

PERSEPOLIS FORTIFICATION ARCHIVE PROJECT

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As we await the result of the plaintiffs' appeal against the summary judgment handed down in March 2014 in the lawsuit over possession of the Fortification tablets (*Oriental Institute 2013–2014 Annual Report*, p. 136), the PFA Project continues to make and display new images, new editions, and new catalog entries, but also begins to review and correct accumulated results.

As last year's *Annual Report* mentioned, a grant from the Roshan Cultural Heritage Institute enabled graduate students Christina Chandler (Classical and Near Eastern Archaeology, Bryn Mawr) and Erin Daly (Classics, University of Chicago) to continue their work with Project editor Mark Garrison (Trinity University) on recording seals on the Fortification tablets. They recorded the seals impressed on the last ca. 550 PF-NN tablets, documents with Elamite texts that the late Richard Hallock recorded and that Wouter Henkelman (*École Pratique des Hautes Études*, Paris) is editing for authoritative publication under the auspices of the PFA Project. In addition, they identified the seals on ca. 150 Elamite Fortification tablets now in Tehran, drawing on photographs made in the 1940s (by a project sponsored by the New Deal's Works Progress Administration) to supplement published information (Arfaee 2008). Chandler, Daly, and Garrison identified ca. 230 new seals, for a total of more than 700 new distinct, analytically legible seals found only on these tablets. To look at these numbers in another way, not only do the texts on the PF-NN tablets roughly double the corpus of Elamite administrative records, and not only do they yield, as expected, much information that overlaps with information from published texts, but the associated seals also mark a roughly 50 percent increase in the number of individuals and offices whose activity is recorded by this enlarged corpus (fig. 1).

By the end of summer 2014, Chandler and Daly finished collated drawings of twenty of the new seals. Collated drawings of the balance are the first priority of their work during summer 2015, made possible by a second grant from the Roshan Cultural Heritage Institute.

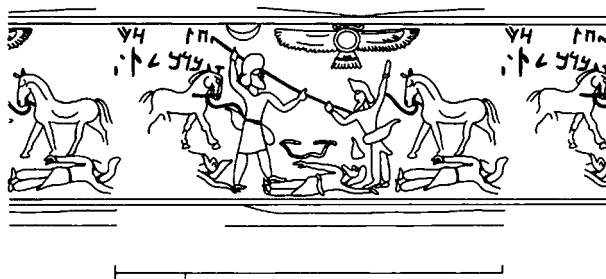


Figure 1. PFS 2899*, the seal of Arsames (Elamite *Iršama*), son of Artystone (Elamite *Irtašduna*), the "favorite wife" of Darius (Herodotus 7.69.2), identified on PF-NN O958 and Fort. 0965–201 (see *Oriental Institute 2012–2013 Annual Report*, pp. 105f., and *Garrison 2014a*, p. 499)

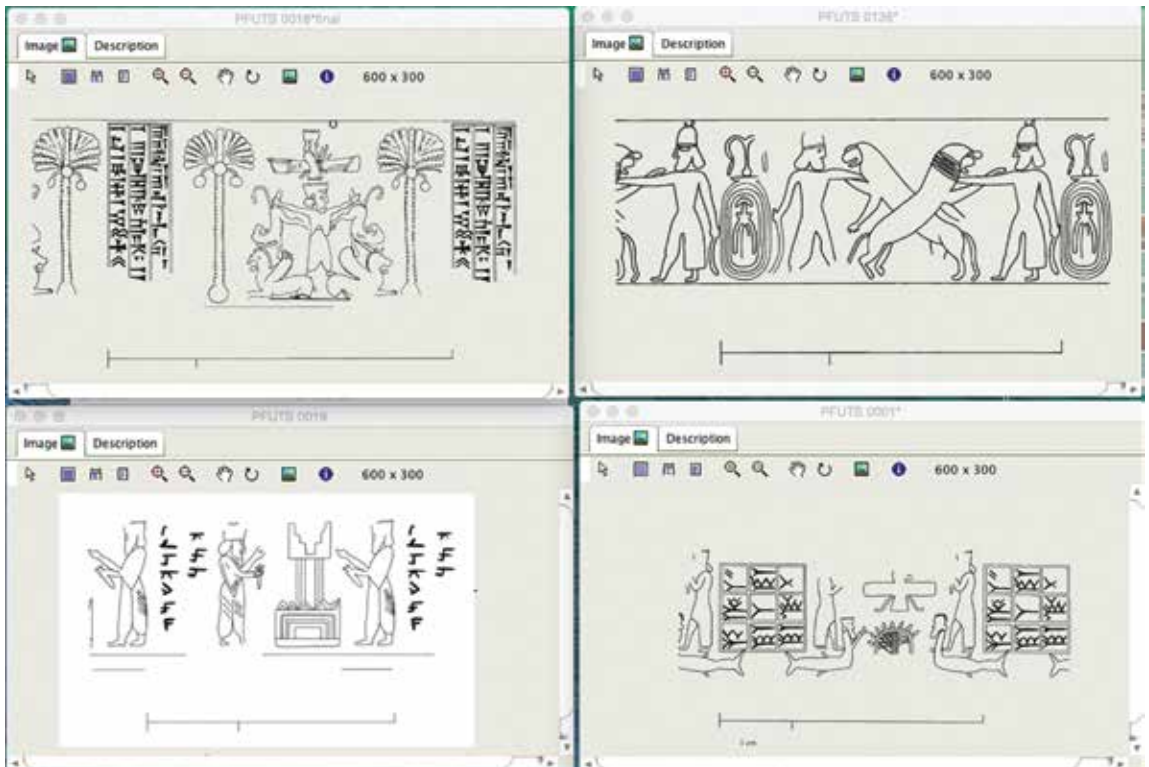


Figure 2. Selection of seals impressed on uninscribed Persepolis Fortification tablets. Above left PFUTS 0018*, with trilingual inscription naming King Darius (see Garrison 2014b, pp. 75f.); below left, PFUTS 0019*, worship scene with Aramaic inscription (Garrison 2015, pp. 205–07); above right, PFUTS 0136*, with Egyptian hieroglyphic cartouche of Pharaoh Amasis (Garrison and Ritner 2010, pp. 28–33); below right, PFUTS 0001* (= PFS 3035*), with pseudo-cuneiform inscription (Garrison 2008, pp. 158f., 173ff.; Garrison n.d.)

Their second immediate priority is to resume cataloging seals on ca. 3,500 uninscribed Fortification tablets, a corpus that promises a still greater enlargement of the field of view that the Archive opens, not only on Achaemenid imagery, but also on Achaemenid administration (fig. 2).

PFA Project editor Elspeth Dusinberre (University of Colorado) completed final drawings of about 540 of the 591 legible seals on the monolingual Aramaic tablets, and student worker Emily Wilson (Classics) finished recording measurements and seal-usage patterns for about 520 of them (fig. 3).

All of this information is now public via the Online Cultural and Historical Research Environment (OCHRE).

In addition to his ongoing recollection of the Elamite PF-NN texts, Project editor Henkelman also collated the texts in Tehran (published in Arfaee 2008), leading to recognition of new interconnections among these documents and the rest of the PFA Elamite corpus.

Project editor Annalisa Azzoni (Vanderbilt University) reviewed and updated readings on more than 250 Aramaic epigraphs on Elamite Fortification documents and 120 monolingual Aramaic Fortification documents, leading to final readings of about 80 more of these terse, difficult texts (fig. 4).

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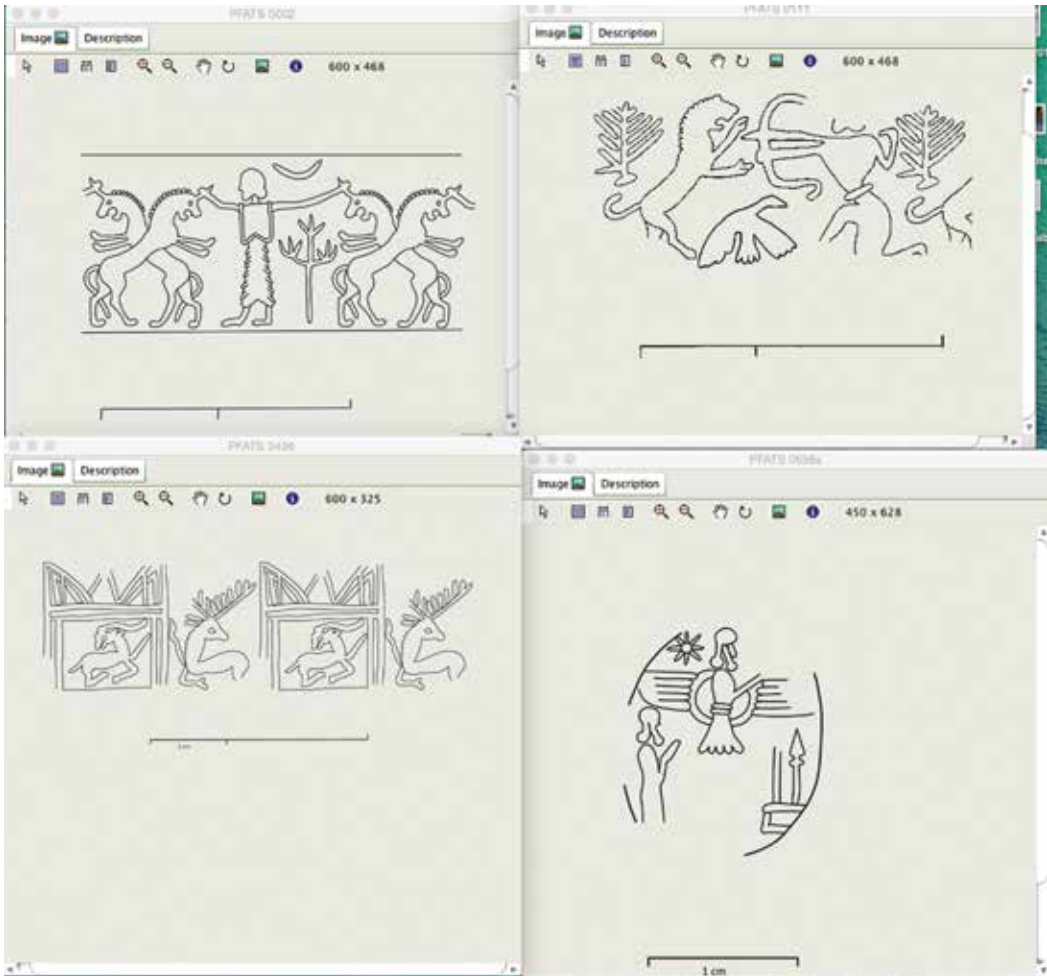


Figure 3. Selection of seals impressed on Persepolis Fortification tablets with monolingual Aramaic texts. Above left PFATS 0002 (Azzoni and Dusinberre 2014, pp. 2ff.); below left PFATS 0436 (Garrison 2015, pp. 299f.); above right, PFATS 0111 (Azzoni and Dusinberre 2014, fig. 1.6); below right PFATS 0656s (Garrison n.d.)

I recorded first-draft editions of Elamite texts on about 75 Fortification tablets and fragments and entered them in OCHRE, for a running total of about 1,525 draft editions of previously undocumented Elamite texts (Fort.), increasing the known corpus by more than 30 percent (fig. 5).

With reduced funding and continuing staff turnover, image capture and processing continued at reduced rates. Student workers Ami Huang (Near Eastern Languages and Civilizations) and Theo Kassebaum (Anthropology) made conventional digital images of about 185 more Elamite documents, including 33 from the Persepolis Treasury Archive in the Oriental Institute collections (fig. 6).

Student workers Edward Fernandez (Center for Middle Eastern Studies) and Adam Bierstedt (Medieval Studies) made about 1,200 Polynomial Texture Mapping (PTM) sets to record about 275 more objects, most of them sealed, unscribed Fortification tablets; they also made about 550 high-resolution scans to record about 25 items with Aramaic texts. Student work-

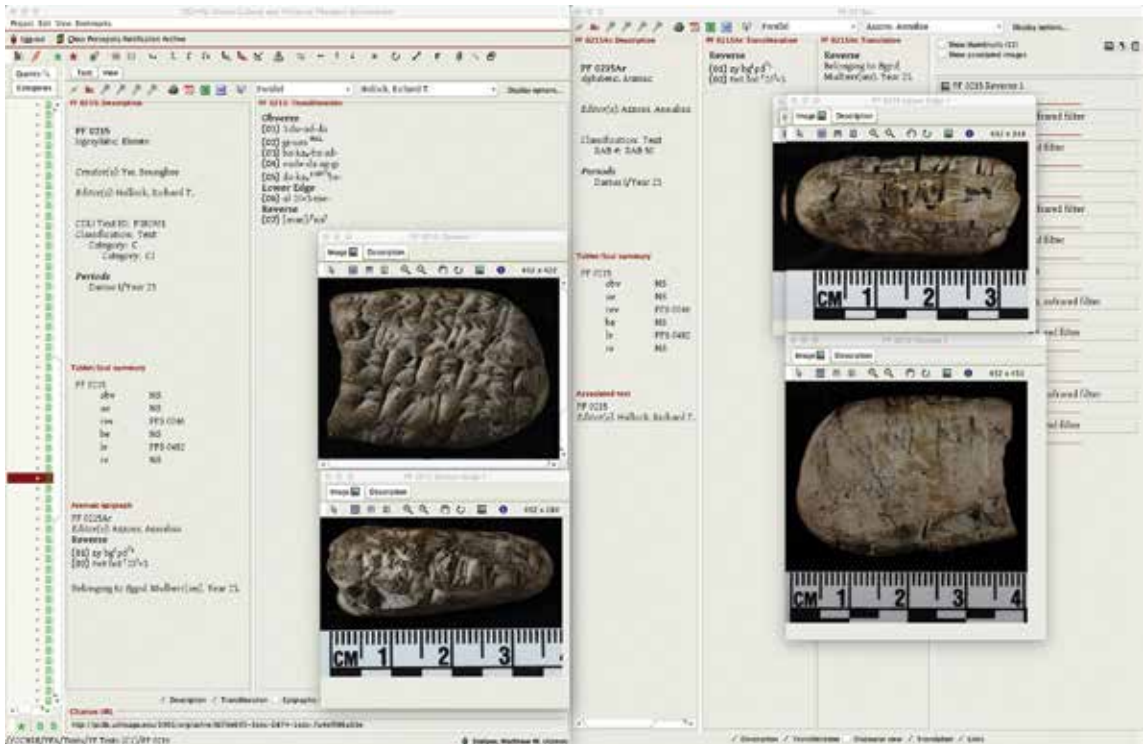


Figure 4. PF 0215, Elamite text and Aramaic epigraph (Azzoni and Stolper 2015, pp. 9ff.)

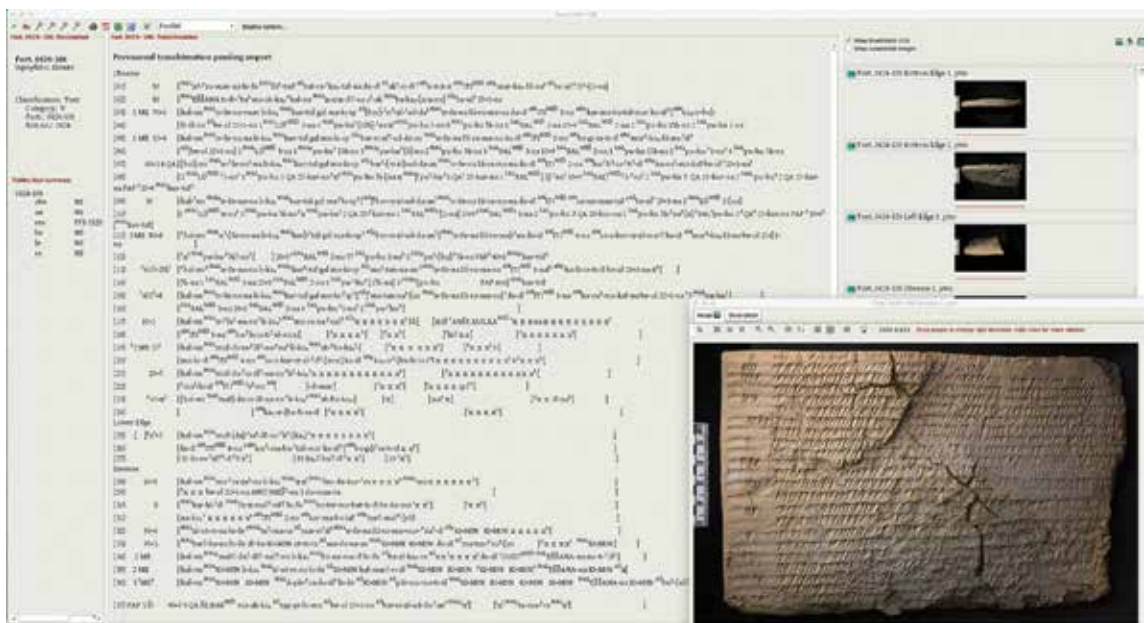


Figure 5. Fort. 0424-106, first draft edition and PTM image of obverse

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Figure 6. Theo Kassebaum photographs Elamite tablets

ers Aimee Genova (History), Robert Marinneau (NELC), and Timothy Clark (Classics) processed about 1,200 PTM sets to produce dynamic images of about 140 objects (fig. 7). At the University of Southern California, our partners at the InscriptiFact Project (Marilyn Melzian, Leta Hunt, and student worker Claire Shriver) processed another 330 PTM sets, representing 40 more objects.

John Nielsen (PhD, Near Eastern Languages and Civilizations, now on the faculty of history at Bradley University) and Teagan Wolter (Center for Middle Eastern Studies) processed draft editions of about 140 previously unedited Elamite Fortification texts for import and display in the Online Cultural and Historical Research Environment (fig. 8). Dennis Campbell (PhD, Near Eastern Languages and Civilizations, now on the

faculty of history at San Francisco State University) entered editions of another 30 texts and reviewed and revised the entries in the OCHRE click-through Elamite glossary, highlighting the urgent need to update the English glosses and the associated bibliography. An aid to that update will be a new tool made available by OCHRE Data Services (ODS) specialist Miller Prosser and ODS director Sandra Schloen, allowing OCHRE to link to items in Zotero bibliographies. To facilitate collation and revision of text editions, Prosser and Schloen also added tools for importing content from Word documents to OCHRE notes, and for exporting processed texts from OCHRE to Word documents.



Figure 7. Edward Fernandez (left) and Timothy Clark (right) process high-resolution images of Persepolis Fortification tablets



Figure 8. Teagan Wolter imports editions of new Elamite texts into OCHRE

OCHRE includes records (catalog, seal information, and/or editions) of about 11,300 tablets and fragments (including about 7,100 Elamite documents, about 860 Aramaic documents, and about 3,200 sealed, uninscribed tablets) and about 3,300 analytically legible seals represented by impressions on the tablets. OCHRE also includes images (including about 82,000 conventional images, 27,000 high-resolution scans and 23,000 dynamic PTM images) of about 10,500 tablets and fragments, and final drawings of more than 2,000 of the seals reconstructed from collations of multiple impressions. The Elamite glossary of more than 4,150 lemmas (including more than 2,100 proper names) and the Aramaic glossary of more than 180 lemmas include morpheme-level parsing of each attested form, counts of each form, and click-

through to views of texts where the glossed form appears. More than 12,000 seal impressions are identified with cataloged seals, linked in turn to the thematic typology described in last year's report, searchable by Project personnel though not yet public (fig. 9).

The screenshot displays the OCHRE web interface for the record PFS 2707*. The interface includes a navigation menu on the left with a list of PFS entries. The main content area shows the following details:

- Record ID:** PFS 2707*
- Location & Object:** */Locations & objects/Catalog of seals/PFS/PFS 2707*
- Observation date:** 06/08/2015 Kruse, Megan
- Classification:** Seal
- Seal type:** Cylinder seal
- Catalog Number:** 0
- Degree of completeness:** -unassigned-
- State of preservation:** -unassigned-
- Image theme:**
 - V. Archers
 - V.D. Human Or Winged/Tailed Human Archer Kneeling Or Running
 - V.D.3. Aiming At Animal(s)/Creature(s) Moving Away From Archer
 - V.D.3.1. Winged Lion
- Hallock number:**
- Style:** -unassigned-
- Impressions of Seal:**
 - Seal impression: PFS 2707* Tablet: PF-NN 1554, rev (1) (Text: PF-NN 1554)
 - Total # impressions of Seal: 1
 - Total # tablets represented: 1
 - # surfaces with only one seal: 1
 - # surfaces with more than one seal: 0
- Creation URL:** <http://oi.uchicago.edu/1001/eng/ochre/oi1780371-66e2-49d1-bb0f-ed11c904658>

The right side of the interface shows a thumbnail of the seal impression with a 1 cm scale bar. The thumbnail image shows a stylized human figure with wings or a tail, holding a bow and arrow, in a kneeling or running pose.

Figure 9. PFS 2707*, newly identified from an impression on PF-NN 1554: thematic typology and final drawing

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Thoughtful users of this material will quickly recognize that much of it, compiled under emergency priorities, is in rough draft form, with attendant errors and glitches (incorrectly labeled tablet surfaces, inconsistently represented transliterations, redundant notes, and so on). This is the price of the Project's commitment to making its records available quickly and continuously, in the expectation of later publication of fully corrected and edited versions. Priorities for the coming years include collation and correction of these lapses.

Conservator Simona Cristanetti treated 55 more Fortification tablets. Cristanetti, along with OI conservators Laura D'Alessandro and Alison Whyte, developed a protocol for portable X-ray fluorescence (pXRF) scanning of Fortification tablets. Scans of a first sample of 28 Fortification tablets were analyzed by Lee Drake, senior application scientist at Bruker Elemental. This first analysis, blind to the contents of the tablets, distinguished two main sorts of clay fabric, encouraging the prospects of distinguishing tablets made at Persepolis from those made in the regions around Persepolis. One of the large tablets (of a type from the late stage of information processing, believed to be made at Persepolis), was mapped, that is, analyzed at intervals across the surface, confirming largely consistent composition of the clay across the width of the tablet, which in turn encourages the expectation that spot-scanning of such large tablets will not produce sampling errors. Whether the PFA Project will be able to characterize a significant number of Fortification tablets in this way will depend on the eventual arrangements made for the expected return of the Fortification tablets to Iran.

Notable among PFA-related public lectures and papers at academic meetings delivered by Project members during the last year were Henkelman's talks on the PFA and funerary sacrifices at the Shiraz University of the Arts and on Achaemenid royal women (highlighting new information found by connecting texts in Chicago with texts in Tehran) at National Museum of Iran; Tytus Mikołajczak's paper at the *Rencontre Assyriologique Internationale* in Warsaw, on the correlations of seals and contents in accounting documents in the Archive; and my presentation on language and writing at Persepolis to a conference at the University of Chicago Center in Beijing and the Department of History at Fudan University in Shanghai, in connection with the Neubauer Collegium's "Signs of Writing" project organized by colleagues Christopher Woods and Edward Shaughnessy.

With eleven new postings during the last year, the Project weblog (<http://persepolis-tablets.blogspot.com>) maintained by Charles E. Jones (Pennsylvania State University) includes 234 entries, viewed by more than 4,300 unique visitors. Hockey fans among them could take special satisfaction from the posting about the return of the Stanley Cup to Chicago, recalling that legendary Chicago Blackhawks star Bobby Hull was the brother-in-law of the father of the Persepolis Fortification Archive, Richard T. Hallock. The newsfeed associated with the blog has 80 email subscribers, and the growing PFA Project presence on Facebook has 965 members, up about 50 percent in the last year.

Notable among fifteen PFA-related articles published or submitted during the last year are Garrison's "Beyond Auramazdā and the Winged Symbol: Imagery of the Divine and Numinous at Persepolis," and Henkelman's "Humban and Auramazdā: Royal Gods in a Persian Landscape," both in the proceedings (co-edited by Henkelman) of the conference on Achaemenid Persian religion mentioned in last year's *Annual Report*; "Fragments from Old Kandahar and Afghanistan," by Michael Fisher and me (http://www.achemenet.com/document/ARTA_2015.001-Fisher-Stolper.pdf), on a discovery also mentioned in last year's *Annual Report*; "The Aramaic Epigraph *ns(y)h* on Elamite Persepolis Fortification Documents," by Azzoni and me (http://www.achemenet.com/ARTA_2015.004-Azzoni-Stolper.pdf), and

my “‘His Own Death’ in Bisotun and Persepolis” (http://www.achemenet.com/document/ARTA_2015.002-Stolper.pdf). In about 50 books and articles published or in press to date, amounting to more 2,000 printed pages, Project personnel have included full editions of about 50 previously unavailable Elamite and Aramaic Fortification texts and fully illustrated discussions of about 115 seals impressed on Fortification tablets.

If the summary judgment of March 2014 is upheld on appeal, the Oriental Institute expects cultural heritage authorities in Iran to call for the repatriation of all the tablets with all deliberate speed. The logistics will be complex. As last year’s report stressed, a corollary process will be to correct and consolidate Project data, the contents that will accompany the objects. In the meantime, a timely and generous new grant from the Roshan Cultural Heritage Institute will support student workers in continuing efforts to make and process images of the tablets, and to edit, display, and correct editorial information, building the record that will sustain ongoing revelations of the Achaemenid world.

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