## TABLET COLLECTION SUSANNE PAULUS

The last year witnessed a flurry of activity in the Tablet Collection. These activities include the gallery enhancement project, research support for scholars, research and digitization projects, object-based teaching, and public-outreach efforts.

The most significant event of the year was the gallery enhancement project. Together with Christopher Woods, Hervé Reculeau, and John Wee, Susanne Paulus redesigned the displays of several cuneiform tablets in the museum, improving the accessibility of the textual sources by adding translations. Other excavated materials were also added to the displays, and interesting storylines showcased around the topics of the invention of writing, education, science, law, administration, and letters. The conditions of all tablets were also reassessed, and, if necessary, they were stabilized by conservation, in addition to receiving new mountings and labels. The Gilgamesh tablets are, for the first time, displayed in a central pedestal case, and a new fragment, the oldest in the collection of the OI, was added to the exhibit. In addition to the cases dedicated to cuneiform tablets, tablets and other objects of the Tablet Collection were added to new displays all over the Mesopotamian gallery by Chief Curator Jean Evans, keeping the Tablet Collection team busy. Objects of the Tablet Collection also form part of two contemporary exhibits: *Aeon* by Ann Hamilton features a clay nail of Gudea from Lagash, and two Sumerian laments are displayed in conversation with the works of Mohamad Hafez. Additionally, Susanne Paulus wrote a history of the Tablet Collection for the centennial volume, *Discovering New Pasts: The OI at 100.* 

In connection with the centennial, the curator performed significant outreach. The highlights include a class for the adult education program Discover Cuneiform with Objects from the OI's Tablet Collection and a guided excursion to discover the exhibition *Ancient Mesopotamia Speaks* as part of the OI travel program. These efforts were supplemented by presentations for the University Chicago Booth School of Business, the Bibliophiles François, UChicago Alumni Day, UChicago undergraduates, and smaller colleges. The tablets also figured prominently in docent training classes, introducing our new docents to the redesigned cases and the cuneiform writing system.

In addition, the Tablet Collection ran three major projects during the last academic year. Susanne Paulus (OI), together with Lee B. Drake (University of New Mexico) and Katharyn Hanson (Smithsonian Institution), received a research and development grant from the National Endowment for the Humanities to research the application of nondestructive X-ray analysis on cuneiform tablets to determine the geo-chemical composition of the clay. The goal of this project is to develop methods to determine the provenance of tablets. This is highly relevant for our collection, because around 50 percent of the tablets that were legally acquired in the early days of the OI do not have a secure provenience. It is also extremely important for law enforcement, as thousands of tablets looted from Iraq, Syria, and Iran are currently on the market. The project used excavated tablets with known findspots from the OI collection to prove that pXRF (portable energy dispersive X-ray fluorescence) is a viable method for determining the provenience of an individual tablet. Susanne Paulus, together with Colton Siegmund (assistant curator) and Suay Erkusoz (PhD student in archaeology), analyzed hundreds of tablets from different sites, including Adab, Nippur, Nuzi, Khafajeh, Ischchali, and Tell Asmar. At the same time, Lee Drake developed a method for interpreting the obtained results using

## **RESEARCH SUPPORT | TABLET COLLECTION**

artificial intelligence and machine learning. The initial results are very promising and show that this method is able to distinguish between clay from nearby sites, such as Khafajeh and Tell Asmar, as well as Nippur and Adab. Indeed, at a larger site like Nippur, it was even possible to discern differences in clay composition between tablets belonging to different archives. In the second phase of the project, they will apply this method to a variety of test cases to determine the provenience of groups of Ur III tablets, mixed acquisitions, and modern forgeries.

Furthermore, two important database and digitization projects initiated last year continued. As the assistant curator, Colton Siegmund, supported the NEH project as well as incoming research requests, Nicole Brandt, a master's student, joined the team to support the work of our four dedicated volunteers, Terry Friedman, Janet Helman, Susan Padula, and Toni Smith.

Susan Padula has now assessed the physical conditions of over 2,800 individual tablets, reporting on both physical damage and inadequate housing. Sadly, the numbers indicate that there is an urgent need for better housing and conservation for a significant number of our tablets. Regarding tablet housing, 87 percent of our tablets are bedded on organic cotton wool; related problems caused by moisture in the bedding material and even individual cases of bug infestation were observed. Furthermore, 40 percent of our tablets are housed in acidic paper-glass boxes, which are not suitable for the long-term storage of museum objects. Ten percent of our tablets are also housed in boxes that are too small, which can lead to damage to the objects. Based on visual inspection, only 16 percent of our tablets are in good condition, while 20 percent are in urgent need of conservation. Finally, in addition to this challenging and time-consuming work, Susan Padula also checked whether individual tablets were published on the OI Integrated Database (IDB) and was able to make many then-unpublished texts available to the wider public.

The second important project is the ongoing digitization of our unpublished tablets. High quality photographs of the tablets in the collection are very important for interested researchers, especially given that our catalog largely lacks images. The volunteers Terry Friedman, Janet Helman, and Toni Smith scanned over seven hundred additional tablets, bringing the project up to 30 percent completion. Using a modern flatbed scanner, they scanned each individual tablet six times to provide complete coverage. Special objects like clay nails, door sealings, and envelopes needed special attention. After the scans were completed, Nicole Brandt and Colton Siegmund checked their quality before uploading the raw data to a file storage system. Post-production was completed over the summer by Yujeong (Erin) Lee, the tablet collection's first summer intern. Yujeong stiched the individual photos together, creating so-called fat-crosses, which allow for a complete overview of the tablet from all sides. She also produced detailed guidelines for the post-production in fall 2019. In addition, Yujeong designed outreach materials for the collection, supported outreach efforts, and was overall a wonderful presence throughout the summer.

Beyond these major projects, normal routines continued in the Tablet Room. Visiting researchers included Sebastian Borkowski (Geneva, Switzerland), Juliane Eule (Berlin, Germany), David Musgrave (Amherst University), Albert Planelles Orozco Gonzales (Alcalá, Spain), and Klaus Wagensonner (Yale Babylonian Collection). The visiting researchers worked on published and unpublished material spanning a wide range of places, genres, and periods, from Sumerian poetry to Bronze Age letters to Early Dynastic royal inscriptions. Thanks to the generous support of Jim Sopranos, the Tablet Room now possess an excellent camera, which also allows us to provide high-quality photographs to scholars unable to visit Chicago. In addition to providing photographs, the Tablet Room team, and especially the assistant curator Colton Siegmund, provided database research and collations to many colleagues worldwide. Researchers supported in 2018–19 include Nicole Brisch (Copenhagen, Denmark), Dominique Charpin (Paris, France), Franco D'Agostino (Rome, Italy), Benjamin Foster

(Yale University), Grant Frame (University of Pennsylvania), Lionel Marti (Paris, France), and Wiebke Meinhold (Tübingen, Germany).

Work on the tablets has led to notable publications. These papers include the publication of an important Sumerian school dialogue by Manuel Ceccarelli, as well as two complex old Babylonian incantation tablets likely from Adab by Walter Farber. Hervé Reculeau and Antoine Jacquet published the remaining Old Babylonian tablets from the R. F. Harper Collection. Finally, Ulrike Steinert included our fragment of the Assur medical catalog in her volume of Assyrian and Babylonian Scholarly Text Catalogues. This fragment, together with other pieces from the same tablet, is currently on loan in New Haven as part of the exhibition *Ancient Mesopotamia Speaks*.

Again, scholars at the OI used tablets for a variety of graduate classes. These include an Old Akkadian class taught by Rebecca Hasselbach and Elementary Hittite taught by Theo van den Hout. A new format for using the tablets for object-based learning was introduced in the signature class offered by Susanne Paulus titled The Age of Innovation—Famous Firsts 5,000 Years Ago. This class is entirely based on drawing knowledge directly from inscribed objects. As the comments from the evaluation show, it was highly successful and will be offered again in the near future:

Amazing course! You learn how to evaluate objects, the fundamental inventions of ancient Mesopotamia, and you get to touch and handle ancient artifacts!

I learned a lot about the history and culture of Mesopotamia, but also where the very first versions of objects we use today came from. It was very interesting to see how things have developed, and to be able to see and handle the objects in class.

I want to close this annual report with a personal note: All these efforts would not be possible without our dedicated volunteers, graduate students, and summer intern. Thank you all for your hard work and dedication to the tablet collection. I am also indebted to my colleagues at the museum, Jean Evans, Kiersten Neumann, Helen McDonald, Susan Allison, Laura D'Alessandro, Alison Whyte, and Stephanie Black. Warm thanks to all of you for your collegiality and support.

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