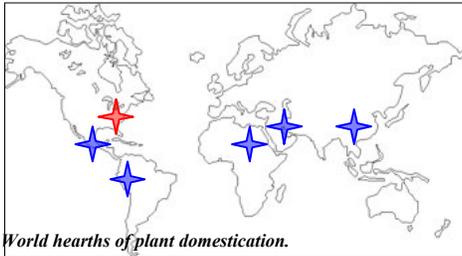


Agricultural Hearths

What do eastern North America, Mexico, Peru, the Middle East, Africa, and East Asia have in common? They are all agricultural **hearths**, or centers of plant domestication.

At these hearths, ancient people selected seeds with certain desirable traits, like larger size or thinner seed coats, and planted only them. Over time, the people's choices domesticated the plants. Familiar examples are corn, potatoes, rice, and wheat.



In the 1980s, archaeologists discovered that eastern North America was an agricultural hearth. Our Red River Gorge sites contributed to this discovery. They contain some of the earliest and best-preserved evidence of ancient plant use. We know now that people began to domesticate plants in eastern North America about 5,000 years ago.



(L-R) Eastern North America crops: sunflower, sumpweed (museum.state.il.us), goosefoot (botany.cs.tmu.edu), maygrass (cas.sc.edu), and squashes.



Site Protection & 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

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Red River Gorge: A World Hearth of Plant Domestication



September 18-19, 2015

Gladie Historic Site

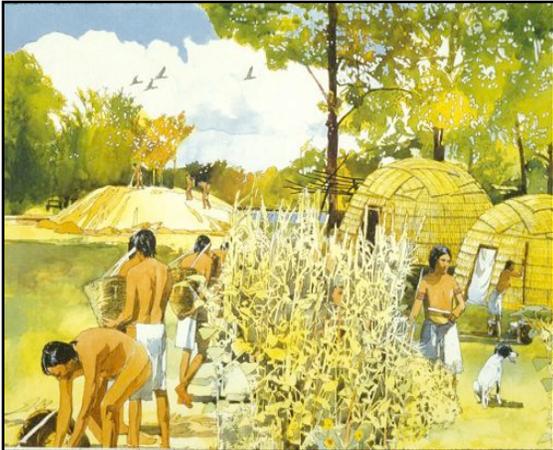
Red River Gorge

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Eastern Agricultural Complex

Native people in North America's Eastern Woodlands hunted wild animals and gathered wild plants. Over time, they gradually added domesticated plants, or **cultigens**, to their diets.

These plants thrived in disturbed places like river floodplains and forest clearings. Native Americans grew these crops long before they adopted corn and beans from Mexico.



demeta.museum.state.il.us

Archaeologists call these domesticated native plants the **Eastern Agricultural Complex (EAC)**. They include oily-seed producing plants, like sunflower, and starchy-seed producing plants, like goosefoot/lambsquarters.

Fleshy squash (*Cucurbita pepo*) also is an EAC plant. *Pepo* squashes include orange jack-o-lantern pumpkins; acorn, zucchini, and pattypan squashes; and numerous types of ornamental gourds.



Pepo Squash

The 5,000-year-long story of native *Pepo* squash/gourd domestication is written in the burned and unburned seeds, rinds, and blossom scars preserved in many of the Red River Gorge's dry rockshelters.

Around 4,000 B.C., local hunter-gatherers collected and ate protein-rich seeds of small, thin-skinned, wild gourds. As time passed, these Native peoples carefully selected certain wild gourds that best met their needs.

This physically changed the plants. Fruits became larger and fleshier. Rinds became thicker. Seeds became larger, too. After 2000 years, Native hunter-gatherer-gardeners were growing smooth and warty, lobed varieties of squash/gourds. Native peoples likely ate the fruits, but it is just as likely they used the squash/gourds as durable containers.

urbanacres.wordpress.com

By A.D. 600, Native peoples' food needs had changed. Their domestication efforts to breed edible, meaty squash produced thick-fleshed fruit with thin rinds.

Squash remained an important food for Native peoples, even after they turned away from the EAC. Native farmers grew squash, along with corn and beans, as one of the Three Sisters. They passed on *Pepo* squash to European settlers.



Over time, many EAC plants reverted to weeds. But people still eat squash, sunflowers, and a species of goosefoot called quinoa. We grow a wide variety of *Pepo* squashes in backyard gardens. Squash is still an important food today.

Cloudsplitter Rockshelter in Menifee County has produced some of the oldest *Pepo* squash seed and rind fragments in Eastern North America. The remains from Cloudsplitter and Newt Kash in Menifee County, and Rogers and Haystack in Powell County provide us with a picture of the complex domestication history of this important plant.