

MRO HiRISE

On August 12, 2005 the Mars Reconnaissance Orbiter (MRO) launched successfully from Cape Canaveral Air Force Station on its seven-month voyage to the red planet. The orbiter carries a new High Resolution Imaging Science Experiment camera, known as HiRISE. This new camera has the capability of photographing the surface of Mars in unprecedented detail, allowing researchers and the public to view objects between 6 meters and 25 cm per pixel.¹ Although the HiRISE camera commenced its mapping orbit around Mars on September 29, 2006, the scientific community would not receive its first high-resolution portrait of the Cydonia Face until the following year.

On April 11, 2007 the University of Arizona Team posted the first MRO HiRISE image of the Cydonia Face on their public web site. The MRO HiRISE image PSP_003234_2210 was aptly titled *Popular Landform in Cydonia Region*. The image was taken in the early afternoon, almost directly overhead, with an amazing resolution of 25 cm per pixel.² Unlike previously released image files like those of the Mars Global Surveyor, which offer Tif, Gif, Jpeg and raw versions of each image,

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*Portions of this report were published in *The Martian Codex, More Reflections from Mars*, (Berkeley: North Atlantic Books, 2009), by George J. Haas and William R. Saunders.

the full HiRISE strip is so large, weighing in at 300 MB, that the public is instructed to upload a special imaging program called JPEG2000 just to view the raw data.³

Contrary to NASA's commitment of easy access to public images, there is nothing user friendly about this new high-tech format. The Non Mapped image provided on the University of Arizona's web site is just a small crop of the larger strip showing only a sparsely lit and inverted portrait of the Cydonia Face (Figure 1). Due to the harsh darkness of the posted release I attempted to revive the image by increasing the brightness and reducing the contrast to reveal additional detail, most notably on the eastern side.

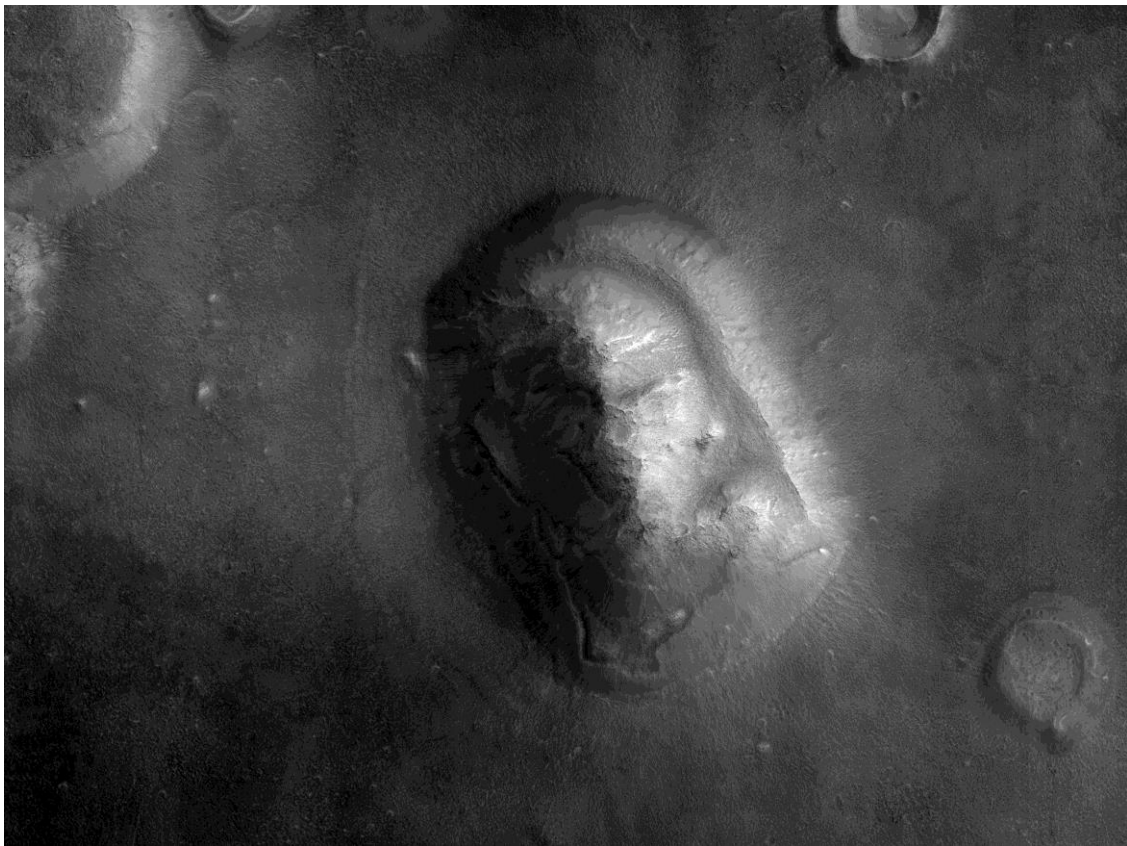


Figure 1 The Cydonia Face. Non Mapped Version (Inverted). MRO HiRISE PSP_003234_2210 (2007)

NORTH IS DOWN

Sometime during the summer break at the University of Arizona, one of the its members quietly replaced the original inverted image of the Cydonia Face with a new "raw" version that was not only cropped at the edges, removing the chin and top of the head, but it was also inverted (Figure 2). Although the inverted orientation of the new image is not acknowledged in the provided caption for the image, the reader must delve deep into the paragraph before realizing that the image was indeed presented upside down with north pointing down.

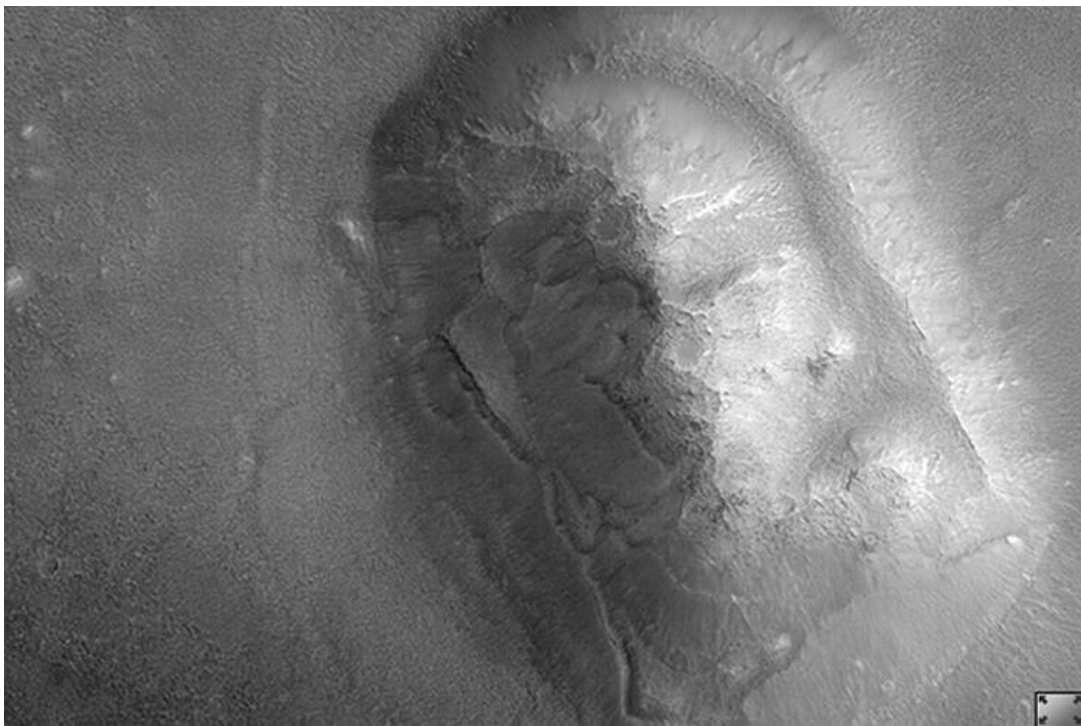


Figure 2 The Cydonia Face. Cropped and inverted version. Crop of MRO HiRISE PSP_003234_2210 (2007)

After an extensive e-mail inquiry to the University of Arizona Team they responded that their reasons given for why the current Non Mapped version was posted upside down was due to the fact that the picture was not fully processed. They maintained that the image was re-released in its raw format, which has an inverted orientation, which was caused by a combination of the push-broom imager and the south to north polar orbit of the HiRISE camera.⁴

In short this means that all raw images are by definition “unprocessed” and retain their original inverted orientation. This explanation was interesting, considering that every other HiRISE image posted on the Arizona University web site are processed and presented with north up. For some reason it appears that the researchers at Arizona University thought it was better to view the highest resolution picture of the Cydonia Face ever obtained in its “raw” format with the camera’s reversed orientation – with north down. Currently the Map Projected version of the MRO HiRISE image is presented correctly (Figure 3), while the Non Mapped version has been restored to its original full frame inverted presentation (Figure 1).



Figure 3 The Cydonia Face. Map Projected version. MRO HiRISE PSP_003234_2210 (2007)

I see no reason for the technicians at the University of Arizona to present an inverted and incomplete version of the Cydonia Face on their web site, other than to mislead the public and obfuscate its bifurcated facial features. The 2007 MRO HiRISE image of the Cydonia Face is presented here in its proper orientation with north at the top (Figure 4). The image is truly an amazing portrait, when viewed in its proper orientation. I have rotated the image 19.5° to the east to accommodate its central axis (Figure 5).

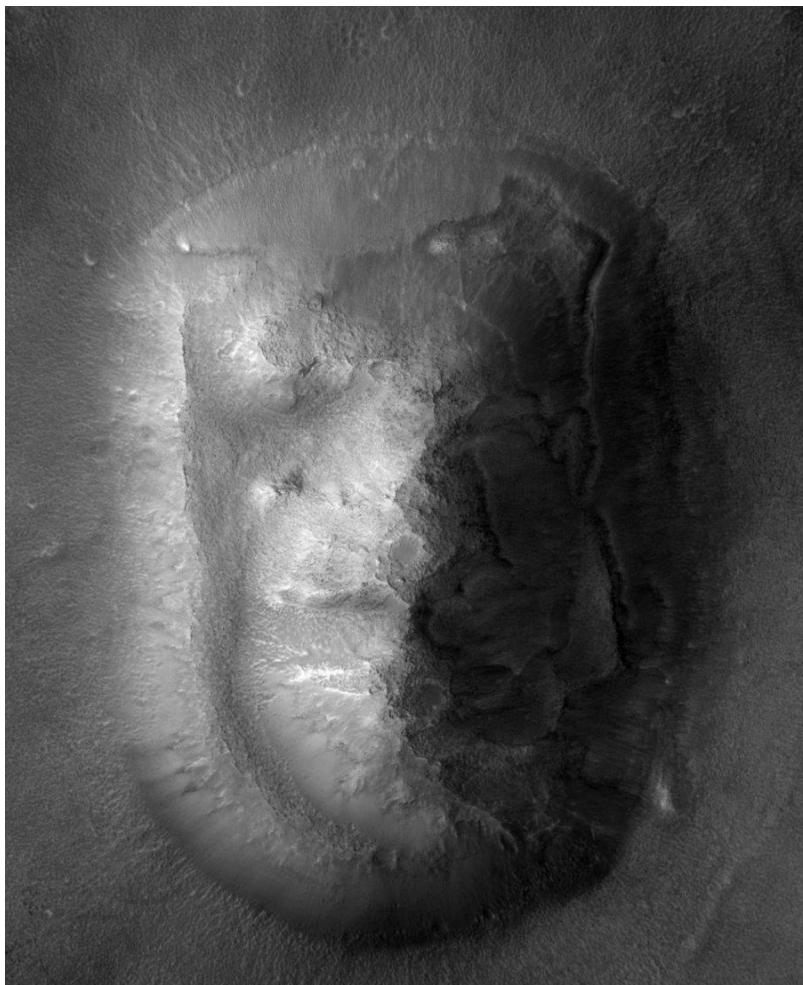


Figure 4 The Cydonia Face. Detail of MRO HiRISE image PSP_003234_2210 (2007).

Soon after its discovery during the early Viking mission a science journalist Richard C. Hoagland, declared the Cydonia Face to be the embodiment of a "Martian

Sphinx”⁵ representing humanoid and feline visage. As a result researchers have debated as to whether or not the face was a symmetrical humanoid face or portrayed a bifurcated, asymmetrical, humanoid and feline edifice. For those supporting a two-faced model the question was; where is its central demarcation line located?

Over the last 30 some years of research it has been my experience that many of these bifurcated formations that I have examined on Mars, such as the Cydonia Face, provide a set of demarcation “markers” that guide the viewer as to where the two faces are separated. These demarcation markers are normally positioned along the edge of the image or near its outer perimeters of the facial formation. They are usually small circular mounds or bar-shaped lines placed on the surface of its outer perimeters or within the supportive platform of the formation.

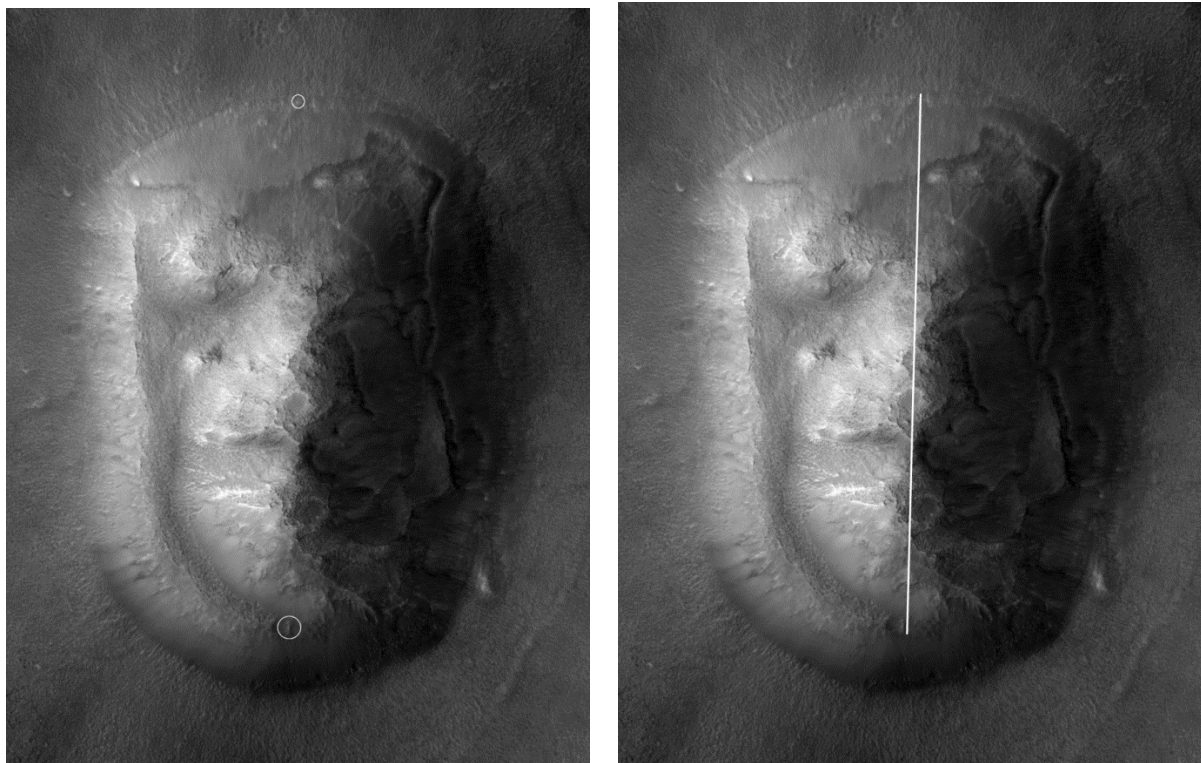


Figure 5 The Cydonia Face Demarcation. Detail of MRO HiRISE image PSP_003234_2210 (2007). Left: Demarcation markers at top and bottom of the face. Right: Demarcation Line.

When examining the Cydonia Face, its demarcation line is directly down the center of the entire face. The first demarcation marker is a small circular mound located at the top of the face within the linear check mark feature, which is half of the Tri-leaf emblem, located at the center of the forehead. The second marker is a horizontal bar-like feature located at the bottom of the face, within the chin area (Figure 5).

Having this 2007 MRO HiRISE image of the Cydonia Face I am highly confident that it will confirm all of the facial features and pictographic motifs that can be observed in previous MGS images within the NASA data base especially the 2001 MOC image E03-00824,⁶ the 2003 MOC image R07-00989⁷ and the 2006 MOC image S1501533.⁸

THE HUMANOID SIDE

Beginning with the Humanoid side of the Cydonia Face, notice the serpentine “check mark” feature at the center of the forehead. When duplicated,⁹ it transforms into a tri-leaf emblem (Figure 6). This is the diagnostic tri-leaf emblem that was first observed in the 1998 MOC image SP1-22003¹⁰ and directed my original symbolic investigation into Mesoamerican iconography. I discovered that this tri-leaf insignia depicts a sprouting maize seed, which was utilized as a symbol of kingship among the Olmec and Maya¹¹ (See: TCIFJ Vol. 4 No. 2, 2001).

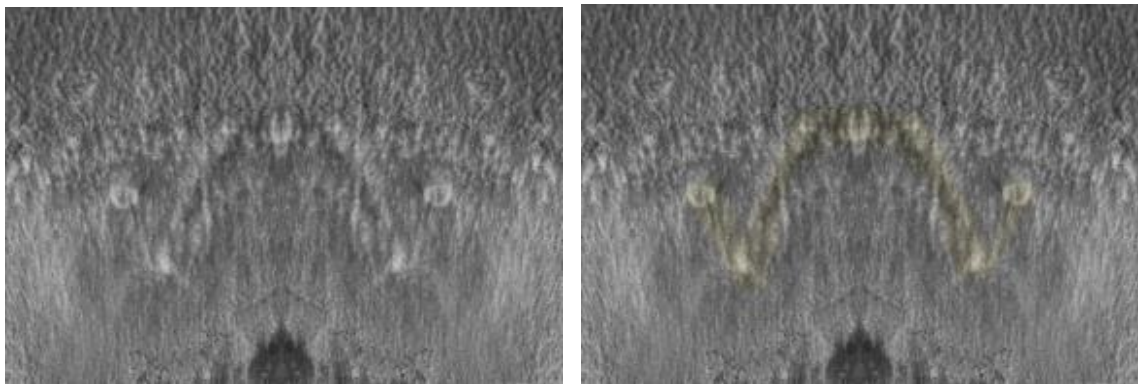


Figure 6 Tri-Leaf Crown Emblem (duplicated). Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash

Looking at the overall rectangular shape of the platform on which the Cydonia Face sits, notice it creates a flanged headdress that frames the western side (Figure 5). Many early researchers attributed this type of headdress to the Egyptians. Despite this common comparison, the Maya, Olmec and Aztec also produced similar, flanged headdress (See: TCIFJ Vol. 4 No. 2, 2001).

Focusing in on the highly detailed eye feature on the Humanoid side, it has a distinct almond shape (Figure 7). The almond-shape of the eye was first observed in the 2000 MOC image M1600184,¹² which only captured a narrow slice of the western side of the Cydonia Face that included the eye.¹³

The pronounced orbit of the eyeball has structural form that adheres to the proper proportions of a human eye. The eye appears as a sphere set within the socket of the skull and it protrudes slightly from the plane of the face. A pupil is suggested by the slight bulge of the land mass at the center of the eye form. Notice the projecting edge of the "brow," the almond-shaped eye socket and lid creases that meet at the medial canthus forming a ridge. The eye form is supported by upper and lower lids that are created by ridge lines. The linear form of the upper lid protrudes further than the lower lid. This image further documents that the western eye has a real anatomical structure as opposed to a chance projection.

As previously discussed in Chapter 3, the anatomy of the eye feature on the Humanoid side of the Cydonia Face is quite comparable to a human eye. Its sculpted appearance is supported by the basic guidelines provided by the sculptor Jay Arrera, on how to sculpt a human eye. He demonstrates that it is the three-dimensional effects of "light and shadow" that creates a "believable" eye.¹⁴

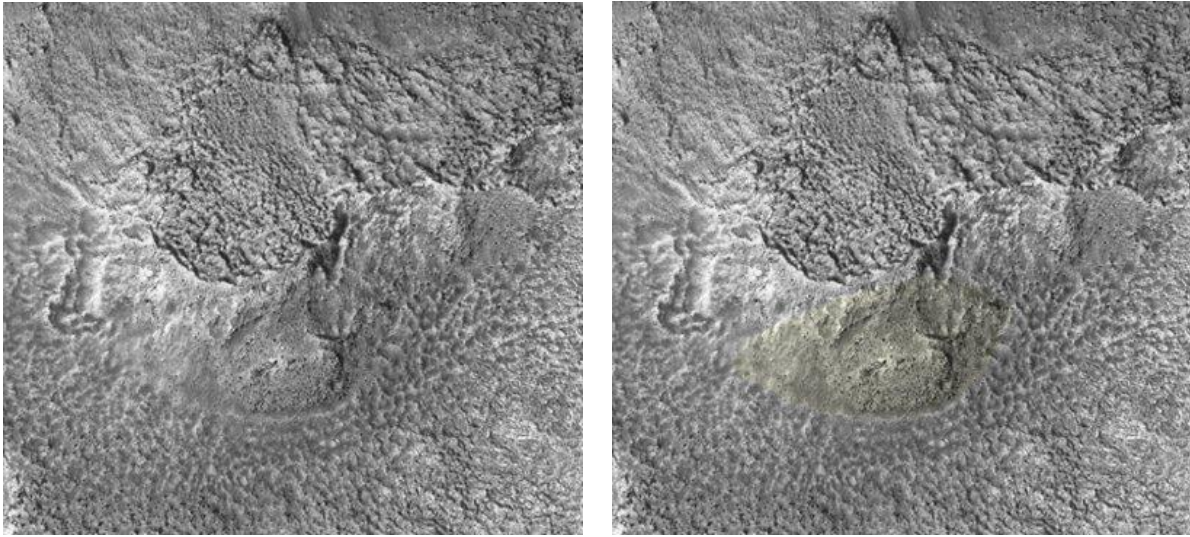


Figure 7 Humanoid Eye (Almond-shaped Eye). Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash.

Zooming in on this high resolution image of the eye feature, on the Humanoid side of the Cydonia Face, it clarifies the decorative eyebrow feature, which takes on the form of an undulating creature with the physical attributes of a horned deer with the body of a serpent that resembles a Deer Serpent (Figure 8). In my study of the 2001 image of the Cydonia Face I have shown examples of the New World cultures envisioning a creature that conflated the physical attributes of a male, horned deer

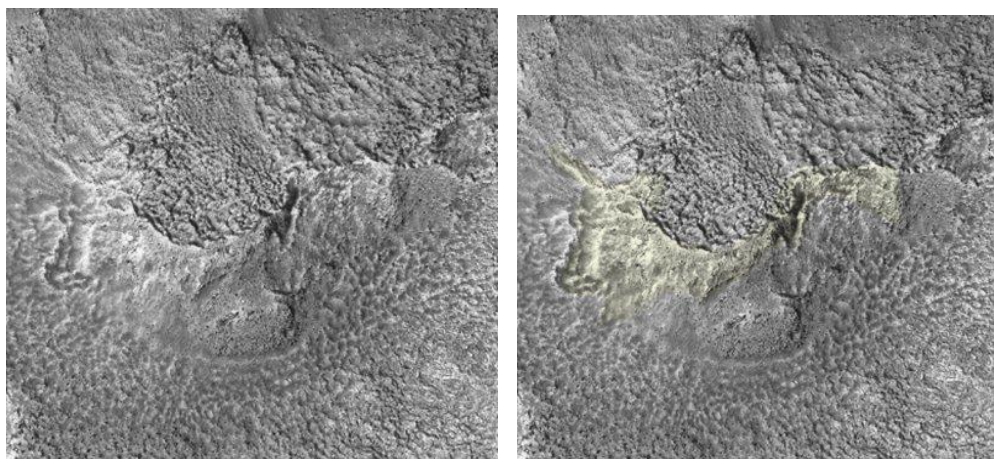


Figure 8 Deer Serpent Eyebrow. Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash.

with the body of a serpent that transforms into an eye and eye brow (See: TCIFJ Vol. 4 No. 2, 2001).

Between the almond-shaped eyes of the Humanoid side is a small “cut in half” jaguar mask (Figure 9). When duplicated, it has a round head with pelt marks and horizontal, cupped ears that are darkened around the edge. It has two large eyes and a dark nose and jowls. The portrait of the jaguar head resembles a contemporary Mexican jaguar mask (See: TCIFJ Vol. 4 No. 2, 2001).

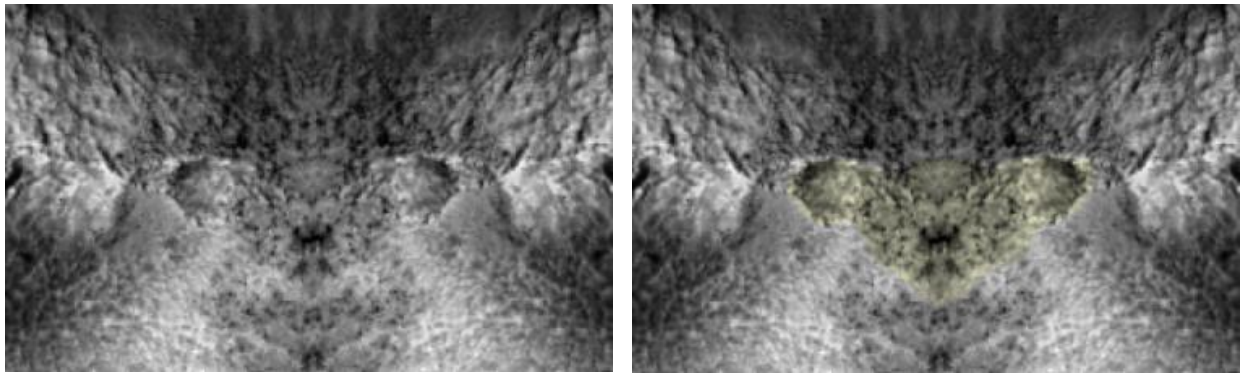


Figure 9 Jaguar mask (duplicated). Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash.

Ever since its discovery, going back to the early Viking images, researchers have questioned the absence of a definitive nose formation. Hoagland first thought that the nose was damaged sometime in the past possibly by meteor impact.¹⁵ The nose is actually obscured by a large nose ornament that hovers over the nose and extends down over the mouth (Figure 10).

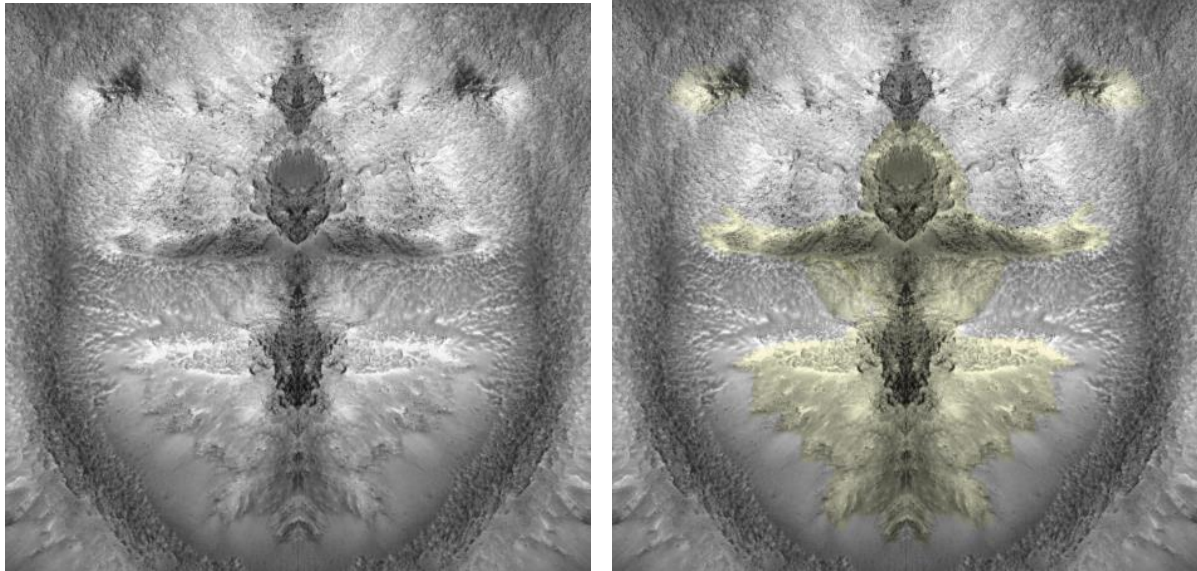


Figure 10 Nose and Cheek Ornament (duplicated). Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash.

The elaborate nose ornament on the Cydonia Face appears to be comprised of a figurative body with an insectoid, demon-like head. It has a short, upper torso with two outstretched, arms or wings that end with a hand with finger-like tips. The lower torso has a flaming, jagged shield-like form that covers the Humanoid's mouth and chin. The entire nose ornament may represent an open winged butterfly or moth (Figure 10).

I have offered two examples of Mesoamerican nose ornaments, one in the shape of an open winged butterfly and an example of a moth in my examination of the 2001 image of the Face on Mars (See: TCIFJ Vol. 4 No. 2, 2001). Both creatures are almost universally seen as references to rebirth and transformation. These nose ornaments were made from gold and sometimes were so large they covered the entire nose and portions of the mouth. Their overall designs highly resemble the Nose Ornament observed on the Humanoid side of the Cydonia Face. Could its moth-shape be a symbolic reference to a human- feline transformation?

Just above the elaborate Nose Ornament is a small mound that Hoagland referred to as the "teardrop" feature, which he thought was a remnant from a hypothetical meteor impact that destroyed the nose and as a result a small portion of it settled on the cheek, creating a teardrop feature¹⁶ (Figure 10).

Hoagland later suggested the "teardrop" feature was an intentional part of the facial design and it has a precise alignment with the "City Square," located in the western region of the Cydonia Complex.¹⁷ I agree its intentional and was designed as a cheek ornament, much like the circular facial features seen on the cheeks of Mesoamerican portraits of gods and lords (See: TCIFJ Vol. 4 No. 2, 2001).

THE FELINE SIDE

Moving now over to the eastern, Feline side of the Cydonia Face, notice the blunted, crowned headdress and its rectangular, squinting eye. It has a broad muzzle a mouth, small fang, flailing tongue and zigzag-shaped mane (Figure 11). Again all of these facial features observed on the Feline side in this 2007 MRO HiRISE image of the Cydonia Face maintain their sculpted, pictographic integrity and are shown to be permanent formations.

Starting at the top of the head of the feline side of the Cydonia, seen here in great detail a pair of knobby forms takes on the shape of two blunted, deer antlers (Figure 12). The Maya were great hunters and deer were a mainstay, therefore deer imagery has held a sacred place in their iconography and motifs signifying the primordial hunt.

To emphasize this relationship I have provided two examples of Mesoamerican masks in Chapter 6 that are adorned with a set of blunted deer antlers. The blunt antler symbolizes the deer's loss of virility and strength. It acts as a trophy head,

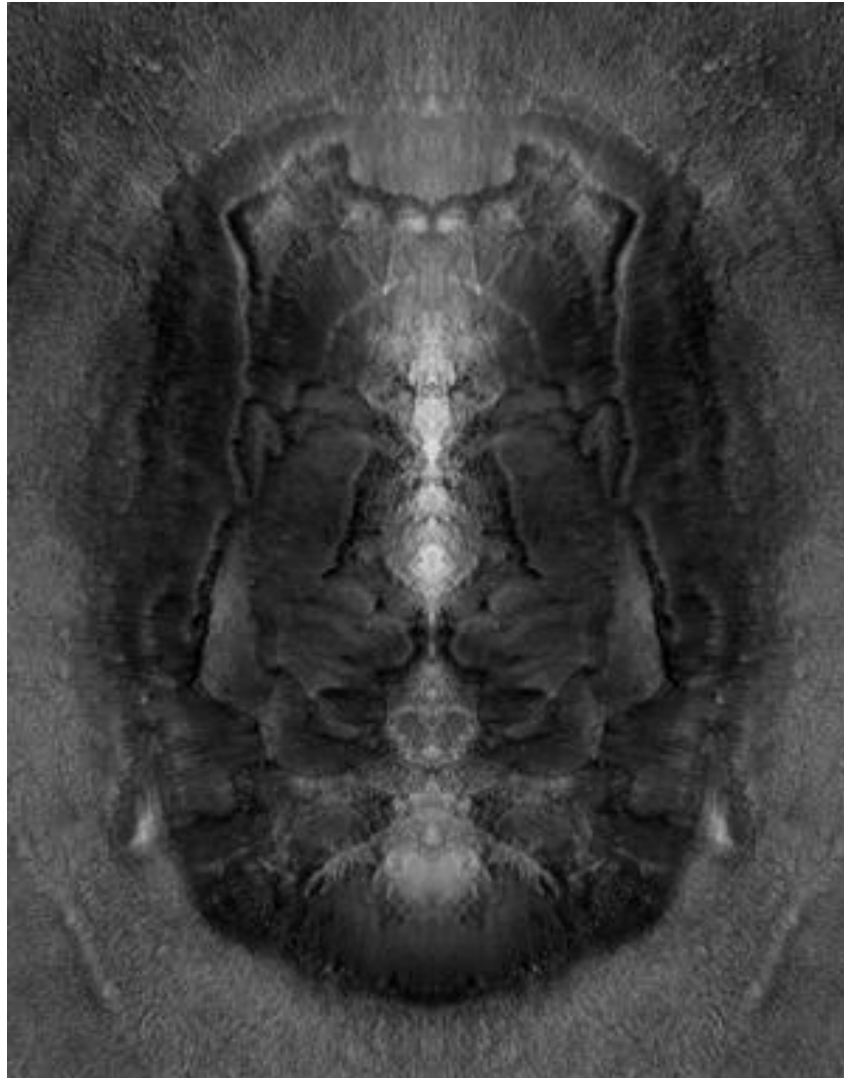


Figure 11 The Cydonia Face, Feline Side (duplicated). Detail MRO HiRISE image PSP_003234_2210 (2007).

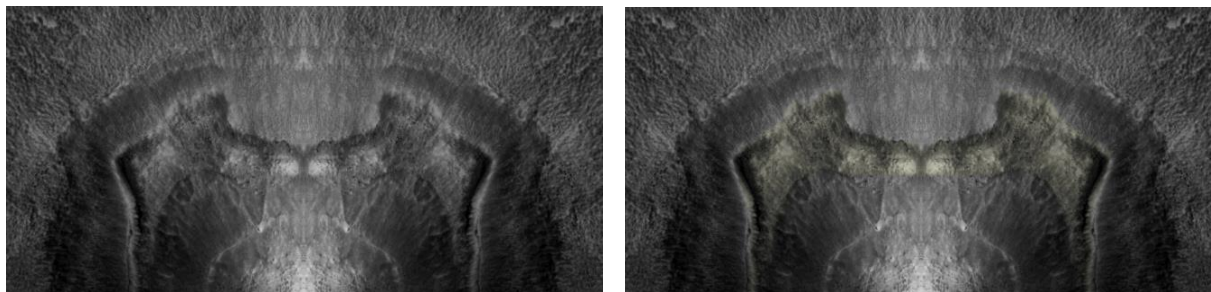


Figure 12 Blunted Deer Antler Headdress (duplicated). Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash.

displaying the hunter's dominance over its emasculated prey.¹⁸ A similar display of dominance may be encoded within the blunted horn headdress seen on the feline side of the Cydonia Face.

Focusing in on the center of the blunted deer antler headdress on the duplicated Feline side of the Cydonia Face, notice the indented, V-shaped cleft (Figure 12). This is a common motif often seen on many representations of Olmec Were Jaguars (See: TCIFJ Vol. 4 No. 2, 2001).

The Olmec Were Jaguar is connected to the Maya rain and maize god, and the V-shaped cleft is a reference to a split in the earth where the first corn sprout sprang.¹⁹ It is amazing to see that just as the Humanoid side has a tri-leaf emblem of a corn sprout on its forehead (Figure 6) the feline side has the original cleft from which it sprang.

I will now examine the squinting, rectangular-shaped eye form on the eastern, feline side of the Cydonia Face (Figure 13). This squinting eye form was examined in a 2001 study by an astronomer and former orbital imaging specialist for the US Naval Observatory, Dr. Tom Van Flandern. Supporting a symmetrical humanoid visage, he published a paper titled: *Preliminary analysis of 2001 April 8 Cydonia Face image*, in

his Meta Research Bulletin. He proposed that a hypothetical meteor impact event hit the mouth area and caused a "melt flow" to partially cover the mouth and eye, therefore explaining the asymmetrical appearance of the humanoid visage.²⁰

Taking a closer look, the narrow, rectangular eastern eye form its contours takes on the shape of a serpent head (Figure 13). Notice the profiled head of a serpent with a large snout and partially opened mouth with a flailing tongue. There is also a small eye form located on the upper western side of the head.

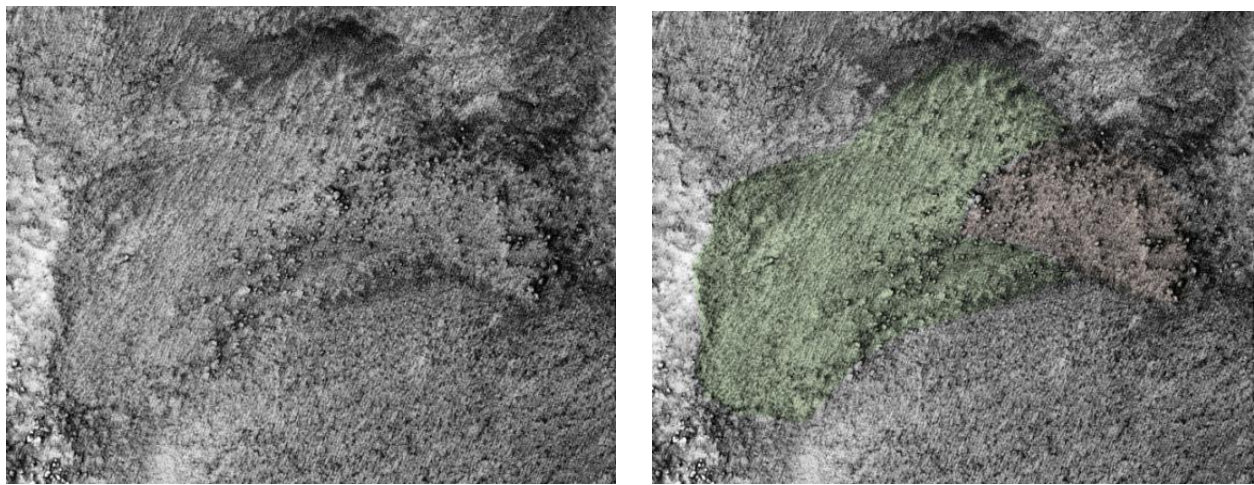


Figure 13 Feline Eye (Serpent Head with Flailing Tongue). Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash.

This idea of replacing an eye with a totally foreign object or symbol was a common motif utilized in the design of Mesoamerican portraits and head glyphs. Three examples were offered in (See: TCIFJ Vol. 4 No. 2, 2001).

Just below the muzzle of the Feline side of the Cydonia Face is the mouth feature, which has a small fang and a highly decorative flailing tongue (Figure 14). The tongue is fashioned as an elaborately constructed owl head wearing a crowned headdress. It has two large eye orbits surrounded by feathery contours and a sharp beak that creates a horned owl face. It also wears a decorative collar.

The depiction of a decorative flailing tongue was a common motif seen throughout Mesoamerican cultures. In my study of the 2001 image of the Face on Mars, I provided three examples of ornamental, flailing tongues as depicted in Mesoamerican artwork (See: TCIFJ Vol. 4 No. 2, 2001).

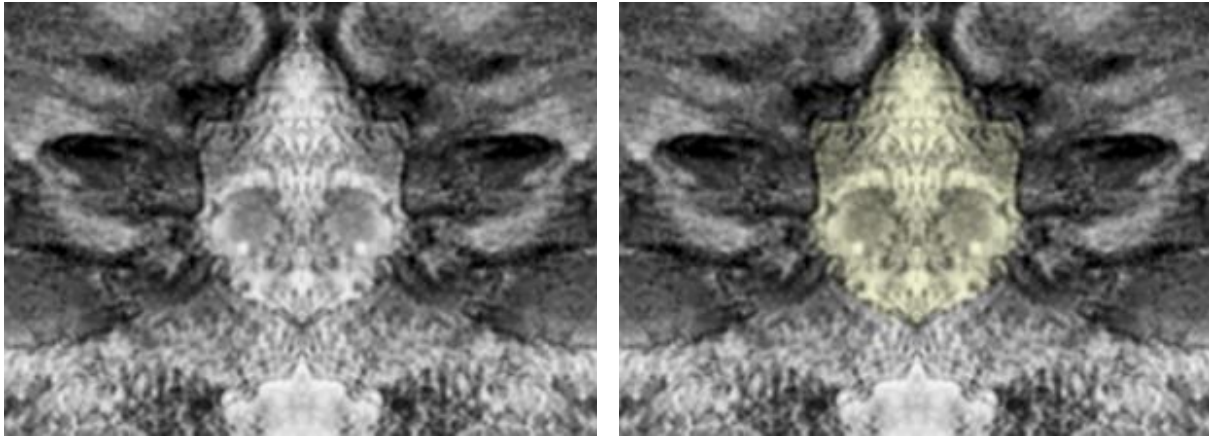


Figure 14 Flailing tongue (duplicated). Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash.

The Crowned Tongue feature on the Feline side of the Cydonia Face is framed within the zig zag-shaped mane formation. As we all know there are no lions in the Mexican region of North America however, many of these Mesoamerican cultures envisioned a feline creature that they called the bearded jaguar, which has a mane. I provide two examples of Mesoamerican jaguars with beard-like manes in Chapter 6.

The zig-zag shape of the mane was also noticed by Van Flandern in his 2001 study. He identified the zig-zag shape as "linear striations" that were caused by the same impact event that affected the shape of the eastern side of the mouth and eye.²¹

Digital imaging specialist Dr. Mark Carlloto hypothesized that the shape of the zig-zag shape of the mane was the result of the accumulation of sand dunes. In his

paper, *Symmetry and Geometry of the Face on Mars Revealed* published in 2001 in the journal *New Frontiers in Science*, he suggested;

[T]he east side of the Face reveals that it is covered by dunes which have likely formed from sand blown by prevailing westerly winds and deposited on the leeward side. From 3-D perspective views this dune field appears to be covering much of the east side of the landform...²²

Considering the seasonal sand storms that pelage Mars there is no evidence of the movement or the accumulation of sand across the Cydonia Face over the past 6 years. Either the sand dunes have been petrified and become permanent or it is an intentionally designed feature. Either the sand dunes have become petrified and are now permanent or it is an intentionally designed feature.

Looking again at the tongue emerges out of the mouth on the Feline side of the Cydonia Face it appears as a crowned head of a Horned Owl Head. The zig-zag shape of Van Flandern's "linear striations" and Carlotto's permanent "sand dunes" easily transforms into an owl's body with a set of out stretched wings. The lower portion of the mane conforms into a barrel-shaped breast attached to two feathered legs with clawed feet and short tail feathers (Figure 15).

The appearance of a similar open winged, horned owl motif can be found within the center of the Teotihuacan complex within a large housing compound known as the Tetitla Palace. Its walls are filled with colorful murals of which, many included large portraits of opened winged owls²³ (See: TCIFJ Vol. 4 No. 2, 2001).

A similar motif is also seen in the design of nose ornaments. When hung from the nose, the owl's head acts as a flailing tongue, while the cheek guards and open wings of the owl mimic the folds seen within the feline's mane, which are also seen in the design of nose ornaments (See: TCIFJ Vol. 4 No. 2, 2001).

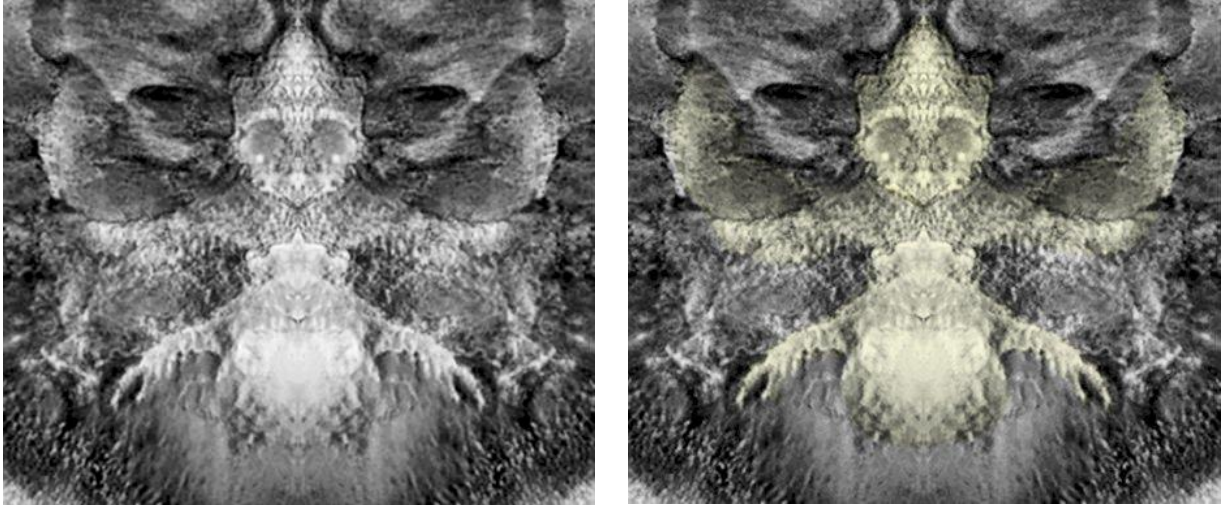


Figure 15 Opened Winged Crowned Owl (duplicated). Left: Detail MRO HiRISE image PSP_003234_2210 (2007). Right: Color wash.

CONCLUSION

As evident in this analysis of the 2007 MRO HiRISE image of the Cydonia Face, which has the highest resolution ever taken, is a testament to its structural integrity. Its bifurcated facial features have not only been reaffirmed they remain consistent with the distinct iconographic motifs shared throughout the cultures of Mesoamerica. When compared to either NASA or ESA archives of previous released images of the Cydonia Face this new image substantiate the endurance of its individual facial features and decorative motifs as permanent constructs. All of which have been visually documented during different seasonal changes and different times of day over the last 6 years.

The opposing camp closes their eyes and envisions a single face model, where they imagine a once symmetrical humanoid face that was damaged on its eastern side by random set of meteor hits sometime in the past. As a result of this targeted damage it created a feline appearance, which can be explained away by a series of

unsupported hypothetical events. They want us to believe that just as engineers used precision explosives to create the a portrait of George Washington on Mt Rushmore – a random set of meteor hits altered the eastern side of the Cydonia Face and created the feline visage we see today. I think it is appropriate to follow the philosophy of Ockham's razor, where the simplest explanation, which requires the fewest assumption, is usually correct.

The images presented here support the simplest explanation, which is a two-faced, human-feline model - where, "what you see is what you get." The Cydonia Face is a two-faced, humanoid/feline visage with decorative adornments and pictographic elements that are consistent with the distinct iconographic motifs shared throughout the cultures of Mesoamerica.

The evidence is there for everyone to see. It appears Richard C. Hoagland has been right all along; the Cydonia Face is a two-faced, humanoid and feline work of art.

Remember; "The most insidious power the scientific community has is the power to ignore."

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Notes

1. NASA, Mars Reconnaissance Orbiter (MRO CTX),
<https://science.nasa.gov/mission/mars-reconnaissance-orbiter/>
2. Mars Viewer, MRO HiRISE, PSP_003234_2210 *Popular Landform in Cydonia Region*, dated April 5, 2007.
3. HiRISE Operations Center, HiRISE & JPEG-2000 F.A.Q.,

4. Personal e-mail communication with MRO HiRISE Team member Joe Plassmann on 8/30/2007.
5. Richard C. Hoagland, *The Monuments of Mars: A City on the Edge of Forever*, 4th ed. (Berkeley: North Atlantic Books, 1992), 22.
6. George J. Haas, *The 2001 Cydonia Face*, The Cydonia Institute: Field Journal, Vol. 4, No. 2, June 2001.
7. George J. Haas, *The 2004 Cydonia Face*, The Cydonia Institute: Field Chronicle Vol. 7, No. 4, December 2004.
8. George J. Haas, *The 2006 Cydonia Face (Malin's last MGS image)*, The Cydonia Institute: Field Chronicle Vol. 11, No. 4, November 2008.
9. The technique of mirroring half and bifurcated images of figurative and graphic forms is an acceptable research tool utilized among the archaeology community, which they call "duplicating". Unfortunately many critics dismiss this technique and are unaware of the long tradition of composite art produced in Pre-Columbian cultures and have prematurely excluded the artistic motif of half, bifurcated and polymorphic models from their criteria for establishing artificiality.
10. George J. Haas, *The 1998 Face on Mars*, The Cydonia Institute: Field Journal. Vol. 1 No. 3, June 1998.
11. David Freidel, Linda Schele and Joy Parker, *Maya Cosmos: Three Thousand Years on the Shaman's Path*, (New York: Quill, 1993), 431.
12. Mars Viewer, MOC 1600184, *Massif in Cydonia region*, dated June 3, 2000
13. George J. Haas, *The M16 Face*, The Cydonia Institute: Field Journal, Vol. 4 No. 1, February 2001

14. Jay Arrera, *Tutorial: Sculpting Eyes*, Sculpture, Tutorials, May 3, 2019.
<https://www.jayarrera.com/blog/2019/05/03/how-to-sculpt-eyes/>
15. Richard C. Hoagland, *The Monuments of Mars: A City on the Edge of Forever*, 4th ed. (Berkeley: North Atlantic Books, 1992), 22.
16. Ibid, 22.
17. Ibid, Figure 30.
18. Matthew G. Looper, *The Beast Between Deer in Maya Art and Culture*, University of Texas Press (April 22, 2019).
19. Karl Andreas Taube, *The Olmec Maize God: The Face of Corn in Formative Mesoamerica*. In *Studies in Ancient Mesoamerican Art and Architecture: Selected Works by Karl Andreas Taube*, vol. 2, p. 100.
20. Tom Van Flandern, *Preliminary analysis of 2001 April 8 Cydonia Face image*, Meta Research Bulletin, 2001.
21. Ibid.
22. Mark Carlotto, *Symmetry and Geometry of the Face on Mars Revealed*, New Frontiers in Science, Vol. 1 No. 1, Fall 2001.
23. There has been some dispute among researchers about what sort of birds are represented on these murals. Both owls and eagles have been suggested, however the round head, paisley eyes and the full plumage suggests an owl rather than an eagle. See Robin Heyworth, *Tetitla: Jaguar Lords, Owl Warriors & the Great Goddess.*, Uncovered History, October 28, 2014 and Jesper Nielsen and Christophe Helmke,