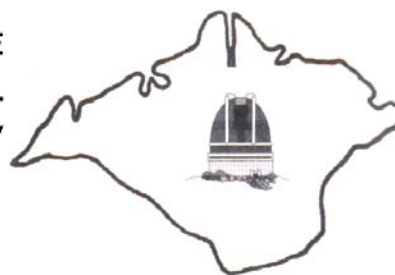


THE NEW ZENITH

THE MONTHLY
MAGAZINE OF THE
VECTIS ASTRONOMICAL
SOCIETY



VOLUME 15 No 8

SEPTEMBER 2007

“I MADE IT BY HOOKE AND BY CROOK”

That well-known presenter of science on BBC-TV, Professor Allan Chapman, was the intended guest speaker at the VAS July lecture in Newport. He was travelling down to the Island from Oxford by train and was expected to arrive at the



venue by around 7:15 pm, ready to drop into his speaking slot 15 minutes later. The talk about Robert Hooke had been well publicised in the local press and around various interest groups on the Island with the result that we had one of the biggest attendances for a VAS lecture since Sir Patrick Moore made a visit to

the Medina Theatre quite a few years ago. The Newport Parish Centre was packed out. Only about four spare chairs remained by 7:30, but where was our speaker? The audience were becoming restless and, to avoid a riot or worse, Peter Burgess was persuaded to fill in with his famous ‘Second Half’, which he gallantly did and calmed the tension. At about 7:45, the doors flew open and in swept the Professor, full of apologies and anxious to start his stuff.

Remember the atrocious weather suffered by the Midlands in July? Well, the Professor’s journey had been horrendous. Five different trains had to be boarded to avoid the inundations across the country and upon reaching Portsmouth Harbour the travails should have been over. That was not counting on the Wightlink *FastCat* having sharpened its claws in the interim. It turned into the *SlowCat* for the crossing over the Solent due to the fierce tides running across the harbour entrance, but the Island was eventually gained. Fortified by a grand helping of fish and chips on this side of the water, the Prof was ready to roll. He wowed those present by a battery of information about the Island’s much neglected hero. No notes or slides assisted the talk, just sheer genius in action - it was magic.

FROM THE EDITOR

Dear Readers

99 Not Out

Well, not cricket but a recollection of how many editions of the New Zenith that have come from my keyboard during the 9 years of being its Editor. Time to declare my innings and pull off the editorial gloves and pads to take a well-earned rest back in the VAS pavilion I believe.

I wish the next Editor all the very best and hope that the New Zenith will be in good hands for a long time yet. I know that I shall look forward to getting the October edition via my email. At least it will be totally new to me, for a change! Also, Mrs Editor (right) now has a long list* of things she wants doing, so this action of mine might turn out to be a big mistake...

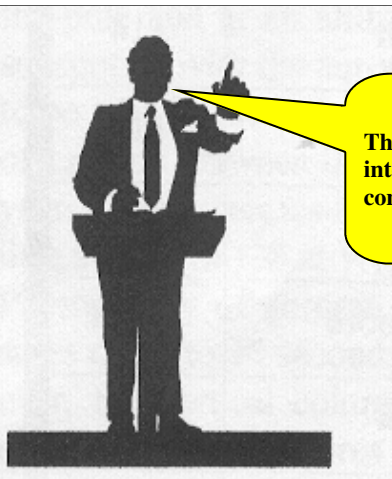
So, it's cheers and goodbye from me,
* See Page 9!




And it's goodbye from him!

IN THIS ISSUE

"I made it!"	1
From the Editor	2
July Lecture	3
September Skies	4/5
Busy Sun	6
Martian Enigmas Pt 5	7
--ditto--	8
Postcard to Editor, List, Garlic Festival Crime	9
Website of the Month Last Words, Etc	10



This looks quite interesting. Why not come along?

BOOKS BOOKS BOOKS

A book written about trees, by Roger Deakin (Wildwood: A Journey Through Trees), has a section describing his visit to the centre of Australia, where he wanted to discover a rare specimen. He mentioned to his Aboriginal guide that he had noticed that the Aussie New Moon was pointing in the wrong (to him) direction. She snapped back, "You have wrong-way rubbish Moon!"

FOR SALE, URGENTLY
Almost new lawn mower. Current owner under threat from 'Er indoors'. Very reasonable offers requested. Apply: Editor (See page 9 for sale reasons)

ELECTRONIC ZENITH?

Members wanting to join the ever-growing list of those receiving their New Zeniths by email can contact Bill Johnston on:
bill.johnston@onwight.net
Benefits of being on this list include getting your magazine extremely early in the month, in colour and a saving to the VAS on mailing costs.

NEXT MONTH'S LECTURE
What Hubble is Telling Us, and a Little Speculation Added
Rob Turner (FRAS, FIAA)
September 28th 7:30pm
In the Parish Centre Town Lane Newport

Robert Hooke

Professor Allan Chapman

(Oxford University)

Robert Hooke was born in Freshwater in the Isle of Wight and educated at Westminster and Christ's College, Oxford. While at Oxford, Hooke met Christopher Wren who became a lifelong friend and he was for a time assistant to Robert Boyle for whom he designed an air pump that was instrumental in the development of Boyle's laws on gases.

Later he took the post of Professor of Geometry at Gresham College in London. At the same time he was Curator of Experiments at the newly-formed Royal

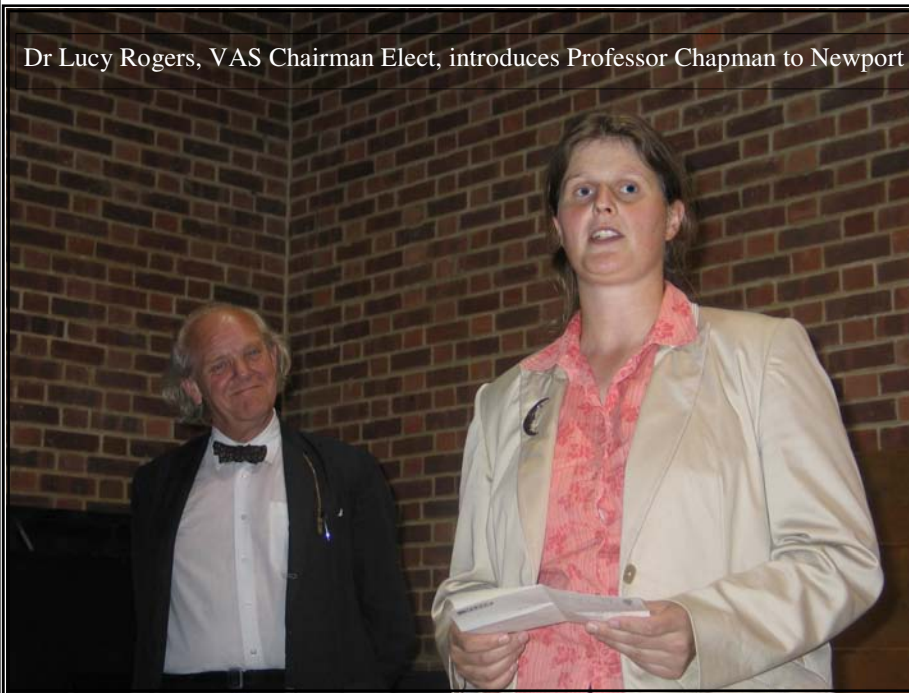
storms obscured the surface from time to time.

Hooke made a detailed study of the crater Hipparchus on the Moon that compares well with modern photographs of the region. The craters on the Moon led to some detailed experiments to try and discover how they were formed. Using semi-liquid pipe clay Hooke tried dropping bullets onto the surface and observed that they created craters like those on the Moon with central peaks. Not satisfied that this was the whole explanation, he also tried bubbling gas through the pipe clay to simulate volcanic activity and again reproduced features like the lunar craters. He concluded that either method could have produced the craters on the Moon but he couldn't determine which had done so.

Hooke tried to understand gravity and devised various experiments to test his ideas. This contrasted with Newton's theoretical approach.

Between 1664 and 1667, Hooke observed two comets that appeared at that time. He suggested that these objects were travelling around the Sun like the planets but in highly elliptical orbits and that the same comets reappeared periodically. He was able to record detail in the head or nucleus of the comets and in the tail, separating this into a relatively dense 'medusa' and the coma. He recognised the orientation of the tail with the direction of the

Dr Lucy Rogers, VAS Chairman Elect, introduces Professor Chapman to Newport



Society and, after the Fire of London, was the Surveyor to the City of London, leading to the rebuilding works.

Hooke had a great interest in nature and showed an enormous talent in devising experiments to explore theories and investigate how things worked. He generated a great number of scientific papers on his studies, 60% of his output being on astronomy. He was an early explorer of the Solar System using long focal length telescopes. He studied Saturn which was an enigma at the time since it appeared at times to grow lobes to either side of the main disc. Eventually Hooke was able to deduce the existence of the rings. In 1666, Hooke was making observations of Jupiter and drew the belt systems, noted the shadows of moons and saw the Great Red Spot. He studied Mars but was unable to understand how its appearance changed over time. He theorised that great dust

Sun and suggested that the comet was being eroded by the Sun's action and he modelled this effect in his laboratory.

Hooke's contributions outside astronomy included designs of gear wheels for clocks, the accurate measurement of angles and telescopic sights. He also contributed to the understanding of light and it was in this field that he received the only recognition of his work from Newton. Hooke realised that white light is made up of colours but was never able to sort out an apparent paradox that objects high in the sky appear to be a different colour than when they are near the horizon.

Hooke outlived many of his contemporaries and died apparently a lonely man. However, he left a huge fortune in money having had a large income throughout his life. Strangely though, when his executors came to value his estate, most of his scientific instruments had disappeared but not a large

September Skies

John W Smith

The Planets

Mercury is not favourably placed for viewing this month.

Venus is now climbing higher in the morning sky. Its crescent shape measures about 50 arc seconds in diameter.

Mars is now passing through the constellation of Taurus and will pass within a degree of M1 on the 16th.

Jupiter remains a prominent object in the south west after sunset.

Saturn will be found close to Venus in the morning sky but is relatively faint compared to Venus.

Uranus is at opposition on the 10th in Aquarius. A good star map is essential to identify this planet.

Neptune lies to the right of Uranus in the constellation of Capricornus.

Meteor Showers

There are two showers that peak this month:

1. The *Piscids* have double maximum this month, these being on the 9th and 21st. Rates of around 5 per hour may be expected.
2. The alpha *Aurigids* reach their second maximum of the year on the 15th with favourable viewing conditions as the Moon sets after 18:00hrs, and rates are anticipated of about 5 per hour.

Moon Phases

New	1st Quarter	Full	Last Quarter
11 th	19 th	26 th	4 th

Deep Sky Objects for small telescopes and binoculars

M2 NGC7089 A globular cluster in Aquarius about 40,000 light years distant.

M52 NGC7654 This is an open cluster of about 120 stars in the constellation of Cassiopeia.

M103 NGC581 A loose open cluster of some 60 stars in the rich field of the galactic plane.

Coordinates

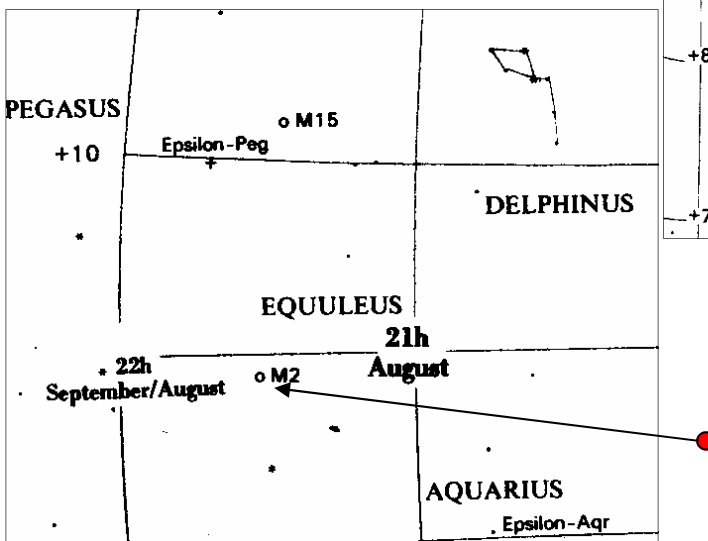
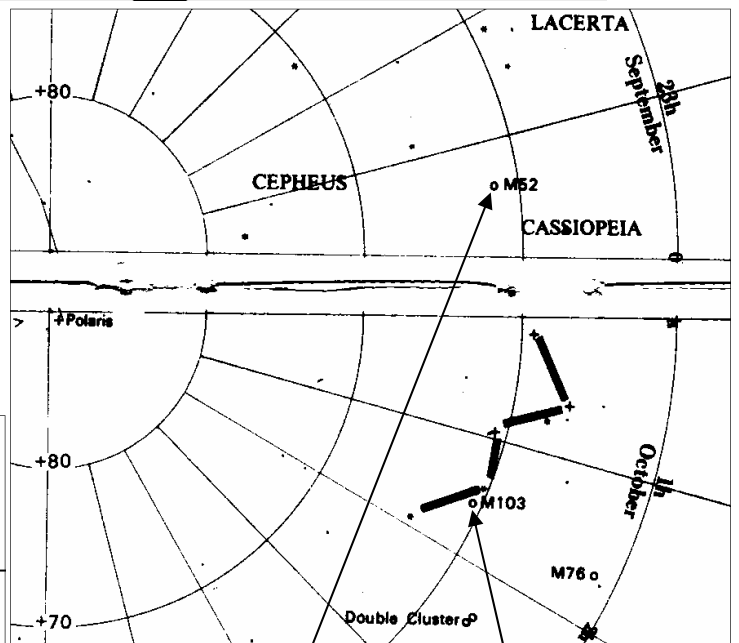
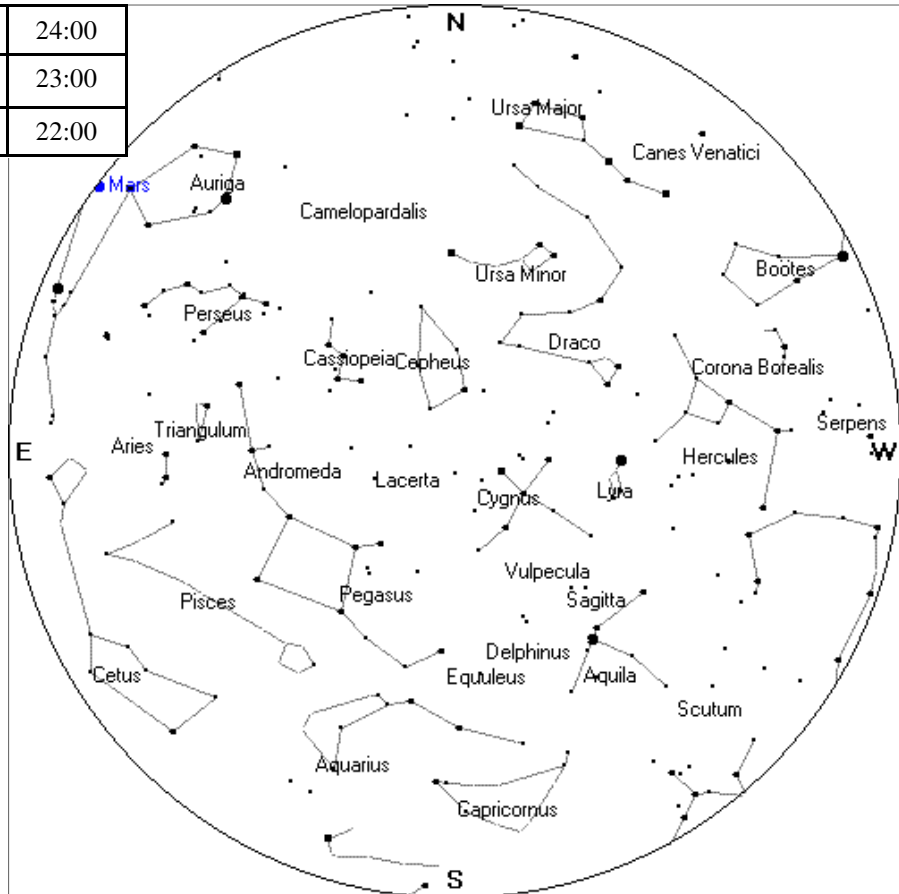
OBJECT	RA	DEC	MAG	SIZE Arc mins
M2	21h 32 m	-00deg 54m	6	8.2
M52	23h 23m	+61deg 29m	7	12
M103	01h 32m	+60deg 35m	7	5

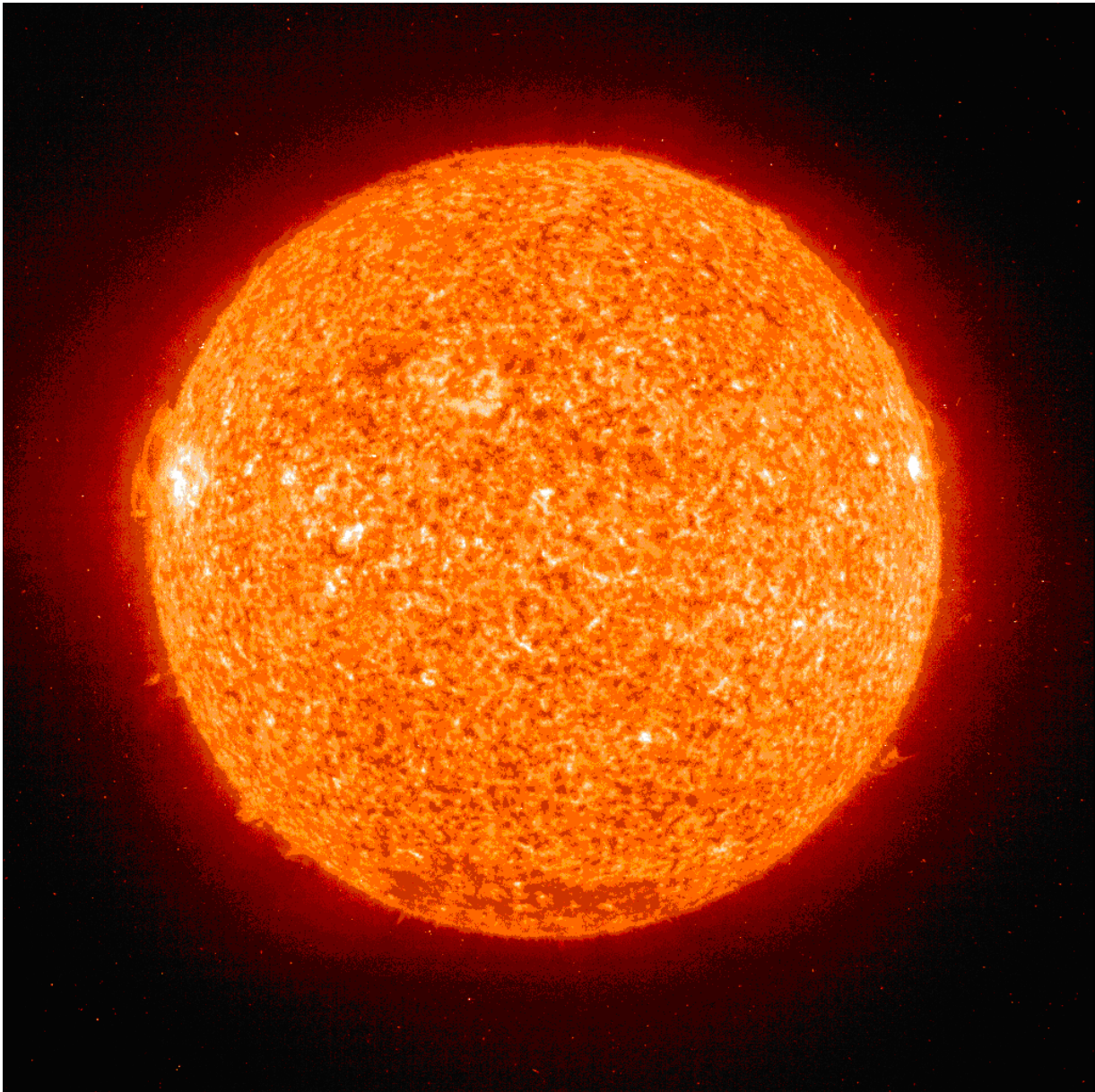
Perseids Report

Last month, August, saw good viewing conditions for the return of this reliable shower. Despite occasional clouds passing over, there was a lot of dark sky in which to spot some brilliant meteors. The main direction was from the northeast, flashing past Cassiopeia almost high overhead. There were also small sporadic meteors crossing at right angles just below Cassiopeia in both directions.

Those having an interest about the Sun's activities will have noted that there is little in the way of any decent sunspots of late. However, I have been observing through my Coronado PST from my back garden over a period of several days of brilliant sunshine and saw some huge prominences located at about the 10 o'clock position on the Sun's limb. I'm not certain whether the PST inverts the image but it does not really matter since all is up or down in space. The images seen resembled London's Tower Bridge in shape at their maximum configuration. At other times there was a single eruption that shot straight out from the surface then turned at a right angle at maximum elevation. Quite spectacular. (See similar NASA image on Page 6)

Sept 01	at	24:00
Sept 15	at	23:00
Sept 30	at	22:00





http://umbra.nascom.nasa.gov/eit/images/latest_eit_304_full.gif

The above image was captured by NASA on August 14th on the Extreme ultraviolet Imaging Telescope (EIT). Note the large prominence at the right hand side of the Sun's limb. This is very similar to that observed by the Editor on 8th August this year. The Sun is clearly going through a lot of activity at present.

SPUTNIK PARTY

As mentioned before, next month (October) will be the 50th anniversary of the world's first successful launch of an artificial satellite. The then USSR managed to up-stage the USA in putting Sputnik 1 into near-Earth orbit and to celebrate this momentous event, VAS will be hosting a Sputnik party over the days/nights of 4th, 5th and 6th October down at the Observatory. Lucy Rogers is the coordinating person for this and anyone having anything that relates to that time should contact her. We are aiming to get Island schools interested in the history of the launch and will be holding a series of themed events at the Observatory.

All are welcome to come along and be a part of it.

THE MARTIAN ENIGMAS (Part 5)

Alan Matthews



Was the organised complex in the Cydonia region of Mars the final gesture of a doomed race? Or is confirming the “Face on Mars” as artificial simply a prelude to more disconcerting discoveries? It is one thing to have human heritage overturned by the presence of non-human artefacts; it is another to confront the mind behind the curtain. It has been noted that high-resolution mirrored Cydonia photographs of the Mars Face’s eastern half has a definite feline appearance, and a mirrored western (left) half giving an ape-like profile. The bilateral split being near perfect. If this massive structure is conclusively proved to be an artificial structure, we can reasonably expect its builders to have invested considerable time and effort in it. Civilizations (or at least terrestrial civilizations) wouldn’t construct mile-long faces in deserts for no compelling cultural reason. Throughout the history of this planet, great civilizations have inevitably been measured by their art (just look at Egypt!). Maybe we are indeed examining millennia-old Martian ruins built by a civilization with a penchant for visual, and symbolic metaphor.

If the Face is a true “double-image”, the humanoid/feline attributes may have once served a mythological or aesthetic purpose. Therefore, the symbolic aspect of the “hominid/feline” Face is presumably far from trivial, and may be a true “message” from an extraterrestrial intelligence. If the feline interpretation of the Face is correct, what are “hominids” and “cats” doing on Mars? Is the Face evidence that our evolution was observed (or even orchestrated) by others...? The fusion of humanoid and feline forms results in an aesthetic friction between prey and predator; the Face might represent the advent of intelligence on Earth by drawing forth images from our evolutionary past. As an enfolded metaphor, the Face then is a subtle but effective attempt to memorialise our species’ origins. If our ancestors hadn’t responded to the threat posed by carnivores, it’s doubtful that intelligence as we know it would have arisen; by remaining evolutionary spectators, early humans would probably have gone extinct. By taking an active role in ensuring their survival, early humans ensured that the challenges



posed by predators (symbolized by the Face’s lioness half) became catalysts for evolutionary change. That a human-built space probe took a picture of the Mars Face itself is proof of our species’ tenacity and adaptability. The apparent cat-like aspect also begs the identity of the Face’s builders. Extrasolar aliens wouldn’t have been aware of humans or cats unless they had visited Earth prior to constructing the Face. We’re left with the possibility that the Face might be the artifact of an unknown terrestrial culture that had attained spaceflight, or the handiwork of a very close common ancestor.

There is, however, another explanation. This is that the “Lion” is not a lion at all. In this hypothesis what we take for feline features is actually the face of the extraterrestrial builders of the Face. If the Face does turn out to be an artificial sculpture, just what were these hypothetical aliens commemorating in a morphed ape-man/alien face? Is *homo sapiens* the trophy in some bizarre interplanetary pantheon? There are three immediate possibilities that come to mind, although they are not entirely mutually exclusive: (1) The morphed face was intended to celebrate friendly intentions by the aliens towards humanity: a symbolic recognition that in some way we had a shared future. (2) The aliens were imperialists and the morphed face was their way of proclaiming in a symbolic way their ownership of the human race. This is not a very comforting thought if they should ever return our way again. (3) The most disturbing possibility is that the morphed features of the Face celebrate a project that means that there is more of the “alien” in us than we would care to consider. This is the scenario in which our ancestors have been genetically manipulated to mould us into a form of intelligence in the aliens own “image.” Of course the feline resemblance may be fortuitous trick of erosion: given the enormous age of this object it is likely that erosive forces and deposition are responsible, in part, for its current state, which have conspired to distort the appearance of a fully bilaterally symmetrical terrestrial hominid -- not a contemporary human -- facial representation. The “Martians” -- whoever they were -- may still have been somehow instrumental in humanity's evolution in which case the Face still stands as a literal “monument” to a feat of genetic engineering. Suggesting that the human race has something to do with Mars, that our history is woefully incomplete, that our understanding of biology and evolution might be in store for a violent upheaval. I see no reason why our species couldn’t have been the recipient of at least one genetic “upgrade” on behalf of extraterrestrial visitors. Contrary to what some think, genetic intervention by ETs (or humans) does not overrule Darwinian evolution. Rather, it compliments mainstream evolutionary thought; genetic engineering may be viewed as an extremely focused form of

(Continued on page 8)

(Continued from page 7)

natural selection; forcing us to consider the process ultimately responsible for our hypothetical benefactors. This genetic manipulation hypothesis, as above, is also very disturbing at many levels. Firstly, it would not do much for humanity's self esteem to discover that it did not pull itself up by its own evolutionary bootstraps. Secondly, there would be a paranoid fear that we were not masters of our own destiny. Thirdly, such a discovery could give a boost to the nasty politics of racial supremacy amongst humans.

In 1950 William Dudley Pelley, the right-wing extremist and America's would be "Hitler" published *Star Guests* in which he claimed the human race was the result of interbreeding between advanced aliens and ape-men. He further claimed that this union of "half-god, half-human progeny" is symbolised by the Egyptian Sphinx -- harking back to the "split Mars Face" scenario. Of course in Pelley's hateful universe some races have retained the god-like genes better than others. Similar ideas are not uncommon in certain esoteric circles today. They could spread like cancer if it was shown that humans are the result of alien genetic engineering. Even if there wasn't an increase in the politics of racial superiority, governments may decide that if the aliens were able to create a superior species through genetic engineering, why shouldn't they continue the process? The idea of governments competing against one another to create a Super Race has sinister connotations. But the Face's "alien" builders might not be nearly as foreign as typically conjectured. The Martians may literally be us, the Face functioning as a mute reminder of our overlooked trans-planetary heritage. One doesn't have to browse too many esoteric Mars websites to know how this particular scenario plays out: threatened by decaying conditions on their native planet, the Martians evacuate to a prehistoric Earth to start anew.... Perhaps the single-most startling aspect of this clichéd notion is that it's entirely possible. The Face's eerie similarity to our own primate ancestors argues that the presence of archaeologists and biologists is vital for any effort to seriously examine Mars for evidence of prior occupation. But there is the equally other possibility that the Face was constructed by beings who just happened to look something like us, never dreaming that their megalithic art would ultimately become a controversy among beings from a neighbouring planet. It's important to remember that in such a wide-open area of inquiry it is best that we reject no ideas until we actually disprove them. We are speculating about the mentality of hypothetical beings -- who could extend back across perhaps an immensity of space and time -- of whom we have zero knowledge at present and are attributing humanlike motives to them. As to

intentions towards us, perhaps they are so far advanced of us intelligence-wise they would be like "gods". Who can guess the motives or actions of such entities? Any thoughts to New Zenith or, conversely, I can be e-mailed at:

alan.matthews3@jobcentreplus.gsi.gov.uk

Related Link: A January 2007 announcement from the Human Genome Project scientists, that after comprehensive analysis, so-called "junk Human DNA," looks like it may have been created by an "extraterrestrial programmer"

Log on to <http://www.agoracosmopolitan.com/home/Frontpage/2007/01/08/01288.html>

Editor's Note

Here is an extract from that article:

A group of researchers working at the Human Genome Project indicate that they made an astonishing scientific discovery: They believe so-called 97% non-coding sequences in human DNA is no less than genetic code of extraterrestrial life forms.

The non-coding sequences are common to all living organisms on Earth, from moulds to fish to humans. In human DNA, they constitute a larger part of the total genome, says Prof. Sam Chang, the group leader. Non-coding sequences, originally known as "junk DNA", were discovered years ago, and their function remained a mystery. The overwhelming majority of Human DNA is "Off-world" in origin. The apparent "extraterrestrial junk genes" merely "enjoy the ride" with hard working active genes, passed from generation to generation.

After comprehensive analysis with the assistance of other scientists, computer programmers, mathematicians, and other learned scholars, Professor Chang had wondered if the apparently "junk Human DNA" was created by some kind of "extraterrestrial programmer". The alien chunks within Human DNA, Professor Chang further observes, "have their own veins, arteries, and an immune system that vigorously resists all our anti-cancer drugs."

Professor Chang further stipulates that "Our hypothesis is that a higher extraterrestrial life form was engaged in creating new life and planting it on various planets. Earth is just one of them. Perhaps, after programming, our creators grew us the same way we grow bacteria in Petri dishes. We can't know their motives - whether it was a scientific experiment, or a way of preparing new planets for colonization, or is it a long-time ongoing business of seedling life in the Universe?"

POST CARD TO THE EDITOR

Dr Guy Moore has sent me a postcard to inform all NZ readers that visual views of his Gateway Arch orbit (as seen in Part 5 of his series of notes on spiral galaxy formations NZ August 07) may be seen at:

www.gatewayarch.com/Arch/info/act.riverboat.aspx

I tried this site and discovered that it led me to a view of the archway behind a traditional riverboat.

Searching the web a little more I found myself about to enter this site

<http://www.nps.gov/jeff/planyourvisit/architecture.htm>

and found an amazing animation through 9 photographs, showing the construction of the Gateway Arch over a period of time. Have a go, it's quite instructive and I hope Guy appreciates the extra footage to his endeavours!
Ed

NOTES TO THE EDITOR FROM MRS EDITOR

- 1 The grass needs mowing.
 - 2 The dog's been sick again.
 - 3 The cats will want feeding soon.
 - 4 I have to pop out to the shops.
 - 5 The grass still needs mowing.
 - 6 Have you seen the state of these windows?
 - 7 The plants should have some feed and water.
 - 8 The cats' toilet tray is overflowing.
 - 9 Don't just sit there pretending not to hear me.
 - 10 Refer to numbers 1 and 5 above. The stuff is over 3 inches high now.
- Etc, etc, etc.

Now that I will have retired as the Editor by the time you read this, please take pity on a poor chap. Ring me up occasionally suggesting that there is a dire emergency somewhere that needs my attention. I don't care what it is, as long as it does not involve mowing grass, cleaning up after the animals, windows, etc. Mrs Editor is really a kind lady and would not like me to suffer too long from editorial withdrawal symptoms. All her list above represents occupational therapy, she claims.

Hmm.



VAS Member's member stolen at Garlic Festival shock. Has very little to go on.



SCENES FROM THE GARLIC FESTIVAL ON SATURDAY 18TH AUGUST

INTERESTING FACTS PART 34

Amongst a wealth of inventions such as the spirit level and the hairspring escapement for clocks and watches, items we are all familiar with nowadays, Robert Hooke came up with the Universal Joint, which is now a vital part of most modern car transmissions the world over. Picture the consternation of the unfortunate elderly motorist who, while deploying said device in his car, managed to crash it through the wall of the Coop supermarket in Freshwater, just a few feet away from the Hooke Memorial situated at the front of the store. To add to the coincidence, the accident happened this July on the anniversary of Hooke's birth registration. Spooky, or what?

Website of the Month

canopusbooks.com

Drop into this site and read the reviews of **Dark Side of the Universe: Dark Matter, Dark Energy, and the Fate of the Cosmos**. Published at £19.95, readers of the New Zenith can order it at a mere £16 post free.

Email Sarah Rees at sarah@canopus.wanadoo.co.uk and tell her that you are a VAS member to get the discount.



Pictured, left, is the Hooke Memorial at Freshwater. This is one of his experimental weights that he used for his experiments into the physics of springs that led to the famous Hooke's Law, beloved of students of mechanical

Last Words

As I finished this final edition of New Zenith in my care, just before closing down my PC I decided to tune into Angel FM, a station that specialises in mature music for the not so young. It was 8 pm when I tried to find their spot on the dial but all I got was silence. Somewhat puzzled, I logged on to the Angel FM website and found the answer. "We broadcast nothing past 1959," I read.

So obvious, really...

Ed

Submissions to the **NEW ZENITH** are very welcome and should be sent to the the following address
The Editor **NEW ZENITH**
'Keepers Lock', Youngwoods Way
Alverstone Garden Village
Sandown PO36 0HF
Tele: 01983 407098
E Mail: johnvl@tiscali.co.uk (any attached files in Word Document format, preferably)

FIND VAS ON THE INTERNET

Members should note the Vectis Astronomical Society Website address:

<http://www.vectis-astro.org.uk/>

MATERIAL FOR THE NEXT ISSUE TO BE RECEIVED BY THE 6TH OF THE MONTH

The Vectis Astronomical Society and the Editor of the New Zenith accept no responsibility for advice, information or opinion expressed by contributors