



The Polychromy of the Sculpted Garments on the Statue of Gaius Fundilius Doctus in the Ny Carlsberg Glyptotek

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Polychromy

*in Ancient Sculpture
and Architecture*

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Fig. 1 - The statue of Gaius Fundilius Doctus, Ny Carlsberg Glyptotek. H: 1.85 m (photo by Maria Louise Sargent).



Fig. 2 - Detail of the right knee on the statue of Fundilius (fig. 1) (photo by Maria Louise Sargent).



Fig. 3 - Detail of the folds draped over the extended left arm on the statue of Fundilius (fig. 1) (photo by Maria Louise Sargent).



Fig. 4 - Detail of the travertine plinth supporting the statue of Fundilius (fig. 1), the right foot and the lower parts of the (mostly broken off) lacinia including what may be the remains of a tassel (photo by Maria Louise Sargent).

The Polychromy of the Sculpted Garments on the Statue of Gaius Fundilius Doctus in the Ny Carlsberg Glyptotek

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Introduction

The statue of Gaius Fundilius Doctus was examined for paint traces in 2012 at the Ny Carlsberg Glyptotek¹. Examinations proved that the entire sculpture was once fully or partially covered in layers of paint. The results gave rise to additional questions regarding the visual appearance of the original statue: How was the painted polychromy applied; and how were the colour-effects meant to be perceived by the ancient viewers? This paper forms a contribution to the answers to such questions. This paper will present and evaluate the results of examinations of the statue of Fundilius, with particular emphasis on the preserved polychromy of the sculpted toga. This paper will discuss how the original colouration of the garment may have been perceived by the ancient viewer, by analysing and comparing the intended visual effects of marble and pigments to the dyes (and fibres) that were available for the production of toga textiles during the Roman Empire.

The statue of Fundilius

The statue of Gaius Fundilius Doctus dates from the middle of the first century CE and originates from a small room (the so-called Room of Fundilia) within the Diana Nemorensis sanctuary in Nemi, Italy². The statue represents a mature man with hair cut short (fig. 1). He is wearing a long-sleeved tunic underneath a toga, and thin leather boots on his feet. The statue is executed in one piece of Afyon marble, except for the left hand and lower right arm, which were executed separately³. It is mounted on a travertine plinth bearing an inscription (C. FVNDILIVS. DOCTVS. APOLLINIS. PARASITVS), which is repeated on the sculpted book-casket placed by his left foot. The inscriptions identify Fundilius as an educated man (*doctus*) and Apollo's parasite (meaning an actor). Furthermore, the lack of references to his paternal ancestry suggests that he is a freedman and former slave⁴.

The surface of the fine-grained marble has received a minutely detailed texture, resembling small folds (fig. 2). Also, the hem of the garment, visible following the line of drapery arranged over the extended left arm, is shaped as curvy lines (fig. 3). Finally, a sculpted detail is visible on the travertine

¹ Ny Carlsberg Glyptotek, IN 707. Examinations were carried out by conservator Maria Louise Sargent and supervised by Amalie Skovmøller and research curator Jan Stubbe Østergaard.

² GULDAGER BILDE 2000, 95-109; SKOVMØLLER, SARGENT 2013, 14-16; SKOVMØLLER 2014, 286-293; GHINI 2014, 17-20.

³ On the results from isotopic analysis of a marble sample extracted from statue see: MOLTENSEN, BALD ROMANO, HERZ 2002, 106 (table 1).

⁴ SALSKOV ROBERTS 1997, 119.



Fig. 6 - Detail of the face of the statue of Fundilius. The once chiselled eyebrows are barely visible (photo by Maria Louise Sargent).

Fig. 5 - Mapping of the examined paint traces on the statue of Fundilius (fig. 1). The coloured dots indicate the location of preserved pigments; the hue of the dot corresponds (roughly) to the hue of the pigment (photo by Maria Louise Sargent).

plinth between the feet (fig. 4). While scholars have identified the detail as a ribbon or band originating from a book-scroll, which Fundilius may once have held in his now-missing hands⁵, it seems more likely that it is the remains of a tassel once attached to the hem of the *lacinia* between the feet, which has since then broken off⁶.

Methodology

The statue was examined by microscopy with a video microscope, accompanied by elemental analysis performed by portable x-ray fluorescence spectrometry (XRF) in situ to identify the pigments⁷. Furthermore, the statue was examined by means of technical imaging with different types of radiation using ultraviolet fluorescence (UV-FL) and visible-induced luminescence (VIL). Finally, minute samples were taken from areas where layers of paint are preserved on the marble surface, and prepared for microscopic cross-sectional analysis.

Results from scientific examinations

The examination of the statue showed that it was originally almost completely painted (fig. 5)⁸. The remains are sparse and mainly preserved on the garments and on the hair. The face has been extensively cleaned, almost completely obliterating the once-chiselled eyebrows (fig. 6), therefore only minute traces of red are found on the skin.

⁵ FEJFER 2008, 285.

⁶ We owe this observation to Berit Hildebrandt.

⁷ SKOVMØLLER, SARGENT 2013, 19.

⁸ SKOVMØLLER, SARGENT 2013, 20.

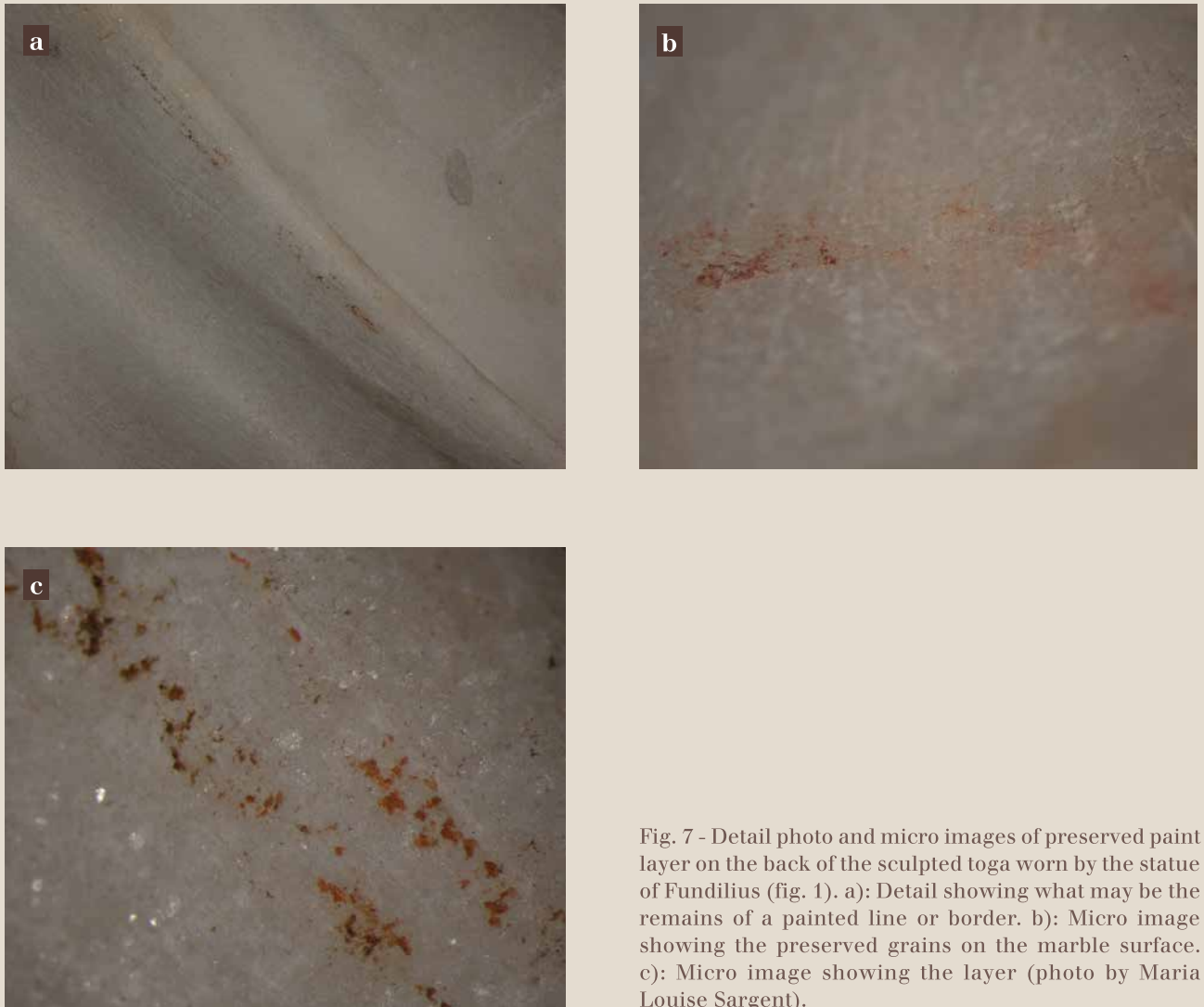


Fig. 7 - Detail photo and micro images of preserved paint layer on the back of the sculpted toga worn by the statue of Fundilius (fig. 1). a): Detail showing what may be the remains of a painted line or border. b): Micro image showing the preserved grains on the marble surface. c): Micro image showing the layer (photo by Maria Louise Sargent).

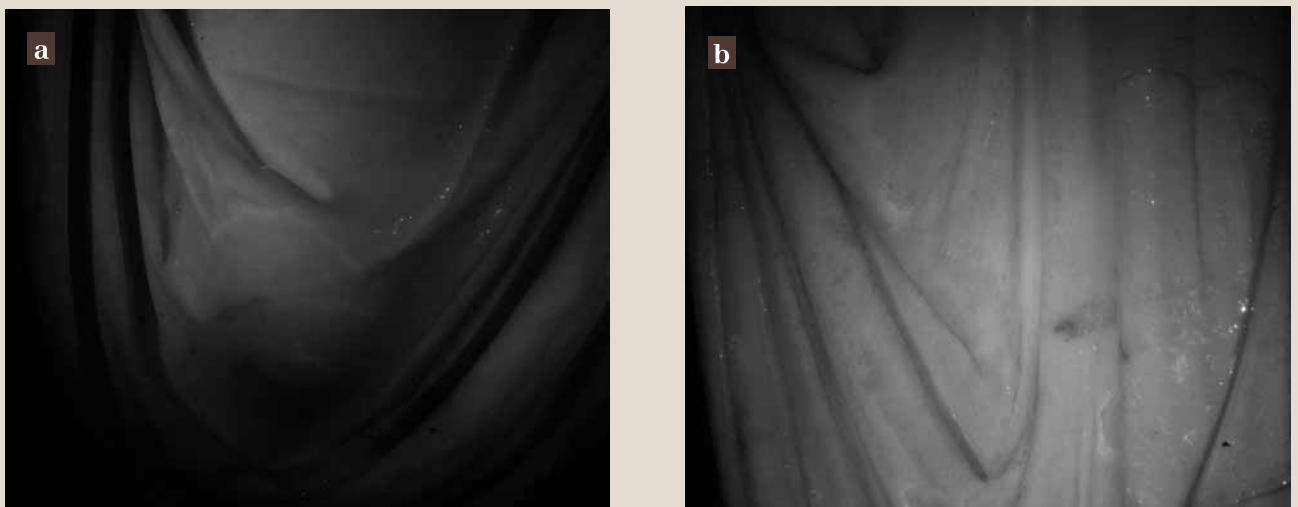


Fig. 8 - VIL image of detail of the sculpted folds on the toga worn by the statue of Fundilius (fig. 1). The luminescent particles may indicate the presence of Egyptian blue pigment grains. a): Detail of the extended right knee. b): Detail of back side of the drapery arranged over the left arm (photo by Maria Louise Sargent).



Fig. 9 - VIL image of the “vacant space” between the book casket and the left foot of the statue of Fundilius (fig. 1). The luminescent particles may indicate the presence of Egyptian blue pigment grains (photo by Maria Louise Sargent).

Finely ground ochre pigments of an orange/reddish hue are preserved in several areas of the sculpted garments: as scattered pigments in areas of the tunic covering the right shoulder, and as coherent layers in several areas of the toga. A sample was extracted from a well-preserved layer located on the back of the toga, and examination of the cross-section show a single layer-structure of orange/reddish pigments painted directly onto the marble surface (fig. 7). The location of the layer seems to create one, maybe two, lines following the drapery.

What may be interpreted as Egyptian blue grains have been identified by means of VIL-imaging, and are present in the folds of the toga and tunic, and especially concentrated on the “vacant space” next to the book-casket (figs. 8-9). Microscopy did not detect any blue grains preserved in these areas. According to the VIL-imaging the luminescent particles do not appear in the same areas – or mixed in with – the red ochre.

Experimental reconstructions

Working from the results from examination, the statue has been experimentally reconstructed in Photoshop by animator Lars Hummelshøj (fig. 10). The reconstructions are performed in two versions: Variant A (fig. 10a), which includes a minimum of interpretation, and Variant B (fig. 10b), where comparative materials are taken into account as well in order to guide the painted version. The reconstructions do not take important aspects such as painting techniques (layering and highlights) into account. Thus, they should be considered as suggestive rather than conclusive.

In Variant A the sculpted toga is reconstructed as a *toga praetexta*. This is based on the location of the preserved reddish/orange pigments found in high concentration in areas of the *balteus*, along the line of the *sinus* curve and on the *lacinia* between the feet. The placement of pigments in these specific areas conforms to how the coloured border may have been visible, when the toga was draped on the male body⁹. This can also be seen on representations of the *toga praetexta* in wall paintings from Pompeii¹⁰. Furthermore, the notion of a painted border may be supported by the coherent paint layer preserved on the back, which seems to form a line following the plastic shape of the drapery. The hue of the painted border is copied from the colour properties of the microscopic images of the cross-section taken from the layer on the back.

⁹ See the experimental reconstructions of how the *toga praetexta* may have been draped in GOETTE 1989, Farbtaf. 5.

¹⁰ In the House of Vettii a genius is depicted in the wall-painting in the *lararium*. He is wearing a *toga praetexta*, and the border is visible on the *umbo* and the *sinus*-curve (GOETTE 1989, Farbtaf. 1).



Fig. 10 - Two reconstructions of the preserved paint traces documented on the statue of Fundilius (fig. 1). (a) Variant A; (b) Variant B (photo by Lars Hummelshøj).

In Variant B the hair is coloured as well as the toga. Although no coherent layers are preserved in the hair, the dominating presence of ochre pigments in brown and red hues suggests that the hair was once intended to be of a similar nuance. In comparison, sculpted hair painted in brown hues is documented on other male portraits dating from the first century CE: the portrait of Caligula in the Ny Carlsberg Glyptotek¹¹, which has well-preserved and well-documented paint traces in the hair, on the portraits of Lucius Annius Rufus, Quintus Hostius Capito and the man wearing a wreath, who also originates in the Room of Fundilia¹², and on the portrait of Augustus from Prima Porta (which may be supported by Suetonius, who notes that the colour of the hair of Augustus was *subflauus*)¹³.

Discussion: Pigments and dyes

Although the reconstruction of the toga worn by the statue of Fundilius remains a matter for debate, the colour properties of the preserved paint layer documented on the marble surface may hold information as to how the painted polychromy of the sculpted garment was once meant to be visually perceived. This section will discuss how the visual effects of the hue, saturation and brightness of the painted layers may have been aimed at imitating certain effects associated with specific dyes (and fibres) used for textile production during the early Roman Empire.

Dyes in the Late Republic and Early Roman Empire

Knowledge of the dyes used during the Late Republican and Early Imperial periods in Rome and Italy comes mainly from written sources¹⁴. During the

¹¹ Ny Carlsberg Glyptotek, IN 2687; ØSTERGAARD 2008.

¹² Ny Carlsberg Glyptotek, IN 1436, IN 1437 and IN 1438. SKOVMØLLER, SARGENT 2013, 25-30.

¹³ Musei Vaticani, inv. no. 2290. LIVERANI 2007, 212-217; 130; BRADLEY 2009a, 449.

¹⁴ See BRØNS, SKOVMØLLER 2017.

second century BCE importation of exotic dyes from the eastern parts of the Mediterranean to Rome and the rest of Italy was intensified¹⁵. Amongst the elite of Rome the everyday exploitation of such luxury items was regarded with suspicion, and specific dyes were deemed immoral in the attire of Roman men and women¹⁶. Nonetheless, use of particularly expensive dyes, such as Tyrian purple (obtained from the glands of certain species of molluscs), saffron (dyestuff made from dried crocus flowers) and kermes (made from the insect called *Kermococcus vermilio*), continued to increase. By the first century CE the visually impressive impact provided by these dyes had come to constitute a coveted status symbol¹⁷. Cheaper dyes, such as those from plants, were widely used to imitate the effects of the desirable ones, leading to the creation of ‘counterfeit’ dyes¹⁸. The colour properties provided by and associated with the different dyestuffs were important tools, when Roman social status was mediated by the garments worn. In such silent negotiations no Roman garment was as important as the toga. Through the toga-clad bodies the stratified society could be measured; a visualization of the Roman *cursus honorum*¹⁹.

Pigments and dyes

Despite the vast knowledge of how luxury dyes were exploited in Roman society, the actual visual impact of the dyes - the effects which they were appreciated and recognized for - remains relatively unexplored. The complexities and nuances related to the semiotic vocabularies, which particularly popular dyes, such as Tyrian purple, developed over time, therefore also remain poorly understood²⁰. In this respect, results of examinations of the paint traces on marble statuary may prove helpful.

Returning to the polychromy of the sculpted toga worn by the statue of Fundilius, the colour properties of the reddish/orange paint layers may inform us how the painted finish was meant to be perceived by the ancient viewers. Combined with the polished, luminous and fine-grained Afyon marble, the thinly applied layer of finely ground ochre pigments provided the sculpted garment (whether entirely or partially covered) with a bright, visual effect that may have scintillated when light hit the surface in various ways. Such effects could have paralleled the textures of textiles dyed with saffron or Tyrian purple. Although the hue of the reddish/orange paint layer may not seem to correlate with the hues normally associated with Tyrian purple, the sheen of the finish may have carried such associations instead²¹. Also, the bright effects of the painted marble may have been an attempt to imitate certain fibres used for toga-garments, such as wool, or something extravagant with material properties that would scintillate naturally, such as silk or sea-silk; or perhaps a mixture of these.

Conclusions and further considerations

The painted finish on the toga of Fundilius may be regarded as a creative interpretation of specific ideals associated with luxurious textiles; such as bright hues and luminous textures. However, the visual effects of the colour properties of the sculpted toga should most likely not be analysed as aiming for an exact or specific textile imitation. The “a-chromatic” baggage associated with certain colours may have been complex and highly nuanced, demanding an equal level of flexibility in the modern analysis²². Seeking to identify specific dyes may therefore be of limited use. What should be essential is a focus on how colours were applied and internalized within Roman society itself. While the modern scholar may be persuaded by his/her own idea of colour appreciation (emphasizing especially hue), the ancient viewer may have recognized other colour properties above hue, such

¹⁵ SEBESTA 2001, 67-68.

¹⁶ BRADLEY 2009b, 197-201.

¹⁷ For a lengthy account of the dyes used during the Roman Empire see BRØNS, SKOVMØLLER 2017.

¹⁸ SEBESTA 2001; CALEY, JENSEN 2008.

¹⁹ LIVERANI 2014, 21.

²⁰ On symbolic value and rhetorical use of Tyrian purple see REINHOLD 1976; BRADLEY 2009b, 189-211.

²¹ On the discussion of whether or not the term *purpureus* should be translated as “shining” see BRADLEY 2009b, 49-50.

²² BRADLEY 2009b, 227.

as sheen and brightness. If so, it is essential to the modern analysis that the documented, preserved pigments are analysed together with examinations of the manner of textured manipulations of the marble underneath.

Finally, it is important to stress that the pigments observed on the marble surface are not the actual dyes turned into pigment-form. Imitation therefore had its limits. While colour on the textiles worn was able to display coveted visual effects, the marble sculptures served as white canvasses upon which the same ideals could be matched -perhaps even surpassed.

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