

POUSSIN: The Flight into Egypt

Private Collection: Mr M Tazzoli

Size: 73.7 x 96.7 cm (29 x 38½ ins)

The painting has been fairly recently relined with glue paste. There is some moating of impasto due to pressure in lining (this might have occurred before the present relining) and some local cupping of the painting film throughout but particularly lower centre, in the Virgin's right leg.

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The paint layer is fairly worn; in addition an area of loss top left and a series of losses along the top edge correspond to tack holes when the part of the painting was folded over a smaller stretcher to reduce it in size. These are clearly visible in the x-ray as is the band of filling and retouching along the bottom foldover edge when the painting was reduced. These losses have been filled and retouched and spot retouches to abraded areas have been carefully executed to a high technical standard. The lines of cusping visible in the x-ray suggest the painting at present is very close to its original dimensions, although the tacking edges have been removed at some time during the lining. The cusping pattern in the original twill weave canvas is accentuated in the x-ray by the widely spaced tacks when the canvas was originally stretched, particularly along the lower edge where the more tightly stretched canvas leading to the tack has prevented paint and ground locking in the canvas structure.

The x-ray image confirms that the painting is thinly painted with no visible alterations to the composition during painting. The area around Joseph's head, painted in to establish the head before the background was completed is visible as a pentiment. An additional area similarly outlining his right shoulder can only be seen on the x-ray. The sky continues under the wing of the angel, although subsequently the outline of the wing has been strengthened by reworking of the sky. A possible pentiment suggesting the outline of a building under the cloud, top left is not visible on the x-ray and must be regarded as inconclusive.

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The picture was examined under the stereo microscope using magnifications up to x40. At this magnification retouches could easily be recognised. Seven tiny paint samples were removed for analysis from original areas in the painting, adjoining areas of loss, during this examination. The samples were made into paint cross-sections by embedding them in a polyester resin and grinding-down the block of resin until the samples lay on the surface on the block, with the paint-layers perpendicular to the surface. The samples could then be examined under a research microscope, using magnifications up to x1000. This enabled a study of the build-up of the paint layers and of the pigments used. The pigments were analysed further using micro-chemical tests and electron-microprobe analysis. The latter method was used in the Department of Earth Sciences in the University and was employed directly on the embedded samples. By this method a narrow beam of electrons is focussed onto the sample whereby x-rays are generated. The wavelength and intensity of the x-rays are dependent on the elements present.

List of samples taken:

- 1 Highlight in Mary's blue drapery.
- 2 Dark shadow in Mary's blue drapery.
- 3 Green drapery.
- 4 Yellow leaf, right hand side.
- 5 'Blanched' green leaves, right hand side.
- 6 Blue sky.
- 7 'Changeant' yellow drapery of the angel.

The cross-sections showed that the painting is on a brown ground layer and not on a red one as was mistakenly assumed by the restorer who retouched the painting. The brown ground layer is quite translucent, being composed mainly of quartz and chalk. Brown ochre, a little lead white and carbon black are present as well. Traces of titanium were found, however, these do not necessarily have to be components of a modern pigment. Titanium is one of the more abundant elements present in the earth's crust and its presence in the painting must be due to its presence in the silicates and ochre used for the ground layer. The brown colour of the ground in part derives from the discoloured medium. Both the ground and the paint layers on top were applied thinly.

Mary's blue drapery was painted in ultramarine, mixed with lead white, with a dark underlayer of ultramarine and bone black in the dark shadows. Most of the pigment

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particles are very fine; the majority of the particles of ultramarine measuring only c. 3 μ m. A few coarser ones are present.

For the green drapery a mixture of pigments was used: fine ultramarine, Naples yellow and green earth. The identification of Naples yellow is based on the presence of antimony established by electron microprobe analysis, which identified the following elements in the mixture: Mg (trace), Al, Si, S, Pb, K, Sb, Fe. (high concentrations underlined). Antimony was found in the changeant yellow drapery of the angel as well, where the Naples yellow is mixed with lead white. A little fine ultramarine and an organic (?) red pigment were present as well, possibly deriving from the sky and the reddish part of the changeant drapery. The sky contains the same fine ultramarine, mixed with lead white. The sample from the yellow leaf contained a mixture of fine ultramarine, brown ochre, lead white and possibly orpiment (the sample was too small for positive identification). The blanched green contains green earth.

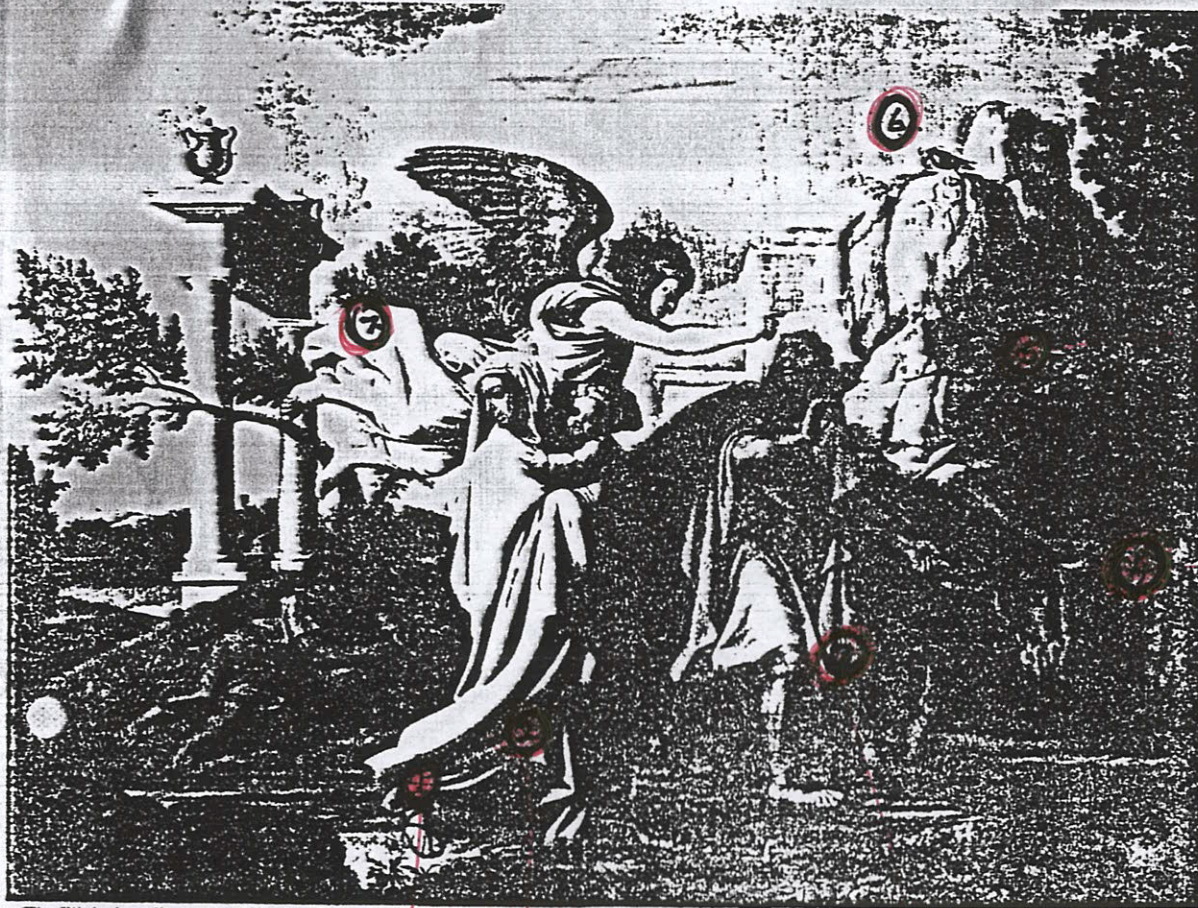
The composition of the ground and of the paint layers is consistent with other results of analysis of paintings by artists of the period, especially French painters working in Rome (Claude, Dughet, Poussin). Characteristic is the composition of the ground and the complicated mixtures of pigments such as used in green areas. Also the use of very finely ground pigments seem, in our experience, to be characteristic; Claude is an example of this.

The discovery of Naples yellow is unusual. However, Naples yellow (lead antimoniate) and/or the double oxide of antimony and tin have been identified in a few paintings by Claude and by Poussin (the works by Claude were examined at the Institute and elsewhere; Poussin in the National Gallery).

Therefore, we have found no evidence to suggest that the painting is not of the seventeenth century - being consistent with the materials and techniques of that period.

Karin Groen

2 July 1987



The Flight into Egypt, by Nicolas Poussin, 73.5 by 97 cm. (Private collection, Switzerland).



The Flight into Egypt, by Pietro del Po after Nicolas Poussin. Engraving.

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