



Revisiting the wall paintings of St Demetrios church in Klimatia village (Epirus, NW Greece)

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Introduction

During 16th century many churches in Epirus (NW Greece, Fig. 1-left) were embellished with splendid wall paintings. This very artistic creation shows several idiomorphic pictorial characteristics that allow for its differentiation from other contemporary Greek painting trends; therefore it has been designated as the “Epirote/NW Greece School” of painting [1]. Among several artists who worked in this framework, the brothers Georgios and Frangos Kontaris stand out due to their high quality work. Two churches bear inscriptions that testify their employment, namely St Nikolaos in Krapsi village (painted in 1563) and the major church of the Varlaam monastery in Meteora (1568) [2], while in 1568 Frangos painted alone the Transfiguration church in Klimatia village. However, several other wall paintings are ascribed to them on the basis of stylistic criteria, including the important wall paintings of St Demetrios church in Klimatia [3]. In the early 2000s several samples from the St Demetrios wall paintings were investigated by Facorellis et al [4], revealing thus the employment of a calcitic plaster, the pigments red ochre, cinnabar, lime and carbon black, egg yolk and gelatin (: binders), and the presence of certain degradation products (gypsum and nitrates) [4]. Following the conservation of the paintings, a new set of samples was subjected to investigation, and the corpus of the analytical data is herein evaluated in the light of other recent analytical works [5, 6].

Project goals

The reported project aims at furthering the first identification of materials and techniques employed in the St Demetrios wall paintings [4] and at comparing them with the materials and techniques of other contemporary Epirote works [5, 6]. In addition, authors attempt a critical evaluation of the recent conservation works conducted on the wall paintings in consideration.



Figure 1 Left: Map of Greece; rectangle notes Epirus region. **Right:** St Demetrios church in Klimatia village.

Methodology

Several micro samples were collected from areas of pre-existing paint losses and micro-cracks (Fig. 2) and were subsequently thoroughly investigated through stereoscopy, optical (OM) and scanning electron microscopy (SEM-EDX), and FTIR. Analytical data were interpreted through comparison with data obtained by earlier pertinent studies [4-6].



Figure 2 St Demetrios church murals, details.

Results & discussion

The recent analyses added a considerable body of information to that obtained by the first analytical investigation [4]. In detail, probing revealed that the surface plaster (“intonaco”) contains minor quantities of flax and other plant materials (possibly straw) (Fig. 3a). Moreover, it turned out that the palette used by the St Demetrios painter(s) is richer than previously thought: indeed, apart from the pigments red ochre, cinnabar, lime and carbon black (identified in [5]), authors spotted yellow ochre, green earth and smalt (Fig. 3b). It is also worth noting that the recent analyses revealed employment of at least two different (in terms of composition and hue) red ochres, a substance that seems to correspond to St Giovanni white pigment (artificial CaCO_3), as well as that the carbon black is of plant origin (Fig. 3c). Note that this palette is identical to those identified in works that are related to (or signed by) the Kontaris brothers [5, 6], while an idiomorphic technique for rendering the dark-blue backgrounds was also identified. The latter corresponds to the application of a charcoal plus smalt mixture directly onto the wet plaster (Fig. 3d) and is regarded as a Kontaris invention [5], that deviates substantially from the practices employed in other contemporary wall painted monuments [8, 9]. Note also that the application of pigments on wet plaster has been attested in various other (non-background) samples (Fig. 3e) revealing thus that at least part of the painting was conducted in the fresco technique. On the other hand, the in depth SEM-EDX investigation of the micro-samples revealed presence of surface accumulation remnants, that were presumably not removed during the recent conservation intervention (Fig. 4). Moreover, grains of modern pigments (e.g. mars black, Fig. 4) were spotted on areas of original painting indicating thus extensive retouching interventions.

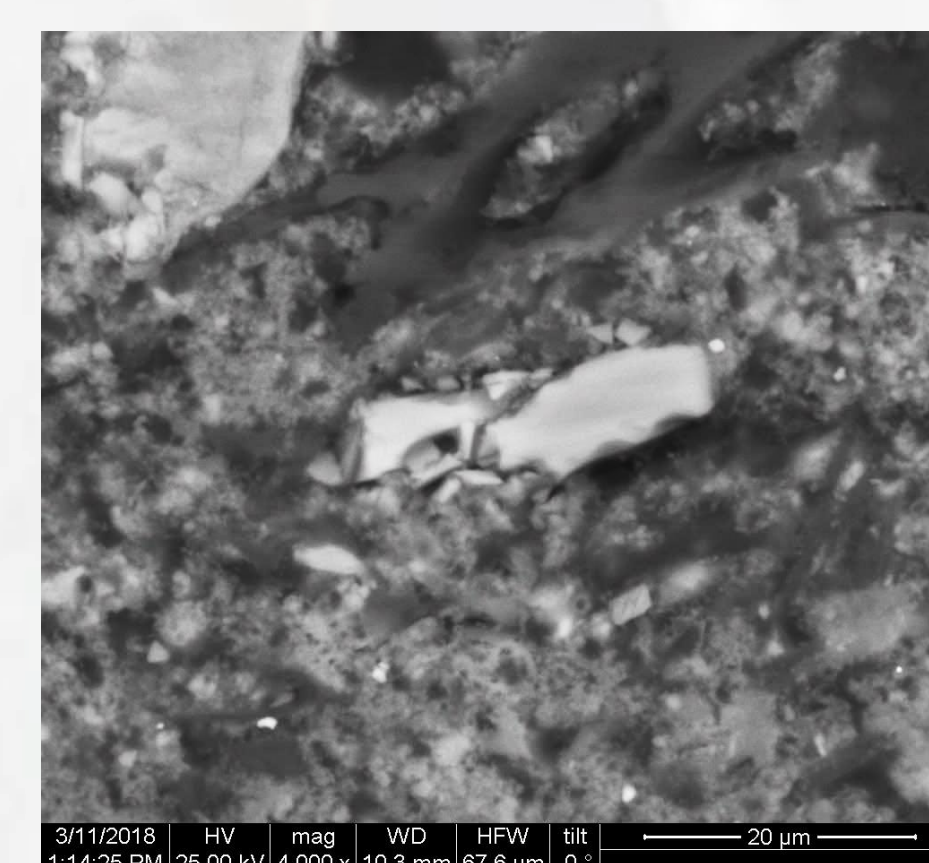
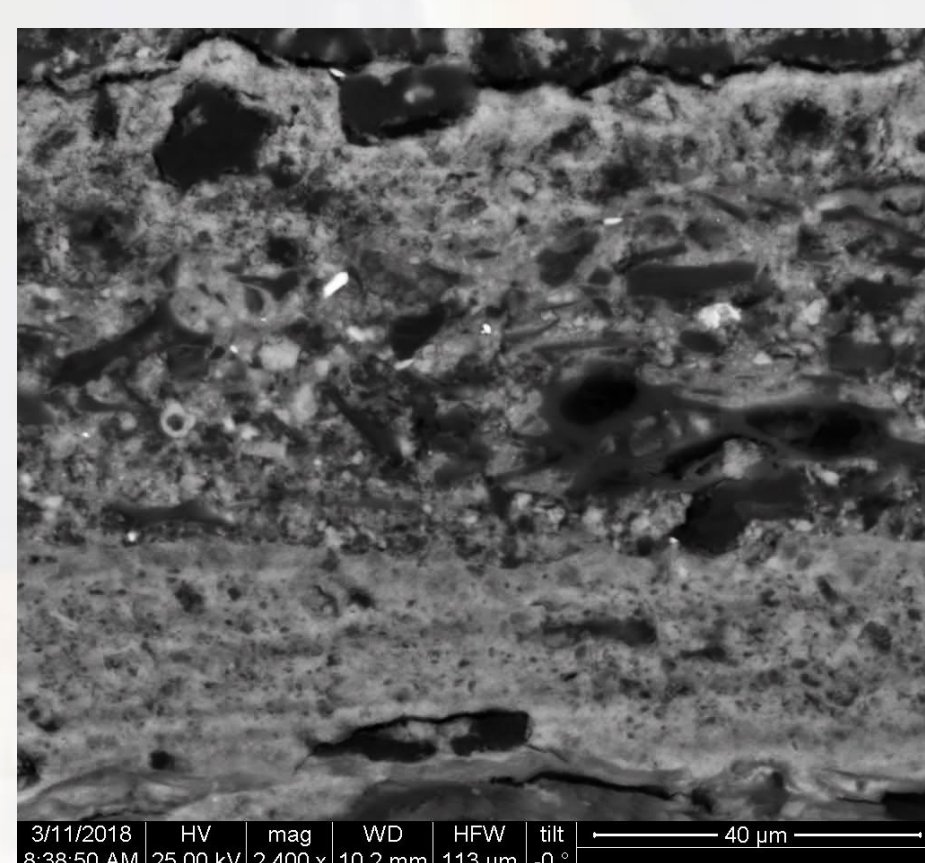
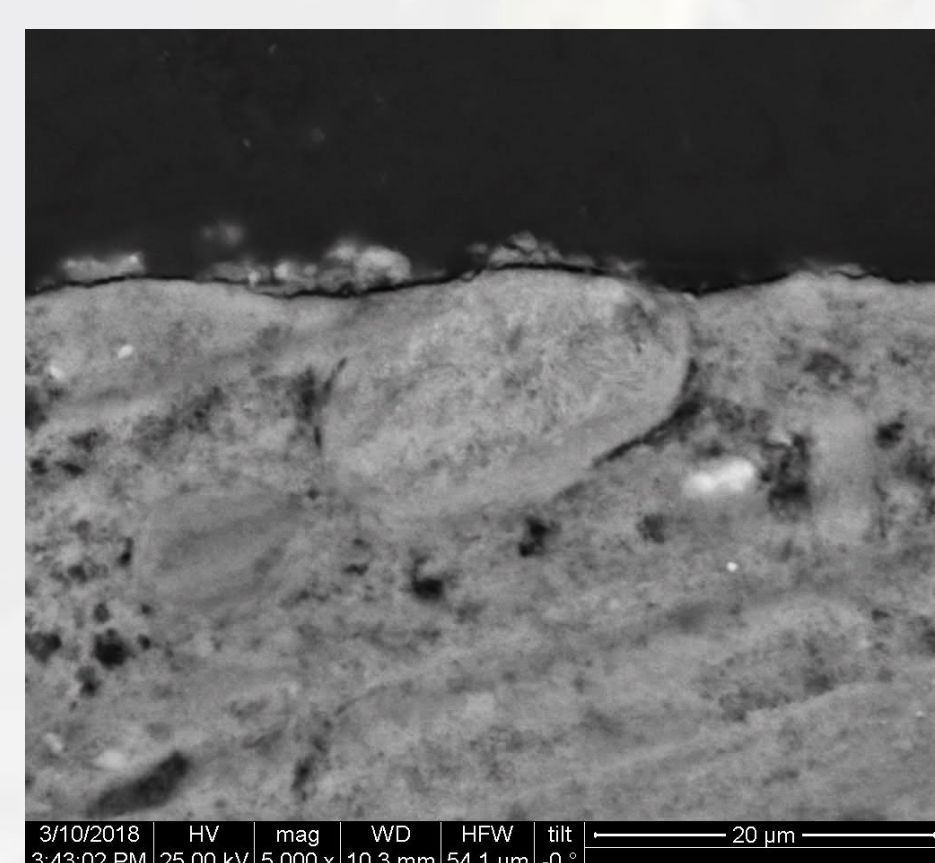
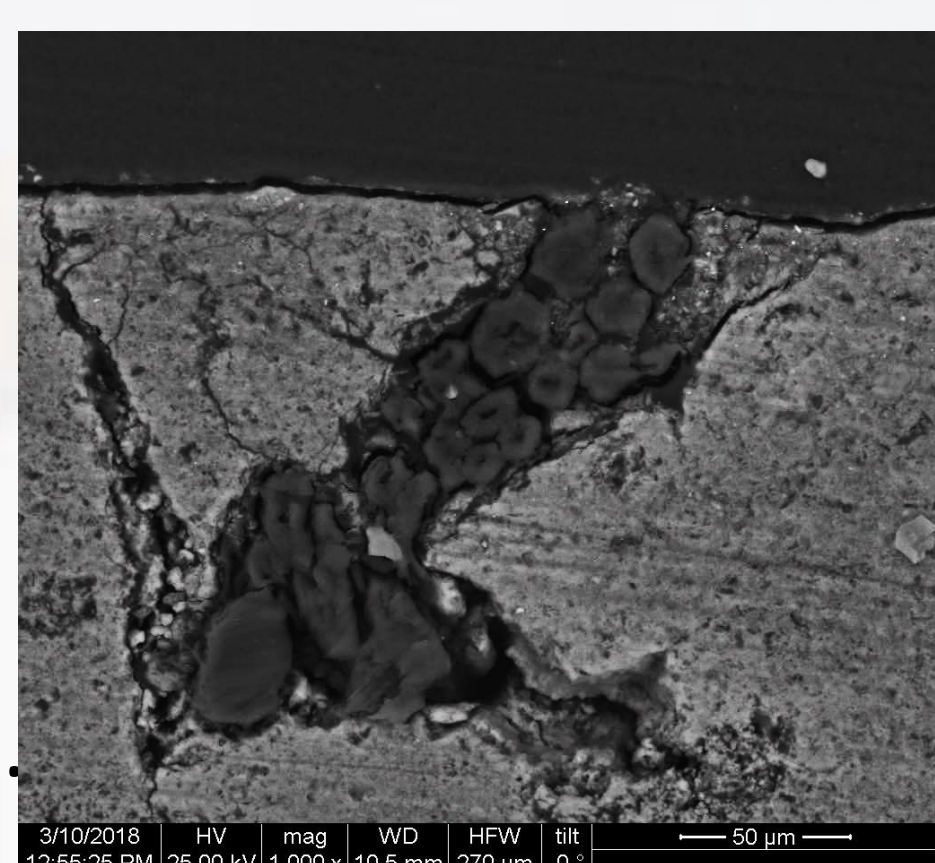


Figure 3 From left to right: (a) cross-section of flax fibers, surface plaster (SEM, 1000×) (b) Green earth grain (center) surrounded by a calcareous matrix (SEM, 5000×). (c) Charcoal grains of plant origin (black grains, SEM, 2400×). (d) Smalt (bright grain, center) next to charcoal grains (black) (SEM, 4000×). (e) Extensive diffusion of yellow ochre in surface plaster (OM, 200×).

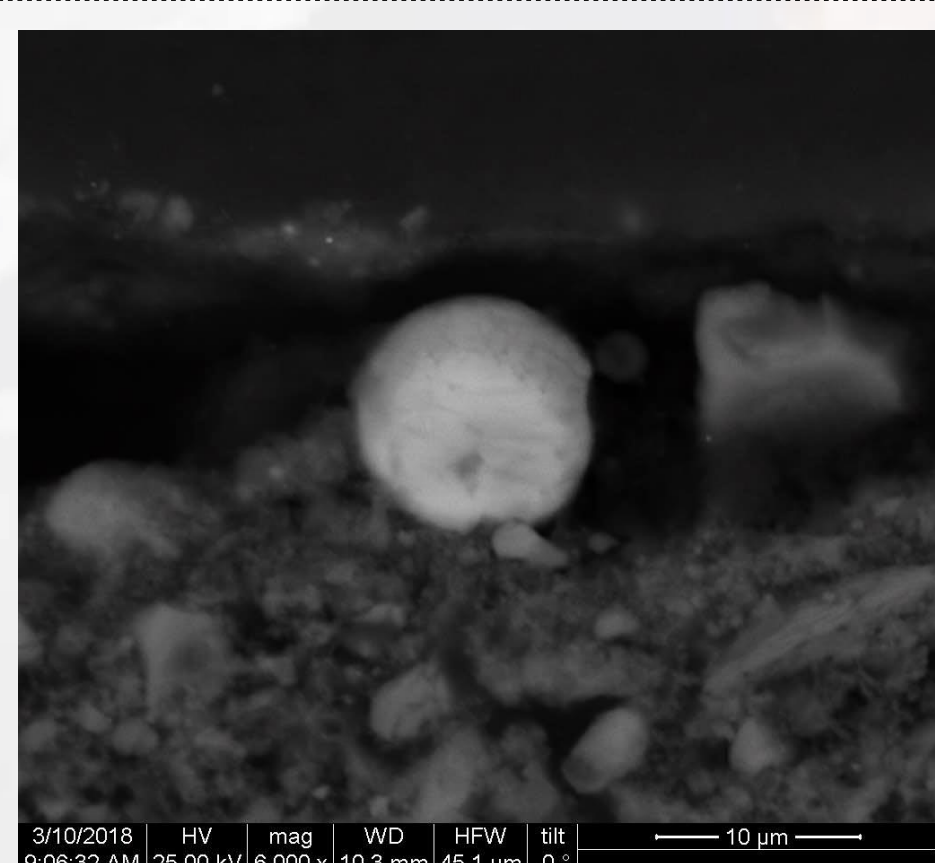


Figure 4 Mars black (bright grain) on top of original painting (SEM, 6000×).

Conclusions

The recent analytical investigation of several samples from the St Demetrios church wall paintings revealed the whole pigment palette employed by the unknown painter(s). On the basis of certain technical characteristics of these very paintings, it is apparent that they do not deviate substantially (as regards materials and techniques) from contemporary works that are either signed or attributed to the Kontaris brothers. Also, it is documented that at least the initial stages of painting were conducted in the fresco technique. In addition, SEM-EDX inspection revealed the presence of accumulation remnants and grains of modern pigment on top of original paint layers.

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