



Guadalupe Miracle



PREVIOUSLY KNOWN SUPERNATURAL FEATURES

- The agave material has survived 400 years longer without notable decomposition than every other agave from the period.
- The original color/pigment on the tilma has experienced no notable decomposition or fading (paint that was subsequently added is decomposed, fragmenting, and fading).
- There is no sizing, canvas preparation, undersketching, or brushstrokes in the production of the original image of the virgin.
- The original color/pigment is no known natural pigment and there were no synthetic pigments in 1531.
- The Sanson-Purkinje triple reflection is perfectly present on the corneas of the Virgin.
- The reflection indicates proper curvature of the virgin's corneas.
- The rough parts of the agave cactus are used to integrate depth into the eyes and the lips of the virgin (which cannot be reproduced by an artist even today).

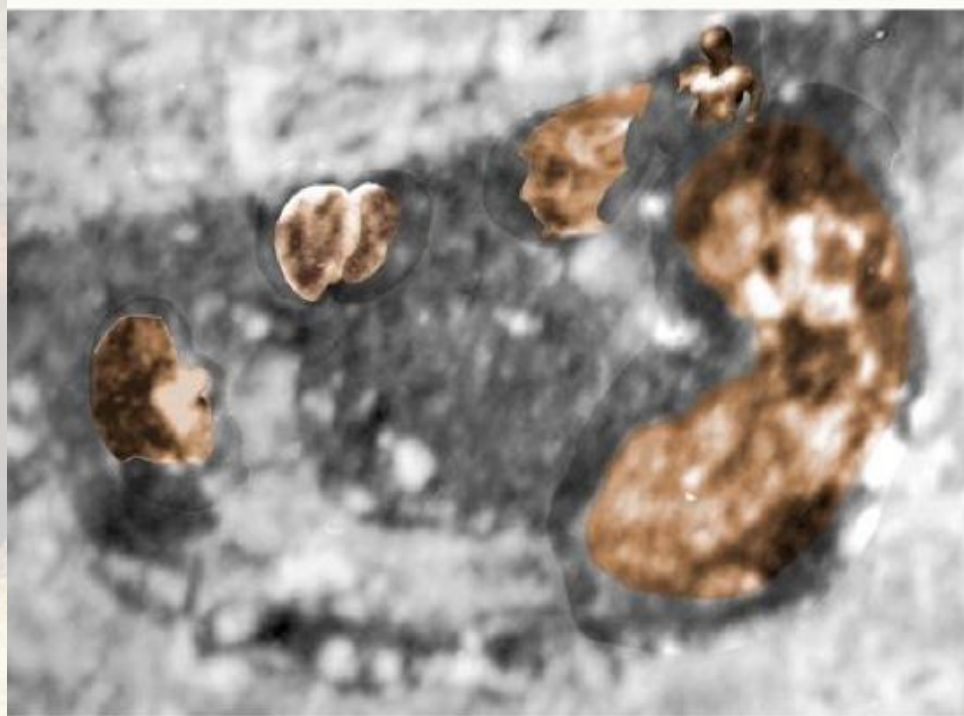
UPDATE #1: DEPTH IN EYES

- As noted previously, the corneas of the Virgin have the proper triple reflection and proper corneal curvature of a normal human eye. The man thought to be Juan Diego has two right side up reflections and one upside down reflection in the proper places.
- More amazingly, according to Dr. Rafael Lavoignet's ophthalmoscopic analysis, the Virgin's eyes have depth of field – though they are painted on an opaque flat surface. The ophthalmoscope shows appropriate depth in the eyes corresponding to normal human (3-D) eyes.
- How can this occur on a cornea/eye which is painted on a flat opaque surface? We have no examples of this anywhere in human painting and therefore it seems to be supernatural in origin.

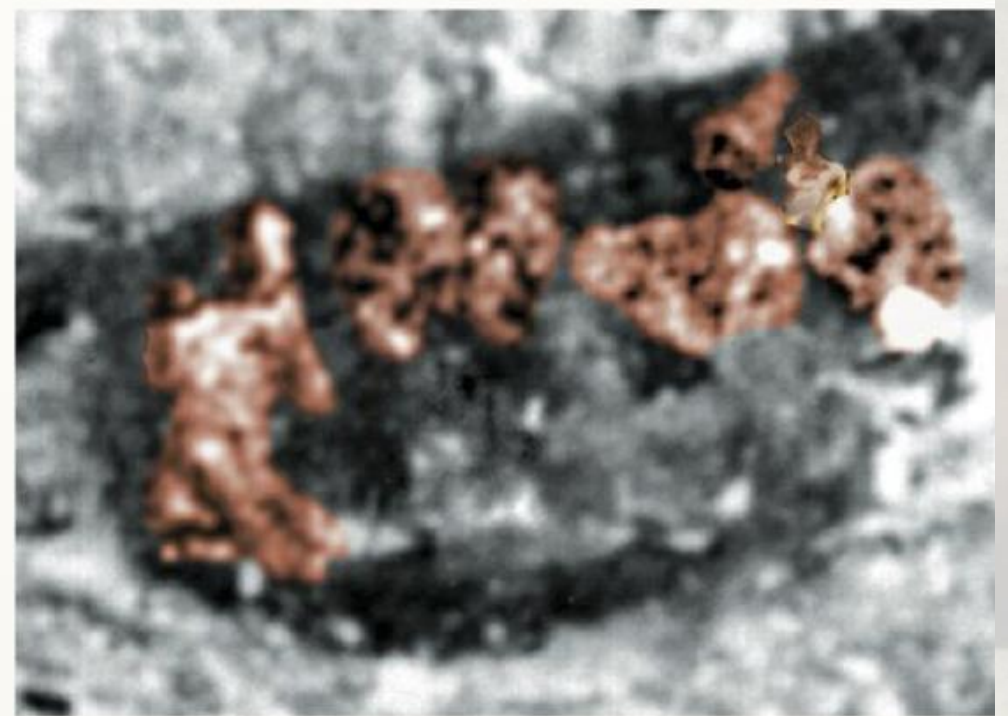
UPDATE #2: THE IMAGES ON THE CORNEA

- In 1956, the image of a man stroking a long beard (previously thought to be Juan Diego) was identified in the corneal reflection of the left and right eye of the Madonna. As noted previously, this image had the Sanson-Purkinje triple reflection.
- In 1975, Dr. Jose Aste Tonsmann (Ph.D. Cornell University, expert in image processing) amplified the image by 2,500 times. He divided the corneas into very small pixelated areas and measured the precise light response in each pixelated area. He then took these light responses and magnified them 2,500 times. Using computer techniques to eliminate “noise” attributable to patterns in the agave fiber etc. He produced an image similar to the one on the following slide.
- Notice, that on the main part of the cornea over the iris, there are six images – from left to right: a native (sitting), Bishop Zumarraga and his translator, Juan Diego, servant girl, and the Spaniard with a beard (formerly thought to be Juan Diego). Bishop Zumarraga and Juan Diego resemble their portraits.

OUR LADY OF GUADALUPE'S CORNEAS



**Right cornea with individual images
(highlighted)**



**Left cornea with individual images
(highlighted)**

UPDATE #2: CONTINUED

- In 2012, Aste Tonsmann completed a very complex analysis. He developed a set of algorithms to transport the images on the right cornea to correspond to the images on the left cornea, recognizing the elevation of the Virgin who is watching, the different angles of the corneas relative to the scene and a slight tilt in the Virgin's head (as seen in the image). He then superimposed the two images according to these algorithms and obtained an almost perfect superimposition. This cannot be a coincidence. See the moving image on the next slide.



CONCLUSION

- There are six previously known scientifically inexplicable features of the tilma (longevity of tilma and image, uniqueness of pigment, absence of sizing under sketches and brushstrokes, use of rough parts of canvas to integrate depth in lips and eyes, and Sanson-Purkinje triple reflection on both corneas). We now know there are two even more extraordinary scientifically inexplicable aspects of the tilma:
 1. Real depth of field in the corneas and the triple reflections even though the image is “painted” on flat opaque surface—defies natural laws.
 2. The appearance of six images on the corneas characteristic of the scene when Juan Diego revealed the tilma.