THE PERSEPOLIS FORTIFICATION ARCHIVE PROJECT

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The main aims of the Persepolis Fortification Archive Project are to record the Archive and to make the record available widely and continuously. The PFA Project pursues these aims in collaboration with projects at other institutions. A legal emergency clouds the future of the Persepolis Fortification tablets (see http://en.wikipedia.org/wiki/Chicago's_Persian_heritage_crisis), so Project members work with a constant tension between the need for fast work against an uncertain deadline and the need for precise results that will make serious work on the PFA possible even if access to the original tablets is interrupted.

One phase of the Project, carried out in collaboration with the West Semitic Research Project (WSRP) at the University of Southern California and supported by a two-year grant from the Andrew W. Mellon Foundation, captures two sets of very high-resolution images of Aramaic Fortification tablets and a sample of the uninscribed, sealed Fortification tablets. One set is made with high-resolution scanning backs, long exposures, polarized and filtered lighting (fig. 1); another set is made with a polynomial texture mapping (PTM) apparatus, producing images that allow the viewer to manipulate the apparent angle and intensity of the lighting (fig. 2). Since the set-up, training, and shakedown phase described in last year's *Annual Report*, Dennis Campbell (Ph.D., NELC), John Nielsen (Ph.D., NELC), Clinton Moyer (Ph.D. candidate, Cornell), and Miller Prosser (Ph.D. candidate, NELC) have made image sets of about 750 items. The number
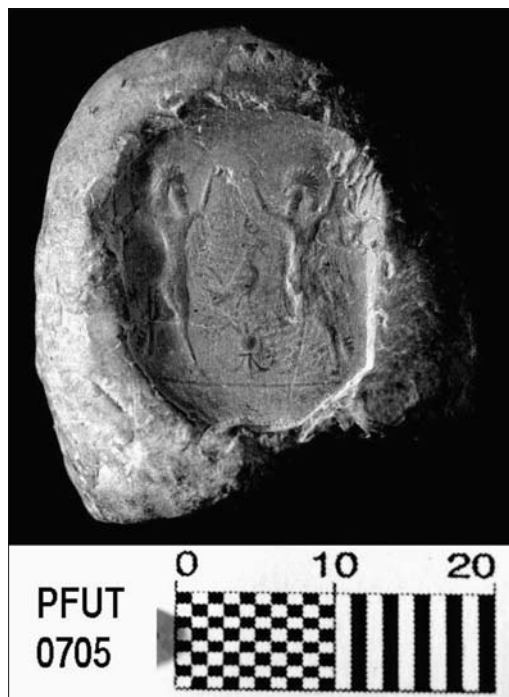

Figure 1. Pre-scan of an uninscribed Persepolis Fortification tablet
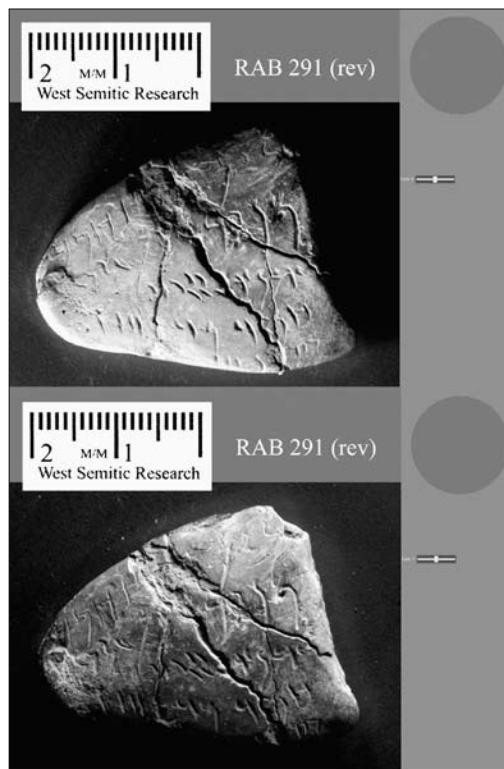

Figure 2. Two prints from a PTM image set: an Aramaic Persepolis Fortification tablet, apparent lighting from lower left (top) and upper right (bottom)
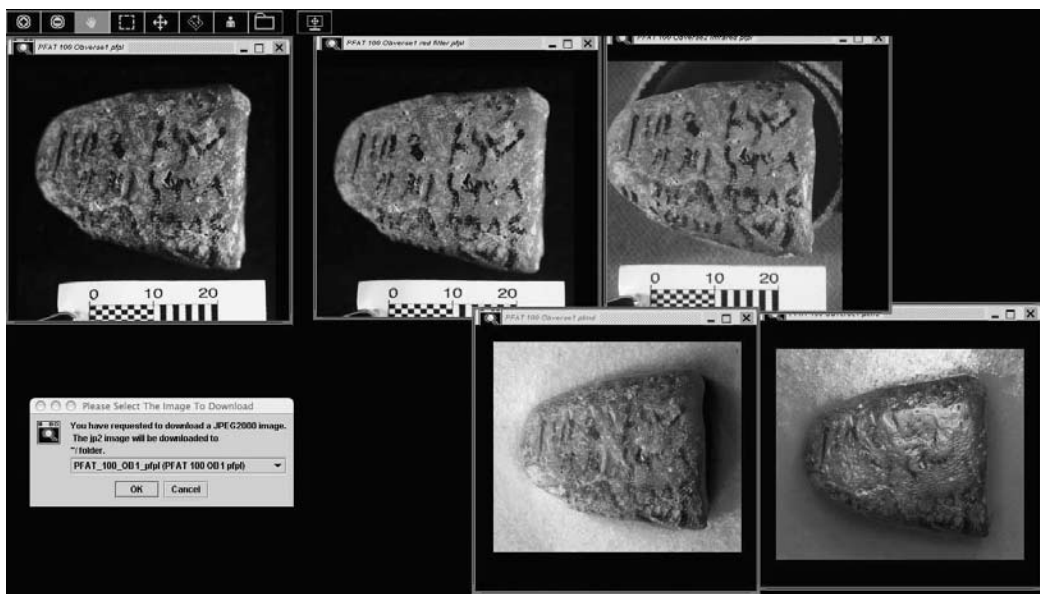
Figure 3. Selected images of a Persepolis Fortification Aramaic Tablet (PFAT) displayed on InscriptiFact (http://www.inscriptifact.com/), showing results of different filtered lightings from high-resolution images and different lighting angles from a PTM image set

of setups required for thorough recording of these awkwardly shaped objects is larger than first projected, but the work flow has been growing smoother and faster, so by the end of 2008, we expect to have very high-quality records of at least 1,100 items, including all the monolingual Aramaic documents identified so far. As of July 2008, images of about seventy items are available on the Web site of the WSRP, InscriptiFact (http://www.inscriptifact.com/, fig. 3), another 120 are being reviewed for public display, and a procedure is in place for rolling out additional groups of images at more or less regular intervals.

A second phase of the Project makes conventional digital images of Elamite Fortification tablets, concentrating first on more than 2,600 documents that were edited by the late Richard T. Hallock, but never published (the so-called PF-N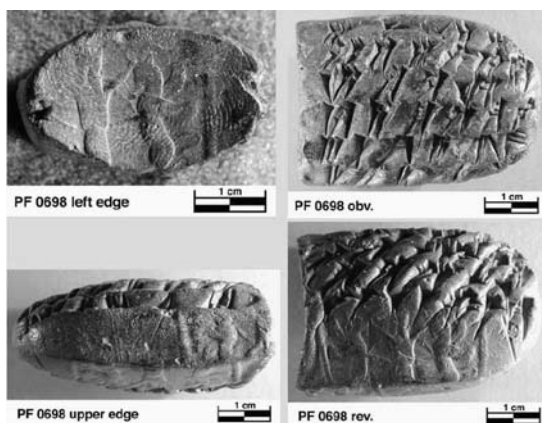N texts), and secondarily on more than 2,000 documents published by Hallock in *Persepolis Fortification Tablets* (OIP 92 [1969], available for free download at http://oi.uchicago.edu/research/pubs/catalog/oip/). During 2007–2008, the crew of photographers and editors included undergraduates Ivan Cangemi, Elizabeth Davidson, and Madison Krieger (all Classics); graduate students Lori Calabria, Jennifer Gregory, Megaera Lorenz, and Elise MacArthur (all NELC); volunteers Irene Glasner, Louise Golland, and Siwei Wang; as well as Gregory Hebda (B.A., University of New Hampshire) and Joseph Rosner (undergraduate, Brown University). As of July 2008, we have useful image sets of about 1,700 of the PF-NN documents and about 600 of the published documents

Figure 4. Selected digital images of a published Elamite Persepolis Fortification tablet returned to Iran in 2004

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Figure 5. An Elamite Persepolis Fortification tablet on CDLI

(including all those restored to Iran in 2004, fig. 4). By early 2009 we anticipate that all the PF-NN documents will be recorded in this way.

A third phase, carried out in collaboration with the Cuneiform Digital Library Initiative at UCLA, makes fast flat-bed scans of previously unphotographed Elamite texts beginning with the well-studied and collated items published in OIP 92. Preliminary versions of online editions of these texts, some with accompanying images, can be viewed on the CDLI Web site (http://cdli.ucla.edu/ [click on "CDLI Search" and enter "OIP 092" in the form under "Primary Publication"]) (figs. 5–6). Graduate students Andrew Dix, Seunghee Yie (both NELC), and Wayne Munsch (Divinity) are preparing updated transliterations in PFA Project standard form, entering corrections and revisions made since the original publication, and making scans of the unphotographed tablets. A complete set of corrected transliterations and images will be available online

Figure 6. An enlarged "fat cross" display of flatbed scans of the tablet shown in figure 5, on CDLI

in early 2009, and as PFA Project editor Wouter Henkelman (Amsterdam and Paris) supplies revised translations and notes, this will become the revised, corrected, and updated edition of Hallock's fundamental work on the archive, *Persepolis Fortification Tablets*.

The streams of images and editions coming from all these phases pour into the Online Cultural Heritage Research Environment, based in Chicago (OCHRE, see http://ochre.lib.uchicago.edu/). As the Elamite texts published in OIP 92 are completed for presentation via CDLI, they will also be imported into OCHRE, and as PF-NN texts and images are entered in OCHRE, they are also prepared for export to CDLI. At the same time PFA Project editor Annalisa Azzoni (Vanderbilt University) prepares online editions of the Aramaic texts, PFA Project editor Mark Garrison (Trinity University) prepares analytical entries of uninscribed, sealed texts. All the editors are collaborating with OCHRE specialist Sandra Schloen in preparing a first version of a user interface that will make an interconnected sample of Fortification documents of all categories — Aramaic, Elamite, Uninscribed, and Miscellaneous — publicly available for complex views and searches by the end of 2008 (fig. 7).

Detailed cataloging of the immense unstudied balance of PFA tablets and fragments has taken a backseat to triage, for the time being, as PFA Project editors search the storage boxes for items that are in good enough condition to reward immediate recording and presentation, and for other items that require immediate conservation to prepare them for recording and presentation. During 2007–2008, the results of this triage included selection and classification of several hundred uninscribed tablets, with a stunning variety of seal impressions and sealing patterns; recording and preliminary readings of more than 100 new Elamite tablets and fragments (fig. 8); infre-

Figure 7. A previously unpublished Persepolis Fortification Elamite tablet in OCHRE, showing transliteration (center), correlation of translation and text (left), image marked up with transliteration (upper right), and result of glossary search on an Elamite word in line 6 (lower right)

Figure 8. Selected Elamite Fortification tablets, recently read and cataloged

Figure 9. Conservator Monica Hudak cleans a Persepolis Fortification tablet

quent but steady identification of previously unrecognized monolingual Aramaic documents; and painstaking cleaning and conservation of more than 300 tablets (fig. 9).

The PFA Project continues to be fortunate in gaining support within and beyond the University community. Humanities Division Computing stepped up in the emergency to provide storage for the rapidly growing volume of PFA Project digital data and support for file movement among collaborating projects. The PARSA Community Foundation generously renewed its support for conservation of PFA tablets for the coming year, the Iran Heritage Foundation offers support for some of our pressing equipment needs, and substantial grants from the National Endowment of the Humanities and from the Getty Foundation assure continuing support for some phases of the Project and some Project staff for the coming two years.

There have been many occasions to plead for the unique importance of the PFA and to try to engage the scholarly and general audiences with the work and aspirations of the PFA Project. In November and December 2007, I summarized the Project at workshops, at UCLA and Johns Hopkins, convened by the collaborating projects CDLI and WSRP. In March 2008, I described the Archive and the Project during a daylong lecture series on The Presence of Iran in the Ancient World, sponsored by the Razi family at the University of California at Irvine (RealAudio version available at http://persepolistablets.blogspot.com/2008/03/matthew-stolpers-lecture-persepolis. html). Early in April 2008, I spoke on the Project to digital information specialists at the Spring Task Force Meeting of the Coalition for Networked Information. Later in April, I spoke to Zoroastrian communities in Dallas and Houston (alongside presentations by Zoroastrian scholars Almut Hintze [London] and Jennifer Rose [Berkeley]), to the presidential dinner of the American Society for Clinical Investigation and American Association of Physicians, and to members of the Oriental Institute.

An article in the Winter 2008 issue of *Tableau*, the publication of the University of Chicago Division of Humanities (see http://humanities.uchicago.edu/tableau/) discusses the legal crisis and the Project's responses for the University community and its alumni. The PFA Project Web log (http://persepolistablets.blogspot.com/) provides the greater online audience with a variety of articles from news and scholarly media, about the Archive, the lawsuit, and other matters connected

with Achaemenid archaeology and epigraphy. PFA Project Editor and Oriental Institute Research Associate Charles E. Jones (Institute for the Study of the Ancient World, New York), reports that the blog has been viewed more than 18,600 times in the twelve months after July 2007, by more than 11,100 visitors, 1,700 of whom made repeat visits. After the home page, the most popular entries so far are "What Are the Persepolis Fortification Tablets?" (http://persepolistablets. blogspot.com/2007/01/what-are-persepolis-fortication.html, originally published in the *Oriental Institute News & Notes*, Winter 2007), and the announcement of our most extraordinary discovery "An Old Persian Text in the Persepolis Fortification Archive" (http://persepolistablets.blog-spot.com/2007/06/old-persian-text-in-persepolis.html, with a link to the full online publication at http://www.achemenet.com/ressources/enligne/arta/pdf/2007.001-Stolper-Tavernier.pdf).

Extraordinary items continue to appear as the material is sifted. The impressions of two seals with Achaemenid imagery and Egyptian hieroglyphic inscriptions (to be published by Project Editor Mark Garrison and Oriental Institute Professor Robert Ritner, fig. 10) are the most engaging of these discoveries, emblematic of the value of the PFA. Seals of this kind are very rare, but impressions that tie the owners of such seals to a specific place, moment, and institutional context are unique to the PFA. With discoveries of this kind, the PFA Project not only adds depth and density to knowledge of the Archive itself, but also creates links to other strands in the common project of the Oriental Institute.

Figure 10. Impression of an Achaemenid cylinder seal with an Egyptian hieroglyphic inscription, on an uninscribed Fortification tablet

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