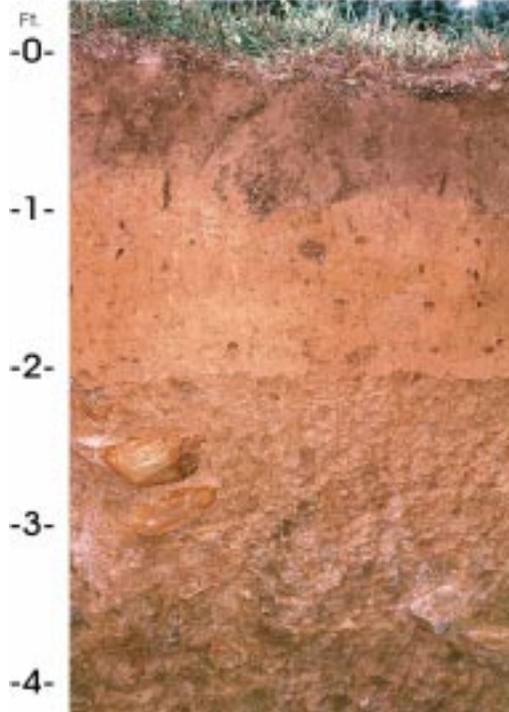


MONONGAHELA -- WEST VIRGINIA STATE SOIL



Monongahela Soil Profile

Surface layer: dark grayish brown silt loam
Subsurface layer: yellowish brown silt loam
Subsoil - upper: yellowish brown silt loam
Subsoil - lower: a firm, brittle fragipan of light yellowish brown loam
Substratum: strong brown and gray clay loam

Monongahela soils occur on more than 100,000 acres in 45 counties in West Virginia. These very deep, moderately well drained soils are on alluvial stream terraces that are not flooded. They are used extensively for cultivated crops, hay, pasture, woodland, and homesite development. Monongahela soils are considered prime farmland where slopes are 3 percent or less. The soils are well suited to crop production.

The Monongahela series was designated the Official State Soil by the West Virginia Legislature in April 1997. The name "Monongahela" is derived from a Native American word meaning "high banks or bluffs, breaking off and falling down in places." The mean annual precipitation is about 45 inches, and the mean annual temperature is about 51 degrees F.



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Monongahela Soil—West Virginia State Soil

The attached photo is a landscape photo taken near the pit on the day of collection. This particular monolith was taken over in Berkeley County, WV on October 12, 2004. The specific site was on an old stream terrace located on Back Creek which is a tributary to the Potomac River. The owner of the property is Mr. Gary Butts who is a farmer and also one of the local contractors in the village of Shanghai, WV. The crew that took this monolith included Steve Carpenter, Charles Delp, Skip Bell, Wendy Noll, Jared Beard, and Rob Pate, USDA-Natural Resources Conservation Service.

One other interesting point about this monolith is the American chestnut frame that it is mounted on. As you probably know, the American chestnut once covered thousands and thousands of acres of land across eastern United States. From about 1900 to 1950, the American chestnut was decimated by a fungus from Asia. It has been recorded that in many areas in WV, approximately 1 in every 4 trees was an American chestnut. The tree was prized for its delicious nuts and was known as the "farmer's friend" because it was used for so many purposes. The wood of the American chestnut is lighter than oak but just about as strong, and it is extremely rot resistant.

The wood that was used to build the frame for the Monongahela in your possession was salvaged from an old barn located on the 4-H grounds, Camp Holly Gray, Braxton County, WV. I am sure that the tree that this wood came from was harvested in Braxton County and sawn on one of many mills located in the area. From talking to some of the locals, I would guess that it was sawn out sometime during the 1930s. There is no more American chestnut so each remaining board is a small treasure.

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DIG IT! *The Secrets of Soil*

EXHIBITION EXPERTS

The following experts are key members of the team responsible for bringing **Dig It! *The Secrets of Soil*** to the Smithsonian's National Museum of Natural History. Upon request, they are available to answer any questions regarding the science, design, development, and tour of this exciting new exhibition.

For additional information, contact: Randall Kremer at (202) 633-2950 or kremerr@si.edu

Dr. Patrick Megonigal, Exhibition Curator, **Dig It! *The Secrets of Soil***
Soil Ecologist, Smithsonian Environmental Research Center (SERC)

Pat Megonigal is the lead scientist for Dig It! He is a senior research scientist at SERC, a large field lab on shores of Chesapeake Bay. Megonigal was President of the international Society of Wetland Scientists and Chair of the Wetland Soils Division of the Soil Science Society of America (SSSA). Before joining the Smithsonian, he was an Assistant Professor of Biology at George Mason University.

Megonigal's research interests focus on ecosystem ecology and soil chemistry. He is an expert on wetland soils and soil responses to global climate change. Many of his research grants concern plant-microbe relationships and how they control soil carbon cycling. Among his more than 50 publications is a recent comprehensive review of microbial life in oxygen-free environments. Megonigal holds B.S. and M.S. degrees in Biology from Old Dominion University, and a PhD in soils and biogeochemistry from Duke University.

Dr. Edward Vicenzi, Exhibition Advisor, **Dig It! *The Secrets of Soil***
Research Geochemist, Department of Mineral Sciences, National Museum of Natural History (NMNH)

Ed Vicenzi is a science advisor for **Dig It!** He is a research geochemist and the Director of the Analytical Laboratories in the Department of Mineral Sciences, which means he is an "instrument geek." Vicenzi is the current chair of Natural History's Senate of Scientists. He recently completed a term as a council director with the Microbeam Analysis Society and is an active workshop and symposium organizer. Prior to his arrival at the Smithsonian, Vicenzi helped to build Princeton University's Imaging and Analysis Center and spent two years in Sydney, Australia as a postdoctoral fellow.

Vicenzi uses electron and ion microscopes to study the origin of geological materials. Some of his scientific interests are out-of-this-world as he examines meteorites from Mars, the asteroid belt, as well as comet dust brought back to Earth by a NASA spacecraft. He received his B.Sc from McGill University, M.S. from the University of Oregon, and PhD from Rensselaer Polytechnic Institute, all in Earth Sciences.



Smithsonian
National Museum of Natural History



DIG IT! *The Secrets of Soil*

Barbara Stauffer, Exhibition Developer, **Dig It! The Secrets of Soil**
Exhibition Developer, National Museum of Natural History (NMNH)

Barbara Stauffer has served as an exhibition developer at the Museum since 1990. In her current role, Barbara focuses primarily on conceptualizing and developing exhibitions, as well as on building creative exhibition partnerships. She received her B.A. in History from the University of Virginia and a M.A. in Geography from The George Washington University. Stauffer is particularly interested in exhibitions that illuminate past and present global biological, environmental and cultural connections, change perceptions of the natural world, and explore the intersection of art and science. Recent projects include the *Global Links*, *Arctic: A Friend Acting Strangely*, and *Atmosphere: Change is in the Air* exhibits, as well as the *Listening to the Prairie* traveling exhibition and *Forces of Change* book project.

In her current role as Acting Chief of Temporary Exhibits, Barbara manages all upcoming temporary exhibitions at the Museum. She is also the Exhibit Developer on the upcoming *Written in Bone: Forensic Files of the 17th Century Chesapeake* exhibition.

Jennifer Bine, Tour Manager, **Dig It! The Secrets of Soil**
Project Director, Smithsonian Institution's Traveling Exhibition Service (SITES)

Jennifer Bine has been a project director for the Smithsonian Institution Traveling Exhibition Service (SITES) since 1993. Her work has focused on the conceptualization development of traveling exhibitions in collaboration with Smithsonian museums and other agencies. Bine is particularly interested in exhibitions that appeal to natural history museum visitors across the country. The subject matter of her exhibitions has ranged from vanishing amphibian populations to the always-elusive giant squid.

Bine has a B.A. in History from Iowa State University and a M.A. in Historical Administration and Museum Studies from the University of Kansas. Jennifer was recently elected Treasurer of the National Association for Museum Exhibition.



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