

SHA08 Rupert's Valley Excavations

Finds Conservation Assessment

24 November 2009

Background

The St Helena small finds assemblage was discovered during excavations of a 19th century burial site on the island of St Helena. The assemblage consists of both organic (textile, leather, wood, bone and hair) and inorganic (metal, ceramic, glass) finds.

Assessment

The finds are packaged into two large Stewart boxes with silica gel to control the microclimate within the boxes. The metals are packaged with silica gel to maintain a low humidity environment, while the organics are stored with PRO Sorb conditioned silica gel to maintain a relative humidity of 50%. Each small find has an individual plastic 'crystal' box, many with cut-out plastazote support for the objects within.

Metals

The metal finds consist of a number of copper alloy pins, coins, buttons and a bracelet, iron sheets/tags and bolts, and lead/tin musket balls and a fragmentary sheet.

The copper alloy objects appear generally stable, with a light build-up of corrosion products which has obscured surface details on many of the objects. Conservation may be required to remove corrosion products to allow more detailed identification of objects such as the coins, if the x-radiographs indicate that sufficient detail remains to be uncovered. Although the copper alloy objects appear to be stable at the moment, the environment to which they are to be stored in the long-term is uncertain. It may be beneficial to actively stabilise them by removing corrosion and treating with a corrosion inhibitor, followed by a lacquer coating.

The iron objects have a hard, shiny, bubbly corrosion surface with patches of a powdery yellow corrosion product in some places. Although storage with silica gel will minimise the rate of corrosion, these objects are vulnerable to fresh corrosion should the relative humidity rise. I would recommend that these objects are investigated further, with active treatment to remove corrosion and stabilise as necessary.

The lead objects are coated with a stable white lead oxide corrosion product and require no further conservation work to stabilise them. For display purposes it may be desirable to lightly clean the objects to remove any powdery corrosion.

Textiles

The textile finds consist of a number of fragments of coarse woven material, together with several more finely woven fragments and ribbon remains. All of the textile finds

are dry and dirty, with considerable dirt visible in several of the crystal boxes. The alignment of the textiles appears to be as discovered, in small discrete folded bundles or as grouped fragments. A number of the textiles appear to have been dyed and one or two may have been overstitched with a pattern.

The textiles are susceptible to pests, with insect remains evident amongst some of the debris in the bags (although insect infestation is not necessarily active). I would recommend that the organic remains undergo a freezing process in order to kill any potential insect activity within the archive.

The textiles require an initial examination by a textile specialist in order to assess the potential for further study and inform the conservation that may need to be carried out in order to facilitate this. This could range from cleaning and mounting of small samples up to cleaning, unfolding and mounting of the entire collection.

Long-term stability and research potential will be greatly improved if the textiles are cleaned, unfolded and mounted for examination / display, but this is a time-consuming (and costly) option, the benefits of which need to be weighed against the importance of the archive.

Leather

Two leather objects were examined. One of them has dried out and become very friable, while the other is still slightly damp but in a fragile condition. Both of these objects require treatment in order to stabilise them. The leather requires examination by a leather specialist prior to treatment in order to carry out an initial assessment. The damp leather should be cleaned then pretreated with a consolidant and freeze dried, a process which may also be of benefit for the dried leather (if it is rehydrated).

Wood

One wooden object was examined. It is in a dry condition and the surface is friable, with losses being noted in the bottom of the bag. This object requires consolidation to preserve the surface. It should be noted that any consolidation may cause the surface to darken slightly.

Human hair

A small number of samples include fragments of human hair. As with the textiles, these are dry and dirty and require treatment to kill any potential pest activity. Light cleaning to remove dirt may be required.

Glass and ceramics

The glass beads and clay pipe bowls and stems all appear stable, although some of them would benefit from a further light clean to remove dirt and further packaging to reduce movement.

Recommendations

All of the finds are currently well packaged with regards to environmental requirements. The micro-environments within the Stewart boxes are correct for the types of items and will greatly reduce deterioration due to environmental fluctuations in the short-medium term.

Given the importance of this archive and the uncertainty of the storage conditions on its return to St Helena I would recommend that it may be necessary to carry out a number of interventive treatments in order to improve both the stability and the research potential of the archive in the longer term.

Metals

I would recommend that all of the metals are x-radiographed in order to determine whether further information, such as inscriptions on the slave tags, lies beneath the corrosion.

Following assessment of the x-radiographs by a finds specialist further cleaning may be required to reveal information lying within or beneath the corrosion, such as details on coins or burial tags.

In order to increase long-term stability the iron objects require further stabilisation involving the removal of corrosion and possibly washing techniques to remove potentially damaging salts prior to storage in a micro-climate using silica gel to reduce relative humidity.

Textiles

I would recommend that the organic remains undergo a freezing process in order to kill any potential insect activity within the archive. This will involve placing the items into a freezer below -20°C for 48 hours, removing them and allowing them to warm up to room temperature for 24 hours and then placing them into the freezer for another 48 hours. For the full procedure see:

<http://www.nps.gov/history/museum/publications/conservoogram/03-06.pdf>

Further work on the textiles may need to be carried out in order to facilitate research following an assessment by a textile specialist. As noted above, long-term stability and research potential will be greatly improved if the textiles are cleaned, unfolded and mounted between netting for examination / display. This can be a time consuming and costly option but will ultimately allow for the greatest amount of research to be carried out as well as providing long-term stability and allowing further study without recourse to more conservation in the future.

Leather

The leather objects require treatment in order to stabilise them. The damp leather should be cleaned then pretreated with a consolidant and freeze dried, a process which may also be of benefit for the dried leather (if it is rehydrated). They will then be able to be stored in the same environment as the other organic objects and handled and examined as necessary.

Wood

The wooden object requires consolidation to preserve the surface. It should be noted that any consolidation may cause the surface to darken slightly.

Human hair

As with the textiles, these objects require treatment to kill any potential pest activity. I would also recommend light cleaning to remove dirt , with collection of any material removed from the hair for further study / analysis.

Glass and ceramics

The glass beads and clay pipe bowls/stems would benefit from a further light clean to remove dirt. I would also recommend that loose items are packaged with plastazote where possible, as other objects have been, to reduce the possibility of physical damage due to movement.

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