

# Winterthur Museum

## Department of Conservation

### Conservation Report

**Accession #:** 2001.0003.047

**Object:** Bacchus, goat and cherub figure group

**Object Date:** early 19<sup>th</sup> century, French

**Artist/Author:** Inscribed: "Mfc. De Dibl.", which may indicate the maker or sculptor, possibly from Sèvres

**Materials:** Biscuit soft paste porcelain

**Dimensions:** H 36.0 cm – base to top of goat's head  
L 31.0 cm – base  
W 22.0 cm – base

**Current Location:** Objects conservation laboratory

**Reason for Treatment or Examination:** To replace missing elements and improve aesthetic appearance for upcoming exhibition at Winterthur: *Uncorked! Wine, Objects & Traditions*, April 28, 2012 – January 6, 2013

**Examined by:** Lauren Fair

**Consulted:** Leslie Grigsby, Bruno Pouliot, and Mary Coughlin's 2004 conservation report

**To be treated by:** Lauren Fair

**Report Date:** November 1, 2011



### **Description:**

The object is a white biscuit porcelain sculpture that depicts three figures atop a fluted, oval base: Bacchus as a boy, a winged cherub, and a goat. The Bacchus boy is leaning on a stone wall surrounded by drapery, a large urn and a tambourine. His body is contorted in an active pose, with both his proper left arm and leg

stretched outward into the space in front of him, and his proper right arm bent over the right side of his face, neck bent toward his left side, as he shields his wreath of grape leaves from a goat attempting to reach them with its mouth. The goat, standing on its hind legs, rests on Bacchus' back and the stone wall upon which he is seated, and its mouth is open, trying to eat the grape leaf headdress. On the other side of the stone wall is a reclining cherub, who is lying on the grass at the base of the wall in front of a hollowed-out tree trunk and holding a pan flute in his proper left arm, twisting his torso and gazing upward over his proper left shoulder at the Bacchus-goat interaction. On the exposed side of the stone wall there is a handwritten inscription: "Mfc. De Dibl."

The figure group and associated objects rest upon a grassy mound, which in turn sits atop an oval base that imitates a stepped marble pedestal decorated with vertical arched fluting and two blank rectangular cartouches on either side. The base is hollow and attaches to the bottom of the figure group around the perimeter. There are two large air holes visible from the underside of the figure group that lead to the hollow interior of the sculpture and allowed for air circulation during the manufacture and firing processes. There are also four pieces of clay that form a cross shape to provide internal support to the underside of the sculpture.

For a more detailed description of the sculpture and information about its manufacture and art historical context, refer to the 2004 conservation report, written by then-conservation graduate fellow Mary Coughlin.

### **Condition:**

Overall, the sculpture is in good condition; however, there are a number of losses and a moderate amount of surface dirt and grime, as well as a small amount of localized staining.

This object was treated in 2004 by then-conservation graduate fellow Mary Coughlin. The full details of her treatment are outlined in the conservation report; however, mention will be made here as it relates to the sculpture's current condition.

### ***Structure***

The sculpture is structurally sound. There are a number of cracks, but all can be attributed to the sculpture's manufacture and are considered to be either drying or firing cracks. The largest crack is located on the bottom of the sculpture group, visible from underside of the base pedestal. There are several other small, fine cracks where there are seams between molded parts, such as where Bacchus' leg is joined to the drapery on the stone wall and where the stone wall joins the grassy mound.

### ***Losses***

There are a number of losses in the sculpture. On the base pedestal, these include the following locations: medium-size (1-2 cm in length) losses at each of the four

stepped lower corners of the blank rectangular cartouches; ten small chips (2-8 mm in length) on the corners of the fluting and lower stepped pedestal edge; and one small chip on the top surface of the blank cartouche below the tambourine.

On the figure of Bacchus, the proper left thumb, four toes on the proper left foot, and one tip of a grape leaf in the headdress is missing. The exposed body where the toes are missing exhibits brownish orange staining (see images below).



BT detail PL hand of Bacchus figure



BT detail PL foot of Bacchus figure

The goat is missing its front proper right hoof and part of that leg; while the other front leg is extant but broken and repaired with a white material visible through a small gap in this join.

Losses to the reclining cherub include the top corner of the pan flute (1 cm in length) and the tip of the proper right wing.

There is also a loss to the lower proper left edge of the tambourine frame (1.5 cm in length) and chips in three of its noisemakers. There is what appears to be an impact dent to the side of the urn, and the edge of drapery just above this dent is chipped.

### *Staining*

Heavy orange staining (believed to be due to nicotine smoke exposure) was greatly reduced in the 2004 treatment. Coughlin used surface treatments of deionized water, as well as poultices for stain reduction, trying both ammonium citrate and hydrogen peroxide bleach solutions. It seems that the ammonium citrate poultices, coupled also with steam cleaning was most effective and greatly reduced the heavy stains and dirt accumulation. However, it was noted that after steam cleaning, “a light yellow staining was present around some cracks” and it was thought that the steam cleaning “may have penetrated the cracks, causing the stains to wick out.”

This staining around the cracks now appears orange in color and may have darkened since the 2004 report was written. Under long-wave ultraviolet light (UV 315-400 nm) illumination, these stains fluoresce bright yellow-orange.

### *Previous restorations*

Prior to the sculpture entering the museum collection, a number of restorations had been carried out. These are detailed in the 2004 report by Coughlin. No loss compensation was carried out in the 2004 conservation treatment; however, degrading restorations were reversed – namely fills on Bacchus' foot and discolored overpaint on the goat's legs. This was done by softening the restoration material with water and ammonium citrate, then removing the material mechanically with a scalpel. The repair to the goat's front proper left leg appears to have been carried out prior to the 2004 treatment; it is slightly out of alignment and there is a gap in the join, but this was left as-is by Coughlin.

There is slightly yellowed overpaint surrounding the loss to the tambourine frame, and this paint fluoresces bright white/yellow under long-wave UV.

Also under long-wave UV, there are swatches of white hazy fluorescence around areas of loss, including a swatch on the cherub's head, the area surrounding the goat's repaired front proper left leg, patches on the stone wall and drapery, the cherub's proper right leg, and the back and back haunches of the goat. No coating is apparent in these areas under normal lighting conditions, and it is unclear whether the fluorescence indicates previous restoration material.

**Purpose of treatment:** To replace missing elements and improve the aesthetic appearance for the upcoming exhibition at Winterthur: *Uncorked! Wine, Objects & Traditions*, April 28, 2012 – January 6, 2013.

### **Treatment Proposal:**

1. Pre-treatment written and photo documentation.
2. Surface clean sculpture with vacuum and soft dusting brush.
3. Test stain reduction methods on an obscure stained crack to see 1) if staining can be lessened and 2) if the staining returns in a day or two. Testing can include surface and/or poultice applications of varying concentrations of chelators such as ammonium citrate and sodium citrate and/or bleaches such as hydrogen peroxide and carbamide peroxide. If stain reduction tests prove to be effective at significantly lessening staining, then localized stain reduction can be carried out on other areas of the sculpture that otherwise stand out. Conversations with curator Grigsby will determine the extent stain reduction.
4. Compensate for losses that have been determined by curator Grigsby to be distracting and warrant replacement fills. Areas will include finger and toe losses to Bacchus boy figure and the goat's front proper right leg.

Thoroughly clean break edges where loss compensation will be carried out and degrease with cotton swabs and acetone. Apply an isolating layer to the

body of the break edges with 2-5% (w/v) Paraloid B72 (ethyl methacrylate and methyl acrylate copolymer) in acetone.

Execute fills in a material that will be stable, of the appropriate strength, and will be reversible. Options include Milliput® epoxy putty or Hxtal NYL-1 epoxy (made with the diglycidyl ether of bisphenol A and triethylene diamine) bulked with fumed silica.

5. Inpaint fills where necessary using Golden acrylic emulsion paints or watercolors.
6. Post-treatment written and photo documentation.

Conservator: Lauren Fair Date: 12/5/2011  
Lauren Fair

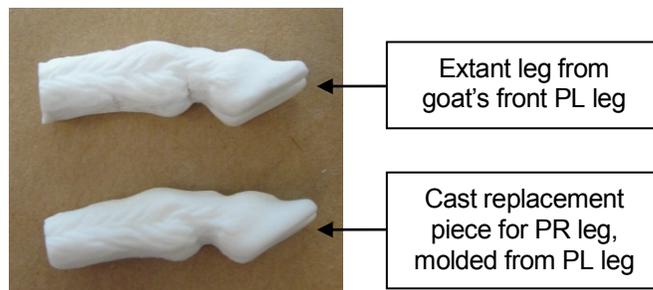
Supervising Conservator: B. Pouliot Date: 12/5/2011  
Bruno P. Pouliot

Curator: Leslie B. Grigsby Date: 12/5/2011  
Leslie B. Grigsby

## Treatment Report:

1. Surface cleaned with soft brushes and a vacuum equipped with a HEPA filter.
2. Reduced orange stains and imbedded surface dirt with cotton swabs and cosmetic sponges<sup>1</sup> dampened with 1:1 ethanol/deionized water (pH 8.5 with ammonium citrate). Soft brushes dampened with the ethanol/water mixture were also used to remove dirt from the porous bisqueware, followed by wiping surfaces with dry cosmetic sponges.
3. Reversed joint to goat's front proper left leg using poultices of cotton batting dampened with deionized water to soften the adhesive. Excess adhesive was then scraped away with a small scalpel blade, and the break edges were further cleaned with steam from a steamer<sup>2</sup>. This joint was reversed for two reasons: 1) in order to more easily take a mold of the extant leg and cast a replacement piece for the other leg; and 2) to rejoin the leg in tighter alignment.
4. Using various mold-making materials, made molds from the Bacchus figure's extant toes and thumb, as well as the goat's front proper left leg. Molds were made using white Milliput® epoxy<sup>3</sup> (with kaolin dust as a barrier), vinyl polysiloxane putty<sup>4</sup> (with kaolin dust as a barrier), and/or white silicone rubber<sup>5</sup> (with no barrier).
5. Cast replacement pieces as follows:

Replacement piece for goat's front proper right leg: Piece was cast with HXTAL NYL-1 epoxy<sup>6</sup> bulked with fumed silica<sup>7</sup>, titanium white dry pigment<sup>8</sup>, and finely ground gypsum. A thin strip of white Milliput® epoxy was rolled out to serve as a strengthening core within the cast. The bulked and tinted epoxy was pressed around the Milliput® core and into the two-part silicone rubber mold taken from the detached extant front proper left leg, and allowed to cure within the mold.



<sup>1</sup> Cosmetic Sponges (non-latex polyurethane) are marketed as a make-up applicator, available from Qosmedix.

<sup>2</sup> belle de St. Claire portable steamer from Kerr Lab Sybron Dental Specialties.

<sup>3</sup> Milliput® (white) is a two-part epoxy sold in a dual stick form, manufactured by Milliput Co.

<sup>4</sup> 3M ESPE Express STP vinyl polysiloxane impression material putty.

<sup>5</sup> Dow Corning 3110 RTV silicone rubber encapsulant/catalyst #4.

<sup>6</sup> HXTAL NYL-1 is a clear 2-part epoxy made with the diglycidyl ether of bisphenol A and triethanol diamine. The HXTAL used in this treatment was purchased from Conservation Resources.

<sup>7</sup> Silica matting agent from Conservator's Emporium.

<sup>8</sup> Titanium white dry pigment from L. Cornelissen & Son.

Replacement piece for Bacchus figure's proper left thumb: Piece was cast with HXTAL epoxy bulked with fumed silica, titanium white dry pigment, and gypsum. A vinyl polysiloxane putty mold was taken from the Bacchus figure's proper right thumb and this was cast with white Milliput® epoxy. The Milliput® thumb was sanded and carved to the proper shape so that a silicone rubber mold could be taken of this piece. Finally, the bulked and tinted HXTAL epoxy was used to cast the replacement thumb from the silicone rubber mold.



Replacement piece for Bacchus figure's proper left toes: First, vinyl polysiloxane putty was used to make a mold of the figure's proper right toes. Second, each toe was individually cast using white Milliput® epoxy. Third, using the individually cast toes and white Sculpey modeling paste<sup>9</sup>, the missing part of the foot and toes on the Bacchus figure's proper left foot were hand-modeled. Next, a silicone rubber mold was taken of this hand-modeled foot. And finally, HXTAL epoxy bulked with fumed silica and tinted with titanium white dry pigment and gypsum was used to cast the replacement toes from this rubber mold.



6. All break edges were prepared for loss compensation and re-joining in the following way: surfaces were steam-cleaned to remove any excess restoration material and residues; surfaces were then de-greased with cotton swabs dampened with acetone solvent; and finally, surfaces were coated with an isolating layer of Paraloid® B72<sup>10</sup>, 5% (w/v) in acetone.
7. Carried out loss compensation and re-joining as follows:
  - Goat's front proper left leg was re-attached with 3:1 Paraloid® B72/Paraloid® B48N<sup>11</sup>, ~50% (w/v) in 1:1 acetone/denatured alcohol.

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<sup>9</sup> Sculpey is the brand name for a plasticized polyvinyl chloride modeling compound and contains about 15% di-(2-ethylhexyl) terephthalate (DOTP) plasticizer. Polyform Products, Schiller Park, IL.

<sup>10</sup> Paraloid® B-72 is a clear colorless thermoplastic acrylic resin composed of an ethyl methacrylate (70%) and methyl acrylate (30%) copolymer; manufactured by Rhom & Haas.

<sup>11</sup> Paraloid® B-48N is a clear colorless thermoplastic acrylic resin composed of a methyl methacrylate/butyl acrylate copolymer; manufactured by Rhom & Haas.

- Replacement piece for goat's front proper right leg was adhered with 3:1 Paraloid® B72/ Paraloid® B48N, ~50% (w/v) in 1:1 acetone/denatured alcohol. Bulked the adhesive with fumed silica to fill in some of the gaps in the join.

*The acrylic resin blend of B72/B48N was chosen for the goat legs because these joins are somewhat protected within the center of the sculpture and thus do not require a stronger adhesive such as an epoxy. The acrylic resin blend will impart the necessary bond strength, while at the same time allowing the joins to be more easily reversible.*

- Replacement piece for Bacchus figure's proper left thumb was adhered with HXTAL epoxy bulked with fumed silica and tinted with titanium white dry pigment and gypsum.
- Replacement piece for Bacchus figure's proper left toes was adhered with HXTAL epoxy bulked with fumed silica and tinted with titanium white dry pigment and gypsum.

*The epoxy resin was chosen for the Bacchus figure's thumb and toes because these elements extend out into space and could more easily be knocked off or damaged; the epoxy resin imparts more strength to the bonds, and with easy access to these joins, the adhesive could still be reversed in the future.*

8. Infilled and inpainted replacement pieces to blend in with surrounding sculpture. First, gaps in the joins between all replacement parts were filled using Flügger Acrylic Putty<sup>12</sup>, and the fills were sanded and smoothed with glass papers and Micro-Mesh® abrasive cloths. Then the pieces were inpainted and toned using watered-down Flügger, tinted with Golden Fluid Acrylic colors<sup>13</sup>.

#### **Documentation:**

Before and After Treatment condition of sculpture was photographed with a digital SLR camera by Jim Schneck, in the Winterthur Conservation Department Photography Studio. Color prints of these photographs are included with this report in the object's conservation file.

**Treatment Completed:**      Number of hours spent on treatment: 45

**Report submitted by:** Lauren Fair, 1/3/2012

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<sup>12</sup> Flügger a white acrylic paste composed of butyl methacrylate and calcium carbonate.

<sup>13</sup> Golden Fluid Acrylic Colors are lightfast, low-viscosity acrylic paints with a high pigment load. Manufactured by Golden Artist Colors; available at art stores and from Golden Artist Colors.