium

- ♦ Abstract booklet at time of the Symposium.
- ♦ Book to be published after the Symposium.

For more information and registration, go to the Symposium website: <http://HarlanII.ucdavis.edu>

Symposium organized by the

Departments of Anthropology, Animal Science, Human and Community Development, and Plant Sciences of the UC Davis College of Agricultural and Environmental Sciences and the UC Genetic Resources Conservation Program, Division of Agriculture and Natural Resources *through a Local Organizing Committee with guidance from an International Advisory Committee.*

Co-chairs of Symposium

Paul Gepts, Dept. of Plant Sciences, and
Tom Famula, Dept. of Animal Science
University of California, Davis

Local Organizing Committee

Charles Bamforth ♦ Bob Bettinger
Eric Bradford ♦ Francine Bradley
Steve Brush ♦ Adi Damania
Ellen Dean ♦ Serge Doroshov
Jan Dvorak ♦ Tom Famula
Paul Gepts ♦ Gurdev Khush
Mingcheng Luo ♦ Pat McGuire
Eric Mussen ♦ Angela Oates
Dan Potter ♦ Cal Qualset
Leanna Sweha ♦ Tom Tomich

International Advisory Committee

- ♦ Patricia C. Anderson, CÉPAM CNRS, France
- ♦ Ofer Bar-Yosef, Harvard University, USA
- ♦ Fredrick A. Bliss, Seminis Seeds, USA
- ♦ Michael T. Clegg, UC Irvine, USA
- ♦ E. Patrick Cunningham, Trinity College, Ireland
- ♦ Cary Fowler, Global Crop Diversity Trust, Italy
- ♦ Emile Frison, Bioversity International, Italy
- ♦ Arturo Gómez-Pompa, Univ. Veracruzana, Mexico
- ♦ David R. Harris, University College London, UK
- ♦ Roger Leakey, James Cook University, Australia
- ♦ Stephen J. O'Brien, National Cancer Institute, USA
- ♦ Ed Rege, ILRI, Kenya
- ♦ Jan Salick, Missouri Botanical Garden, USA
- ♦ Barbara Schaal, Washington University, USA
- ♦ Stephen Smith, Pioneer Hi-Bred Intl., Inc., USA

Symposium Secretariat

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