



NMSR Reports

The Newsletter of the
New Mexicans for Science and Reason

NMSR Reports, David E. Thomas, Editor, 801 Fitch Ave., Socorro, NM 87801 © 2016

NO OCTOBER MEETING:

NEW MEXICANS FOR SCIENCE AND REASON WILL NOT MEET THIS MONTH

Next Meeting *November 9th* with Ben Radford

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

==> **Room 204** <==

Bring a friend!

7 PM Wednesday November 9th, CNM Main Campus, Student Resource Center, room 204 (@ Richard Barr Boardroom).

CSICON 2016, October 27th-30th, 2016



Dave Thomas is presenting a talk at this year's CSICON 2016 meeting, in Las Vegas, NV. His topic is "War of the Weasels: An Update on Creationist Attacks on Genetic Algorithms," and will be given in the Sunday morning session, October 30th, 2016.

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FUTURE MEETINGS ANNOUNCED

NO MEETING IN OCTOBER!

There will be no NMSR meeting in October, as Dave Thomas and John Covan will both be on the road.

November 9th, 2016 NMSR Meeting: Ben Radford on "Psychic Medium John Edward." Ben will report on Edward's July 13th appearance in Albuquerque.



Abstract: Since Genetic Algorithms (GAs) are a class of computer programs that use evolutionary principles to "evolve" answers to difficult problems in math, physics, engineering and biology, they are a prime target of creationists of all varieties. This talk will trace the evolution of creationist attacks on GAs, from saying that they all need the final answers fed to them at every step (like Dawkins' Weasel experiment), to claiming that "active information" is being secretly introduced into GAs, and finally to the preposterous definition of "Specified Complexity," the claim that examples of evolving complexity don't even count unless they meet the absurd criterion of being as uncommon as tossing a fair coin heads up 500 times in a row. The game is rigged from the very start: evolution can never win under the rules adopted by "Intelligent Design".

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.

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Membership: \$20/year, includes newsletter, make your check payable to NMSR, send to treasurer (Shelton).

Newsletter available in hard-copy and downloadable PDF.

NMSR Advisors:

- **Mark Boslough**,
Physicist (Impacts, Climate Change,
Global Warming). Sandia National Labs.
- **Kendrick Frazier**
Editor, Skeptical Inquirer
- **John Geissman**
Professor of Paleomagnetism, UNM
- **Alan Hale**
Southwest Institute for Space Research
- **Randy Thornhill**
Professor of Biology, UNM

Cyber-Cypher Clue: Z = K, Y = F.

Bonus Puzzle Clue: Use maths, solve for the unknown.

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, NOVEMBER 9th, 2016**, 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: OCTOBER 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.

" G F K N B E O H E Z B G
 D E Y H B : E N O L O B Y L H M B O O
 A B C B M A O L C K M N X B
 J X G D G J N B D K Y N X B
 L O B D . " - N X B K A K D B
 D K K O B F B H N

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

SEPTEMBER CYPHER SOLUTION

"A TRUMP PRESIDENCY WOULD EMBOLDEN ISIS. WE CANNOT TAKE THAT RISK. THIS ISN'T REALITY TELEVISION. THIS IS ACTUAL REALITY." - HILLARY CLINTON

Esteemed September Code Crackers: Mike Arms*, Terry Lauritsen*, Gene Aronson*, Ross Goeres*, and Alice Anderson*. *Secret Word: "BLUSTERING."

Need more Secret Word Cryptograms?

SOCORRO STUMPER

New puzzles every week at

www.nmsr.org/SocorroStumper.htm

October Bonus: "Election Night Jitters"

Submitted by Dave Thomas

It's election night, and candidate Shirley is running a tight race against candidate Ronald. Shirley has 55% of the vote, with 60% of the

voters counted.

The October Bonus: What is the *minimum* percentage of votes Shirley needs from the remaining electorate in order for her to defeat Ronald?

September Bonus: “A Pair of Swingers”

Submitted by Dave Thomas

A rigid 12-inch ruler with a tiny hole at one end is hung on a nail, and allowed to swing back and forth. It is hung alongside four simple pendulums, of lengths 6, 8, 9 and 12 inches.

The September Bonus: Which one of the four simple pendula has the same period as the ruler?

Solution: The 8-inch pendulum matches the ruler.

Congrats to our crack September Solvers: Rocky S. Stone (NM), Keith Gilbert (NM), Terry Lauritsen (NM), Eric Hanczyc (WA), and Alice Anderson(NM).

September 14th, 2016 Meeting:

Dr. Ian Palmer, on Fracking and Earthquakes in Shale-oil-gas.

Does fracking cause earthquakes, or is something else responsible? This was the topic of Dr. Ian Palmer’s talk on Sept. 14th. His synopsis follows,

NMSR thanks Dr Ian Palmer for a fascinating discussion.



Fracking, Shale-Oil-Gas and Earthquakes

Dr Ian Palmer gave a presentation on September 14 to NMSR on the subject of Fracking and Shale-Oil-Gas and Earthquakes. Ian worked in the oil-and-gas industry for 30 years, and for much of that time was involved with fracking.

Ian summarized the revolution of shale-gas-oil, which came about via the new technology of a long horizontal well (1-2 miles), which is fracked serially with 10-20 fracs. Fracking is just cracking the shale, by pumping water down the well under high pressure, and is necessary to get the oil or gas molecules to flow along the cracks to the well. Fracking also causes

earthquakes, but they are micro-earthquakes, and will never be felt at the surface. The micro-earthquakes can be utilized to map the size and shape of fracs, so the fracs can be optimized. The energy of a micro-earthquake is equivalent to a gallon jug of milk dropped from the counter to the floor.

There has been a huge increase in earthquakes in Oklahoma since 2009. 900 earthquakes of magnitude M greater than 3 were recorded in Oklahoma in 2015 compared with only 2 per year before 2009. M = 3 quakes can be felt at the surface because their energy is equivalent to a million gallon jugs of milk dropped from the counter to the floor simultaneously. The increase in earthquakes is related to increasing oil and gas production since 2009. A 5.8 magnitude earthquake shook northwest Oklahoma on 3 September 2016 and was felt in seven other states (the largest quake ever recorded in Oklahoma). An M = 5 quake can damage weak structures.

If not fracking, then what causes the M = 3 earthquakes? The answer is disposal wells, which are drilled deep to inject saltwater into certain intervals. The saltwater is produced along with oil and gas. At the bottom of a disposal well, the wastewater spreads out in a plume, and if it encounters a fault it can lubricate the fault and cause it to slip, which gives rise to an earthquake. Since 2009, the number of oil and gas wells has expanded greatly in Oklahoma, implying greater volumes of wastewater to be injected in disposal wells, hence more earthquakes.

Steps that can be taken to mitigate earthquakes include: (1) reduce rate and volume of wastewater injection, (2) inject into an interval that is shallower than the standard interval, which is too close to basement faults, (3) monitor earthquakes with a seismic array near suspect disposal wells, (4) clean up the wastewater at the surface, either at the well site or truck it to a town which has a facility.

The presentation was well-received and was followed by a variety of questions. More info on the subject can be found in Ian’s website www.IanDexterPalmer.com.

Woo-woo in Las Cruces

by Alice Anderson

The weekly newspaper Las Cruces Bulletin prints puff pieces about local businesses. The August 12 issue had a story on page A24 headlined "Author, numerologist, artist Ruth Drayer is back in town", quoting Ms. Drayer. " 'The study of numerology has always been based on the premise that your name and birthday vibrate to particular frequencies,' Drayer said. 'If you understand those frequencies, you will understand your life plan purpose and chart out the timing of your life cycles: your personal almanac.' she said." The story says that your destiny number is (*sic*) your birth name and your birthplan number is (*sic*) your birth date. " 'Somewhere between ages 40 to 50, a person's destiny and birthplan numbers combine to create his or her attainment number', she said. The birthplan, destiny and attainment numbers 'form of (*sic*) triangle of energy' that 'clarifies your evolutionary plan,' she said. 'The attainment explains where your name and birthday have been propelling you,' Drayer said."

The story had no description of how to calculate your destiny and birthplan numbers, nor how to combine them to find your attainment number. Should you add the destiny and birthplan numbers, concatenate them, or divide the sine of one by the arccotangent of the other?

Drayer says that 8 is a good number for politicians. "Hillary Clinton's numbers are all 3s, 6s, and 9s". The story doesn't explain Drayer's use of the plural for what should have been only 3 different numbers. "Trump's name adds to 5.....The vowels and consonants of his name are sevens."

Contact information is given for interested readers "to set up an appointment and to discuss her fee." I expect the discussion of the fee would be clearer than the discussion of destiny, birthplan, and attainment numbers.

Fall Skeptiverse Haiku!

by Keith Thomas, Oct. 2016

Could you stay healthy, Hearty and hale/Without your Daily dose of kale?	What a Spectacle: The online skeptics battle The internet trolls!
Was our star swimmer Tangled in the tentacles Of a monster squid?	The laws of science Have been battered and abused By pseudoscience.
Our democracy Looks like it might get trumped by Demagoguery.	Who knows how many Cubic cubits of bull crap Ken Ham’s ark could hold?



What creature were Larry Barker and Dave Thomas searching for in the Sandia mountains? Tune into KRQE-13 later this month (or next) for the report.

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, Albuquerque, 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: Alice Anderson, John Covan, Eddy Jacobs, Dr. Ian Palmer, Nancy Shelton, Keith Thomas, Debbie Thomas, and all our Puzzlers!

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IN THIS ISSUE:

**Future Meetings
Announced**

New Puzzles!

Sept. Meeting -

FRACKING & QUAKES

Woo-woo in Las Cruces

New Haiku!
