## Reference data
643592

## Description (shape and decoration)
Jug (possibly Morel type 5644b1)
Clay body: Solid fineware, of light reddish-brown clay
Surface: Black slip
Decorative pattern: Incised decoration, divided into two panels by a horizontal band running across the center of the body. Both the upper and lower panels are decorated with a series of parallel lines.

## Provenance
Burial site near Norcia

## Period/ Date
330-290 BC

## Owner
Italian State/ Museo Archeologico Nazionale dell'Umbria

## Restoration Notes

1. **Documentation**
   Text and digital photo

2. **Cleaning method**
   Cleaning started from the broken edges of the sherds. These were not very soiled, only a thin layer of dust needed to be removed. For this the use of cotton swab dampened in ethanol, which allowed a light cleaning without damage to the clay was...
adequate.

Most of the interior surfaces of the sherds were entirely without slip, and were only lightly soiled. I could clean most of the sherds using cotton swab dampened in ethanol. Some of the interior surfaces had slight encrustations of plant roots, and I removed these using a scalpel, sized 15 blade.

I then proceeded to clean the exterior surfaces. These were more heavily soiled with soil encrustations throughout, and calcareous encrustations in some places. The exterior surfaces also have a thick black slip coating, and a test clean revealed that the slip was not damaged by cleaning with deionized water. I cleaned all the surfaces with a cotton swab dampened in deionized water, which removed the soil more efficiently and easily than the ethanol. The calcareous encrustations I removed with a scalpel, sized 15 blade. In some places the black slip had become iridescent beneath the calcareous encrustations.

The base (which is complete) had a very thick calcareous encrustation on its exterior surface. Removal of this revealed that the slip around the base is thinner in some places, and the surface color appears reddish rather than black.

Took digital photographs of the exterior surfaces of the sherds after cleaning.

3. Bonding

I first performed a test assembly of the sherds, temporarily holding each in place with thin strips of masking tape. I discovered that, despite some large gaps in the body, all of the sherds could be connected apart from the handle fragment. There are no rim sherds and the neck is fragmentary. I took digital photographs of the temporarily assembled vessel from various sides.

I then prepared the sherds for assembly creating a primer/consolidating layer. First I applied two initial coats of resin with a narrow paintbrush, along the connecting edges. For these two coats I used 5% Paraloid B-72 acrylic resin in acetone solution. I then applied a third preparatory coat the same acrylic resin, using 10% in acetone solution.

I connected the sherds, starting from the complete base. For this I used 20% Paraloid B-72 acrylic resin in acetone solution. Again I applied the resin using a thin paintbrush, holding the sherds in place manually for 60-90 seconds before testing their adhesion, and temporarily supporting them with thin strips of masking tape along the interior and exterior surfaces.

One final sherd belonging to this vase was discovered as well.
It had been mistakenly grouped with vessel 643588 belong from the same grave. I was able to connect this sherd to the fragmentary neck of the vessel in object.

I removed excess resin from the remaining exposed edges of the sherds using a cotton swab dampened in acetone. Took digital photographs of the vessel after bonding was completed.

### 4. Filling

Before beginning the filling, I made a test mix of Polylfilla plaster and pigments. After allowing the plaster mixture to dry, I tested the color after applying three resin solutions: 1.5% Mowital in acetone, 1.25% Paraloid in acetone, and 2.5% Paraloid in acetone. After drying, the 1.25% Paraloid in acetone proved to reach a result closest to the color of the original clay fabric of the vessel.

The first filling was made in the large lacuna in the fragmentary neck and shoulder of the vessel. I first made a wax mould of the interior surface of the neck, attaching this mould across the lacuna with strips of masking tape. I applied the plaster mixture to the area using a spatula. Following this same procedure, I filled the large lacuna at the base of the vessel.

Once dry, I formed and sanded these fillings using a scalpel, sized 15 blade, and fine sandpaper, followed by a protective coating with 2% Paraloid B72 in acetone applied by brush.

### 5. Other notes

Cause there was not sufficient time to complete the filling of all lacunae in the vessel, two other large lacunae in the body of the vessel should be filled at a later date to provide more support to the vessel.

### 6. Short photographic documentation

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<td><img src="image1.jpg" alt="Before" /></td>
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