



Left: Madeleine Neiman using a binocular microscope to examine a bone figurine.



Right: Bone figurines (TMA 1931.479, KM 16198, KM 16180) excavated at Seleucia-on-the-Tigris.

EXAMINING BONE FIGURINES FROM SELEUCIA

Last September marked the beginning of my Samuel H. Kress fellowship in the Kelsey Museum conservation department. Each year, the Kress Foundation provides competitive grants to museums across the United States for conservation fellowships; these twelve-month positions are designed to serve the preservation needs of the institution as well as offer real world experience crucial to the post-graduate training of young conservators like me. My time at the Kelsey has largely been devoted to the technical analysis and treatment of materials within the Museum's Seleucia-on-the-Tigris collection.

The University of Michigan carried out excavations at the site of Seleucia in the 1920s and the 1930s. Located approximately 35 km south of modern-day Baghdad, this ancient city was founded by Alexander the Great's general Seleucus Nicator and inhabited between the late fourth century BC and early third century AD. Among the objects recovered from the site were a number of anthropomorphic figurines. The majority of these, and the group that has received the most scholarly attention, are those fabricated from clay. These mold-made figurines were covered with a gesso-like preparation layer and then embellished with painted decoration. But bone figurines were also recovered from Seleucia, and one of my projects at the Kelsey has been to carry out a survey of these less well-studied artifacts.

A conservation survey is largely an exercise in looking. Each object is examined to glean as much information as possible about its condition as well as its materials and methods of manufacture. I began by simply using my eyes and then brought in other tools—everything from a binocular microscope to an ultraviolet (UV) light. This close study has led to a few interesting discoveries you probably would not notice at first glance.

For example, most of the figurines had arms. Each figurine was carved to depict a nude female form, but while there is significant variation in style—some are quite naturalistic in their appearance, while others are highly stylized—almost all display one characteristic: a small opening is present at each shoulder. Although the majority of the arms have been lost or dissociated from the objects, the attachment points indicate they were present on most figurines.

The figurines were also painted. When looking at each under magnification, I found that many show traces of red, pink, or black paint. A small number also display a white gesso-like preparation layer for paint, just like the layer observed on the clay figurines. Although the bone figurines appear quite plain today, they would have been colorful in antiquity.

Looking at the figurines under ultraviolet or "black" light prompted another discovery; the pink paint fluoresces. While we can't see UV light, certain types of materials, including some dyes,

minerals, and resins commonly found on archaeological objects, fluoresce or glow when illuminated with UV. In the case of the bone figurines, the pink paint glowed a bright orangey-pink when exposed to UV light. In antiquity the most common sources of red and pink were the pigments hematite (iron oxide), cinnabar (mercuric sulfide), red lead, and madder (from the plant *Rubia peregrina*). When viewed under visible light, all five appear red to pink. When examined under UV light, however, one stands out: madder! The purpurin and pseudopurpurin that give the dye its reddish color also cause it to fluoresce, making it easy to distinguish and identify.

The figurines also vary in shape, and when I examined them with Kelsey research scientist and zooarchaeologist Dr. Richard Redding, I learned that this variation is, in part, related to the shape of the bones. Based on the morphological characteristics, Richard was able to determine that many of the objects were fabricated using cattle or sheep/goat metapodials (hand and foot bones) or limb bones from a large animal (likely cattle). Understanding the type of bone used has allowed me to see how the raw materials impacted the objects' finished forms. For example, the "clothes-pin" shape of many of the stylized figurines is largely a by-product of the metapodial bone source material. The flared head-dress and splayed appearance of the legs reflects the widening at the top and bottom of the bone.

One of most interesting things about my conservation training has been learning how to "read" an object—figuring out how to piece together visual evidence to tell an artifact's life story from its creation to its life in a museum. It's a bit like playing detective. I hope that next time you visit the Kelsey Museum you will take some time to look at the bone figurines on display in the permanent galleries. Perhaps you will see them in a new way.

Madeleine Neiman

NEW K-12, COMMUNITY OUTREACH COORDINATOR

Meet Sarah Mullersman, the Kelsey's new coordinator of K-12 and community outreach. Sarah traces her love for archaeology back to her childhood fondness for digging things up in the backyard. She also spent a lot of time in museums, especially the Florida Museum of Natural History in Gainesville, where her mother was a docent. During her college years at the New College of Florida in Sarasota, she explored American archaeology at the Cahokia Mounds Field School in St. Louis and Mediterranean archaeology on the Athienou Archaeological Project in Cyprus.

Sarah's enthusiasm for excavation soon led her to wonder what happened to objects after they were excavated. She volunteered for various museum internships to try to answer that question, helping to catalogue collections, prepare exhibitions, and write condition reports on objects at various Florida museums.

Handling so many objects made Sarah

curious about how museum-goers might best engage with them. So she took a job as education coordinator at the East Tennessee State University Natural History Museum. There she found her calling as a museum educator, deploying her considerable energy and imagination to develop popular programs for visitors of every age: outreach programs to local schools, field trips to the museum, Girl Scout and Boy Scout programs, a monthly lecture series, a summer camp, and overnights at the museum. Her K-12 programs all emphasized hands-on learning that would be fun as well as educational. She worked with the local city school system science coordinator to offer professional development opportunities for teachers. She trained docents. And she began developing a multimedia app to enhance the visitor experience.

In the four months since Sarah's arrival in Ann Arbor, she has already organized a very successful Family Day and taken



a large share of responsibility for the impressive roster of summer programs outlined below. In the near future she will begin updating the Museum's K-12 tours to meet the state's Grade Level Content Expectations. She will be reaching out to local teachers and updating the Civilizations in a Crate. She also expects to plan tours and lectures for adults in the community.

We are delighted to welcome Sarah Mullersman as a Kelsey colleague.

SUMMER PROGRAMMING TARGETS VISITORS OF ALL AGES

Saturdays will be busy this summer at the Kelsey! Docents have prepared themed tours called "Saturday Samplers" for every Saturday afternoon at 2:00 pm. Topics range from "Ancient Spirits: Beer and Wine in the Ancient World" to "Curator Favorites." A complete list can be found on the Museum events calendar at www.lsa.umich.edu/kelsey. We will also offer extra tours during Art Fair and our regular scheduled Sunday afternoon tours on second and fourth Sundays of each month.

Be sure to look for our new Discovery Carts. The items on the carts will help visitors learn a little more about the ancient world through a fun hands-on experience in the gallery. Come by and try your hand at knucklebones, reassemble a piece of pottery, build a Roman arch, write on a wax tablet, and more.

During our regular "Read and Look" program for our youngest visitors we'll

read a kid-friendly book and explore a related part of the exhibition. This is a great way to get acquainted with the ancient world and connect our daily lives to the lives of families in the past. The program makes a perfect first trip to the Museum. Past favorites have included: *Temple Cat*, *How to Take Your Grandmother to the Museum*, *The Museum*, *Tickle Tut's Toes*, and *In Egyptian Times*. This free event is open to everyone but is intended for children ages three through six. "Read and Look" is on the third Thursday of every month at 10:15 am. Meet at the front desk of the Upjohn Wing on May 21, June 18, July 16, and August 20.

The Museum will be offering a new program for children ages six through twelve this summer. "Painting with Water" connects kids with the fun and challenge of creating 2-D art from 3-D objects, especially replicas of ancient sculpture. They will tour the special exhibit

Rocks, Paper, Memory, then use zen water painting boards to create their own works of art. At the end of the program they can take the board home for further exploration. The program fee is \$5.00; pre-registration is required. Please contact Sarah Mullersman (mullersm@umich.edu) to register. Program dates and times: Saturdays from 2:00 to 3:00 pm, June 13, June 27, July 11, and July 25.

Adults and kids can try "Sketching in the Galleries" from 1:30 to 3:30 pm on Saturday, June 6. The Museum will provide paper, pencils, and clipboards as well as artist Heather Accurso from the Ann Arbor Art Center, who will offer guidance and instruction as needed. Create your own sketches of the ancient objects found in the *Rocks, Paper, Memory* exhibition. This free program is intended for all ages.

We hope you will join us for these fun and innovative programs this summer!

Cathy Person and Sarah Mullersman