NMSR REPORTS

NMSR *Reports*

The Newsletter of the
New Mexicans for Science and Reason

NMSR *Reports*, David E. Thomas, Editor, 801 Fitch Ave., Socorro, NM 87801 © 2017

SEPTEMBER MEETING:

NEW MEXICANS FOR SCIENCE AND REASON WILL HEAR

Matthew Lee Loftus

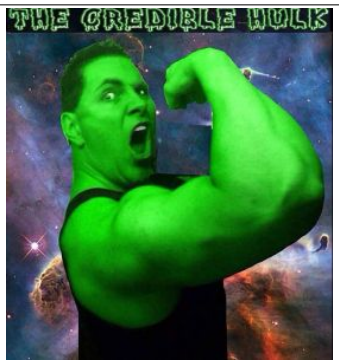
on *"Genetically Engineered Food Opposition: the Gap between Science and Public Perception"*

7:00 PM September 13th, 2017

==>*CNM MAIN CAMPUS, Student Resource Center*<==

==>Room 204<==

Bring a friend!



7 PM Wednesday September 13th, CNM Main Campus, Student Resource Center, room 204 (@ Richard Barr Boardroom).

FUTURE MEETINGS ANNOUNCED

September 13th, 2017 NMSR Meeting: Matthew Lee Loftus on "Genetically Engineered Food Opposition: the Gap between Science and Public Perception"

Our September speaker is Matthew Lee Loftus, also known as the "Real Credible Hulk." Check out his Facebook page at facebook.com/therealcrediblehulk/.

October 11th, 2017 NMSR Meeting: A Double Header, Fienning and Thomas!

At our October 11th meeting, our resident master of macabre magic, Bill Fienning, will perform a couple of his most diabolical and cunning effects. Dave Thomas will follow up with an update on the surprising growth of the Flat Earth Movement. Check out this month's Bonus Puzzle for a sneak peek at Flat Earth Theory.

New Mexicans for Science & Reason (NMSR)

NMSR is a non-profit group with the goals of promoting science, the scientific method, rational thinking, and critical examination of dubious or extraordinary claims. NMSR meets at 7 PM on the second Wednesday of each month, in Albuquerque, New Mexico, at CNM's Student Resource Center, room 204 (@ Richard Barr Boardroom). NMSR Reports is its official newsletter.

Membership: $**20**/year, includes newsletter, make your check payable to NMSR, send to treasurer (Shelton). Newsletter available in hard-copy and downloadable PDF.

Cyber-Cypher Clue: W = K, X = V.

Bonus Puzzle Clue: Keep looking up!.

WANTED: READER ARTICLES & COMMENTARY

Got something to share with NMSR members? Send it in! ATTN: Dave Thomas, Editor, NMSR Reports.

REMEMBER, our next NMSR meeting is at 7 PM on **WEDNESDAY, SEPTEMBER 13th, 2017**, at Student Resource Center, room 204 **at CNM!**

PUZZLE TIME!

[*Please send solutions to Dave Thomas at: nmsrdave@swcp.com, or at 801 Fitch Ave., Socorro NM 87801.]*

Cyber-Cypher: SEPT. PUZZLE

(Submitted by Dave Thomas)

The following letters are a simple substitution cypher. If R stands for L, R will stand for L everywhere. Your Cyber-Cypher Clue: Clue? Oh, well - if you must, see p. 2.

```
"DH'G  INGDIM  HK  NGW

AKMLDXIJIGG  HPNJ  DH

DG  HK  LIH

OIMZDGGDKJ."  -

YKZOCHIM  GYDIJHDGH

NJE  CJDHIE  GHNHIG

JNXQ  MINM  NEZDMNB

LMNYI  PKOOIM
```

SUPER SECRET WORD!

However you prefer to do the cypher itself (above or below), simply duplicate those actions on the alphabetized row of cypher letters below. You'll build an answer key, and you'll also reveal - the Super Secret Word!

```
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
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AUGUST CYPHER SOLUTION

"THE NATIONS MAY BE DIVIDED IN EVERYTHING ELSE, BUT THEY ALL SHARE A SINGLE BODY OF SCIENCE."

Esteemed August Code Crackers: Mike Arms*, Terry Lauritsen*, and Austin Moede*.
*Secret Word: "LABS FORGE UNITY"

Need more Secret Word Cryptograms?

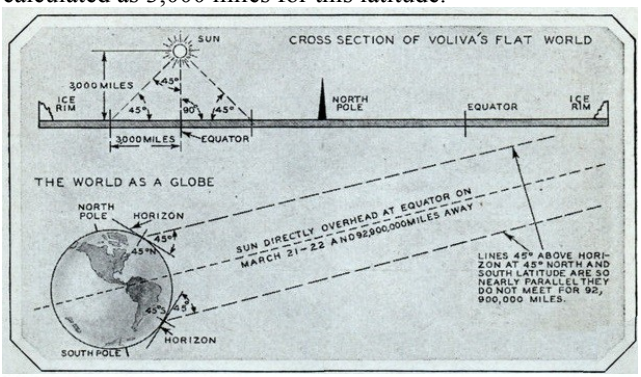
SOCORRO STUMPER

New puzzles every week at
www.nmsr.org/SocorroStumper.ht

September Bonus: "How High the Sun?"

Submitted by Dave Thomas

The diagram below indicates a method whereby one could use measurements of the sun's elevation on the vernal or autumnal equinox to calculate the height of the sun above the earth in Voliva's flat earth model. In this diagram, an observer at 45° latitude would see the sun at that same angle above the horizon, and will be 1/8th of the 24,000-mile diameter of the flat earth away from the equator, i.e. 3,000 miles. The "height" of the sun would be calculated as 3,000 miles for this latitude.



The spring and autumn equinox as seen from 45° North and South Latitude on either a flat or spherical earth. Voliva's world is a disc 24,000 miles in diameter. On March 21-22 the sun is directly above the equator and is seen at 45° above the horizon at 45° North and South Latitude. The distance from the equator to either 45° North or South Latitude is one-eighth of the earth's diameter, or 3000 miles, therefore the sun must be 3000 miles away. With the spherical world the same reasoning would place the sun 92,900,000 miles away. The diagrams explain both theories.

The September Bonus: What would the following people, using the method above, calculate for the height of the sun above the flat earth, as seen on the autumnal equinox? (A) A resident of Albuquerque, NM (latitude 35°), (B) A resident of Eureka, Nunavut, Canada (latitude 80°).

August Bonus: "Uphill Both Ways"

Submitted by Dave Thomas

A commuter using a bicycle has a two-mile ride to work. Going to the office, the path is level for a half mile, then runs uphill at a 10% grade for one mile, then downhill at a 10% grade for a quarter mile, and finally uphill for a quarter mile at a 20% grade. The commuter goes ten mph on a level surface, half that for a 10% uphill grade, three-halves that for a 10% downhill grade, and one-quarter that for a 20% uphill grade. For a 20% downhill grade, the rider purposely limits his speed to no more than that for the 10% downhill grade.

The August Bonus: (A) How much higher is the rider's office above their home, in miles? (B) How long does it take the rider to get to work from home? (C) How long does it take the rider to get home from work?
Answer: (A) 0.125 mi (1/8 mi), (B) 22 minutes, (C) 11 minutes.

Congrats: Mike Arms (NM), Terry Lauritsen (NM), Keith Gilbert (NM), Rocky Stone (NM), and Brian Pasko (NM)!

August 9th NMSR Meeting: Kaplan on Lifestyle, Health and Evolution

Our August 9th speaker, Dr. Hillard Kaplan of UNM, talked on "Coronary atherosclerosis in indigenous South American Tsimane: a cross-sectional cohort study." He began by talking about chimpanzees and humans. While chimps tend to die soon after reproducing (at about 40 years), humans often live for decades after their child-bearing years. To understand why humans have evolved like that, Kaplan said it made sense to study hunter-gatherer communities, as these are much more representative of human lifestyles during our long evolutionary history than are the habits of modern city-dwellers. Kaplan and associates have worked extensively with the Tsimane, a community of hunters/gatherers in Bolivia. The research focused on differences in lifestyles between the Tsimane and modern Westerners, and also on the prevalence of conditions like atherosclerosis in the two types of communities. The Tsimane do a lot of fishing in addition to hunting and gathering, and typically have large families (the average is nine children per family).

Kaplan and his colleagues gathered reams of data on many Tsimane individuals, including electro-cardiograms, mortality, disease, eyesight, and so forth. In addition to EKG and CT scans, samples of Tsimane DNA, urine and saliva were collected and cataloged. Demographic information was collected regarding fertility, mortality, migration, and kinship. Behavioral data were also collected regarding diet, work, food and aid transfers, market involvement, family relationships, cognition,

personality, depression, social status, education, and language. The research focused on development and aging as affected by sex, community, family, and other personal factors.

The life expectancy of a typical hunter/gatherer tribe member is only 35 to 40 years at birth, and babies of these communities are 200 times more likely to die by age 35 than are modern urban-lifestyle babies. However, the longer hunter-gatherer babies survive, the better their prospects of reaching the nominal human lifespan of 70 years. While most chimps are dead by age 40, around 40% of the population of hunter-gatherer communities is alive at age 45. This reflects differences in human/chimp evolution; human offspring are energy hogs, and do not become self-sufficient until age 20, while chimp babies are typically self sufficient several years earlier. Humans reach their peak productivity at age 45, the same age where chimps are largely dying out. Kaplan thinks that humanity's larger brains and longer lifespans co-evolved, with humans being "in their prime" much longer than chimps. In human communities, there can be three generations at a time, with parents and grandparents joining forces to feed and shelter their babies.

Hillard's group wanted to study these questions: How does exposure to pathogens shape the development and aging of the immune system? What are the joint impacts of an active lifestyle and lifelong inflammation on cardiovascular disease, diabetes, the aging of the brain and dementia? The Tsimane suffer from regular and multiple infections during their lives; tuberculosis and parasites are common, and inflammation is a frequent factor. Hillard's group found that while Tsimane men have higher risk for cardio-vascular disease than the women, the risks are much higher for modern-culture males than for Tsimane males. Tsimane typically have lower risk factors: low obesity, high activity, lean diet, minimal smoking, low LDL/chol, and minimal diabetes. They are at a high risk for low HDL and high inflammation. The Tsimane spend a lot of time walking every day, and both males and females usually put in more than 15,000 steps per day, compared to 7,000 for people from industrial societies. Tsimane exhibit significantly lower coronary and aortic calcification than Westerners.

The major new findings of this research are:

- Lifestyle appears to drive the rate of cardiovascular aging.
- Tsimane arterial aging is more than two decades delayed from U.S..
- It is a possible for the majority of the population to age without risk of heart attacks.
- Economic costs of unhealthy lifestyles are >250 billion dollars a year.

Kaplan concluded that our Westernized taste buds are leading us into unhealthy lifestyles. Obesity is on the rise in a major way. The Tsimane are helping to teach us that diet and exercise are indeed important for long-term survival. NMSR thanks Hillard Kaplan for a fascinating talk.

NANCY IS RETIRING! Please contact Dave Thomas if you are interested in becoming Treasurer.

DUES - check the date on your mailing label. If it's time for you to renew, or to make a contribution, please send a check to NANCY SHELTON, NMSR Treasurer,
11617 Snowheights NE, Albuq., NM 87112
Name _____
Address_____
Membership $20 *per annum**
On the Net? Ask for the Paperless NMSR Reports! Send an email to nmsrdave@swcp.com "Dave Thomas"
**For Renewals that are above the $20 annual amount, the excess will be applied to the NMSR budget. Thanks!*

The NMSR e-mail list is fun! It's an e-mail list with news announcements of interest to NMSR members, discussions about news of the times, and more. To join, send a request to nmsrdave@swcp.com.

Thanks to: John Covan, Eddy Jacobs, Nancy Shelton, Debbie Thomas, and all our Puzzlers!

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Sept. Meeting:
GMO FEARS
Weds., Sept. 13th
7:00 PM
CNM SRC 204

Future Meetings Announced

New Puzzles!

August Meeting:
Tsimane and Atherosclerosis