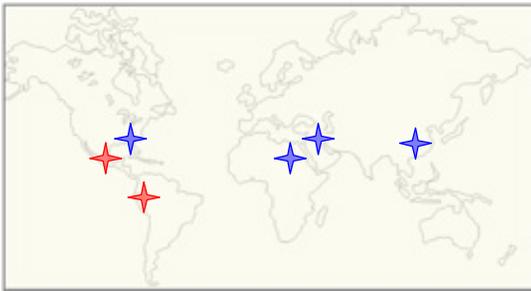


HEARTH AND DIFFUSION

The places people first domesticated native plants are called **hearths** of plant domestication. In these places, people selected seeds with certain desirable traits. Their choices, over time, domesticated the plants. Familiar hearths are Mexico (corn) and the Middle East (wheat). Eastern North America also was a hearth (sunflower).



Through **diffusion**, domesticated plant cultivation spreads across long distances to places where the plant is not native. People share seeds and the knowledge needed to grow the plants and prepare the foods.

Several plants domesticated elsewhere came to prehistoric Kentucky through diffusion. One example is the **common bean**. It was domesticated in the Peruvian Andes around 4400 years ago and again in Mesoamerica around 2400 years ago (the red stars shown above).



The "Three Sisters" (L-R): squash, corn, and beans



SITE PROTECTION AND PRESERVATION

The archaeological sites in the Red River Gorge are like all cultural resources on government property. They are protected by state and federal laws.

Please help preserve our irreplaceable cultural heritage. Leave artifacts where you find them and do not dig sites. Report discoveries on public or private property to government agencies, professional archaeologists, resource managers, or local universities. The past belongs to all of us!

• Living Archaeology Weekend 2013 •

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Beans and the Red River Gorge

The Other Side of Plant Domestication



September 20-21, 2013

Gladie Historic Site

Red River Gorge

Daniel Boone National Forest

THE THREE SISTERS

Native peoples adopted domesticated beans quickly. Beans appear in the Eastern Woodlands by the late AD 1200s. This is about the same time they appear at sites in central and northern Kentucky.

Native peoples in central, northern, and eastern Kentucky turned to farming around AD 1000. Native farmers planted complementary crops together in the same field. It was a sophisticated, sustainable, and productive agricultural system.



In almost every agricultural community worldwide, farmers paired a legume with a cereal grain. In prehistoric Kentucky, the legume was beans and the cereal grain was corn. Add squash and you have what many Eastern North American native peoples still call the “Three Sisters.”



BEANS

Archaeologists are not sure how domesticated beans got to Kentucky. Some think they came from the American Southwest and across the Plains; others think they came from the Caribbean and up the Atlantic coast. Regardless of the path, it is clear that beans appeared after squash and corn.

Beans complement corn nutritionally. Beans are rich in amino acids; corn has carbohydrates and protein, but lacks certain amino acids. Dishes that combine beans and corn are a good source of complete vegetable protein.

Beans were part of native burial rituals. Shelled beans and corn kernels may have been offerings or eaten as part of mourning ceremonies or feasts.



Outside the Red River Gorge, prehistoric farmers lived in villages. Several village sites in central and northern Kentucky have produced domesticated beans. The earliest Kentucky examples occur at the Guilfoil site in Fayette County and at Fox Farm in Mason County. Charred beans from Fox Farm are pictured below.



In the Gorge, small groups of people came to hunt in the winter. They stayed in its many rockshelters. As yet, archaeologists have not found beans at rockshelter sites in the Gorge.

European-Americans and their slaves learned about beans from native peoples. Some Eastern Kentucky heirloom beans may be linked to prehistoric bean varieties. Today, there are hundreds of different heirloom beans in the Southern Appalachians, like Turkey Crow, Partridge Head, and Big John.

The common bean is a cheap way to meet nutritional needs. It is the best source of vegetable protein. Beans can feed the world without destroying the planet.