



Archeology Program

National Park Service
U.S. Department of the Interior



June 2012 Archeology E-Gram

Passing of Archeologist Bill Rathje

William L. Rathje, professor emeritus at the University of Arizona, who pioneered the study of modern refuse as a scientific discipline, died in Tucson, Arizona, on May 24, 2012. Rathje's three decades of landmark studies punctured assumptions of what happens when people throw things away. He demonstrated that the principles and methods of archeology could extract information about behavior in contemporary society.

A native of Wheaton, Illinois, Rathje graduated from the University of Arizona in 1967, and earned his doctorate at Harvard in 1971. Early in his career, Rathje specialized in Mayan studies. In 1973, he was co-director of the Cozumel Archaeological Project, sponsored by National Geographic, and his models of the rise and fall of classic Maya civilization have been used to explain the fate of other civilizations as well.

In 1973, Rathje began the Garbage Project, which stemmed from an idea by his students, who collected trash from several parts of Tucson and correlated it with census data. Their results differed from assumptions about consumption patterns in specific areas: higher-end products in wealthier areas, and more modest consumption in less-affluent neighborhoods. Rathje mobilized a small paid staff and a cohort of volunteer students to expand the project. Working with the City of Tucson, they surveyed homeowners about consumption and disposal patterns. City garbage collectors routed trash containers from the surveyed households to Rathje's lab where he and his students sorted, weighed, recorded, and analyzed what they found. They discovered gaps, often significant ones, in what people reported they used and discarded, compared to what actually was found.

In 1987, Rathje turned his attention to the landfills themselves, to find out what they contained and how materials behaved inside

them. Using a bucket auger, workers scooped out vertical shafts of garbage from landfills, first in Arizona and later across the United States. The landfill excavations revealed an astonishing lack of knowledge not only about what was in the country's waste streams, but the eventual fate of materials buried underground. Conventional wisdom held that much of the trash in landfills would quickly decompose. Instead, organic materials were found mummified in the airless depths of sanitary landfills. Items like hot dogs and lettuce that had been entombed for years looked as if they had just been recently thrown out. Decades-old newspapers were still intact and readable. Construction materials,



Bill Rathje, founder of garbology

originally thought to be virtually non-existent in landfills, actually accounted for a significant portion of waste.

The Garbage Project had an impact on fields beyond archeology, including nutrition, hazardous waste – including disposal of nuclear materials – and recycling, and landfill management. Funding increased as the project grew, with grants coming from USDA, the EPA and other Federal agencies; and state and municipal grants in the U.S., Canada, and Australia.

In 1990, Rathje earned the Award for Public Understanding of Science and Technology given by the American Association for the Advancement of Science, which cited "his innovative contributions to public understanding of science and its societal impacts by demonstrating with his creative 'Garbage Project' how the scientific method can document problems and identify solutions." He also won the 1992 Solon T. Kimball Award for Public and Applied Anthropology, given by the AAA.

In addition to numerous academic journals, Rathje also wrote popular articles. In 1992, he collaborated with Cullen Murphy on "Rubbish! The Archaeology of Landfills."

*From story by Jeff Harrison
Media Relations, University of Arizona*

NPS Archeologist Remembers Bill Rathje

Bill Rathje passed away May 24, 2012, in Tucson, Arizona. He had a significant effect on the field of archeology, stretching the boundaries of what archeologists do and the questions they address. After a successful career as a Mayanist, Bill developed the field in archeology of modern material culture studies.

To me, however, Bill was an energetic mentor, a perfectionist that threw himself fully into his projects, including his graduate students. This was of tremendous value to me as one of the graduate students. I remember a particularly excruciating 6-month period when I drafted a proposal to the National Science Foundation (NSF) to explore household hazardous wastes. I would present Bill with my best graduate student writing, trying to address the somewhat mysterious (to me) proposal requirements of the NSF's Environmental and Water Quality Engineering Directorate, and Bill would quickly return it to me covered in red ink. After a few iterations of this, I would think I was getting better because there was less red ink, but then the next draft would "bleed" as much or more than the first. While frustrating, this process was exceptionally useful to me and ultimately paid off in a funded grant.

Working with Bill helped my writing immensely, but also taught me how important the grants process was to scholarship. Working through reports and articles with him showed me how attention to detail and clear and effective writing was a critical skill in archeology, one that has served me well in the NPS, and in mentoring my own students.

Bill was also acutely aware of the media and the good that positive media had on developing an understanding of what scientists really do. He was a master in front of a television camera. He taught me how to develop and present the "sound bites" that would forward one's research objectives while dampening perceptions of lunacy, particularly acute when anthropology students are doing such nontraditional things as poking through modern garbage or drilling holes in landfills.

Bill could be very persuasive in front of a lecture hall, or in a boardroom. He had no problem explaining why garbology was a valid science and how archeology could contribute to the modern world. Bill was a charmer, and could tell incredibly funny jokes and stories. He loved to talk and socialize. While he was by no means a perfect man, his strengths outweighed his weaknesses. While I have had other mentors in my life, there was no one quite like Bill Rathje.

By Doug Wilson

Archeologist, Cultural Resources Partnerships

New NPS Climate Change Adaptation Coordinator for Cultural Resources

Marcy Rockman is the new NPS Climate Change Adaptation Coordinator for Cultural Resources, joining the NPS and initiating the position in October 2011. Rockman is an archeologist by training. She has a B.Sc. in Geology from the College of William and Mary, and an M.A. and Ph.D. in Anthropology from the University of Arizona. She recently completed a 2009–2011 American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellowship at the EPA’s National Homeland Security Research Center, Washington, DC; and is a Fellow with the Cotsen Institute of Archaeology at UCLA. Prior to her AAAS fellowship, she worked in cultural resource management in California and Arizona. She has conducted fieldwork in the American West, Europe, and the Middle East.

Rockman’s long-term research focus is the landscape learning process - how human populations gather, share, remember, and transmit environmental information. Her current role addresses impacts of climate change on cultural resources across the nation and translation of archeological information into forms useful for Federal and partnerships-level planning regarding adaptation and resilience. Rockman is also the lead editor of two edited volumes about archeology, including the new “Archaeology in Society: Its Relevance in the Modern World” released in December 2011 by Springer Press and has published multiple scholarly chapters and journal articles.

Visitors Peer Into Past at Archeological Open House at Hopewell Culture National Historical Park

Hopewell Culture NHP hosted an open house at Hopewell Mound Group, Chillicothe, Ohio, on June 2-4, 2012. Over 100 visitors watched ongoing archeological research and learned from researchers. Paul Pacheco, State University of New York/Geneseo, and DeeAnne Wymer, Bloomsburg University, Pennsylvania, were working at Hopewell Mound Group with anthropology students from both universities.

Idaho. Structural finds include earth ovens, where piled rock is cracked and flecks of burnt orange charcoal are present.

Tucked away on the north side of the earthwork, the choice of location for the excavation was based on results of a 1994 project led by Bill Dancey, Ohio State University. The high density of Hopewell artifacts led Pacheco and Wymer to their project area. The researchers have found projectile points, pieces of pottery and more than 200 bladelettes. Pacheco said they also have found obsidian native only to Wyoming or



Mound at Hopewell Culture NHP

Sandy Bender, an anthropology student participating in the dig, said they also have found spots where its posts likely once stood to support a dwelling or other structure. Based on the types of artifacts discovered, the site appears to be a domestic area that would have been in use while ceremonial events were taking place inside the earthwork at Hopewell Mound Group.

For more information about Hopewell Culture NHP, go to <http://www.nps.gov/hocu/index.htm>

By Rick Perkins

Chief Ranger, Hopewell Culture NHP

NPS Awards Civil War Battlefield Land Acquisition Grants

The NPS has announced the award of more than \$3.8 million in grants to help with land acquisition at six Civil War battlefields. Grant projects include easement purchases at Cross Keys, Virginia (\$181,125); Tom's Brook, Virginia (\$25,000); Buckland Mills, Virginia (\$3,350,060); and fee simple acquisition at Mill Springs, Kentucky (\$90,800); South Mountain, Maryland (\$149,000); and Bentonville, North Carolina (\$45,325).

The grants were made from the NPS American Battlefield Protection Program (ABPP) to help states and local communities acquire and preserve threatened Civil War battlefield land outside the boundaries of national park units. Priority was given to battlefields listed in the NPS Civil War Sites Advisory Commission Report on the Nation's Civil War Battlefields (CWSAC Report). Funds were awarded based on the property's location within CWSAC-defined core and/or study areas, the threat to the battlefield land to be acquired, and the availability of required non-Federal matching funds.

The grant funds were made available under the Department of Defense and Full-Year Continuing Appropriations Act of 2011 (Public Law 112-10) and the Consolidated Appropriations Act of 2012 (Public Law 112-74), which appropriated a combined \$17,967,600 for the Civil War battlefield land acquisition grants program. Applications for the balance of the funds are accepted at any time. Criteria to consider in applying for the Civil War Battlefield Land Acquisition Grants include:

- Grants are awarded through a competitive process to units of state and local governments.
- Private non-profit groups may apply in partnership with state or local government sponsors;
- Each grant requires a dollar-for-dollar non-Federal match.
- Grants are available for the fee simple acquisition of land, or for the acquisition of permanent, protective interests in land at Civil War battlefields listed in the Civil War Sites Advisory Commission's (CWSAC) 1993 Report on the Nation's Civil War Battlefields.
- Higher consideration will be given to proposals for acquisition of endangered lands at battlefields defined as Priority I or II sites in the CWSAC report.

Complete guidelines for grant eligibility and application forms are available online at <http://www.nps.gov/history/hps/abpp>

For further information, contact Kristen McMasters, ABPP Grants Manager, at 202-354-2037.

San Antonio Missions Cleared by Department of the Interior for World Heritage Nomination

The DOI has authorized the San Antonio Franciscan Missions for nomination to the UNESCO World Heritage List. The San Antonio Franciscan Missions, currently on the Tentative List of Potential Future

Nominations and recently recommended for World Heritage nomination by the Federal Interagency Panel for World Heritage, includes four missions and their archeological resources (San Antonio Missions NHP), and the Alamo (Mission San Antonio de Valero). San Antonio Missions NHP preserves four missions that embody the cultural roots of this great city and represents the single largest concentration of Spanish Colonial resources in the United States.

The NPS will propose the nomination to the 21-nation World Heritage Committee during the next available round of nominations. The nomination dossier will be completed by the end of 2013, in time for consideration by the World Heritage Committee in 2015.

San Antonio Missions NHP, attracting more than 1.6 million visitors a year, supports nearly \$100 million in economic activity annually. Those dollars translate into over 1,100 jobs for the local San Antonio community. A National Parks Conservation Association report estimated that a \$1 investment in the park yields \$16 in local economic activity.

World Heritage listing is a prestigious designation that acknowledges the historical, cultural or natural value of a site, as well as the commitment of the sovereign nation and the site's owners to its long-term protection and management. Under the World Heritage Convention, the Secretary of the Interior is charged with identifying and nominating worthy U.S. sites that display superlative cultural and/or natural attributes for designation.

For more information on the San Antonio Missions NHP, visit [here](#).

For more information on the World Heritage Sites, visit [here](#).

National Park Foundation Awards \$658,000 to 2012 America's Best Idea Grant Recipients

The National Park Foundation has announced \$658,000 in grants will be awarded to the 49 parks participate in the 2012 America's Best Idea program. Inspired by Ken Burns' documentary "The National Parks: America's Best Idea," the America's Best Idea grant program funds park projects designed to connect underserved and under-engaged populations with national parks.

Some archeological programs made possible through the 2012 America's Best Idea grants include programs at Great Smoky Mountains National Park and Katmai National Park and Preserve. High school students will participate in a two-week archeological dig in Great Smokies NP along with archeology students and professors from the University of Tennessee. The students will learn about the process of archeology, how artifacts tell a story through context.

The descendants of the Alutiiq refugees who fled the largest eruption of the 20th century will journey back to their ancestral home near Novarupta, Katmai NP and P, known as the "American Pompeii." The



Spanish Aqueduct in San Antonio Mission NHP

youth will hike, camp, learn about geology, and study with an anthropologist who will retell the story of their ancestors' evacuation.

Chartered by Congress, the National Park Foundation is the official charity of America's national parks. For a full listing of participating parks and program descriptions, visit the National Park Foundation website at www.nationalparks.org

Archeological Resources in "Teaching with Historic Places"

For more than 20 years NPS Teaching with Historic Places (TwHP) has been offering curriculum-based lesson plans about sites on the National Register of Historic Places. The plans use historic sites to explore American history. They focus on historic places, as tangible links to the past and as sources of evidence, to help teach academic subjects, raise awareness of available information about places, and foster an appreciation for the value of cultural resources. Aimed at middle school students, the lesson plans can be adapted both for older and younger grades and link to the national Curriculum Standards for History for Grades 5-12, and Social Studies standards for middle school.

Currently, 140 lesson plans are available. At least ten of the lesson plans have an archeological focus. The archeology lesson plans are an eclectic mix of historic themes and time periods that include transportation (King of Prussia Inn, PA); mining (Johnson Lake Mine, NV); settlement (Frederica, GA); and ironworking (Saugus, MA). There are also lesson plans about a pre-Civil War interracial town (New Philadelphia, IL) and Native American settlements (Gran Quivera, NM, and Knife River, ND). The 20+ lessons plans having to do with the Civil War are particularly relevant during this sesquicentennial of the conflict between the States.

The lesson plans are an excellent way to introduce students to archeological concepts and the unique information and perspectives that archeology can provide. To obtain a list of lesson plans with an archeological focus choose "Archeology" on the Lesson Plan Index: Theme page at www.nps.gov/history/nr/twhp/descrip.htm of TwHP.

To learn more about Teaching with Historic Places, visit the website at www.nps.gov/history/nr/twhp. More information about Teaching with Historic Places is available in "History in the Hands of Tomorrow's Citizens," at <http://crm.cr.nps.gov/archive/23-08/23-08-1.pdf>. The article was published by Carol Shull and Beth Boland in the *Cultural Resource Management* issue *Creative Teaching with Historic Places* (CRM Vol. 23, No. 8, 2000). Another useful article is "Teaching with Historic Places Looks Back, Looks Forward," (*Forum Journal*, vol. 9, no. 1, Fall 2004).

National NAGPRA Launches On-Demand Training Video Series

The National NAGPRA Program is excited to announce the launch of its YouTube Channel. The channel now features eight training videos covering the Native American Graves Protection and Repatriation Act (NAGPRA) and its implementing regulations. In addition to an in-depth treatment of the law, the videos include grant-writing tips, first-person narratives, and program statistics. The eight segments in the series, which are available on-demand, are:

- NAGPRA
- NAGPRA Notices
- NAGPRA Grants
- Consultation under NAGPRA
- Decision-making under NAGPRA
- NAGPRA Civil Penalties

- NAGPRA Review Committee
- The Development of NAGPRA

In the course of producing the video series, the National NAGPRA Program conducted fifty interviews with Indian tribe and Native Hawaiian organization members, museum and scientific organization officials, Federal agency representatives, and cultural heritage stewards in ten cities nationwide. The interviews themselves comprise an important archive for studying the history of NAGPRA.

Visit the site at www.youtube.com/user/NationalNAGPRA. For more information about the National NAGPRA Program, go to <http://www.nps.gov/nagpra/>

Contact: NAGPRA_Info@nps.gov.

NPS History Program Offers Training in Oral History

The NPS History Program will offer "Effective Oral History: Interviews, project management and practical applications" (NPS-2012-0910-STMA) September 10-14, 2012, at the Stephen T. Mather Training Center, Harpers Ferry, West Virginia. This workshop is a great opportunity for hands-on learning about oral history practice led by a team of experienced NPS oral historians. The instructor team includes historians, an ethnographer, archivists, and a solicitor.

Topics include oral history project planning; legal and ethical issues; recording technologies (audio and video); oral history and ethnography; interview preparation; interviewing; processing interviews (indexing and transcribing); preserving, archiving, and managing oral history interviews; using oral history in interpretive programs, exhibits, Web sites, and publications.

The goal of this course is to apply oral history theory and principles. Much of the classroom time will be spent practicing all phases of an oral history project. Participants will also conduct and critique an interview on-site. Instructors will share case studies based on NPS oral history projects they have designed and completed.

The course is intended for historians, interpreters, ethnographers, archivists, and museum curators who conduct oral history projects, and staff with collateral responsibility for oral history projects.

The course, listed in DOI Learn, requires supervisory approval. There is no tuition charge; travel scholarships are available. For questions regarding the course, contact Lu Ann Jones, Park History Program, WASO, (202) 354-2219.

Registration for 2012 Pecos Conference

Mark your calendars and register early! The 85th Pecos Conference, co-hosted by School for Advanced Research, Museum of Indian Arts and Culture, New Mexico State Historic Preservation Office and others, will be held at Pecos NHP on August 9-12, 2012. First inspired and organized by A.V. Kidder in 1927, the Pecos Conference has no formal organization or permanent leadership. Open to all, the Pecos Conference remains an important opportunity for students and students of prehistory to meet with professional archeologists on an informal basis to learn about the profession, gain access to resources and research opportunities, and to test new methods and theories related to archeology.

Expect the highest caliber reports from the field and labs (as usual). The same great on-site camping as in 2007 is available. For more information on the conference, please visit the conference website: http://www.swanet.org/2012_pecos_conference or find them on Facebook.

Mount Vernon's Mystery Midden

NPS partner Mount Vernon Ladies Association's archeologists have announced that the website for the Archaeological Collections Online Project – South Grove Midden is live. The two year project to analyze and digitize more than 120,000 artifacts excavated between 1990 and 1994 is directed by Eleanor Breen. It dates from the mid-eighteenth to the twentieth century, with the bulk of the assemblage deposited prior to the Revolutionary War.

The first component available on the website is the Invoices and Orders database, that contains information about the the objects and shipping materials received from England between 1754 and 1773. Almost 4,000 objects are searchable and represent typical material culture from Mount Vernon. Each object is matched with Washington's corresponding order to compare what was ordered and what was received. The database documents materials intended for use by George and Martha Washington; other items, like the coarse linen fabric called oznabrig, were destined for the growing community of enslaved individual.



Excavation of midden at Mount Vernon

The Invoice and Order database can be searched on the Midden website or downloaded. A manual and FAQs are available on the website to facilitate using the database. Over the next several months additional content will be added to the Midden website including the 400 Objects database, featuring selected objects from the archeological site.

To visit the website, go to <http://mountvernonmidden.org>. Progress of analysis of the Midden site can be followed on the weekly blog, linked to the Midden website and accessible by “liking” Mount Vernon's Mystery Midden Facebook page.

The project's Facebook page is “Mount Vernon's Mystery Midden” www.facebook.com/pages/Mount-Vernons-Mystery-Midden/117164641680347

Projects in Parks: Projects in Parks is taking a break this month.

Projects in Parks is a feature of the *Archeology E-Gram* that informs others about archeology-related projects in national parks. The full reports are available on the *Research in the Parks* web page www.nps.gov/archeology/sites/npSites/index.htm or through individual issues of the *Archeology E-Gram*.

Prospective authors should review information about submitting photographs on the *Projects in Parks* web page on InsideNPS.

Archeology E-Gram, distributed via e-mail on a regular basis, includes announcements about news, new publications, training opportunities, national and regional meetings, and other important goings-on related to public archeology in the NPS and other public agencies. Recipients are encouraged to forward *Archeology E-Grams* to colleagues and relevant mailing lists. The *Archeology E-Gram* is available on the *News and Links* page www.nps.gov/archeology/public/news.htm on the NPS Archeology Program web site.

Contact: Karen Mudar at dca@nps.gov to contribute news items, stories for *Projects in Parks*, submit citations and a brief abstract for your peer-reviewed publications, and to subscribe.