

The Raptor Zone Complex

by George J. Haas

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Elysium Planitia

In the summer of 2018, independent researcher and Technical Specialist, located in South Africa, Jean Ward posted an article on his Raptor Zone Blog titled "Cydonia 2.0 – A Mars MRO Epic." In the article Ward proclaimed he had found "something new and refreshing".¹ The article included a set of pyramids and other strange geometric structures that he claimed were comparable to the famous Cydonia complex that included Face on Mars and its surrounding structures.

These odd pyramids and other strange geometric structures discovered by Ward are located in the Eastern Quadrant of Mars, just below the Utopia Planitia, in a region known as Elysium Planitia. This region expands across a broad plain filled with oddly shaped mounds and knobs that straddles the equator at approximately 3.0°N to 40.0°N and from 154.7°E to 180.0°E.² The word Elysium comes to us from the stories of Greek mythology. It is a reference to a special place in the after-life that was reserved for heroes and the friends of the gods, known as Elysian Fields.³ The area of this study is located at around 7°N and 148°east (Figure1).

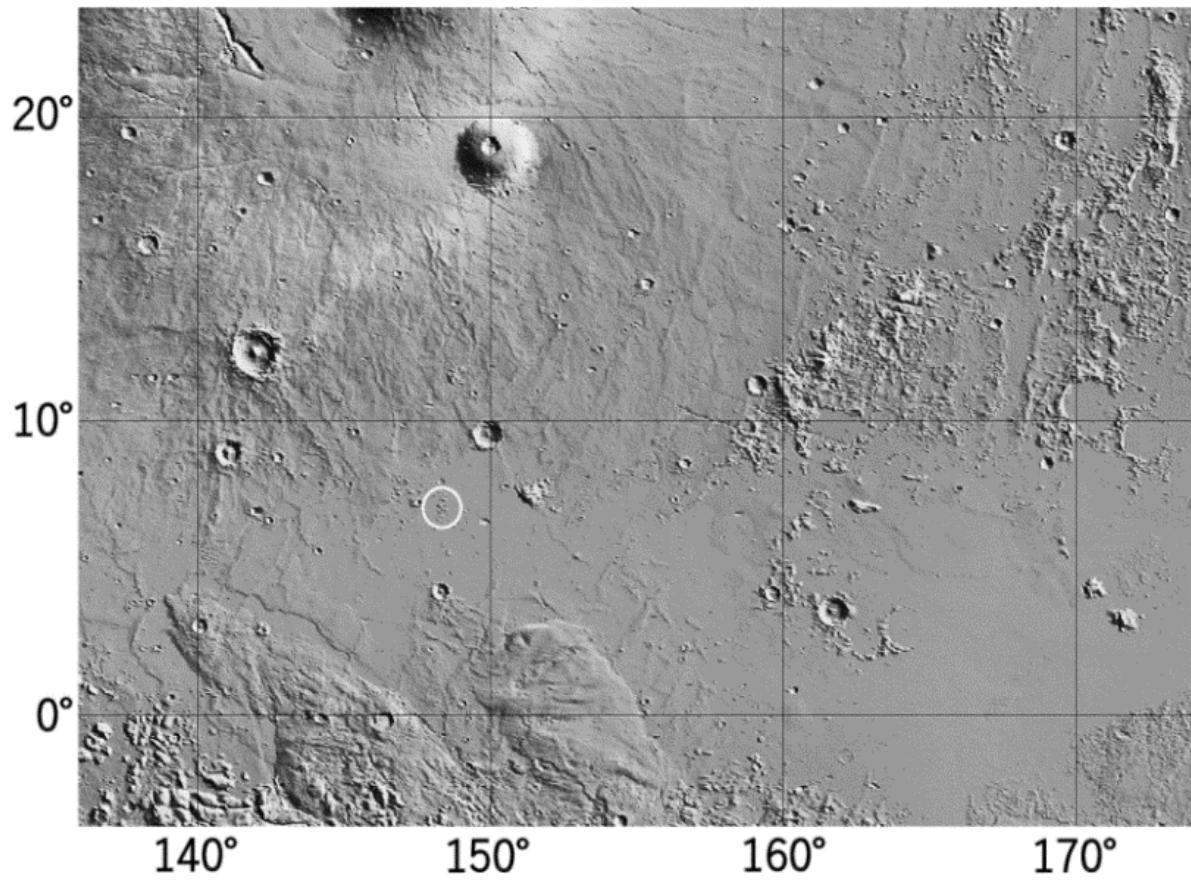


Figure 1

Elysium Planitia region of Mars
The Raptor Zone Complex (circled)

The Mars Reconnaissance Orbiter HiRISE CTX camera acquired a great image of this area (P20_008753_1876_XN_07N211W) that shows complex of pyramids and strange geometric structures that Ward referred to as Cydonia 2.0 back in 2018 (Figure 2). The most interesting formations are labeled A, B, C and D.

The MRO HiRISE CTX image was taken in 2008 during the afternoon at 12:47 with a resolution of 5.6 meter per pixel.⁴ The sun light is coming in from the west with harsh shadows being cast on the south eastern sides of the formations.

After seeing all of these anomalous formations within their original context I decided to title this area The Raptor Zone Complex, in honor of Mr. Ward (Figure 2).

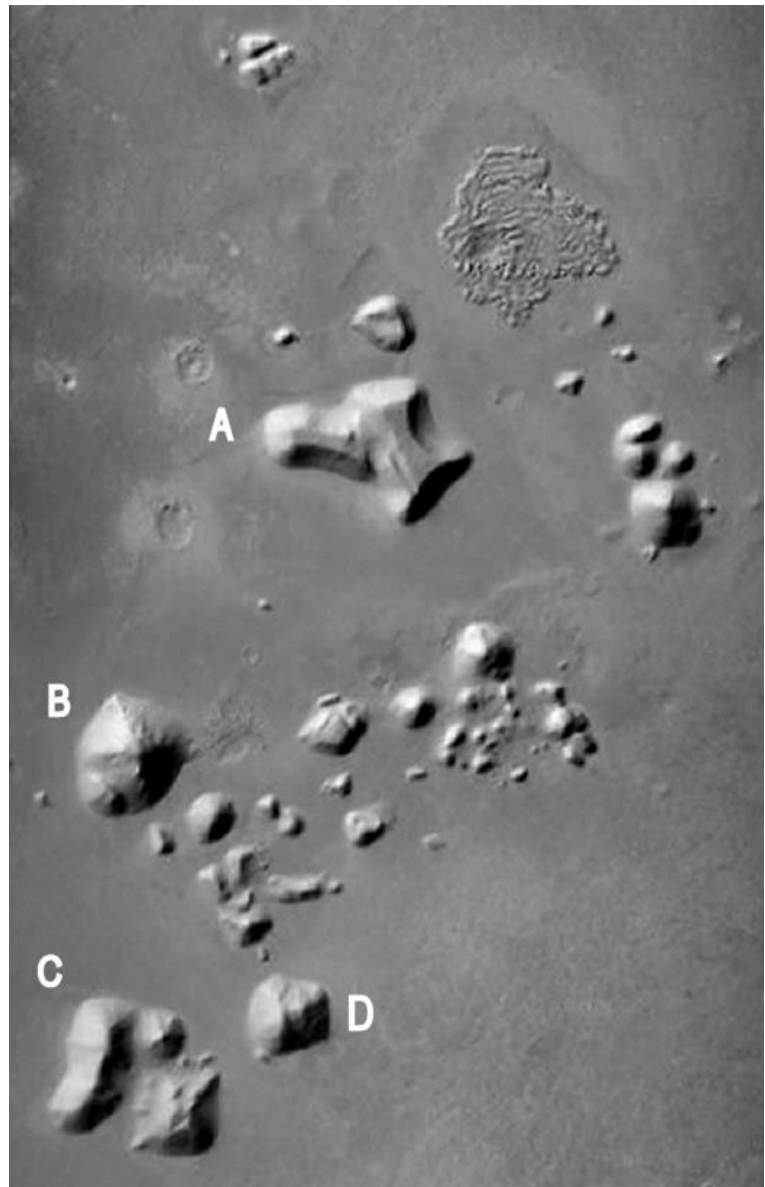


Figure 2

The Raptor Zone Complex

Notated A, B, C and D

MRO HiRISE CTX image

P20_008753_1876_XN_07N211W

(2008)

The Raptor Head

I will begin my study of this complex with a formation that Ward has referred to as a "pistol," labeled A in figure 2. As we all have experienced with many of these geometric and aesthetically designed structures that have been observed on the surface of Mars their visual impact is quite often open to personal interpretation.⁵ So, while Ward saw what he thought looked like a geoglyphic formation of a "pistol" (Figure 3), I see a profiled head of a left facing raptor (Figure 3). The only difference between what Ward believes he sees and what I see is that I attempt to provide supportive evidence that will show that my interpretation is plausible.



Figure 3

The Raptor Head (Labeled A in figure 2)

Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Notice the geoglyphic formation has a thick neck, the sharp crested head and the hooked beak. There is also evidence of a teardrop-shaped eye feature at the base of the beak. The avian head resembles a massive cubic sculpture of an "Art Deco" impression of a raptor head, something like you would see on the Chrysler building in New York.

A second MRO HiRISE CTX image (F17_042576_1875_XN_07N211W) of the Raptor Head geoglyph was acquired and released in August 2015 (Figure 4). The image was obtained just before 1 o'clock in the morning with a resolution of 5.8 meters per pixel.⁶ The Raptor Head geoglyph is enormous. The distance from the tip of its beak to the back of its neck to almost 5 miles in length and from the top of the head to the bottom, left side of the neck, it is about 4 miles.⁷ An analytical drawing with a color wash that highlights the avian facial features is provided in figure 4.

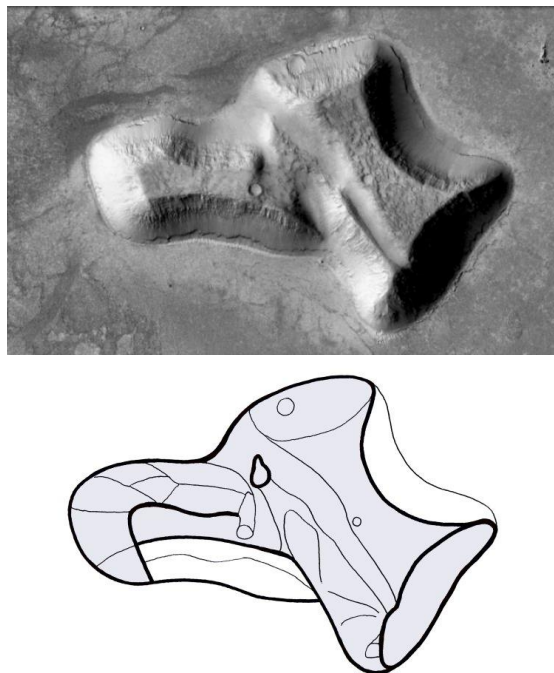


Figure 4

The Raptor Head (Labeled A in figure 2)

Left: Detail MRO HiRISE CTX image F17_042576_1875_XN_07N211W (2015)

Right: Analytical drawing with a color wash by George J. Haas

Cultural Reference

Starting with the Raptor Head geoglyph, it can be compared to a heraldic portrait of a crested eagle (Figure 5). Notice the curved beak and the high, feathered crest.

The placement of the Raptor Head geoglyph may have been built as a “calling card”, like has been suggested of the Cydonia Face.⁸ This recognizable avian creature could have been used as a marker or beacon alerting orbital travelers above that a settlement was located below.

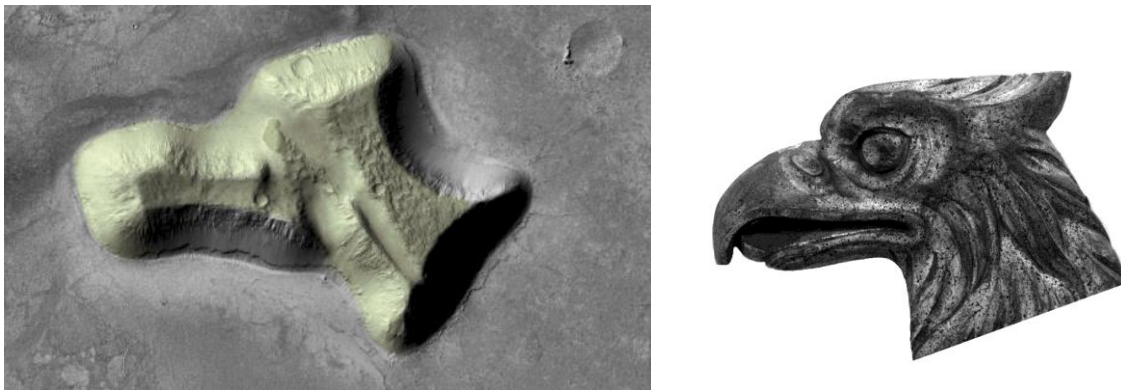


Figure 5

The Raptor Head

Left: Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Color wash by George J. Haas

Right: Heraldic Eagle, Giltwood Italian eagle crest, 18th century, (detail)

Comparable Geoglyphic Formations: Martian

Years before the discovery of Raptor Head at Elysium Planitia, a highly textured imprint of another raptor's head (Figure 6) was noticed within the lower basin of the crater by independent researcher Eric C. Lausch in 2004. He discovered the

formation in the Cydonia region of Mars in a Mars Odyssey THEMIS image V03945003.⁹ Lausch was so impressed by the facial features of the formation that he immediately published an article titled *Lowell's Legacy* on his web site.¹⁰ During his initial evaluation of this anomalous formation Lausch suggested the avian imprint could only be the result of intelligent design. He equated its artful carving to *"a bas relief effigy of a bird of prey stamped into the crater basin like a megalithic scale twenty dollar gold piece on the surface of Mars"*.¹¹

The formation was targeted again in a recent MRO HiRISE CTX image P19_008429_2226_XN_42N009W acquired in May 2008¹² (Figure 6). The eagle head imprint is quite iconic and despite the craters worn and uneven condition, the low relief of the sculpted surface is wholly remarkable in its aesthetic character. It is clear to see that the shape of the head projects a distinct avian profile, including a stern, recessed eye socket and a thick curving beak. The modeled surface shows evidence of textured feathering within the head and neck line and jagged feathers appear sprouting along the crest of the head. It certainly looks like a portrait of an eagle head. An analytical drawing of the Eagle Head Crater is provided in Figure 6.

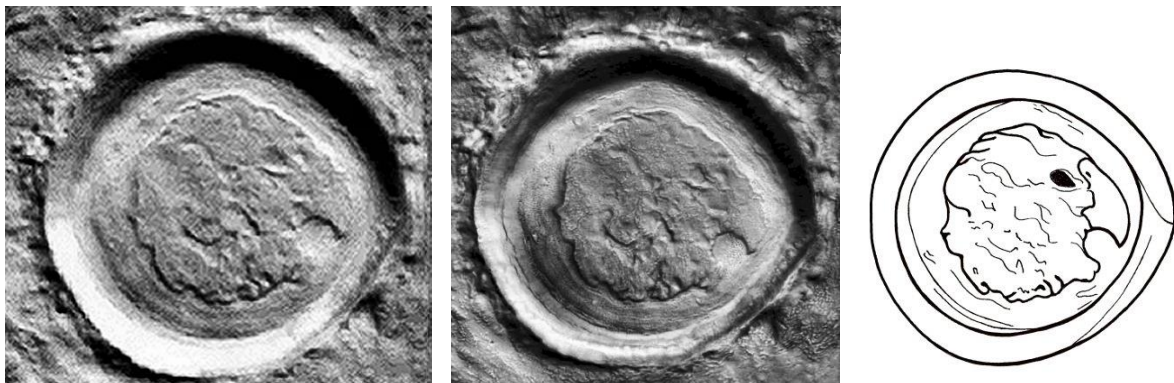


Figure 6

Eagle Head Crater

Left: Detail of Mars Odyssey THEMIS image V03945003 (2003)

Center: Detail of MRO CTX P19_008429_2226_XN_42N009W (2008)

Right: Analytical drawing by George J. Haas

The placement of the Raptor Head geoglyph is very similar to the Eagle Head Crater, which is placed at the northern most point, above a sprawling complex below it.¹³ As we have observed with the placement of Face at the center of the Cydonia complex, it is not surprising that the Raptor Head geoglyph may have also been used as a marker, alerting air travelers to this complex and all of the structures that surround it.

Comparable Geoglyphic Formations: Terrestrial

By studying the current data base of geoglyphic art created on Earth and found on Mars we can compare their aesthetic design and look for common motifs. Humans have a long history of artistically altering the landscape in a variety of ways and for different reasons. The majority of comparative examples of terrestrial geoglyphs come to us in the form of earthworks that were created by ancient cultures throughout North and South America. Many of these huge earthworks were shaped like animals and human figures, while others took the form of geometric symbols. It is estimated that the number of earthworks found throughout North America number in the hundreds of thousands. However, over time almost all of these monuments have been either destroyed by natural erosion or by the rapid expansion of rural and urban development.

A large 20 acre corn maze was created in 2010 at Liberty Mills Farm in Somerset Virginia that included a profiled portrait of an American Bald Eagle (Figure 7). Similar in presentation, the corn maze portrait is a classic Eagle profile. Notice the feathered head, stern, eye and thick curving beak.

Figure 7
American Bald Eagle (2010)
Corn Maze
Liberty Mills Farm, Somerset. Virginia



Four-sided Pyramid with Conjoined Mound

Moving down from the Raptor Head geoglyph, to the formation labeled B in figure 2, I will examine the very symmetrical, pyramidal formation that Ward recognized in his Cydonia 2.0 article. The odd formation appears to be a four-sided pyramid with a conjoined mound or platform attached to its lower side (Figure 8).

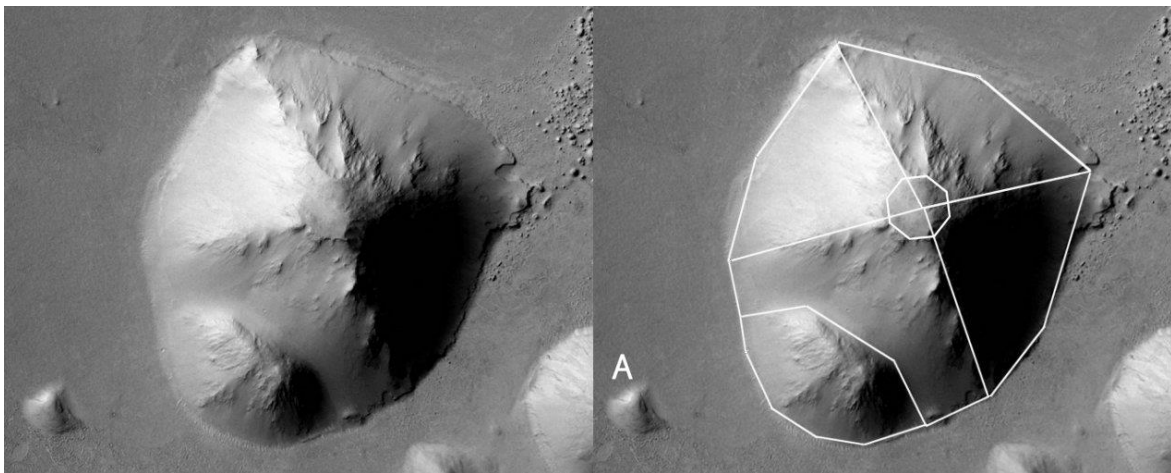


Figure 8
Four-sided Pyramid with Conjoined Mound (Labeled B in figure 2)
Left: Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)
Right: Outlined and notated by George J. Haas

The central mound has four jagged spurs that run down the sides of the formation from its summit. They separate its four triangular faces, into equally spaced parts, while a smaller, crescent-shaped mound is attached to its south-western side. The apex of the pyramid has a flat hexagonal shape. Perhaps the flat area is the result of a missing cap stone.¹⁴ Notice the small, oddly-shaped mound resting to the south eastern side of the Conjoined Mound (Labeled A in figure 8). Could this small mound be the remains of this missing cap stone that may have been blown off sometime in the past?

A second MRO HiRISE CTX image (K04_054760_1852_XN_05N211W) of the Four-sided Pyramid with Conjoined Mound was acquired in April 2018 (Figure 9). The new image was obtained in the late morning with a resolution of 5.4 meters per pixel.¹⁵ The pyramidal formation is almost 3 miles in length from the southern, lower edge of its conjoined mound to the base line of pyramids north eastern side.¹⁶



Figure 9

Four-sided Pyramid with Conjoined Mound (Labeled B in figure 2)
Detail MRO HiRISE CTX image K04_054760_1852_XN_05N211W (2018)

Cultural Reference

The Four-sided Pyramid with Conjoined Mound can be compared to the Pyramid of the Moon at Teotihuacan, Mexico (Figure 10), which may be well over 2000 years old, measures approximately 426 by 511 feet at its base.¹⁷ Notice the small stepped platform that extends from the Pyramid of the Moon is similar to the small mound that is conjoined with the Four-sided Pyramid on Mars. Just as the Four-sided Pyramid with Conjoined Mound on Mars appears to be covered with layers of sediment, the Pyramid of the Moon was once covered with layers of dirt and rubble when it was first found.¹⁸ The pyramidal structure we see today has been extensively re-constructed. Image what its Martian counterpart would look like if we were able to excavate this amazing structure.

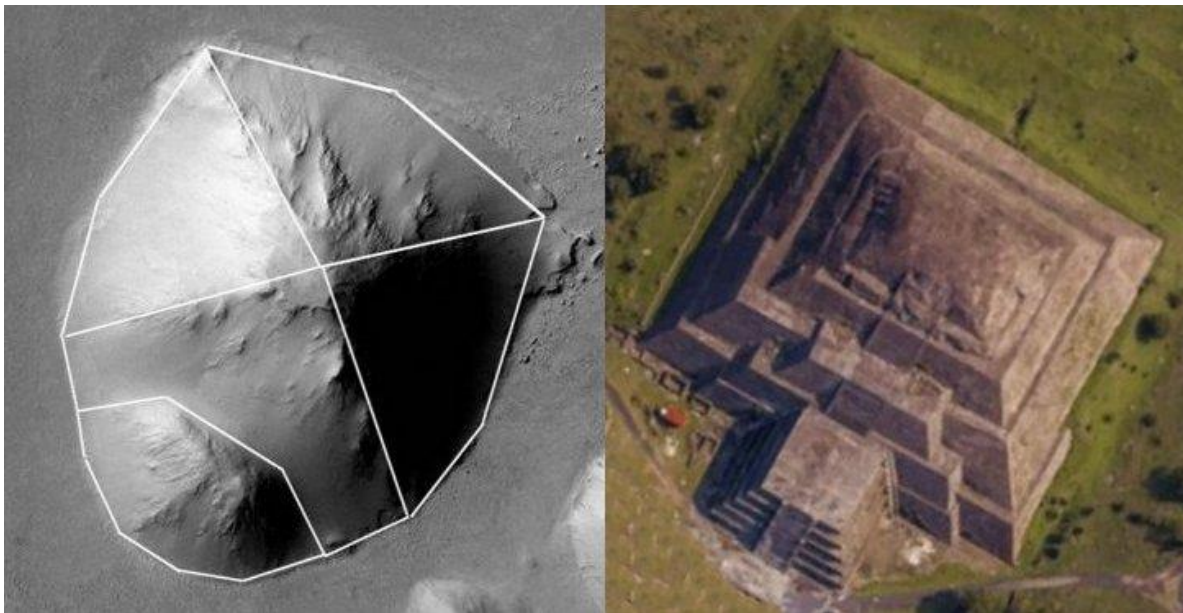


Figure 10

Four-sided Pyramid with Conjoined Mound

Left: Detail MRO HiRISE CTX image K04_054760_1852_XN_05N211W (2018)

Outlined by George J. Haas

Right: Pyramid of the Moon with Conjoined Platform. Teotihuacan, Mexico (100 BC)

Mound Cluster

Directly below the Four-sided Pyramid with Conjoined Mound, is a cluster of geometrically designed mounds (labeled C in figure 2) that were captured in the same MRO HiRISE CTX image (P20_008753_1876_XN_07N211W). This tightly arranged cluster of mounds is formed by three very different formations. The first is a long serpentine-shaped formation with a central spine and segmented ribs. On the eastern side of the serpentine formation sits a circular mound that also has a set of radiating spines. Directly below the circular mound is a square, four sided pyramidal formation (Figure 11). The serpentine form is approximately 3 miles long, while the overall width of the southern side of this cluster of formations is about 4 miles square.¹⁹

Starting with the Segmented Mound of the group, its overall form is very symmetrical in its shape and design. Its serpentine form follows a slight S-shaped curve and is bracketed by evenly spaced vertical ribs that extend down both sides of the formation.

Looking to the circular and square-shaped mounds, it is very interesting to find a circular mound setting right next to a square, four sided pyramidal form. The presents of a round, circular formation sitting right next to a very linear square formation is quite perplexing. Any erosional process that included enough wind driven sand to produce a circular mound would certainly affect the linear integrity of the square, four sided pyramidal formation sitting right next to it.

The pairing of these two graphic forms is also significant on a more traditional level. The circle and the square are two geometric forms that are highly symmetrical and often seen as symbols of opposition.²⁰

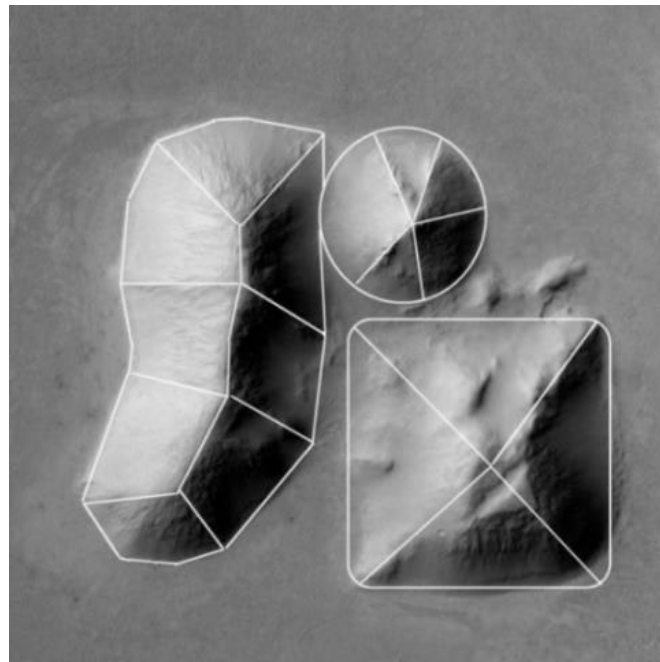
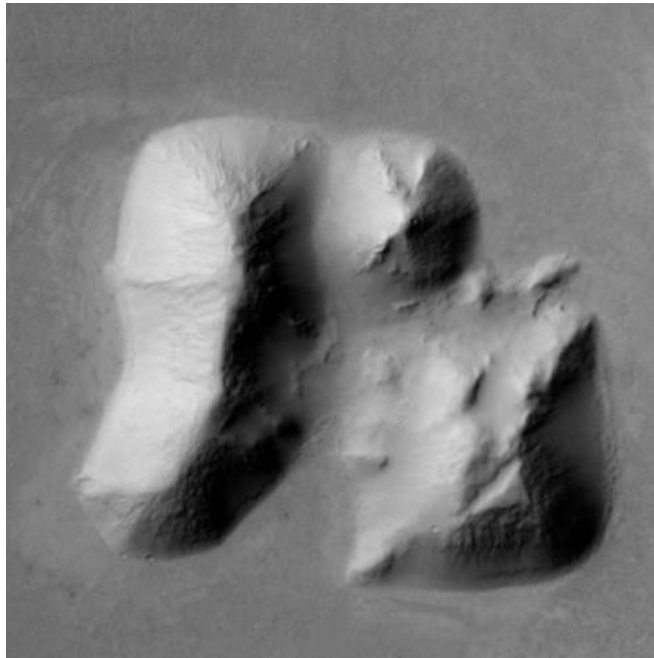


Figure 11

Mound Cluster: Segmented Formation with Circle and Square Mound
(Labeled C in figure 2)

Top: Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008).

Bottom: Outlined by George J. Haas

The same MRO HiRISE CTX image (K04_054760_1852_XN_05N211W) includes a second shot of the Mound Cluster, again showing the Segmented Mound pressed up against the Circle and Square Mound (Figure 12). The second image was acquired on April 2018 in the late morning with a resolution of 5.4 meters per pixel.²¹



Figure 12

Mound Cluster: Segmented Formation with Circle and Square Mound (Labeled C in figure 2)
Detail MRO HiRISE CTX image K04_054760_1852_XN_05N211W (2018)

Both of the MRO HiRISE CTX images provide similar detail. They confirm the supportive spine and ribs seen throughout the segmented formation, while the shapes of the circular and square mound appear consistent.

Cultural References

The Segmented Mound with Circle and Square Mound within the Mound Cluster can be compared to both ancient and contemporary architecture. The Segmented Mound, of the group, looks very much like a segmented dome, structure produced by the Danish artists' group N55 and architect Anne Romme (Figure 13).

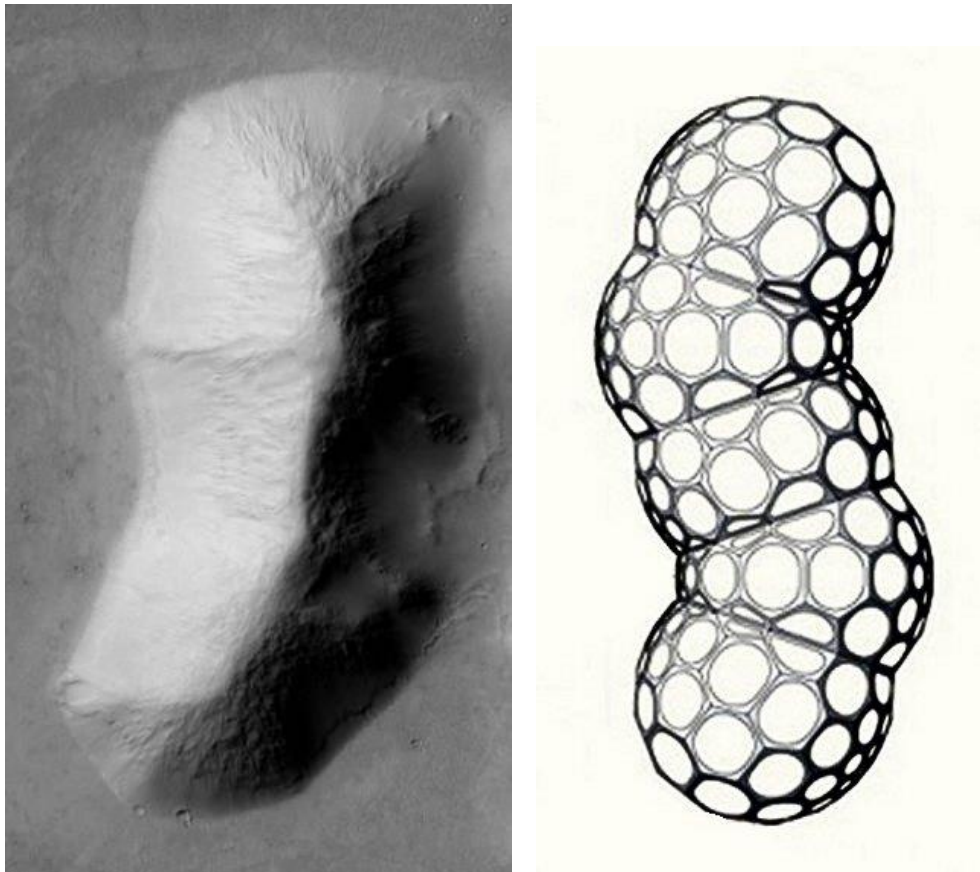


Figure 13

Segmented Formation

Left: Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Right: Snake dome, Modular Space Plates.

N55 and architect Anne Romme

The module structures are made of adjustable "Spaceplates" that are made from aluminum panels that allow for various shapes of the enclosure.²² The only thing missing from the module, serpentine-shaped structure is layers and layers of dirt, collected over the millennia.

The circular domed formation of the group can be compared to a large circular mound that was produced in Ohio by the Adena Indians, over 2000 years ago (Figure 14). Early excavations that were conducted in 1869 revealed that the exterior of the mound may have had a stone facing. Digging deep into the mound archaeologists discovered that portions of the mound were constructed with layers and layers of flat stones that overlapped like shingles.²³ The original dimensions of an earthwork known as the Miamisburg Mound, was estimated to be over 70 feet tall and 877 feet in diameter.²⁴

Thanks to the Ohio preservationist the Miamisburg mound is currently a well preserved earthen monument that has maintained its original conical form and circular base (Figure 14). The bar-like feature that extends down along one side of the mound is actually a stairway of 116 steps that was added by conservators to allow visitors easy access its top.²⁵

This stairway echo's the highly reflective spine features observed on the dome-shaped mound at the Raptor Zone Complex on Mars. Looking at the two formations, one wonders if the circular, dome-shaped formation on Mars was preserved and maintained with such care and respect as the Miamisburg mound, imagine the architectural secrets it could reveal to us today?

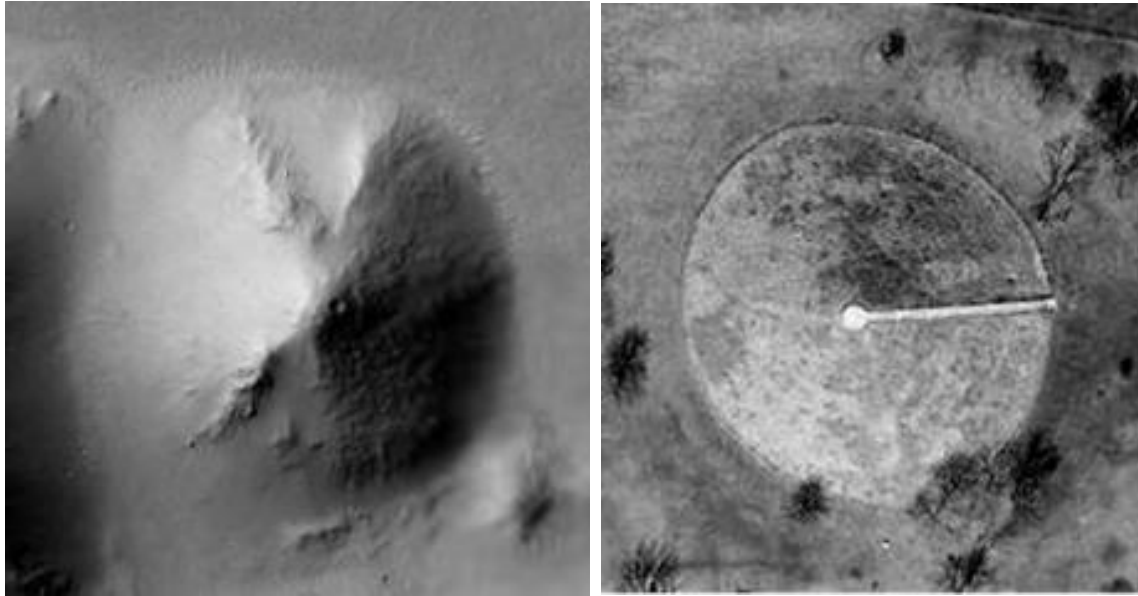


Figure 14

Circular Dome Formation

Left: Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Right: Miamisburg mound, Ohio

The four sided pyramidal formation, below the Circular Mound of the group, can be compared to one of the slightly worn four-sided pyramids that were recently revealed in Xianyang, China (Figure 15). Although the four sided pyramidal formation on Mars is highly eroded and partially collapsed on its western side - it could have been found sitting right next to one of these ancient pyramidal ruins recently documented in China. Notice the peak of the China pyramid has flattened and its once perfectly straight spires have swayed off their original alignment.

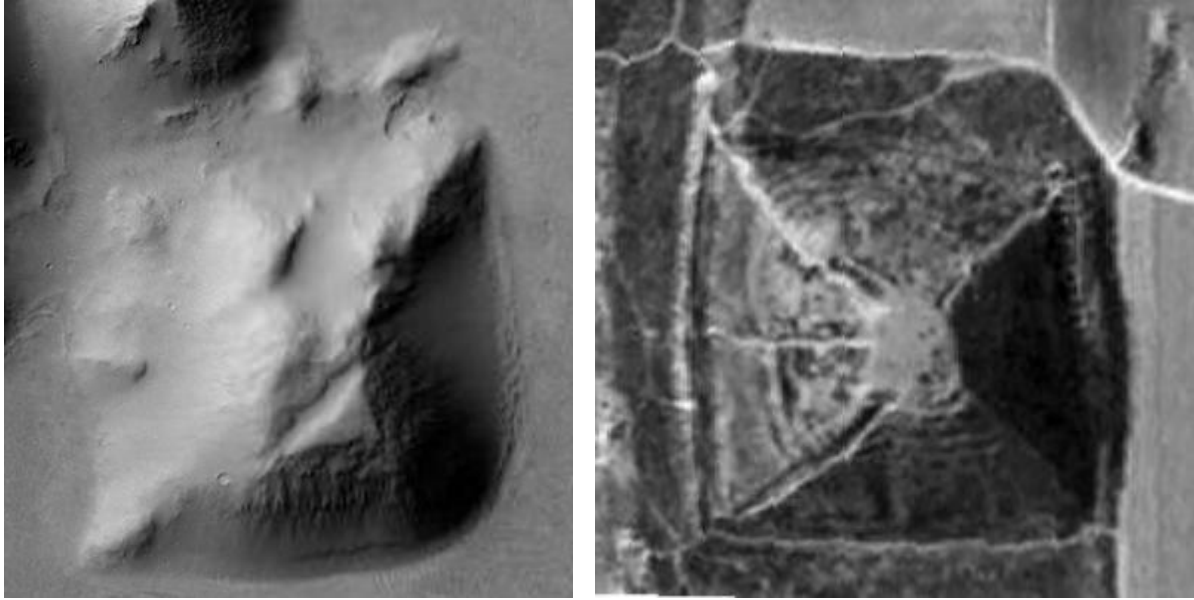


Figure 15

Pyramidal formation

Left: Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Right: Xianyang Pyramid, China (Circa 150 BC)

Looking at the pairing of the circle and square they are two geometrically opposing forms. Symbolically the circle represents unity, while the square embodies the four elements.²⁶ These two forms are seen as common mound and pyramidal shapes that are prevalent motifs often seen within the mound building cultures of both North and South America.

Here are two examples of this pairing of the circle with the square, one from North America, produced by the Hopewell Indians in Ohio and a second recently discovered in the Amazon in South America (Figure 16). Notice the offset design of a circle and square formation recently discovered in the Amazon highly resembles the placement of the Circle and Square Mound found on Mars (Figure 16).

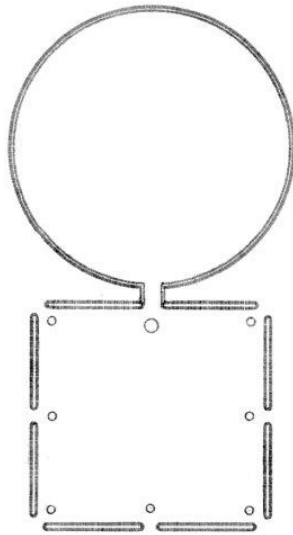


Figure 16

Circle and Square Earthworks

Top: Circleville, Ohio (100 BC)

Bottom: Amazon, Peru (100 BC)

Note: the white and yellow lines are contemporary roads.

When all three formations are compared to their terrestrial counterparts -their common design becomes quite amazing (Figure 17).

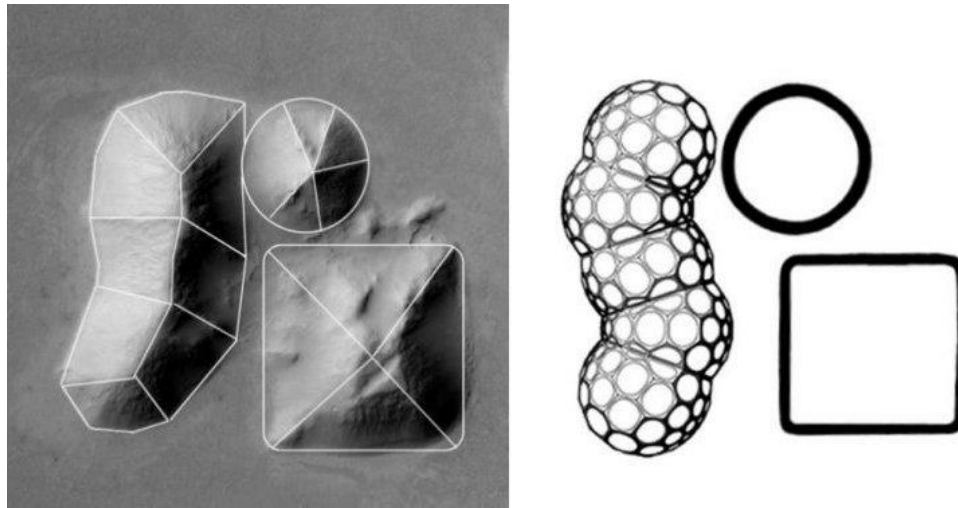


Figure 17

Segmented Formation with Circle and Square Mound

Left: Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Outlined by George J. Haas

Right: Snake dome, Space Plates paired with a circle and square earthwork, Amazon

Analytical drawing by George J. Haas

The Pentagonal Mound

Moving over to the south eastern side of the Mound Cluster: Segmented Formation with Circle and Square Mound is a large polygonal-shaped mound formation (Labeled D in figure 2). Notice the smooth, highly reflective western side that is bracketed by triangular supportive facets on its north and southern sides (Figure 18). The eastern center appears to have a collapsed leaving a sloping indentation along its eastern side. The blunted western side may have been caused by weathering and erosion over time. It may also be covered by sand and debris or was damaged by some unknown impact. The length of the Pentagonal Mound from its south western peak to its north eastern side is approximately 2 miles.²⁷

On its south western side is a small nodule attached to the Pentagonal Mound (Labeled A in figure 18) that takes on the form of a profiled head of a turkey²⁸ (Figure 19). Notice the curved head, round eye, small beak and bubble wattle. An analytical drawing is provided in figure 18.

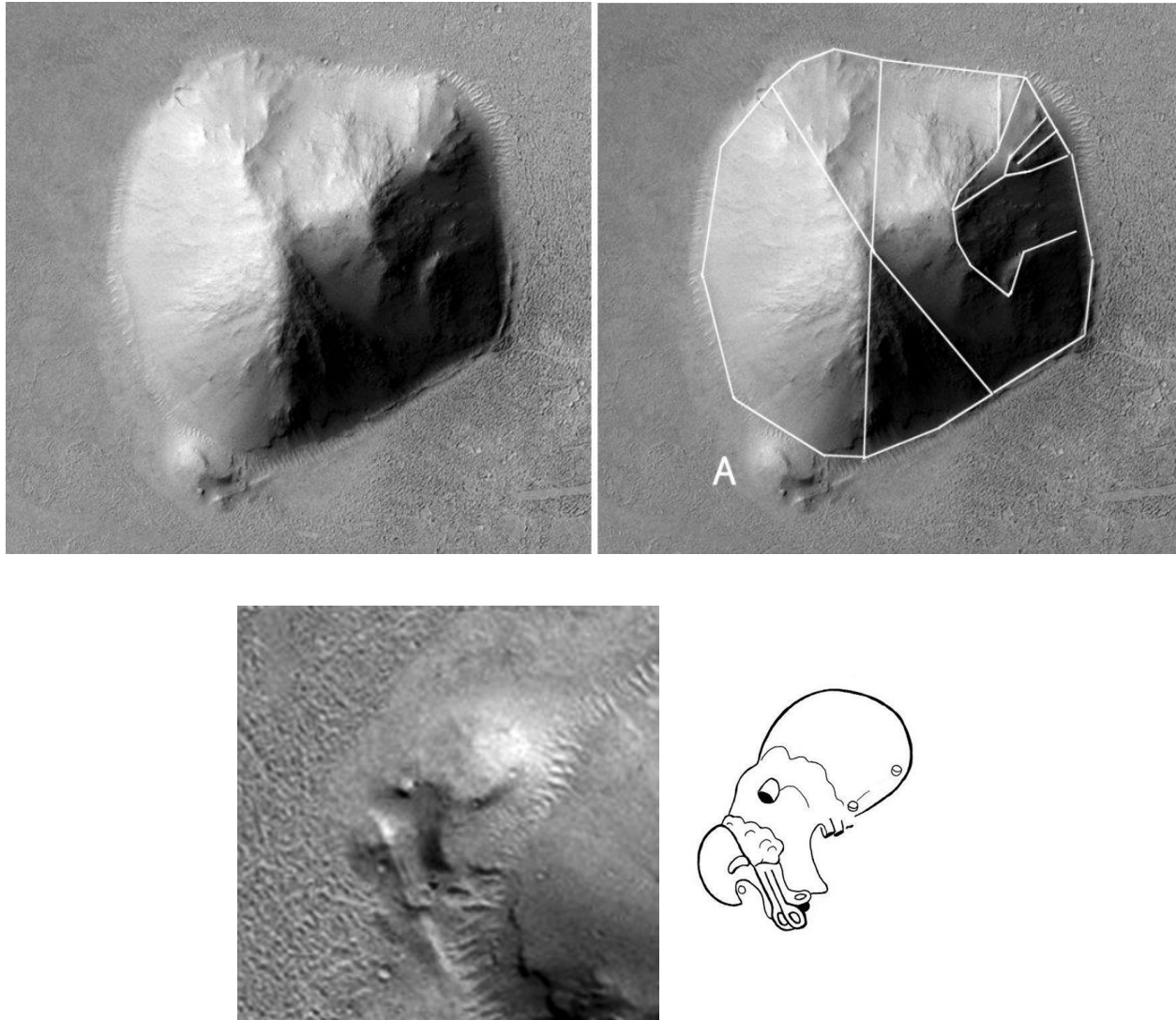


Figure 18

The Pentagonal Mound (Labeled D in figure 2)

Top left: Detail of MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Top right: Outlined and notated by George J. Haas

Bottom Left: Detail of Turkey Head Nodule (Labeled A)

Bottom right: Analytical drawing by George J. Haas

The outer contours of the formation have an overall pentagonal shape with a softened point on the western side (Figure 19). When the outline of a pentagonal shape is place over the outer contours of the Pentagonal Mound its structural adherence to the overlaid shape is remarkable. The only default is the blunted western point.

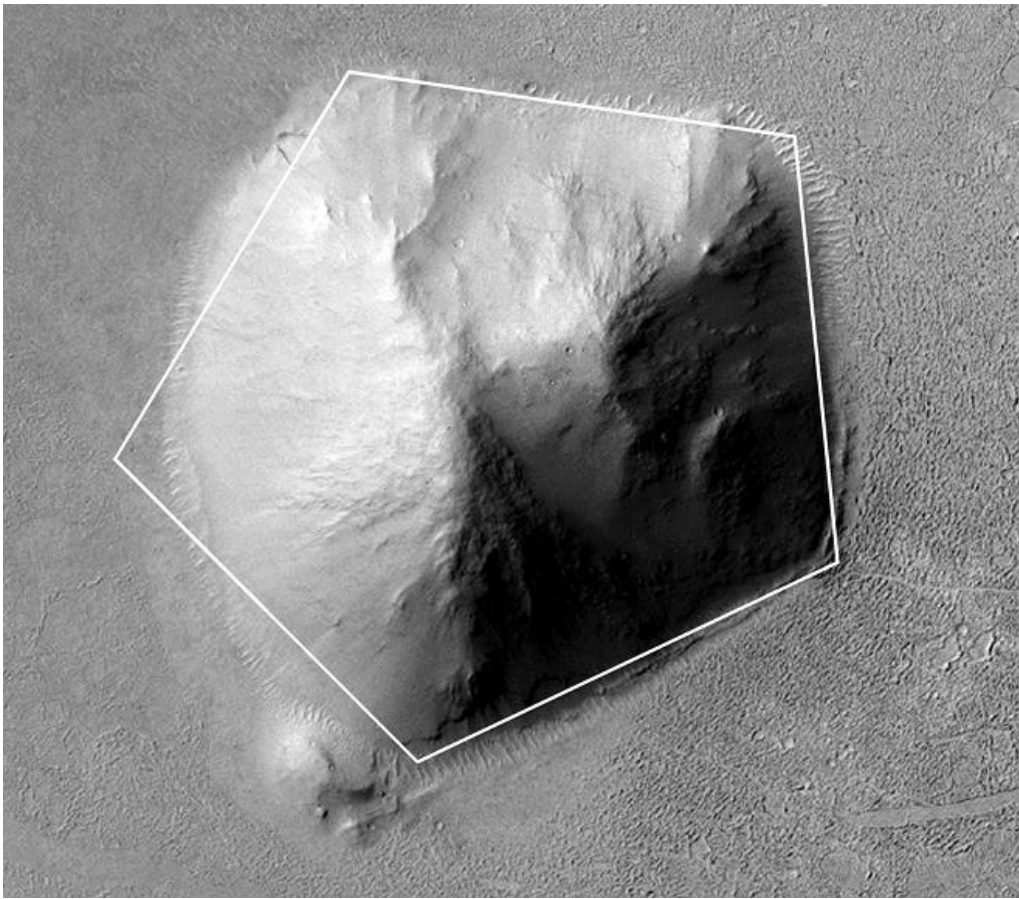


Figure 19

The Pentagonal Mound (Labeled D in figure 2)

Detail of MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008).

Outlined by George J. Haas

Comparable Formations: Terrestrial

Taking a closer look at the contours of the geometrically shaped Pentagonal Mound formation, we see that it has a high degree of bilateral symmetry (Figure 20). Although the western point of the formation is smooth and blunted - its overall geometrical shape is still very close to the shape of the U.S. Pentagon in Washington D.C.

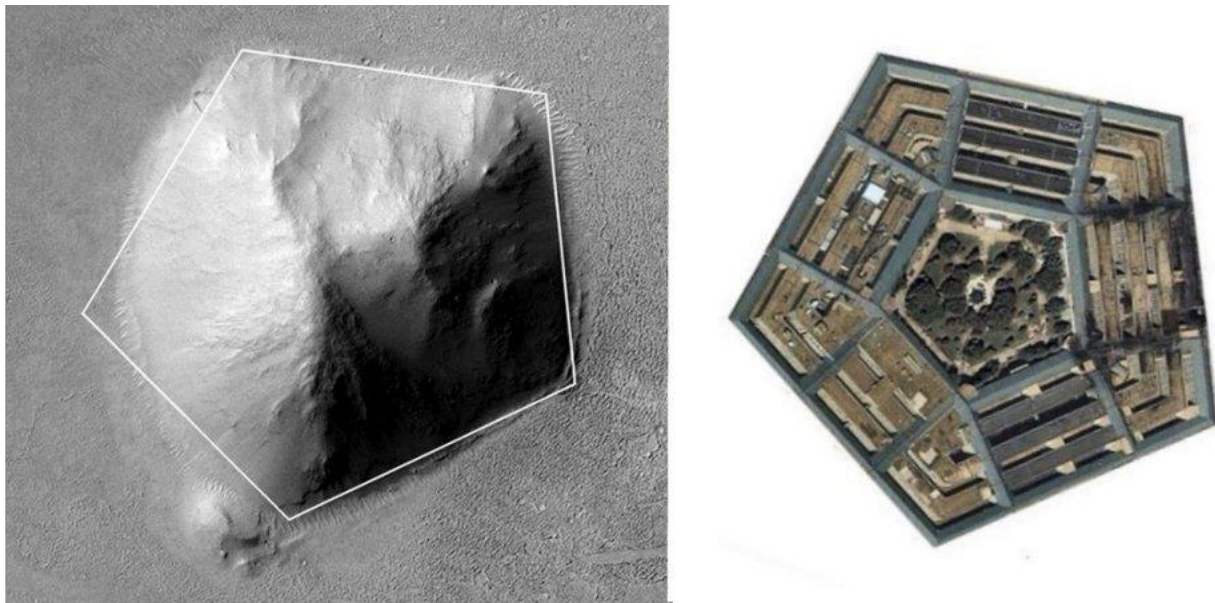


Figure 20

Pentagonal Formation

Left: Detail of MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Right Pentagon, Washington DC (Detail)

Comparable Formations: Martian

There is another pentagonal formation that was discovered in the Cydonia region of Mars known as the D&M Pyramid²⁹ (Figure 21). Its overall symmetry and geometry can be compared to the Pentagonal Formation observed within the Raptor Zone Complex. The D&M Pyramid, which sits on the remains of a large arrow-shaped platform, has four flat faces with the fifth being partially collapsed.

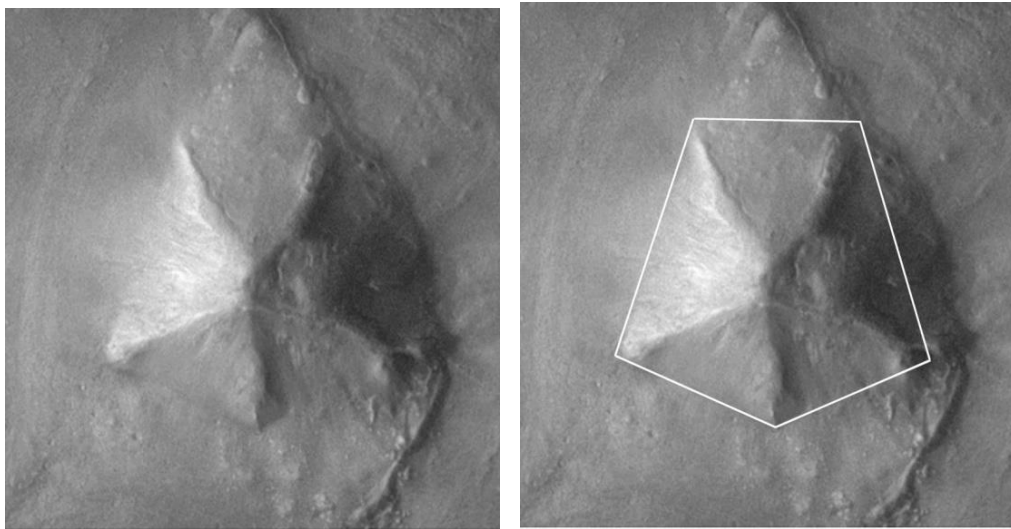


Figure 21

D&M Pyramid

Left: Detail THEMIS 20020413a (2002)

Right: Detail THEMIS 20020413a (2002) – Outlined

When the two formations are rotated to a common perspective their common pentagonal design can be compared (Figure 22). The exposed, supportive spines on the D&M Pyramid are readily seen, possibly because of internal sagging and structural collapse, while the Pentagonal Mound on Mars appears more robust. Its

upper structural face is smooth, although there are areas that appear to be sagging, giving a hint to the location of its underlying, supportive substructures.

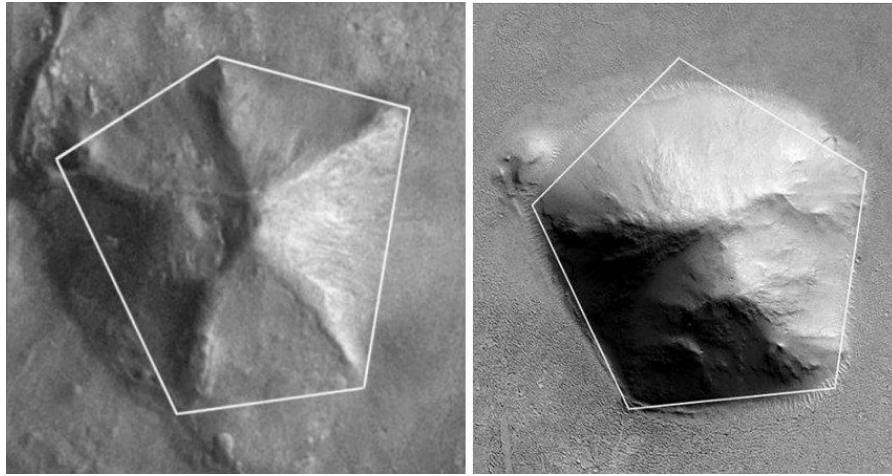


Figure 22

Left: D&M Pyramid

Detail THEMIS 20020413a (2002)

Right: Pentagonal Mound

Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

I find it very interesting that both the Pentagonal Mound and the D&M Pyramid on Mars have both received damage to one of their sides, just as the U.S. Pentagon in Washington DC was damaged on 9-11.

A Rectangular Cluster of Mounds

Taking another look at the overall layout of the Raptor Head Complex, I'd like to direct your attention to the cluster of small mounds located between the Four-sided Pyramid with Conjoined Mound (Labeled B in figure 2) and the Pentagonal Mound (labeled D in figure 2). Notice the cluster of small and large mounds and buttes that appears to be arranged within a rectangular shape (Figure 23).

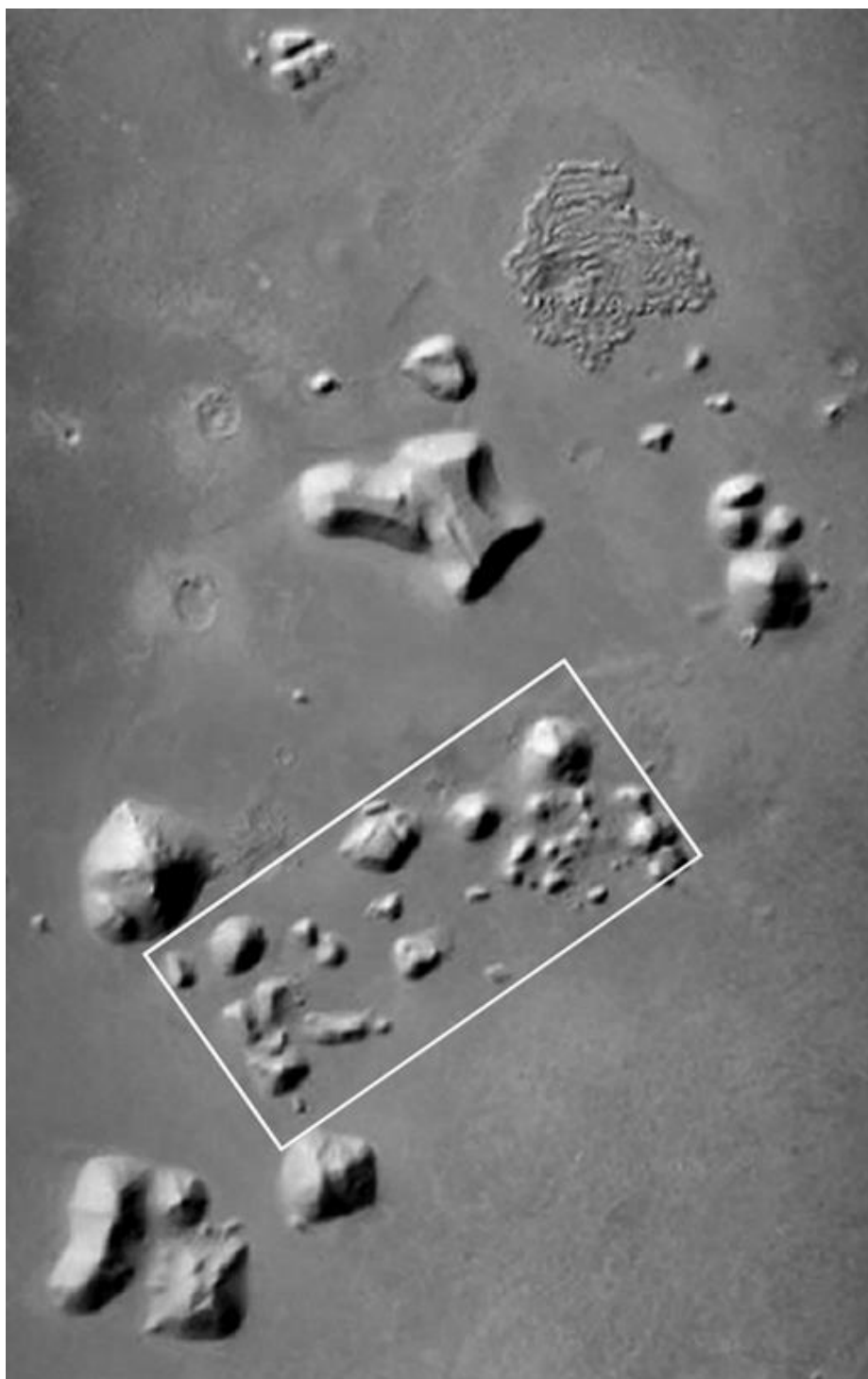


Figure 23

Rectangular Cluster of Mounds

Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Notated with rectangular box by George J. Haas

The area that the mounds occupy measures about 10 miles in length.³⁰ Its overall arrangement can be compared to a cluster of ruins found in Izapa Mexico, some dating back to 900 BC (Figure 24). Notice the common mound forms.

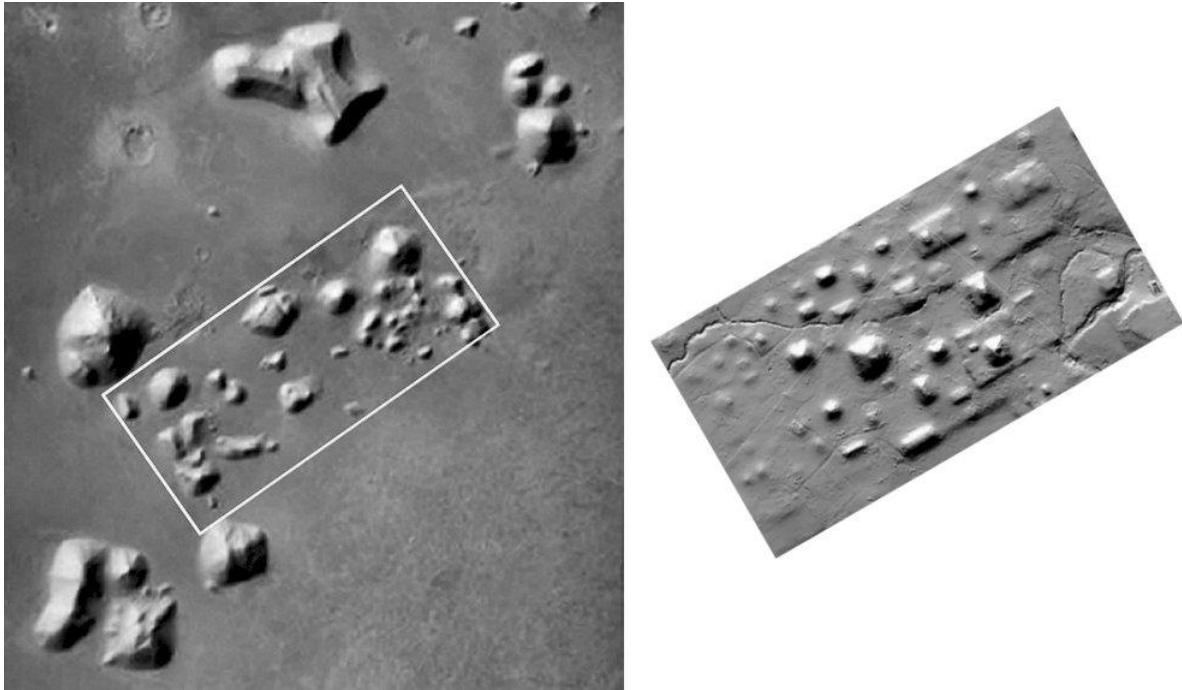


Figure 24

Rectangular Cluster of Mounds

Left: Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Right: Detail of LIDAR image of Izapa ruins, Mexico

The Square Mound with Truncated Platform

Looking just below the Square Mound (Labeled C in figure 22), towards the south eastern end of the Raptor Zone Complex there is another highly symmetrical square-shaped mound,³¹ with a truncated ramp or platform, labeled E in figure 25.

Utilizing MRO HiRISE CTX image P22_009821_1848_XI_04N211W, which was taken in the early evening with a resolution of 5.4 meters per pixel,³² we can get a closer look. In this expansive view, we also can see this complex of pyramids and strange geometric structures extends far below the Raptor Head geoglyph (Labeled A in figure 2).

Notice the setting sun is casting dark shadows on the eastern sides of each of these formations in figure 25. The smaller mounds and buttes in the lower center of the strip are highly reflective, as opposed to the formations near the Square-shaped Mound to the north west (Labeled C in figure 25) and the square-shaped mound to the south east (Labeled D in figure 25) Perhaps these formations are made of different materials, causing such a high albedo.

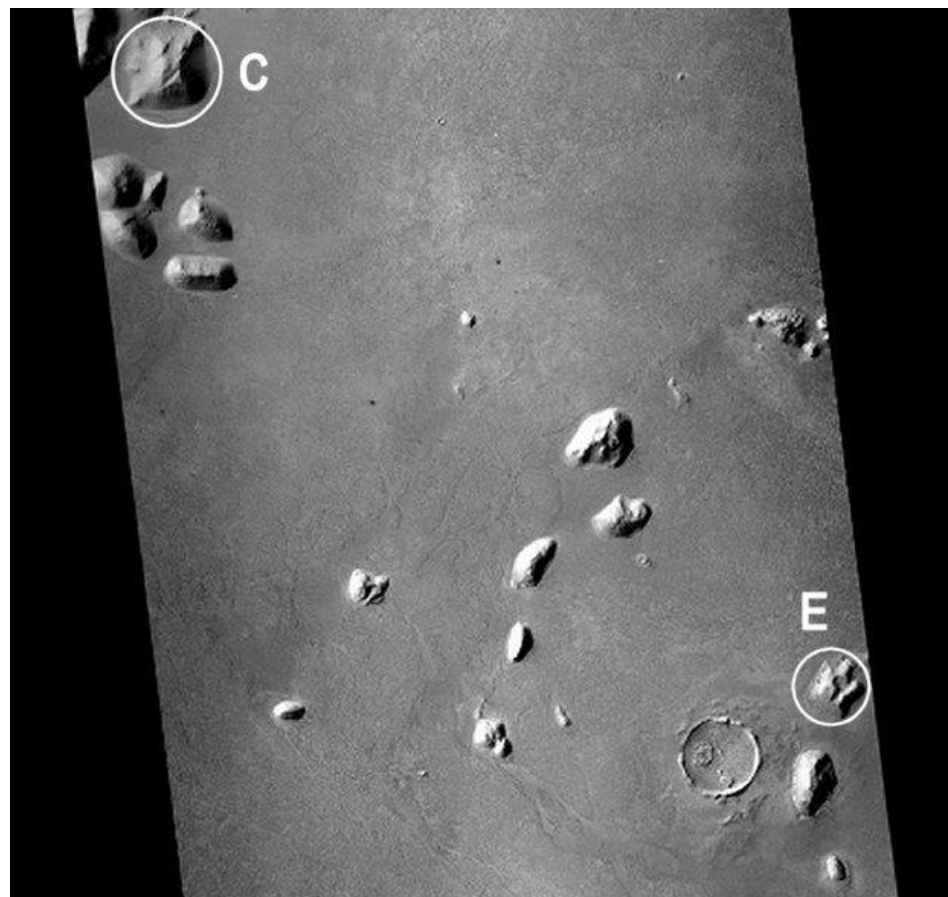


Figure 25

The South Eastern
area, below the Mound Cluster
Notated C and E
Detail MRO HiRISE CTX
P22_009821_1848_XI_04N211W
(2008)

This second, highly symmetrical, square-shaped mound in this study, labeled E in figure 25, rests just above a circular crater that is similar in size. Notice the square-shaped mound with truncated ramp has an odd groove cut across its eastern side and shallow, circular imprint just to the north east of its center (Figure 26). The circular imprint and the groove may have been caused by an internal, structural collapse. Its north eastern side has an extended, truncated platform that extends out like the ramp of a Ziggurat. The formation is about 1 mile in length from its lower, southern side to the tip of its truncated platform. The circular imprint measures approximately 1600 feet across.³³

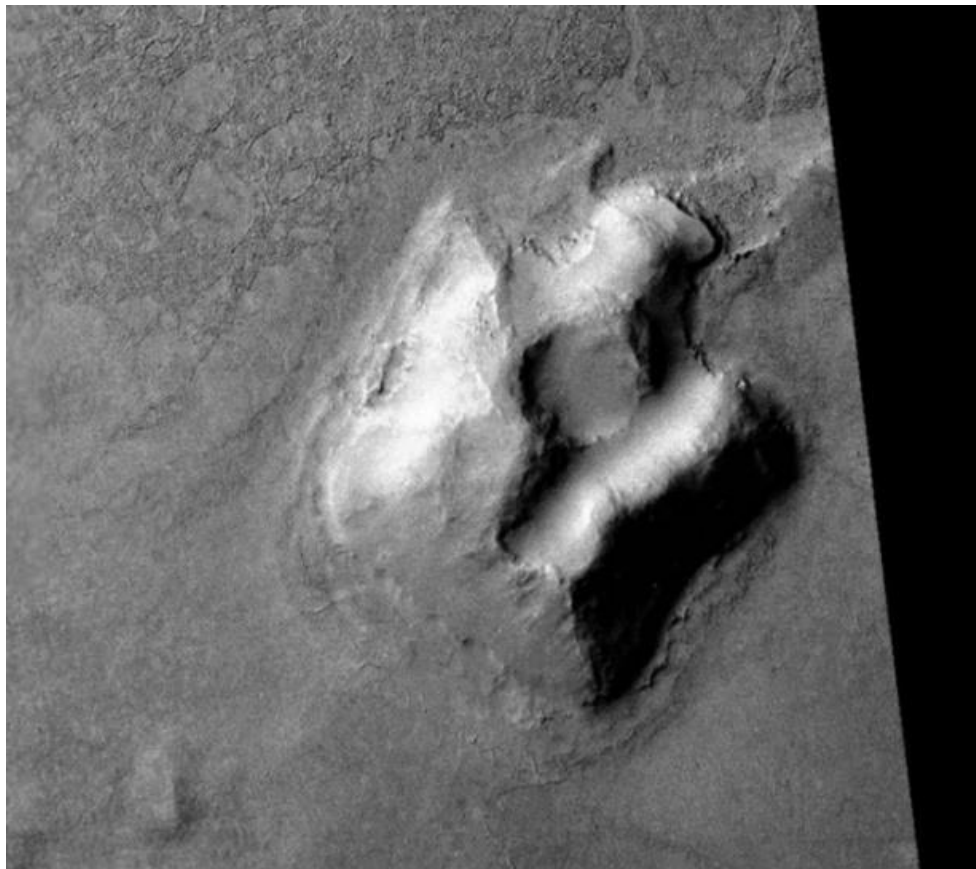


Figure 26

Square Pyramid with Truncated Platform
(Labeled E in figure 25)

Detail MRO HiRISE CTX P22_009821_1848_XI_04N211W (2008)

In 2017 a second image of the Square Pyramid with Truncated Platform was acquired by the MRO HiRISE CTX camera (J19_052347_1865_XN_06N211W) and released in September (Figure 27). The new image was taken in the late morning with a resolution of 5.4 meters per pixel.³⁴



Figure 27

Square Pyramid with Truncated Platform
(Labeled E in figure 25)

Detail MRO HiRISE CTX, J19_052347_1865_XN_06N211W (2017)

Here is an outlined version of the Square Pyramid with Truncated Platform showing its interior form and geometric symmetry (Figure 28).

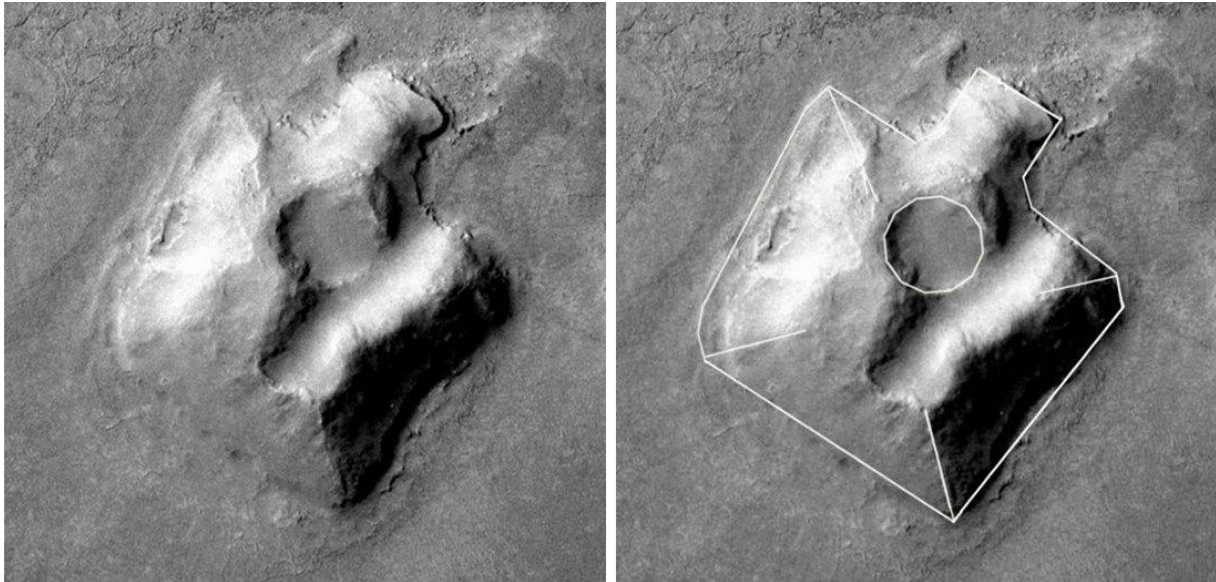


Figure 28

Square Pyramid with Truncated Platform (Labeled E in figure 25)

Left: Detail MRO HiRISE CTX, J19_052347_1865_XN_06N211W (2017)

Right: Outlined by George J. Haas

Comparable Terrestrial Formations

The Square Pyramid with Truncated Platform brings to mind many of the earthen mounds built by the early indigenous peoples of North America. One example is located near the Harpeth River in Cheatham County, Tennessee at a site called Mound Bottom.³⁶ Acquired by LiDAR (Light Detection and Ranging) the image shows a square-shaped mound with a short ramp (Figure 29). Its overall design looks very much like its companion on Mars.

Figure 29

Square Mound with short ramp
Cheatham County, Tennessee
LiDAR Image courtesy the Tennessee
Division of Archaeology



The Square Pyramid with Truncated Platform also has an uncanny resemblance to a massive pyramidal mound produced on the other side of the world, within the Sechin Alto, area of Peru (Figure 30).

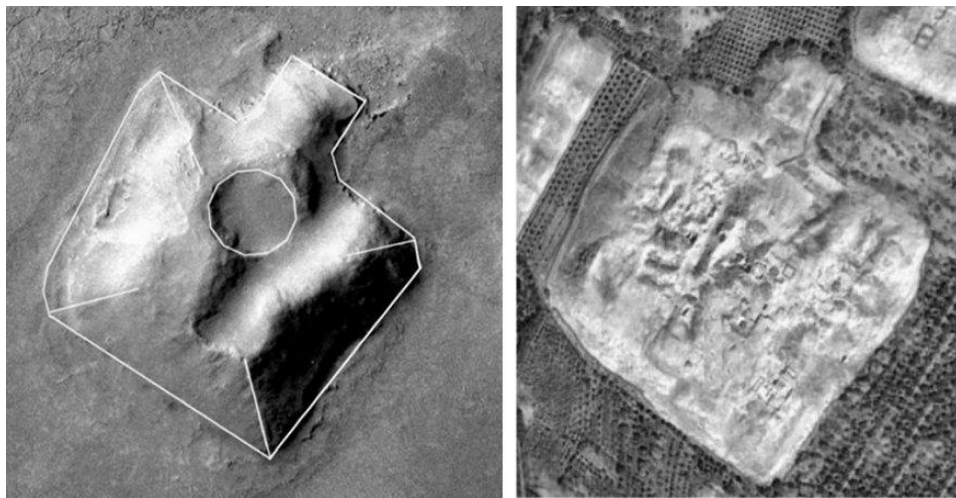


Figure 30

Square Pyramid with Truncated Platform

Left: Mars, detail MRO HiRISE CTX, J19_052347_1865_XN_06N211W (2017).

Outlined by George J. Haas

Right: Sechin Alto, Peru (2000 BC).

Image source: Google Earth

The ruins of this massive formation, which date back to around 2,000 BC, are just a small part of one of the largest architectural complexes ever built in Pre-Columbian America³⁷ (Figure 30). Notice the square shape of the mound and the truncated neck, or ramp feature that extends from the north western side.

The Raptor Zone Complex - Alignments

I direct your attention back to the overall arrangement of the Raptor Zone Complex (Figure 31). I have labeled the areas of interest A through F and their alignments *a* through *f*. I started with the Raptor Head geoglyph (Labeled A in figure 31), because it is position at the northern most sector of the complex and it is the eagle that is often equated with the Sun. It is believed that not only does the eagle have keen eyesight but it also has the ability to gaze directly into its fiery blaze and is therefore is regarded as the standard of divine vision.³⁸

Looking at the eye feature of the Raptor Head geoglyph, I notice the eye formation (Labeled *a* in figure 31) has a direct alignment with the central apex of the Four-sided Pyramid with Conjoined Mound (Labeled B in figure 31). Following the lower south, western spine (Labeled *c* in figure 31) of the Four-sided Pyramid with Conjoined Mound, from the central apex, it is aligned with the western edge of the Square Pyramid (Labeled C in figure 31). The south eastern spine (Labeled *b* in figure 31) of the Four-sided Pyramid with Conjoined Mound (Labeled B in figure 31)) is aligned with the central apex of the Pentagonal Mound (Labeled D in figure 31). The location of the three spine alignments of the Four-sided Pyramid with Conjoined Mound, labeled *a*, *b*, and *c* is illustrated in figure 32.

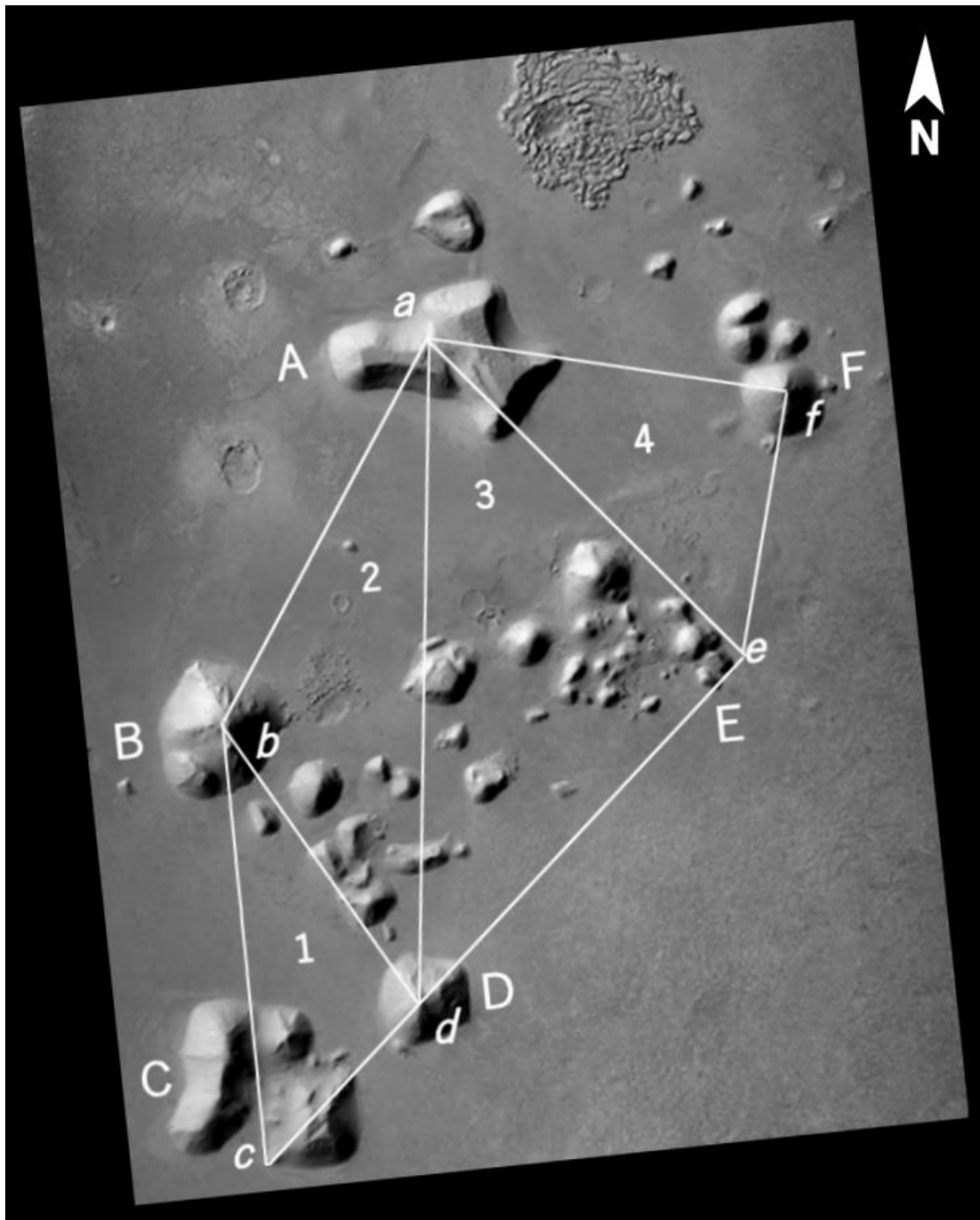


Figure 31

Raptor Zone Complex – Alignments

Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Notated by George J. Haas

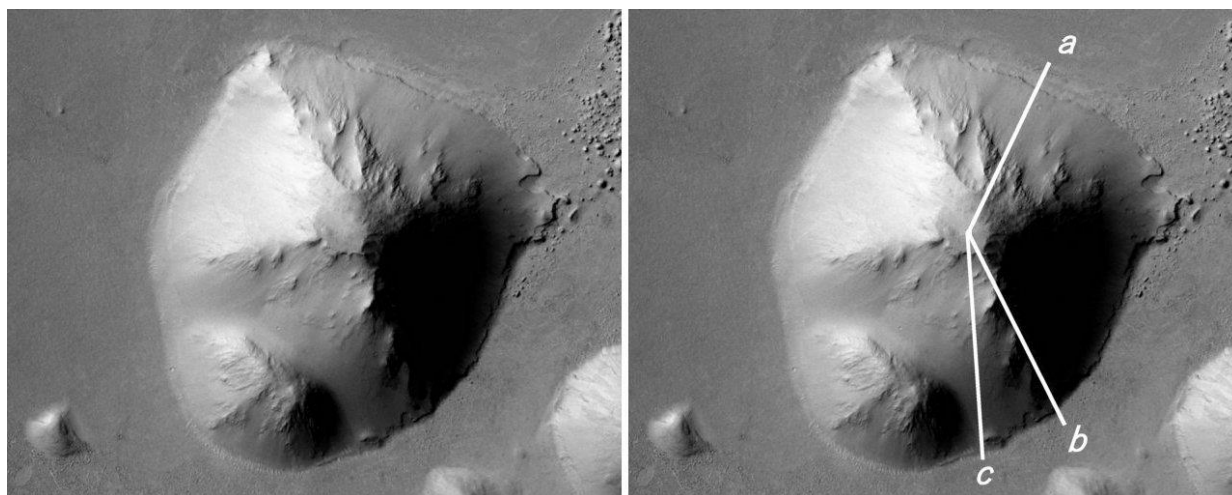


Figure 32

Four-sided Pyramid with Conjoined Mound Alignments (Labeled B in figure 31)

Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Notice spine alignments *a*, *b*, and *c*

Notated by George J. Haas

Moving down to the Mound Cluster (Labeled C in figure 31), notice the lower south western point of the Square Mound (Labeled *c* in figure 31) is aligned up through the mounds north eastern point (Labeled *d* in figure 31) and extends out to the central axis of the Pentagonal Mound (Labeled D in figure 31). The location of these two spinal alignments, labeled *c* and *d* of the Square Mound is illustrated in figure 33.

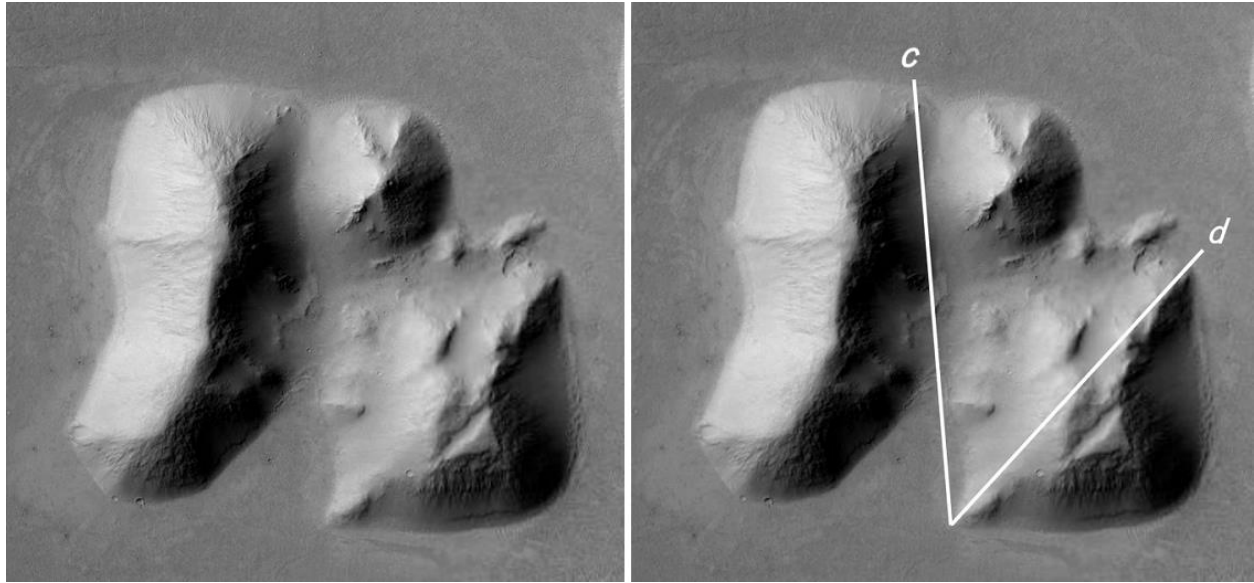


Figure 33

Square Mound Alignments (Labeled C in figure 31)

Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Notice spine alignments *c* and *d* on the Square Mound. Notated by George J. Haas

The Pentagonal Mound (Labeled D in figure 31) has four alignments points. The first begins at the eye (Labeled *a*) of the Raptor Head geoglyph (Labeled A in figure 31) that runs through the north spine of the Pentagonal Mound (Labeled D in figure 31) to its central apex. The second alignment starts at the north wester spine (Labeled *b* in figure 31), which aligns with the south eastern spine of the Four-sided Pyramid with Conjoined Mound (Labeled B in figure 31). The third alignment cuts through the Pentagonal Mound along a south to west diagonal, extending from point *d* to its north eastern spine (Labeled *e* figure 31). Notice the alignment of point *d* extends out along the top of the Turkey Head Nodule. The alignment of point *d* extends down to the Square Mound (Labeled C in figure 31) intersecting at the corner points *c/d*. The final alignment follows the south western point of the Pentagonal Mound (Labeled *d*) and exits at the north eastern spine (Labeled *e*). Point *e* aligns with the corner of the Rectangular Cluster of Mounds (Labeled E in figure 31). The location of the four alignments, labeled *a*, *b*, *d* and *e* of the Pentagonal Mound is illustrated in figure 34.

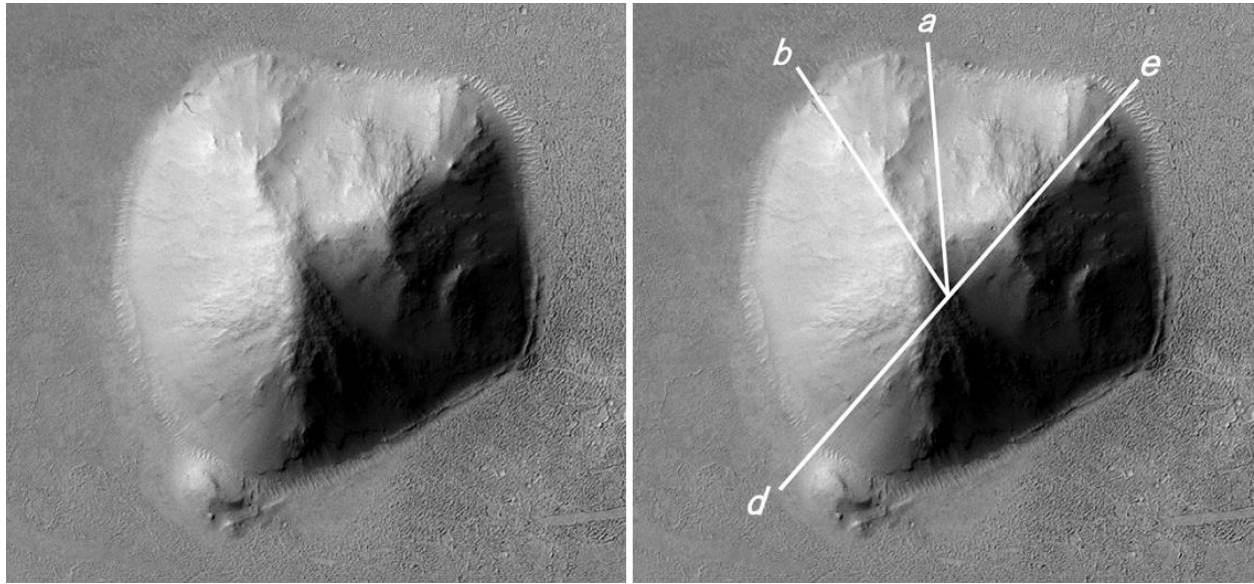


Figure 34

Pentagonal Mound Alignments (Labeled D in figure 31)

Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Notice spine alignments *a*, *b*, *d* and *e*

Notated by George J. Haas

The eye (Labeled *a* in figure 31) of the Raptor Head geoglyph (Labeled A in figure 31), is also directly aligned with the western spine of the main pyramidal mound of the Eastern Mound Cluster (Labeled F in figure 31). The southern spine of the main pyramidal mound of the Eastern Mound Cluster (Labeled F in figure 31) is aligned with the eastern corner of the Rectangular Cluster of Mounds (Labeled *f*/*e* in figure 31). The two spine alignments identified as *a* and *f* are illustrated in figure 35. The alignments of the two angles found within the main pyramidal mound of the Eastern Mound Cluster, identified as *a* and *f*, is illustrated in figure 35.

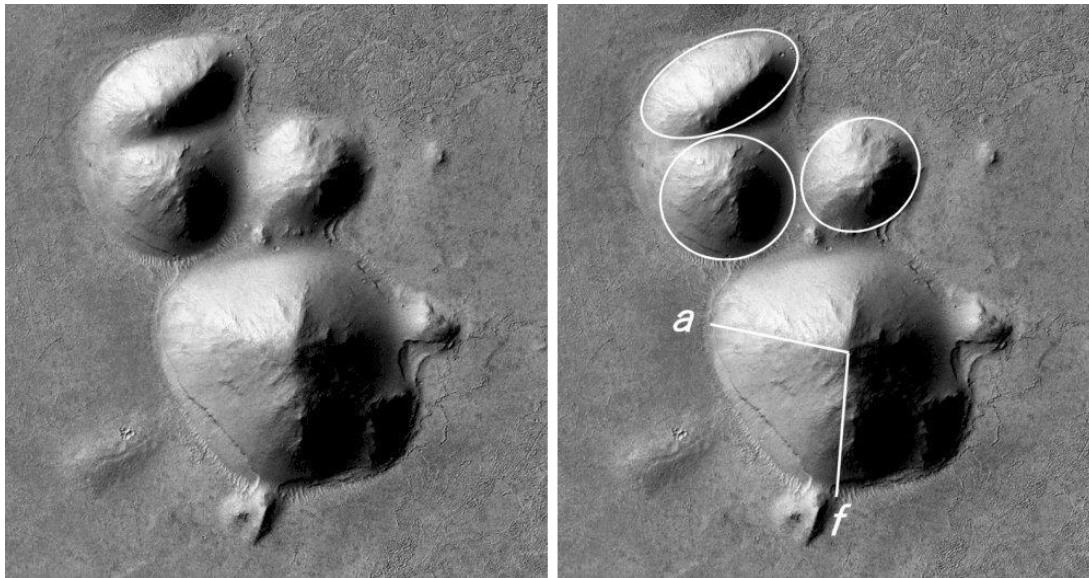


Figure 35

The Eastern Mound Cluster (Labeled E in figure 31)

Detail MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008)

Notice spine alignments *a* and *f* on the main pyramidal mound. Notated by George J. Haas

Notice there is also a small claw-shaped mound attached to the south, western side of the main pyramidal mound within the Eastern Mound Cluster (Labeled E in figure 31). The claw-shaped mound has a flat edge, which is aligned with the spine labeled *f* in figure 31. The claw-shaped mound may have been intentionally placed here as an alignment guide (Figure 35).

These multiple alignments that I have observed throughout the Raptor Zone Complex create four triangular zones, labeled 1, 2 3 and 4. A very similar set of triangular alignments was discovered over 20 years ago just beyond the Face on Mars at Cydonia.

Cydonia Mound Alignments

In 1999 Dr. Horace Crater and Dr. Stanley McDaniel had a paper published in the Journal of Scientific Exploration titled; *Mound Configuration on the Martian Cydonia Plain* that explored an arrangement of six mounds located in the Cydonia area of Mars. The six mounds, which are located between much larger formations to their north and south, are labeled P, G, E, A, D, and B (Figure 36).

When lines are drawn from the estimated centers of mounds P, G, E, A, and D, B and a second set drawn from mounds P, E and G, A, that form a parallelogram P,G,E,A. The triangles drawn from mounds P, G, E and G, E, A create right triangles that contain the same angles and are also of the same size. The triangles drawn for mounds G, A, D, and A, B, D are again right triangles containing the same angles as P, G, E and G, E, A. Crater and McDaniel noticed that although different in size, the right triangle E, A, B have the same angles and same size as the isosceles triangle E, A, D. They suggest that the angles are such that if it were bisected at the vertex at mound D, then it would be split into two right triangles that closely match the right triangle A, D, B, in both angles and size.³⁹

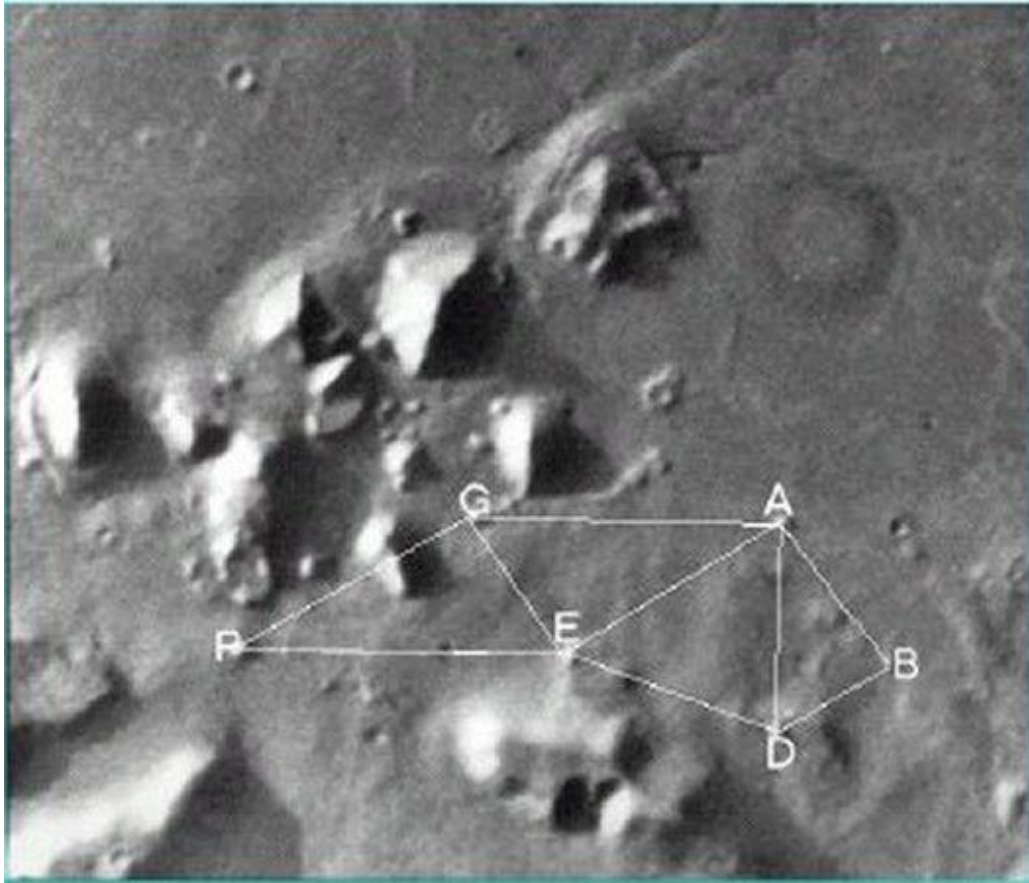


Figure 36

Cydonia Mound Alignments

Viking image 35A72 (1976)

Note parallel lines, right and isosceles triangles

Courtesy, Crater and McDaniel

These four triangular alignments are very similar to what I have observed within the arrangement of the geometrically-shaped mounds and pyramids found at the Raptor Zone Complex. Perhaps this is additional evidence to support a common structural arrangement on a massive planetary scale. After examining these structures for himself, Dr. John Brandenburg has added this site to his *Dead Civilization Hypothesis*,⁴⁰ which presents strong evidence for a widespread dead, humanoid civilization on Mars.

I recommend that both NASA and the ESA imaging teams direct their current orbiting spacecraft to acquire additional images of these anomalous surface features. New images should be acquired at different times of day and seasons, under various sun angles for further analysis. If these formations are found to be consistent under higher resolution imagery, I would encourage the pursuit of a robotic "ground truth" expedition and recommend this site be a prime candidate for a human mission to study the potential existence of archaeological artifacts on Mars.

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Footnotes

1. Jean Ward, *Cydonia 2.0 – A Mars MRO Epic*, Raptor Zone, June 27, 2018.
<http://mars.raptorzone.co.za/2018/06/27/cydonia-2-0-a-mars-mro-epic/>
2. USGS Astrogeology Science Center, Gazetteer of Planetary Nomenclature.
3. Sacks, David, *A Dictionary of the Ancient Greek World*, (Oxford University Press US, 1997), pp. 8, 9.
4. Mars Viewer, *Ride-along with HiRISE*, MRO HiRISE CTX, P20_008753_1876_XN_07N211W, June 8, 2008.
5. On his web site, Raptor Zone Mars Anomalies, Ward uses a quote by Mars researcher, Will Farrar, of the WhatsUpInTheSky Youtube channel; "I see what I see, you see what you see." <https://whatsupinthesky.com/index.php/bios/will-farrar>

6. Mars Viewer, *Ride-along with HiRISE*, MRO HiRISE CTX, F17_042576_1875_XN_07N211W, August 27, 2015.
7. Personal communication with James S. Miller, January 16, 2020. Miller is an image analyst and member of The Cydonia Institute. Measurements were made utilizing the ancillary data for MRO HiRISE CTX image F17_042576_1875_XN_07N211W (2015), provided by The University of Arizona: Lunar and Planetary Laboratory.
8. Richard C. Hoagland, *The Monuments of Mars: A City on the Edge of Forever*, 5th ed. Edition, (Frog Books/Berkeley California, 2001), 17.
9. Mars Odyssey THEMIS image V03945003, *Acidalia Planitia*, dated June 10, 2003.
<http://viewer.mars.asu.edu/planetview/inst/themis/V03945003#start>
10. Eric C. Lausch, (aka Johnny Danger) *Lowell's Legacy*, Part 6, 2004,
<http://palermoproject.com/lowell2004/legacy6.htm>.
11. Ibid.
12. Mars Image Explorer, MRO Context Camera, CTX: P19_008429_2226_XN_42N009W, dated May 14, 2008.
13. The Eagle Head Crater at Cydonia is located at the northern most sector of a complex of avian and deer geoglyphs below it. See: George J. Haas, *The Cydonia Aviary*, The Cydonia Institute: Field Journal, Vol. 8 No. 1, January 2010.
14. Personal communication with Jean Ward, February 20, 2020. Ward also noticed this flat area at the apex of the Four-sided Pyramid with Conjoined Mound.
15. Mars Viewer, *Wafra Crater and surrounding terrain*, MRO HiRISE CTX, K04_054760_1852_XN_05N211W, April 2, 2018.

16. Personal communication with James S. Miller, March 15, 2020. Miller is an image analyst and member of The Cydonia Institute. Measurements were made utilizing the ancillary data for MRO HiRISE CTX image K04_054760_1852_XN_05N211W (2018), provided by The University of Arizona: Lunar and Planetary Laboratory.

17. Miller, Mary Ellen, *Art of Mesoamerica: From Olmec to Aztec*. London, (UK: Thames & Hudson Australia, 2012), 70-74.

18. Kelly Hearn, Teotihuacan, *The Mayan city in today's Mexico has mysterious origins*, Science/Reference, National Geographic, January 5, 2020.

19. Personal communication with James S. Miller, March 15, 2020. Miller is an image analyst and member of The Cydonia Institute. Measurements were made utilizing the ancillary data for MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008), provided by The University of Arizona: Lunar and Planetary Laboratory.

20. John T. Irwin, *The Mystery to a Solution: Poe, Borges, and the Analytic Detective Story*, (JHU Press, 1996), 47.

21. Mars Viewer, *Wafra Crater and surrounding terrain*, MRO HiRISE CTX, K04_054760_1852_XN_05N211W, April 2, 2018.

22. Laylin, Taflin, *Modular SPACEPLATES Greenhouse Mimics the Geometry of Sea Urchin Shells*, Inhabitat, May 29, 2012.

23. Ohio History Connection, *Miamisburg Mound*, ohiohistory.org, accessed, February 22, 2020. .

24. Jay Robinson, *Miamisburg Mound State Memorial*, Miamisburg Historical Society. http://www.miamisburg.org/miamisburg_mound_park.htm, Accessed March, 22, 2013.

25. Ibid.

26. John T. Irwin, *The Mystery to a Solution: Poe, Borges, and the Analytic Detective Story*, (JHU Press, 1996), 47.

27. Personal communication with James S. Miller, March 15, 2020. Miller is an image analyst and member of The Cydonia Institute. Measurements were made utilizing the ancillary data for MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008), provided by The University of Arizona: Lunar and Planetary Laboratory.

28. Personal E-mail communication with William Saunders, *Re: The Raptor Zone Complex revised*, February 23, 2020. Saunders noticed that when he rotated the formation 90 degrees he noticed the little mound looks like a turkey head

29. While examining the Viking files in search of alternative photographs of the famous Face on Mars, a pair of independent scientists DiPietro and Molenaar found a five-sided pyramid. From this point on, early researchers began referring to this peculiar structure as the D&M Pyramid, named after its discoverers DiPietro and Molenaar

30. Personal communication with James S. Miller, March 15, 2020. Miller is an image analyst and member of The Cydonia Institute. Measurements were made utilizing the ancillary data for MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008), provided by The University of Arizona: Lunar and Planetary Laboratory.

31. The Square Mound with Truncated Platform was also discovered earlier by Jean Ward.

See, Jean Ward, *Cydonia 2.0 – A Mars MRO Epic*, Raptor Zone, June 27, 2018.
<http://mars.raptorzone.co.za/2018/06/27/cydonia-2-0-a-mars-mro-epic/>

32. Mars Viewer, *Platy flow surfaces in Zephyria region*, MRO HiRISE CTX, P22_009821_1848_XI_04N211W, August 30, 2008.

33. Personal communication with James S. Miller, March 15, 2020. Miller is an image analyst and member of The Cydonia Institute. Measurements were made utilizing the ancillary data for MRO HiRISE CTX image P20_008753_1876_XN_07N211W (2008), provided by The University of Arizona: Lunar and Planetary Laboratory.

34. Mars Viewer, *Ride-along with HiRISE*, MRO HiRISE CTX, J19_052347_1865_XN_06N211W, September 26, 2017.

35. LIDAR (Light Detection And Ranging), is a remote sensing method that uses a pulsed laser to measure ranges (variable distances) to the Earth. These light pulses are combined with other data recorded by the airborne system, which can generate precise, three-dimensional information about the topography of the Earth and its surface characteristics.

36. Aaron Deter-Wolf, *Ongoing Research at Mound Bottom State Archaeological Area, 30 Days of Tennessee Archaeology, Day 7*, Tennessee Archaeology Council, September 7, 2018.

37. Burger, R. L. *Chavín and the Origins of Andean Civilization*, (Thames and Hudson, London), 1992, 77-80.

38. Hope B. Werness, *The Continuum encyclopedia of animal symbolism in art*, (London: A&C Black, 2006), 152, 152.

39. Dr. Horace Crater and Dr. Stanly McDaniel, *Mound Configuration on the Martian Cydonia Plain*, Journal of Scientific Exploration, Vol 13, no. 3, 1999, pp. 373-400.

40. Personal communication with Dr. John Brandenburg via E-mail, dated March 3, 2020.