

Conservation Process of Loom Weights Found at Khirbat al-Balu'a

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Introduction



Loom weights, which provide tension for the warp-weighted loom, are often the only remnants of weaving found within an archaeological context (Mårtensson, et al: 374). Loom weights are usually made of unfired, sunbaked clay and often crumble when being extracted from the ground in an archaeological dig. The loom weights excavated during the 2017 season of the Balu'a Regional Archaeological Project (BRAP), arrived in the lab in many small pieces. One of the goals of this thesis project is to conserve these loom weights as well as conserve the loom weights in-situ during the 2019 BRAP season.

Paraloid B-72 Treatment Applied to Loom Weights

Next, one should create an enclosed workspace for the loom weights in order to piece them together like puzzle without worrying about possible contamination from other artifacts or loom weights getting in the way. For this purpose, use a tray that can contain the individual loom weight components while assembling them together. Next, glue the small pieces together before coating the entire outside with Paraloid B-72, which is dissolved in acetone. To accomplish this, a 25% solution is used to glue each individual piece together prior to the outside coating. Once the individual pieces are dry, then a 10-15% solution can be applied to the outside to protect the entirety of the loom weight.



Gluing Supports



Sculpey polymer clay, found at Sculpey.com, is employed to support the separate pieces and keep them in place while the PB-72 dries. This part of the process usually takes a day to dry and allows the pieces to become stable, otherwise if the PB-72 is not fully dry the pieces will slide around while the conservator is trying to conserve the rest of the loom weight and sometimes the process needs to be repeated. This has been a trial and error effort throughout this project.



Tools Used Throughout the Conservation Process



The photos in this section show the various tools and accoutrements used throughout the conservation process and the final result. The brushes to get should be chosen for their ability to withstand solvents such as acetone; which is used to cut the PB-72. For this project, craft brushes for oil painting were used as they are able to handle solvents such as acetone. Straight acetone is implemented to clean up bubbles that seep out through the cracks. The loom weights are weighed and measured before they are finally ready to be stored in lab bags.

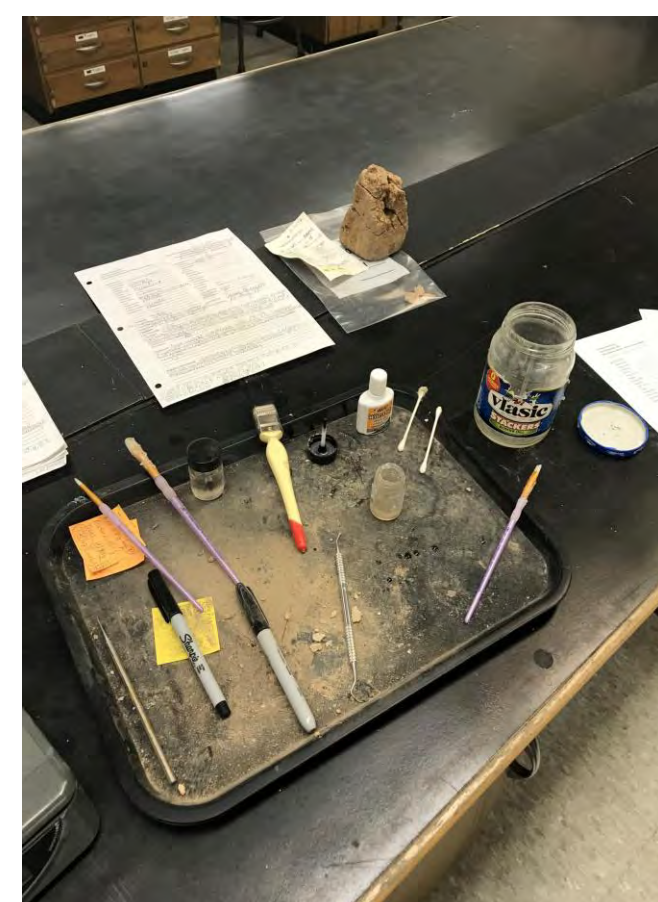
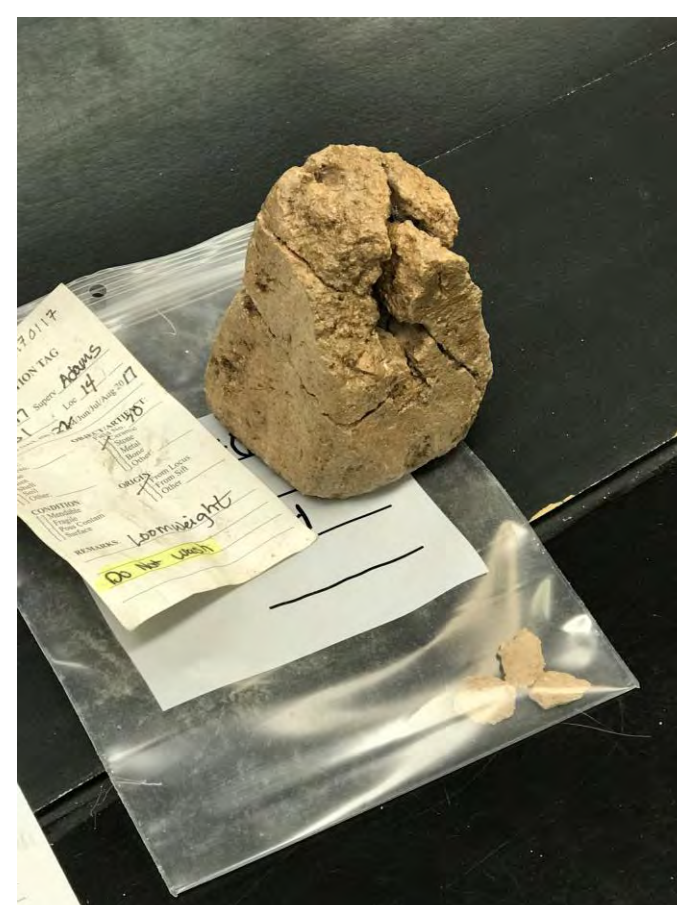


Photo by: Dawn Acevedo



Loom Weight In-Situ Conservation

As part of this thesis project, the use PB-72 was implemented as part of in-situ conservation techniques during the 2019 BRAP season. We then brushed the loom weights with a light, small brush to expose the loom weight from the dirt around it, this exposes enough of the loom weight to paint it with a 10-15% solution of PB-72 mixed in a glass jar with beads brought from the US and acetone purchased in Jordan. Thus the archaeologist can brush and then paint as they work their way around the loom weight, while giving it time to dry out, which works well in the dry heat and dries within less than 10 minutes. This creates for a fast conservation technique that can be used to protect the loom weight from extraction from the dig site, to the lab.



Photo by: Betty Adams

In-Situ Loom Weights Coated with PB-72 Prior to Extraction



Photo by: Betty Adams

The photos of the loom weights featured left and right were taken in the process of being treated with PB-72 before being extracted from the ground and were then transported to the lab to be processed, weighed, and recorded.



The photo below shows the loom weights in the lab after in-situ conservation.

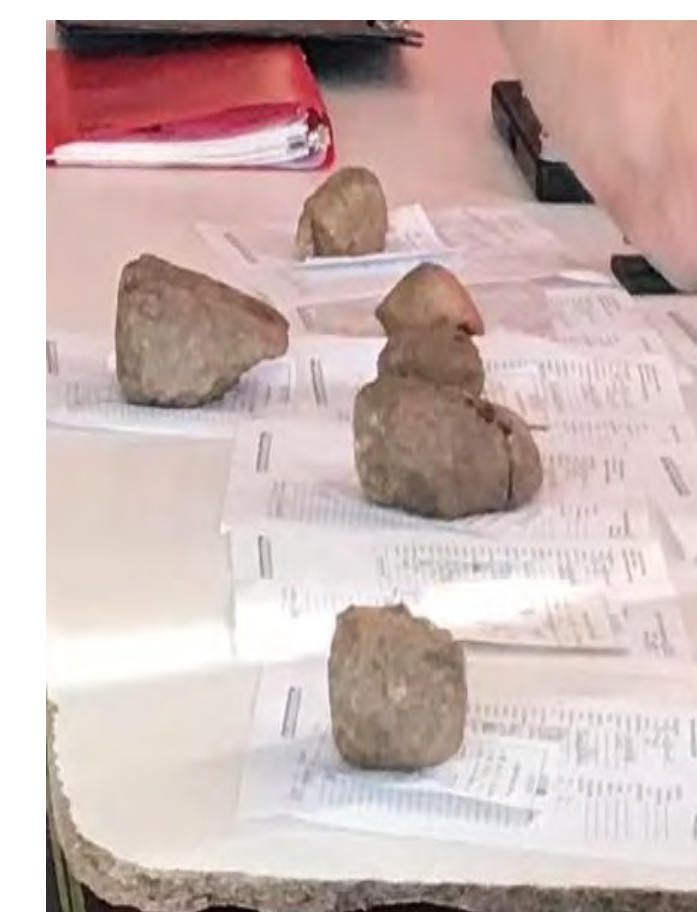


Photo by: Monique Vincent, Ph.D.

Conclusion

Conservation of the loom weights from the 2017 season and implementation of the in-situ conservation for the 2019 season for this project with the loom weights has helped to understand the context in which they were found as well as understanding the consistency in which they were formed as the style is consistently similar even with the varying sizes of loom weights. By weighing them in the lab also sheds light on three consistent weight amounts in three varying sizes of loom weights found in this context. In conclusion, conserving the loom weights in-situ has enabled the ability to measure and weigh them at their actual size as opposed to piecing them together in the lab and hoping to get them fully reconstructed. If they are conserved in-situ, it prevents them from deteriorating before getting to the lab, and thus lends for a more accurate weight and measurement of them. Researching artifacts such as loom weights gives us an insight into the daily lives of the inhabitants of this region.



Photo by: Monique Vincent, Ph.D.

REFERENCES

Mårtensson, Linda, Marie-Louise Nosch, and Eva Andersson Strand. "Shape of Things: Understanding A Loom Weight." *Oxford Journal of Archaeology* 28(4) (2009): 373-398.