Thesis

Shedding Light on the Strong Astronomical Association of the Matsuyama-Shiraishi-no-hana Megaliths

Kunihiko Shinozawa

The Shiraishi-no-hana (the small cape-of-the white stone) megaliths stand tall above the sea off the coast of the suburbs of Matsuyama City, Ehime Prefecture, Japan. These marine megaliths are strongly associated with the movement of the sun. Through more than 10 years of close observations, I have proved that gaps formed in the megaliths and their arrangements are aligned with the path of the sun during the spring and autumn equinoxes and summer and winter solstices. As part of efforts to revitalize the local community through the sun-aligned megaliths, I have taken every opportunity to hold viewing events around the time of the equinoxes and solstices.

1. Introduction

In this thesis, I would like to shed light on the strong astronomical association of the Matsuyama-Shiraishi-no-hana megaliths located in Matsuyama City, Ehime Prefecture, Japan.



FIG.1 The "Three Giant Stones" (Three Stones) form a major part of the Shiraishi-no-hana-megaliths.

In January 2008, I found the awe-inspiring megaliths quite serendipitously, and started studying them. Following the discovery, I have spent more than 10 years devotedly working on studying the megaliths and revitalizing the local community through them. Specifically, I have held sunset-viewing events as many as 44 times around the time of the equinoxes and solstices so that people can enjoy viewing the megaliths accentuating the rays of the setting sun. I have also held symposiums seven times to share the results of my studies with experts and professionals. During this period, my studies have received extensive coverage from various Japanese media such as Japan's national broadcaster NHK, and major and local newspapers and TV stations. Here, I would like mainly to discuss the association of the megaliths with the movement of the sun.

2. Alignment with the sun's path during the spring equinox

In January 2008, I was driving along the coast in Matsuyama city to a business appointment. I was humming, while completely relaxed. However, as soon as I turned a corner, the Three Stones of the marine megaliths (actually, they consist of five boulders) suddenly came into view. I knew nothing about the Three Stones until that moment. but thev were SO overwhelmingly impressive that I decided to

stop and check them out on the way back from my appointment.

I walked down to the ground of the Shiraishi-ryu (the white stone-dragon) shrine, and considered the marine stones standing tall just about 50 meters ahead of me. At that moment, I had a flash of insight that the massive stone structure is not natural. I started to suspect that the stone structure had been constructed by humans. Since I had grown up with a strong interest in the ancient Egyptian and Mayan civilizations. I knew that the massive ancient structures of those periods had been built in astronomical close association with alignments. Therefore, I hypothesized that, if the Three Stones were remnants from the ancient times. they too had been deliberately placed to synchronize with the path of the sun. I decided to verify this hypothesis at the earliest possible opportunity. On the spring equinox of March 20, 2008, despite being very busy with a work deadline drawing near, I rushed to the megaliths after work. As I was studying the movement of the sun, just as expected, I was able to witness the sun setting behind the Three Stones and the rays of the setting sun passing through the gap formed in the Three Stones and drawing a beautiful orange straight line on the surface of the sea.



FIG.2 The sun's rays are beaming through a gap in the Three Stones around the time of the spring equinox.

This surprising and deeply moving experience has become an unforgettable memory. It literally stirred my soul. However, I knew I should not let down my guard because I had only proved at that point that my hypothesis works only on the spring equinox. I soon turned my attention to the next summer solstice, and decided to continue to study carefully until I could prove that there is a strong association between the megaliths and the path of the sun at the solstices and autumn equinox.

3. Alignment with the sun's path during the summer solstice

Actually, it was when I found that viewed from the Shiraishi-ryu shrine, the three small stones neighboring the Three Stones seem to form an imaginary groove on a straight line that I began to think that there was a hint that these megaliths as well were designed by humans. I later named them the "Three Stones of the Summer Solstice" (Three Summer Solstice Stones). The three "small" stones are, in fact, big rocks weighing more than one ton each that extend firmly and integrally from a rock bed. Therefore, these stones are immovable. It appeared to me that the bed rock had been drilled to form a straight-line groove (See the yellow arrow). Also another groove appeared to be drilled pointing toward the straight-line groove (See the red arrow).



FIG.3 Summer Solstice Stones

On the summer solstice, the sun sets at about 30 degrees north of due west (270 degrees) on the horizon, which corresponds to an azimuth of about 300 degrees of due north. When viewed from the gate of the Shiraishi-ryu shrine, the imaginary straight line is formed between the Three Summer Solstice Stones, and extends at an azimuth angle of about 299 degrees of due north. On the very day of the summer solstice, I observed that the sun was setting behind the mountains on Gogoshima Island located on the other side, illuminating the sea surface. At last, the rays of the setting sun did beam a straight orange line through the groove formed between the Three Summer Solstice Stones. After successfully establishing that there is а strong synchronization of the megaliths with the path of the sun on the spring equinox (i.e., on the autumn equinox as well) and summer solstice, I started trying to raise awareness of the megaliths, believing that we must preserve them as a public treasure (property) rather than keeping them to myself.

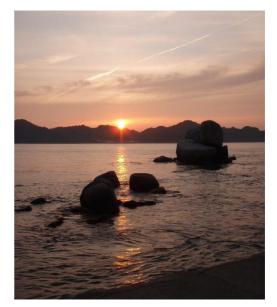


FIG. 4 The rays of the setting sun are beaming through the Three Summer Solstice Stones

4. Holding a sunset-viewing event

On September 19, 2008, I held the first sunset-viewing event, inviting about 20 people mainly through the local community center. To my surprise, very few of the local people knew that the gap was formed in the Three Stones, let alone appeared to have given any thought to its astronomical association with the sun. We watched the sun setting behind the Three Stones, gradually lowering its altitude. As the sun's rays passed through the gap, shining an orange straight-line on the sea surface, everyone oohed and aahed, admiringly saying "This is fantastic!" "I've never seen anything like this before!" That was the the Shiraishi-no-hana moment that megaliths made their debut to the local community. I set up a Matsuyama Shiraishino-hana investigative megaliths committee along with the assistant manager and supervisor of the community center and others who participated in the event, and launched various activities for the megaliths.



FIG. 5 Sunset-viewing event of autumn 2008

5. Alignment with the sun's path during the winter solstice

In September 2009, I held the first symposium on the Shiraishi-no-hana megaliths, inviting Mr. Yoshiki Kobayashi and Ms. Shiho Tokuda of the Kanayama Megalith Research Center from Gifu prefecture as lecturers. I took them to the Shiraishi-no-hana cape to explain on the spot the associations that I had established between the Three Stones and the path of the sun on the spring and autumn equinoxes and between the Three Summer Solstice Stones and the path of the sun on the summer solstice. The commonly called "Kame-ishi Stones" or "Turtle Stones" located on the shore seemed to particularly capture the attention of Mr. Kobayashi and Ms. Tokuda. They walked around the stones over and over again. I knew that the Kameishi Stones form a gap. I always had had the feeling that the stone structure was built by humans, but I had no clue as to its significance at that time.



FIG. 6 Kame-ishi Stones



FIG. 7 A gap is formed in the Kame-ishi Stones.

Following their advice, I began to investigate those stones, and successfully uncovered the mystery of the gap at the next winter solstice about 1 year later. The Kame-ishi Stones form not only a gap, but also a passage that extends a few meters from the gap. I was clueless about how and when sunlight would enter the gap and penetrate through the passage. I made a chalkboard from cardboard about 2 weeks before the winter solstice, placed it at the exit of the passage so that if a beam of sunlight did penetrate through the passage, it would reflect off the chalkboard, and I patiently observed there. The passage extends along a straight line, but with a wave-like undulating shape, thereby making the passage traversable by a beam of light very narrow---only about 10 centimeterswide. During the several days of observation, a beam of sunlight came close to passing

through the passage every day, but each time it ultimately failed. I came to realize through the persistent effort that the sunlight would penetrate through the passage about one hour before the sunset, i.e., a little past 16:00 during the winter solstice, rather than at the time of the sunset. First, a very faint and indistinct light reflection was detected on the chalkboard, but soon after that, a direct beam of sunlight clearly appeared on the chalkboard, thereby establishing that the rays of sun beam through the long narrow passage of the Kame-ishi Stones.



FIG. 8 The sunlight is about to pass through the passage of the Kame-ishi Stones.



FIG. 9 The sunlight passed through the passage of the Kame-ishi Stones.

The excitement that I felt at that time was very powerful, and also has become unforgettable. After I looked all over for the right spot for observation, I finally found it. From there, a direct beam of sunlight that you can observe is not blinding; it is very mysterious because the rays of the sun come through a very small space of the passage. The sight was very mesmerizing. Everyone who came to see the aweinspiring sight oohed and aahed. One viewer was so amazed and said, "I just saw the mystery of the universe."



FIG. 10 The sunlight passed through the passage of the Kame-ishi Stones.

The day became a very special day for me because I finally established on that day that the Shiraishi-no-hana megaliths have gaps, shapes, and stone arrangements that are clearly associated with the path of the sun on all the equinoxes and solstices.

6. Accurate prediction of the sun's path

I continued to make close observations to predict the path of the sun accurately, while also holding sunset-viewing events for the local community. After a process of much trial and error, the accuracy of my predictions gradually improved. As previously explained, first I established that the Three Stones are closely associated with the path of the sun during the spring equinox (around March 21), and then successfully held a sunset-viewing event with the local people on September 19, which was on a weekend, four days before the autumn equinox (September 23). Half a year later, I went on to hold another sunsetviewing event on March 15 of the next year, five days before the spring equinox (March 20). When I observed the sunset on March

14, one day before the event, the sun was setting farther south of the Three Stones at a point which was nowhere near the point that would align with their gap. On the day of the event, about thirty locals, including a reporter from a leading national newspaper Yomiuri-Shimbun, came to see a sunset where the rays of the sun would penetrate through the gap of the Three Stones. However, against all expectations, the sun set farther south of the stone structure. This provoked a sense of disappointment and even derision toward me among the participants. One participant was frustrated enough to say, "We could have seen it, had the Three Stones been situated farther to the left." Later, I found out why the event failed. The sun moves very fast around the spring and autumn equinoxes, shifting the position of the sunset by about 0.5 degrees along the horizon every day. In other words, the position of the sunset will vary by about 2.5 degrees in five days. The sun's path gradually shifts southwardly from north to south around the spring equinox. In other words, the sun's path shifts gradually from right to left when the Three Stones are viewed from the usual observation spot. On the other hand, the sun's path shifts gradually from south to north (from left to right) around the autumn equinox, changing the position of the sunset.

The gap of the Three Stones is opened at an azimuth angle of about 269.5 degrees (almost due west) when viewed from the usual observation spot, not at exact 270 degrees (due west). This means that the sun's rays penetrate through the gap when the sun sets north of azimuth 270 degrees on the horizon, and do not enter the gap when it sets south of azimuth 270 degrees. It is easy to understand why the gap is not formed to open exactly at an azimuth angle of 270 degrees. Since the low mountains on Gogoshima Island stand ahead of the megaliths, the sun sets slightly south of azimuth 270 degrees, rather than setting on the horizon.



FIG.11 Movements of the sun around the autumn equinox.

After many years of close observations, it has become apparent that the sun's rays precisely begin to penetrate through the gap on the day of the spring equinox, and continue to do so for about one week from the spring equinox. On the other hand, the sun's rays always begin to penetrate about one week before the day of the autumn equinox, continue to do so until the autumn equinox, and precisely stop entering the gap on the day following the autumn equinox.

Latitude:33.9070° Longitude:132.7098° Altitude: 0.0 m			
Date	Sunset	Azimuth	Sun's rays viewed from the
	time	angle	observation spot
Sep. 19, 2009	18:11	272.2	Penetrated
Sep. 20, 2009	18:09	271.7	Penetrated
Sep. 21, 2009	18:08	271.3	Penetrated
Sep. 22, 2009	18:06	270.8	Penetrated
Sep. 23, 2009	18:05	270.3	Penetrated (autumn equinox)
Sep. 24, 2009	18:04	269.9	Did not penetrate
Sep. 25, 2009	18:02	269.4	Did not penetrate

Table 1 Azimuth angles of the sunset around the autumn equinox¹)

To illustrate how the positions of the sunset change around the spring and autumn equinoxes, I often use the following literary analogy: "The dragon descends from the sky on the spring equinox and ascends to the sky on the autumn equinox". I feel this kind of astronomical alignment to the Shiraishi-no-hana megaliths is somewhat similar to the one that takes place at one of the Mayan ruins in Chichen Itza, also known as the Temple of Kukulcan (El Castillo) around the spring and autumn equinoxes, where the main stairway of the pyramid combined with the light and shadow cast by the sun creates the illusion of a massive serpent descending the pyramid.



FIG. 12 The Temple of Kukulcan built by the Maya Civilization²⁾

The Temple of Kukulkan is oriented at an angle of 17 degrees of due west so that the shadow of terraces falls on the side of the main stairway. If it was oriented toward due west, the sun light would not fall on the stairway in such a manner to cast a shadow on the side of the main stairway, thereby not creating the illusion of the descent of the snake.

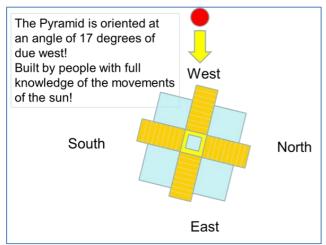


FIG. 13 Orientation of the Temple of Kukulcan

This incredible phenomenon would never occur by accident unless the pyramid was purposefully designed and built by people with full knowledge of the movements of the Their sun from the very beginning. remarkable astronomical knowledge and architectural techniques amaze us still today. Now I would like to bring the subject back to the Shiraishi-no-hana megaliths. After the sunset-viewing event that I held the Three Summer Solstice Stones, I was captivated by one particular photograph taken by a participant of the event. The photograph had captured the direct beam of the sunlight penetrating through the gap of the Three Stones. Around the time of a low tide during the spring equinox (the autumn equinox as well), you can walk down the shore along an imaginary east-west line (which extends horizontally to the megaliths) to a lower position to gaze up at the gap of the Three Stones and view the sky over the mountains on Gogoshima Island through a slit formed at the top left of the gap.

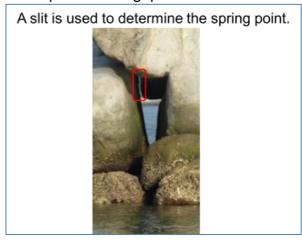


FIG. 14 A slit is formed to determine the spring point.

During the spring equinox (the autumn equinox as well), the sun's rays fall on the slit before the sunset so that you can witness a very mysterious, direct beam of sunlight shining through the slit.



FIG. 15 Direct beam of the sunlight during the spring equinox

Before this discovery, I thought the best way to view this phenomenon was by observing the sun's rays reflected and shining on the sea surface after passing through the gap. Since the discovery, I have become certain that the right way to do so is to observe the direct beam of the sunlight penetrating through the slit from a much lower position along the imaginary eastwest line that extends toward the gap. However, at a normal time of the average sea level, you would need to walk down into the sea and stand chest-deep in the sea to get to the right position to view the direct beam of the sunlight. From this, I assume that the megaliths were used as an astronomical observatory during the times when sea level was much lower than it is today, which then suggests that the megaliths date back to the Jomon Period (10,000-300 BC) preceding the Yayoi Period (300 BC- AD 300) when the sea level was about the same as it is today. However, detailed research on the past sea level is necessary to specify the period when the megaliths were used to determine the dates of the equinoxes and solstices.

7. Overall structure of the Shiraishi-nohana megaliths

Here I would like to illustrate the overall structure of the Shiraishi-no-hana megaliths as known today.

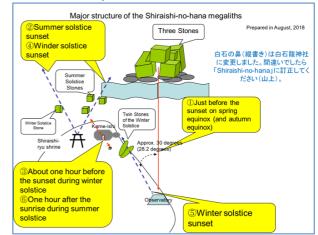


FIG.16 Sketch of the Shiraishi-no-hana megaliths

- When viewed from a place called the "Observatory (spot for observation)", the gap of the Three Stones is opened toward almost due west (approximately azimuth 269.5 degrees). Therefore, you can make an accurate observation before the sunset during the spring and autumn equinoxes.
- ② When viewed from the gate of the Shiraishi-ryu shrine, the Three Summer Solstice Stones are situated at an azimuth angle of about 299 degrees of due north. Therefore, you can observe from there the rays of the setting sun perfectly beaming into a groove extending on an imaginary line.
- ③ The Kame-ishi Stones form a gap and a passage that extends from the gap (about azimuth 233 – 235 degrees). The sunlight passes through the passage about one hour before the sunset during the winter solstice.
- ④ When viewed from the gate of the Shiraishi-ryu shrine, the "Winter Solstice Stone" is located ahead of you on the left. It has a straight cut section that indicates a line that the setting sun

draws during the winter solstice (approximately azimuth 242 degrees).

- 5 When viewed from the Observatory, the rays of the setting sun penetrate between the "Twin Stones of the Winter Solstice" right before the sunset during the winter solstice, drawing a line with light and shadow, which extends parallel to the line etched into the stone at the Observatory (etched line). A gigantic stone is situated to cast a shadow on the line-etched stone. However, there were traces that the gigantic stone had been cut in the early modern period. Had it not been cut out, the line that the setting sun draws would have perfectly coincided with the etched (Approximately azimuth line 242 degrees).
- (6) The Kame-ishi Stones are arranged so that the rays of the rising sun penetrate through their gap and passage during the summer solstice (Approximately azimuth 70 degrees).

As stated above, several regular spots for observation are available during the winter solstice. This is not altogether surprising. People in the early modern period obviously did not want to lose the chance of observing the astronomical wonder on a cloudy or rainy day; they wanted to increase the possibility of observing.

For example, even if the sky suddenly becomes overcast one hour before the dusk and you cannot observe from the spot of (3), you still have a chance of observing the setting sun just before the dusk at the spot of (4) or (5).

Computer systems share the same design concept, using the Network Time Protocol or NTP (time synchronization server) to synchronize the time of computers over a network. A typical NTP

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configuration design approach utilizes redundant servers to increase the constant availability of NTP servers, thereby preventing trouble from happening.

8. The Shiraishi-no-hana megaliths viewed from the sky

Recently, abundant aerial imagery is becoming widely available on Google Maps or other websites for research and study of massive rock formations (dwelling places of gods or spirits) and megalithic structures. It is indeed amazing that the available aerial imagery allows us to observe them from different perspectives and gain a deeper understanding of them.



FIG. 17 Aerial photograph of the Shiraishi-no-hana megaliths (Google Maps³⁾)

As you can see on the aerial photograph, the white beautiful shape of the Three Stones particularly stands out because of their massive sizes. If you draw a line between the observatory and the Three Stones, you can find that the line will align beautifully with the imaginary east-west line. A plurality of giant stones that are considered important are situated along this imaginary east-west line. A myriad of giant stones also cluster together under water as if they are placed to support the Three Stones. However, no giant stones are found anywhere else. I drew two lines on the aerial photograph, one extending from the shrine gate to the Three Summer Solstice Stones along the line that the setting sun would draw during the summer solstice and the other extending from the shrine gate to the Winter Solstice Stone along the line that the setting sun would draw during the winter solstice. Now the ground of the Shiraishi-ryu shrine is covered with concrete completely. However, I assume that a stone or other marker used to be situated at the point of intersection under the concrete, serving as a spot for observation.

9. Using drone images for close examination

Let me show you a photograph of the Three Stones that I took from a boat at sea. Mr. Masaaki Kimura, a distinguished marine geologist and a professor emeritus at the University of Ryukyus (Okinawa, Japan) visited us in September, 2012 to give us a lecture and observe the megaliths. After close examination. Mr. Kimura concluded that the stones and their arrangements are so unreal that no natural science can offer a proper explanation that they are natural. He said, "I am 200% sure that they are a monument.4)", citing the features of Stones B and D as the number one reason. That is, Stone B has a round bottom but has a top that has been cut to be flat and smooth, while Stone D also has a surface that has been cut to be flat and smooth. Mr. Kimura argued that these features are so unnatural that they cannot be explained by natural weathering and erosion.

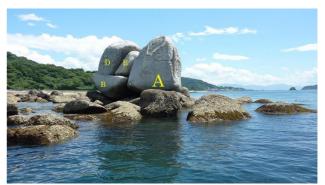


FIG.18 The Three Stones from a boat at sea

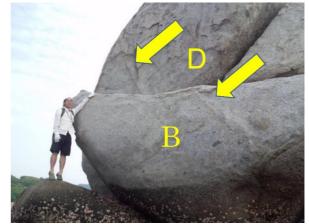


FIG.19 Orange lines of the Three Stones

In addition to these unnatural features, there were lines that I had always considered strange. Stones B and D also have the same orange lines that are tilted at the same angle. I wanted to find out why these lines were on the stones. Then, a local printing company (Sakawa Printing Co., Ltd.) cooperated in providing me with the drone images of the megaliths.



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FIG.20 Video taken by a drone "Ehime"⁵⁾ (Sakawa Printing Co., Ltd.)

Stone D has a deck-like top that has been cut to be flat and smooth, which implies that Stone D is formed so that a different stone (or an object) may be placed on the top.



FIG.21 Video taken by a drone "Ehime" (Sakawa Printing Co., Ltd.)

Next, I tried to find an answer about the lines on Stones B and D.



FIG.22 The lines align with each other.



FIG.23 The lines align with each other. (Enlarged photo)

Then, I found out that the orange lines on Stones B and D align with each other as if to form the same line in color and width. Stones B and D used to be a unitary giant stone of the same rock body, but it was cut to form Stones B and D. Then, Stone D was shifted backward and to the left, thereby forming a gap between Stones A and D, which is large enough to place a relatively small boulder (Actually, I assume that the relatively small boulder weighs nearly 100 tones).



FIG.24 Video taken by a drone "Ehime" (Sakawa Printing Co., Ltd.)

Accordingly, Stones D and E are not continuous by any means. For example, Stone E has a relatively round, natural shape on the right side, but has a straightcut section on the left side, which does not match Stone D in any way. Therefore, it is apparent that Stones D and E do not derive from the same rock body. Many geologists often turn to a theory of exfoliation joint formation in granite when they explain how a straight-cut section of a giant stone is formed, i.e., a giant stone can be naturally cut in half by this theory. However, how would they explain where the other half of Stone E has gone? Also, they explain that a granite corestone in the mountain has turned into a pile of giant stones by natural weathering and erosion, and that the giant stones have been stacked against and atop each other by mere coincidence. However, this explanation is not credible and is not convincing at all.

10. Great location of Gogoshima Island

The mountain looms on the east side of the megaliths, but the sea stretches out on the west side. Therefore, you cannot observe the sunrise towards the east, while you can easily observe the sunset towards the west. Furthermore, on the west side, Gogoshima Island lies ahead of the megaliths with the low mountains, which have an altitude of 1-2 degrees, viewed from the observatory. Without the island situated as it is, it would be extremely difficult for us to observe the positions of the setting sun. Because the island is situated ahead of the megaliths, we can use its low mountains as a landmark or a guide to predict where the sets at certain time of the year, e.g., the sun sets at around this specific area at the foot of this mountain during the winter solstice. If only the sea or sky stretches out as far as the eye can see, with no landmark in sight, you cannot remember exactly where the sun set, thereby making it hard to predict the position of the setting sun at certain time of the year. You can form a straight line, connecting the following 3 positions of your eyes, of the megaliths, and the sun setting behind the mountains of the island, and if you extend the line, you can find the sun, the pillar of the solar system at the end of the line.

FIG. 25 is a simulation diagram prepared by Mr. Motoyasu Higuchi using the stellar navigator. What appears as a figure-8 is an analemma. According to Wikipedia, the analemma⁶⁾ is the figure-8 path that the Sun makes during an entire year against the equation of time. In other words, the analemma is the path of the Sun that can only be traced by photographing the Sun at the same place and at the same time for an entire year and by synthesizing the photographed images. The far-left line indicates the Sun's path during the winter solstice, while the far-right line indicates the Sun's path during the summer solstice. The center line indicates the Sun's path during the spring and autumn equinoxes. This simulation diagram clearly shows that the sun sets behind the Three Stones during the equinoxes.

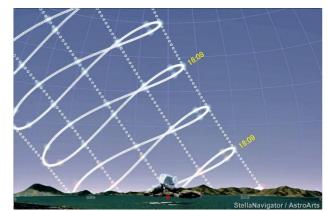


FIG.25 Analysis diagram⁷⁾ prepared by Mr. Motoyasu Higuchi



FIG.26 The Three Stones stand tall against the backdrops of the mountains on Gogoshima Island.

The sun sets behind at the foot of Mount Kofuji, the tallest mountain on Gogoshima Island during the winter solstice. However, the sun sets behind the Three Stones during the spring and autumn equinoxes.



FIG.27 The setting sun during the winter solstice



FIG.27 The setting sun during the autumn equinox

As we have seen, the Shiraishi-no-hana megaliths are uniquely arranged so that their shapes and apertures align with the sun's path during the equinoxes and solstices at at least six locations. Stone structures like the megaliths are rarely found Japan, particularly, throughout stone structures that align with the sun's path during all the equinoxes and solstices and that are situated in a small area like the megaliths. Furthermore, to the best of my knowledge, the distinguishing feature that the Three Stones, a pillar to the megaliths, stands above the sea is rarely found throughout the world.

In my opinion, it is easy to determine the age of the megaliths that are non-organic matter because they rise above the sea rather than lying beneath it. Had they been situated under the sea completely, it would have been extremely difficult to construct and observe the megalithic structure.

When I explain the megaliths, I try my best to separate fact from hypothesis. It is still my hypothesis at present that the marine megaliths are man-made. However, it is the established fact that the megaliths are strongly associated with the path of the sun as I stated throughout this thesis. Therefore, I can reproduce the same results. In fact, for more than 10 years, I have held sunsetviewing events as many as 44 times around the time of the equinoxes and solstices so that local people can see the strong astronomical association of the megaliths first hand. Literally, thousands of people witnessed the megaliths aligned with the sun's path.

11. Summary and what's next

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FIG.29 The event to enjoy viewing the sunset during the summer solstice

It is, indeed, statistically significant that the same sun-alignment results can be reproduced at as many as six locations. It is very unnatural to think that the weathered and eroded rocks that were once strewn had somehow piled up, and had coincidentally formed the megaliths, synchronizing with the path of the sun during the equinoxes and solstices. I am sure that I am not the only one who believes that people purposefully designed and built the megaliths.

There are still many other giant rocks lying around the megaliths that deserve close examination. However, there is one particular giant rock that has captured my attention recently. This marine rock is situated along the imaginary east-west line that extends to the Three Stones, and is shaped like a cannon and angled as if to point toward the arctic pole. I am now figuring out the best ways to conduct research on the rock efficiently and effectively, considering both advantages and disadvantages that come with the position of the rock. For example, a study can be carried out only at low tide because it is situated at sea. However, because it is at sea, the rock has been preserved in good condition. The megaliths are truly one of a kind. I would like to continue to do research and study on them with equal fervor, while collecting objective data as much as possible.

In this thesis, I have reported the findings of my research as of this date. I would greatly appreciate your observations and comments about my findings and next research project.

Reference

- Obtained data at the Koyomi Station website of the Japan Meteorological Agency
- http://eco.mtk.nao.ac.jp/koyomi/koyomix/koyomix.html 2) NAVER, a online platform The descent of Kukulcan: A winged serpent deity
 - descends the pyramid twice a year at the Mayan ruins in Chichen Itza. https://matome.naver.jp/odai/2142522175841831301
- 3) The aerial photograph from Google Maps
- https://www.google.com/maps/
- 4) Reported in the September 23, 2012 edition of the Ahime Shimbun
- 5) Sakawa Printing Co., Ltd. recorded videos using a drone "Ehime"
 - https://www.youtube.com/user/ehimedogajp
- 6) Analemma https://ja.wikipedia.org/wiki/アナレンマ
- Analysis diagram prepared by Mr. Motoyasu Higuchi using the stellar navigator of "Japan Archaeoastronomy Club"

About the Author



Kunihiko Shinozawa

Graduated from: Ehime University, Dept. of Humanities and Social Sciences Working at: Nippon Telegraph and **Telephone West Corporation** Serving as: -Executive Board Member, Astronomical Archeology Society of Japan -Executive Board Member, Iwakura Study Society -Presiddent, Ancient Megalithic Culture Exploration Club Authored the book entitled: Research Report on Matsuyama-Shiraishi-no-hana Megaliths, Stonehedge of Iyo

Province (Present day Ehime Prefecture, Japan) <Expertise> -IT Specialist (System Engineer) -Researcher of Ancient Megalithic

Culturer

<Contact Information> shinozawakunihiko@gmail.com

Translator

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