Western unlocks secrets of Small Wonders

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Western unlocks secrets of Small Wonders

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As Andrew Nelson slices his way through half a millennium of history, he is unlocking secrets of *Small Wonders*.

Led by the Art Gallery of Ontario (AGO), Metropolitan Museum of Art (MMA) in New York and Rijksmuseum in Amsterdam, the Anthropology professor’s most recent investigation into the construction of miniature art has opened Nelson’s eyes to these more than 500-year-old artifacts.

“I didn’t know about these at all,” said Nelson, about when he first began the partnership with the AGO in 2012. “It was amazing. It had to be absolute devotion to create something like this. It would take months to make just one.”
Along with scientists at the Canadian Conservation Institute, London’s Museum of Natural History (United Kingdom) and NASA, Nelson assisted conservators from the AGO and MMA in investigating the creation of boxwood prayer beads, rosaries and miniature altarpieces from Northern Europe during the early 1500s.

These tiny masterpieces, small enough to fit in the palm of the hand, depict complex scenes with grace and precision. Without fail, the most common response to seeing these works of art is, ‘How a person could have possibly made them?’ It’s a question that can now be answered – thanks to Nelson.

Nelson and Western’s Sustainable Archeology project specialize in microCT, an imaging technique to non-destructively capture and analyze human skeletal remains and archaeological artifacts. The micro-CT creates 3D models that allow researchers to view an object’s internal structure with 3D software from multiple perspectives, including cutting away portions to reveal unseen inner structures.

“What they really wanted to know was how they were constructed. It was pretty much ‘How’d they do that?’” said Nelson, adding they were also interested in finding out if the pieces were made by a guild; were they all made by one person; were there different groups.
Western professor Andrew Nelson’s work with Art Gallery of Ontario has helped unlock a 500-year-old mystery around the creation of miniature prayer beads.

With the use of the microCT, he hoped to get inside the minds of the artists, through the ‘virtual deconstruction’ of approximately a dozen artifacts, and work out the mystery behind the creation of the beads.

The bead has two halves, with each half comprised of an outer half, which is this gothic design you see on the bead, and an inner half which has all the figures carved in it. On the top half, the bead depicts the Last Judgement and the lower half the Coronation of the Virgin. The bead is carved entirely from boxwood; its halves are hinged with a metal pin.
“They carved the scene from the front and then flipped over the inner shell and cut a little window out of the back, popped it out and were able to carve the figures from behind,” he said of the solid wooden masses. “So that’s why you have such incredible detail. Unless you really know what you’re talking about, you don’t see this – and none of these are added. It is all one piece. The walls, the arch, the figures are all one piece."

The Thomson Collection of European Art at the AGO is home to the world’s largest collection of 16th-century boxwood carving. The upcoming exhibition, *Small Wonders: Gothic Boxwood Miniatures*, opens Nov. 5 and, for the first time, brings together more than 60 rare boxwood carvings from institutions and private collections across Europe and North America. Some of these have never been seen, such as the Chatsworth Rosary, originally owned by Henry VIII.

Lisa Ellis, the AGO’s Conservator of Sculpture and Decorative Arts, has led the ongoing scientific investigation into these objects. She is thrilled to have had Nelson as part of the development of the exhibition, which offers new insight into the methods of production and cultural significance of these awe-inspiring works.

“Micro-CT scanning has revealed previously unknown and clever strategies used by the carvers to make these amazing works of art,” said Ellis, whose partnership with Nelson came through word of mouth. A former colleague and friend of the AGO heard about the project and recommended Nelson as the go-to person.

“Andrew’s collaboration has been invaluable; he’s a very special guy,” said Ellis, adding Nelson not only has been helping with the technical information but has been a great resource in terms of finding other imaging specialists with whom to work. “He’s got an amazing amount of
experience dealing with all sorts of things. On top of that, he’s got some amazing and entertaining stories to tell while you’re sitting around waiting for scans to finish – digs in Syria and Peru and mummies.”

Nelson, who will share his research as part of a symposium prior to the exhibit’s opening this fall, admitted while it’s been long and painstaking work to uncover the mystery of the creation of the beads, he is thrilled whenever he gets the opportunity to be part of such a project.

“The discovery never ceases to amaze me. That’s why I keep doing it. I love it,” he said.

Video courtesy of Object Research Systems