



# NMSR Reports

The Newsletter of the  
New Mexicans for Science and Reason

NMSR Reports, David E. Thomas, Editor, 1201 N. Avenida de Chamiso Pl., Socorro, NM 87801 © 2021

**NOVEMBER MEETING:**  
**NEW MEXICANS FOR SCIENCE AND REASON will discuss**  
**“Sodom, Airbursts, and Tall el-Hammam”**  
**=>November 10<sup>th</sup>, 2021 7:00PM<=**  
**=>Attend online!<=**

## FUTURE MEETINGS ANNOUNCED!

**November 10<sup>th</sup>, 2021 NMSR Meeting:**  
**“A Tunguska sized airburst destroyed Tall el-Hammam a Middle Bronze Age city in the Jordan Valley near the Dead Sea.”**

That was the title of an article published in Scientific Reports on September 20<sup>th</sup>, 2021. The authors wrote “...we consider whether oral traditions about the destruction of this urban city by a cosmic object might be the source of the written version of Sodom in Genesis. We also consider whether the details recounted in Genesis are a reasonable match for the known details of a cosmic impact event.”

NMSR will host a Zoom discussion on this article, and the storm of criticism and confusion which has arisen over the claims presented. As of press time, the list of tentative panelists includes both Dr. Mark Boslough, a critic of the paper, and Dr. David Burleigh of New Mexico Tech, one of the co-authors of the paper.

Paul Braterman’s [blog](#) mentions several problematic concerns. One problem listed by acknowledged experts in PubPeer relates to misuse of Mark Boslough’s account of airbursts; Boslough is a long-standing critic of the claims of the Trinity Southwestern University (TSU) group.

There was substantial undeclared image manipulation (eventually admitted) described as

“without significance”.



Braterman also notes that “*In the paper’s Figure 44c, shadows are cast by a sun shining from the direction labelled North. This obviously cannot happen at Tall el-Hammam, giving rise to further concerns about the quality of the work.*”

In a section on the Tunguska cosmic airburst, the Tall el-Hammam paper notes that some of the trees that were snapped in the event were “*up to one meter in diameter across.*” The sole citation for this datum is an article titled “The Tunguska Explosion of 1908” by Mark W. Brazo and Steven A. Austin, for the Geoscience Research Institute’s Origins journal (<https://www.grisda.org/about-gri>). This is a joint publication of the Institute for Creation Research (ICR), one of the country’s oldest creationist societies, and the Seventh-day Adventist church. The mention of “*an area where trees up to three feet in diameter had snapped like toothpicks*” was credited to Russian mineral scientist L.A. Kulik, but no citation to Kulik’s work was given. Is citing a creationist journal on an anecdotal claim science?

Because of the ongoing Corona virus crisis, this meeting will be held online, and members can attend from their homes or offices. It will be hosted on Zoom. A Zoom Link will be sent out to all members and potential attendees before the meeting. To get added to the attendee list, simply **email [nmsrdave@swcp.com](mailto:nmsrdave@swcp.com)**. Then, tune in to Zoom at **7:00 PM November 10<sup>th</sup>, 2021**, On Line! This will be an interesting meeting, don’t miss it!

## 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 a secure, undisclosed location. NMSR Reports is its official newsletter.

### NMSR officers:

**Dave Thomas, President**

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Membership: \$25/year (hardcopy newsletter), or \$15/year (downloadable PDF), make your check payable to NMSR, send to treasurer (Debbie Thomas).

### NMSR Advisors:

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

**Cyber-Cypher Clue:** W = G, Z = B

**Bonus Puzzle Clue:** You could look for an algorithm until you get to Doomsday.

### 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 **ONLINE, November 10<sup>th</sup> at 7PM, on Zoom!**



## PUZZLE TIME!

[Please send solutions to Dave Thomas at: nmsrdave@swcp.com, or at 1201 N Avenida de Chamiso Pl., Socorro NM 87801.]

### Cyber-Cypher: NOVEMBER 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.

" P D R X L X R K P N L F C R R P D R  
Y F G K R Q J Z B G B P N L E  
R Y R Q N P D B K W ; B P ' C C L C X J G G .  
P D B C J B Q , A D B I D B C S R R M B K W  
F C J G B Y R , B C P D B K K R Q P D J K  
N L F Q C S B K . " - J C P Q L K J F P  
A B G G B J X C D J P K R Q

### 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

### OCTOBER CYPHER SOLUTION

"DECISIONS DURING THE EARLY WEEKS OF THE PANDEMIC RANK AS ONE OF THE MOST IMPORTANT PUBLIC HEALTH FAILURES THE UNITED KINGDOM HAS EVER EXPERIENCED." - MEMBERS OF PARLIAMENT

Esteemed October Code Crackers: Mike Arms\*, and Austin Moede\*!

\*Secret Word: "DAFT POLEMICS BURN"

## SOCORRO STUMPER

### Need more Secret Word Cryptograms?

New puzzles every week at

[www.nmsr.org/SocorroStumper.htm](http://www.nmsr.org/SocorroStumper.htm)

### November Bonus: "Mark The Date"

Submitted by Dave Thomas

**The November Bonus:** What do the following seven dates have in common?

March 14<sup>th</sup> ( $\pi$  day), June 6<sup>th</sup> (D Day), July 4<sup>th</sup> (Independence Day), August 8<sup>th</sup> (Nixon Resignation Day), September 19<sup>th</sup> (Talk like a Pirate Day), October 31<sup>st</sup> (Halloween), and December 26<sup>th</sup> (Boxing Day).

## October Bonus Solution: “Office Football Pool”

*Submitted by Dave Thomas*

Eight staffers at an office participate in a weekly football pool. The pool goes for 16 weeks of the NFL season. The participants are evenly matched as regards predicting game winners. Each week has a definite winner, predictions of the total score for Monday night football are used to break ties.

**The October Bonus:** What is the most likely number of wins for any given participant over the course of the 16-week season?

**Answer: 2.**

**Congrats:** Earl Dombroski (NM), Rocky S. Stone (NM), and Keith Gilbert (NM), Harold H. Gaines (KS)!

## October 20<sup>th</sup>, 2021 NMSR Meeting: Larry Crumpler on “Update from Mars: Perseverance, Ingenuity and More”

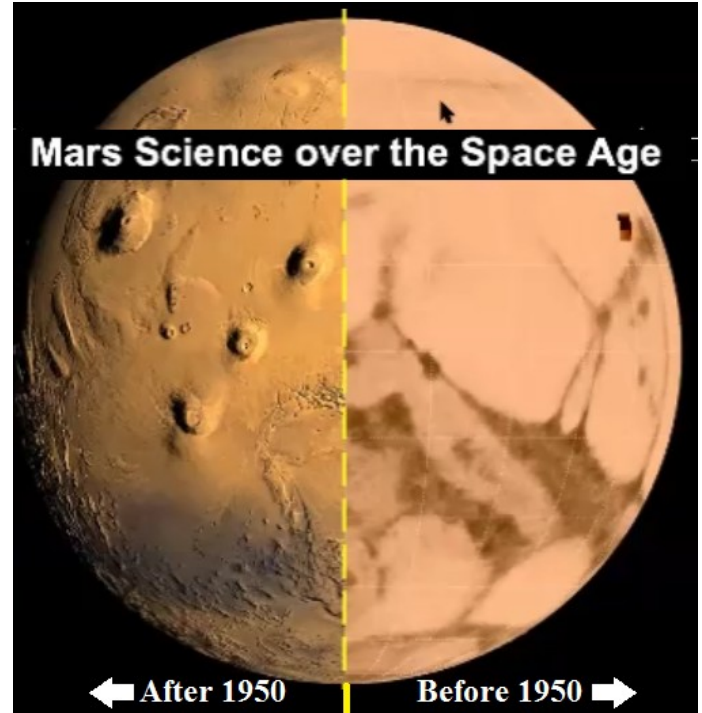


Our October speaker, Larry Crumpler, is a volcanologist with the NM Museum of Natural History and Science. He has worked with NASA for years on rover missions to Mars, advising the team on geological considerations. Crumpler was picked as one

of the 13 scientists selected by NASA to be on the science team of the Mars 2020 Perseverance Rover mission. His talk was titled “Exploring a New World: The First 238 Days on Mars with Perseverance and Ingenuity.”

Larry began by saying science was all about knowing things, and knowing when you don’t know something as well. Larry’s winning bid to join the project was a field geologic mapping of the deployment area. How has our knowledge of Mars evolved over the years? For thousands of years, all we knew about it was that it was a strangely-moving red star. From the dawn of telescopes to the dawn of the space age, we learned that Mars had polar caps, and curious blotches on the landscape. People like astronomer Percival Lowell thought these blotches indicated the existence of an alien civilization. It wasn’t until we could send spaceships near Mars, and land on its surface, that we learned that the

blotches were just minor surface color variations, and that Mars had volcanoes, craters, valleys, and sediments – it was an actual geological place to explore. This was the most dramatic example of Mars teaching us new things, Larry said, but added there would be many more such examples.



The first flybys of Mars were the Mariner missions (1964-1973). The Viking missions of 1975 included a flyby and two landings, our first. Then, political considerations led to a twenty-year gap in Martian exploration. Larry referred to data-starved Mars scientists during this period as the “Lost Generation.” The gap ended with the deployments of the Mars Global Surveyor (1997) and Sojourner (1996, a small rover). Since then numerous flybys (Mars Odyssey 2001, Mars Reconnaissance Orbiter (2005, providing data still used to plan rover routes), and Maven (2013) have been sent. The Spirit and Opportunity rovers started crawling around the Red Planet in 2003-2004, our first detailed land explorations of Mars. Other landing missions include Phoenix (2007), Curiosity (2011), Insight (2018, with a seismometer), Perseverance (2020, the current mission), and coming up in 2026, the Mars Sample Return mission.

Perseverance, the rover Larry is working with, has a slew of high-tech instruments. These include Mastcam-Z (a camera with zoom and stereo capabilities), SuperCam (which can zap samples with a laser, and also does telephoto shots and audio

recordings), MEDA (weather package), RIMFAX (Ground Penetrating Radar), Moxie (to test out making oxygen from carbon dioxide), and the large arm, which can take selfies of the rover, and also carries SHERLOC (an ultraviolet spectrometer for testing for organic compounds) and PIXL (which analyzes elemental compositions).

There is also a helicopter, Ingenuity, which is as large as a box of tissues, while having 4-foot wide blades to fly in the thin Martian atmosphere. Ingenuity has made 13 successful test flights.

The Perseverance mission has four major goals: sample caching, geology, astrobiology, and preparation for human visitation. As the rover takes core samples at a variety of outcrops, they will be cached at dozens of locations, to be recovered by another mission for return to Earth within the decade. Larry's specialty is the geologic mapping, which is ongoing as the rover traverses Mars. Besides astrobiological tests, some experiments like Moxie are testing methods to assist humans once they arrive on Mars.

Perseverance landed in Jezero Crater, which is close to a river delta. The slow-moving, fine-sediment deposition of deltas provides a promising place to look for signs of past microbial life. The

area was once quite wet, 3.8 to 3.5 billion years ago. The rover has autonavigational capabilities, and can steer itself across the Martian surface, dodging rocks as it goes. This feature will be critical as Perseverance goes the long way around the lava field, to reach the delta deposits sometime next year.

Larry has a new book coming out, Missions to Mars, on the history of scientific exploration of Mars. The Question and Answer period included questions about what happens during conjunction (data are collected, but no commands are sent), the height of the crater walls (a couple of kilometers), whether the caches will be buried in Martian dust (no), and the "Percy the Mars Rover" humorous Twitter account.

NMSR thanks Larry Crumpler for a splendid presentation. **Videos of this and other meetings are available at <http://www.nmsr.org/meetings.htm>.**



DUES check the date on your mailing label. If it's time for you to renew, or to make a contribution, please make your check **payable to NMSR**, and send it to Debbie Thomas, NMSR Treasurer, 3205 Alcazar NE, Albuquerque., NM 87110  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_  
*Membership \$25 per annum (hard copy newsletter), or \$15 per annum (online newsletter).*

**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](mailto:nmsrdave@swcp.com).**  
 Thanks to: John Covan, Eddy Jacobs, Debbie Thomas, Keith Thomas and all of our Puzzlers!


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**Online/Zoom**