Louisa Hunter was only 16 when she died, in 1825, from what her brief obituary described only as “a long and painful illness.” Hunter lived in a community in transition—an area of Lower Manhattan that in the early 1800s was mostly rural, and during Hunter’s short life was rapidly urbanizing and filling with immigrants and African Americans recently freed from slavery.

Neighborhood residents worked at the docks along the Hudson River, at a tannery and glue factory, and at small shops along Spring Street. Hunter seems to have been part of an emerging middle class, which was shifting away from home-based farm life and joining the market economy.

At the center of this diverse New York community was the Spring Street Presbyterian Church, built in 1811 among fruit orchards. Louisa Hunter and hundreds of others were buried in the church’s four underground vaults, mostly in unmarked coffins, up through 1843. In that period, the Spring Street church was a hub for abolitionism and a stop on the Underground Railroad, and one of the first churches in New York with a multiracial congregation and Sunday school. The pastors’ progressive politics caused such a stir that the church was targeted and destroyed during the race riots of 1834.

Though the church was rebuilt and survived into the 20th century, membership dwindled; and by the time the building burned down in the 1960s, its history and community were largely forgotten. A parking structure covered the site until 2006, when construction workers digging the foundation for the Trump SoHo tower unearthed human remains.

Today, the stories of Louisa Hunter and the Spring Street congregation are finally coming to light thanks to the work of Maxwell School bioarchaeologist Shannon Novak. All the contents of the burial vaults have been relocated temporarily to Syracuse University’s physical anthropology lab, where Novak and a team of researchers use cutting-edge techniques to draw remarkably precise conclusions about people from the past—from where they grew up and what they ate to how they died. Thanks to what remains of Louisa Hunter and others buried in the Spring Street vaults, we have a clear window into a pivotal period in 19th-century American life.

Shannon Novak is a bioarchaeologist, working in a subfield of anthropology that blends biological, historical, and cultural analysis. Part of her expertise lies in human osteology—the study of bones—which helps her identify, for instance, markers of disease on skeletal remains even centuries later. Through X-rays and taking bone and teeth samples for molecular tests, Novak can glean an extraordinary amount of additional information about how a person lived—and even where his or her ancestors came from. Where an osteologist might look at bones strictly as medical specimens, Novak also considers the cultural context, through ethnographic studies and archival research. Over the years she has used this multifaceted approach to explore everything from the harsh realities of medieval warfare in England to the decision making of the Donner Party.

The details that emerge from close examination of skeletal remains can be extremely subtle. During a tour of her lab in Lyman Hall, where bones from the Spring Street vaults are arranged on long lab tables, Novak shares one example, which she calls seamstress notches—tiny notches in a woman’s tooth that came from pulling thread across it day after day. In other cases, the stories revealed by the remains are much more dramatic.

“That’s the kind of thing we see with human remains that goes unappreciated by historical documents.”

Bioarchaeologist Shannon Novak with the remains of one of the congregants who had been interred at Spring Street Presbyterian; above left, bones and bone fragments as they arrive in Novak’s lab.

Bioarchaeologist Shannon Novak is marrying physical and social science to capture the life stories of New York City church congregants who died well more than a century ago.

By Jeffrey Pepper Rodgers

Jeffrey Pepper Rodgers is a contributor to National Public Radio’s All Things Considered and the author of The Complete Singer-Songwriter.
prostate cancer, to the point where it had metastasized in his legs,” says Novak. “The cancer was in the bone. That’s interesting in its own right. But we’re also thinking about that individual, who would have been in a lot of pain. What was it like for him to try to perform daily activities? What was his life like? That’s the kind of thing we see with human remains that goes unappreciated by historical documents.”

Louisa Hunter is one of just a handful of people from the Spring Street vaults who have been identified by name, thanks to the engraving on her coffin plate and the few details in her obituary. “Near where that coffin plate was found,” says Novak, “we had a young female about 15-and-a-half to 16-and-a-half years of age, and she had lesions in her teeth that suggested she had a chronic illness that would flare up. So that goes along with what her obituary says about a ‘long and painful illness.’ A pilot study of carbon and nitrogen isotopes — drawn from collagen in Hunter’s bone — provides additional clues about her everyday life. ‘Her isotopes suggest she may have had a diet that was moving toward more grains and away from fish, possibly related to emerging class differences,’” says Novak. DNA tests underway will soon reveal much more about Hunter and others from the burial vaults, including a ‘deep geographical ancestry’ that may well point to people’s roots in both Europe and Africa.

Shannon Novak first sensed the direction of her research as a bioarchaeologist back in the 1990s, when training in archaeology at the University of Utah and working on prehistoric sites. “We’d do excavations and everyone would get excited about pots and arrowheads,” Novak recalls. “And then we’d find a body and the archaeologists would grumble and complain.” Intrigued by what the others overlooked, she took a course on human osteology, studying the skeletal system, and loved it. “The body is an extension of these other objects. It’s that person who constructed the arrowhead,” she says.

While completing her graduate studies, Novak landed an internship with the Smithsonian’s Doug Owsley, a forensic specialist. They worked on archaeological finds at a time when the Native American Graves Protection and Repatriation Act greatly increased the demand for trained osteologists.

For Novak, a key component of bioarchaeology — studying the historical and cultural context of human remains — came into focus with her research on Utah’s Mountain Meadows massacre of 1857, in which a local militia killed some 120 men, women, and children migrating west. Novak blended archival and oral history with an analysis of the skeletal remains to create what she calls a biocultural history of the massacre. The resulting book, House of Mourning (Univrsity of Utah), was published in 2008. She has since conducted a long-term ethnographic study of the victims’ descendants in the Ozarks.

Novak explored another grim chapter in the history of the American West — the Donner Party — for a new book she co-edited, An Archaeology of Desperation: Exploring the Donner Party’s Alder Creek Camp (University of Oklahoma). She worked on the smaller, less-known cannibalism site, Alder Creek, where the Donner family was trapped, examining a hearth that was filled with pieces of chopped-up bone. The fragments were too small to determine species visually and DNA analysis was impossible. But through histology (the study of cell shape) the butchered species were found to include deer, oxen, and dog.

“We know from the accounts that they were eating pine needles and shoe leather and book covers — everything they could — until they sacrificed the dog and then began consuming human tissue,” says Novak. “The family pet seems to have been a transition food to human corpses.” As in all her work, what drives Novak’s research is not just the facts gleaned from physical evidence but the human experiences behind them. In the Donner case, the unimaginable decisions people had to make to keep their families alive. — 278

The kind of in-depth analysis and molecular testing of the Spring Street collection that’s in progress today nearly didn’t happen. The 46-story Trump SoHo, towers over its surroundings in Lower Manhattan, was controversial from the start; neighborhood preservationists charged that the building violated zoning laws and filed suit against the developers. When workers first discovered the church vaults, and construction was halted to comply with historic preservation laws, the cultural resource management firm handling the excavation hired forensic anthropologist Tom Crist of Utica College to perform the initial analysis — and he contacted Shannon Novak for assistance. Given the high stakes in the $400-million construction project, pressure was intense to quickly complete the excavation and study.

In the absence of any known biological descendants of the Spring Street congregation, the Presbytery of New York City, an umbrella organization of Presbyterian churches, agreed to act as the “next of kin” and take responsibility for reburial. But for nearly four years the Trump SoHo developers retained control over the remains — a highly unusual arrangement, according to Novak — and prohibited any DNA analysis. It wasn’t until 2011 that legal control shifted to the Presbytery, which signed an agreement with SU to do a comprehensive study and arranged for the contents of all the vaults to be shipped to Syracuse.

When Novak began work on the project in 2007, what arrived at her lab was mostly “thousands of commingled remains,” she says. “Some had been in bags and boxes in a warehouse growing mold.” With the help of SU archaeology students, Novak began the painstaking work of screening dirt; removing and cleaning bones, teeth, and hair as well as artifacts such as nails and coffin plates; and documenting everything they found. Carefully sorting the bones, Novak was able to match up the remains of a few individuals, including the man with prostate cancer. To complement the lab work by Novak and her students, Maxwell colleagues have brought other kinds of expertise to the project. Carol Faulkner, chair of the history department and a specialist in 19th-century America, provided background on the abolitionist movement, and geographer Joseph Stoll created a map of the area around Spring Street at the time of the burial vaults.

Others outside SU are contributing as well. Dr. Ralph Stevens, a radiologist and history buff in Oneida, New York, performs X-rays in his lab. For the isotope tests, Novak sends collagen samples to Dr. Joan Brenner Coltrain at the University of Utah. DNA tests are being conducted by genetic specialist Dr. Jodi Lynn Barta at Michigan’s Madonna University.

“My goal has been to allow Shannon and her team the time and latitude to study these remains as they see fit,” says David Pultz, head of the Presbytery’s Spring Street committee in New York City. “The

“Get these rather polarized views of the period, of the extremes. [This project] gives us a more diverse perspective on what life was like in the city.”

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Coffin plates from the Spring Street excavation. Below: A tooth showing “wear patterns” along its top edge and (bottom) a section of pelvis evidencing prostate cancer (the darker patches at left)
haps lab tests will solve the mystery of Georgia senator Nicholas Ware, whose name also appears on a Spring Street coffin plate even though other historical accounts say he was buried at another location in New York City. Novak is seeking funds for isotope and DNA tests on some 200 individuals who have yet to be profiled, so the project has strong potential.

David Pulit, of the Prebyterian’s Spring Street committee, appreciates the larger significance of Novak’s work: “It is that beginning to answer broad historical questions not from theory or secondary sources but from physical evidence — the clues to the past embedded in bone. These clues can often lead to unexpected discoveries, like the adolescent skull from Spring Street with saw and pin marks indicating it was used as a medical-school teaching specimen; or the children whose isotopes reveal that some were weaned fairly young while others nursed until around age four — a sign, perhaps, of women’s changing roles in work outside the home. “For me, historical bioarchaeology is this wonderful meeting ground that allows historians to learn more than they could have from the archives alone,” Novak says. “By drawing on historical documents, we too gain more robust insights into the past that we could not access from just the bodies alone. So we feel very lucky.”

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**Artifact Central**

Maxwell’s archaeologists recently got new digs (so to speak) in Lyman Hall.

The physical anthropology lab in Lyman Hall, where Shannon Novak studies the Spring Street burial vaults, is part of a brand-new suite of archaeology research and teaching labs. Novak’s lab relocated to Lyman from Bowie Hall a few years ago. This spring historical archeologists Doug Armstrong and Theresa Singleton moved into new, state-of-the-art labs down the hall in Lyman, with expanded and upgraded space for research and teaching.

“With historical archaeology there’s a lot of material culture — ceramics, glass, and other things — that we analyze,” says Armstrong, who helped design the Lyman labs. “The new labs provide layout space for comparative analysis and matching of artifacts, or for reconstructing vessels.” Both of the new labs have wet sinks and dirt traps for washing and preparing artifacts, plus photography equipment and computers for data analysis.

Alongside the faculty labs are a fully equipped teaching lab and offices for teaching assistants, making Lyman a new hub for both faculty and students of archaeology, and giving the department significant room to grow.  

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**Trickle-Down Effect**

As happens in every graduate program at Maxwell, projects such as Spring Street Presbyterian help establish student careers.

Along with Shannon Novak’s work on the Spring Street church vaults, many students have found rich material in the collection for their research.

Several Honors Program undergraduates have done capstone projects related to the church. Plus, two anthropology dissertations are in progress; Meredith Hicks is researching the lives of the children of Spring Street, and Katie Hicks is analyzing metal artifacts (such as coffin plates) and transcribing names obscured by corrosion. In addition, Lauren Hosek, preparing for PhD work on a different topic, used the Spring Street project to develop laboratory skills.

Ellis was teaching literature and writing courses at area colleges when the Spring Street materials arrived. Out of curiosity, she volunteered to help Novak in the lab with sorting and cleaning bones, but was quickly hooked and decided to pursue a PhD in anthropology.

She has spent time at the Presbyterian Historical Society (in Philadelphia) and the New York State Historical Association, reconstructing the setting of the church and lives of the congregants. “The ability to leave these archival sources,” says Ellis, “and then directly see, touch, and learn about the congregants from their remains is a remarkable intersection of history and archaeology. “Even more amazing is that this collection is here at Syracuse. Most students in my department travel around the world to get access to sites or collections. I walk two miles from my house to the lab, and my world of research is waiting for me.”

The significance of the Spring Street study lies in how it illuminates day-to-day life in this tran-
sitional period in the 19th century, among people whose stories are rarely told. The city’s poorer residents, and the tenements where they lived in notorious neighborhoods like Blue Points, were the subject of much attention and propaganda at the time, and the elites were well documented in the press. But the kinds of people in the fast-growing community around Spring Street — cabinet makers, merchants, grocers, dock workers, and many women and children working outside the home — are mostly absent from the historical record.

“They just kind of fall under the radar,” Novak says. “These are everyday working folks, most of them. We get these rather polarized views of the period, of the extremes.”

Studying the Spring Street collection, she says, “gives us a more diverse perspective on what life was like in the city.”

What is clear from this research so far is that life in this community was tough — especially for the children. Signs of infectious disease are common, such as boils of enamel on a child’s teeth indicating congenital syphilis, or a layering on the ribs of a young female with pulmonary tuberculosis.

An extraordinarily large number of children in the burial vaults — some 30 percent — suffered from rickets, a disorder resulting from vitamin D deficiency that leaves behind weak, softened bones that, in the extreme, look like coal. By comparison, Novak says, adults who’d grown up rural areas and moved to Lower Manhattan were much healthier than the children of the industrializing city.

As additional results come back from a pilot study of isotopes and DNA, Novak is looking forward to learning much more about the lives and times of the Spring Street congregation. Along with Louisa Hunter, the teenager who died from a chronic illness, an upper-class man named Rudolphus Bogart has been identified — and his remains are reburied probably within five years.

**Starting from the micro context of the Spring Street congregation, we can ask broader questions and understand their place in this nested history.**