



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 © 2022

APRIL MEETING:
NEW MEXICANS FOR SCIENCE AND REASON will hear
Nicholas Lamar Soutter on
“War Update : Latest from the Ukraine and Covid Fronts”
=>April 13th, 2022 7:00PM<=
=>Attend online!<=

FUTURE MEETINGS ANNOUNCED!

April 13th, 2022 NMSR Meeting:
Nicholas Lamar Soutter on “War Update : Latest from the Ukraine and Covid Fronts”

Two-time NMSR speaker Nicholas Lamar Soutter is an American writer and philosopher. His 2012 novel, *The Water Thief*, is about a future in which "corporations own everything, even the air we breathe." The novel won a Kirkus Star from Kirkus Reviews. Nick produces copious commentary on politics, science and humanism on his YouTube channel “In Time.”



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. Then, tune in

to Zoom at **7:00 PM April 13th, 2022, On Line!**

This will be an interesting meeting, don't miss it!

May 11th, 2022 NMSR Meeting: TBD

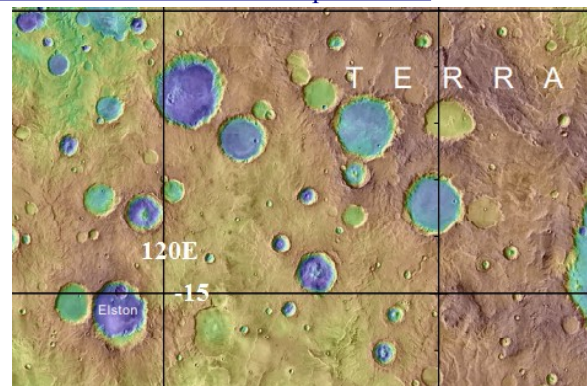
Got an idea for a speaker, or topic? Send them along to Dave Thomas for consideration.

Wolfgang Elston Honored Via Naming of Martian Crater



The late Wolfgang Elston, longtime NMSR member, has been honored with the naming of a large Martian crater after him. KRQE News reported on January 17th, 2022 that “From now on, when someone looks at a map of the planet Mars, they will see a massive crater that would span from Grants to Albuquerque named for Wolfgang Elston. Elston died in 2016, with his work mapping Mars just a small part of his legacy. ... Dr. Larry Crumpler, a grad student of Elston’s in the 70s, said ‘He was a sort of down-to-Earth sort of person who actually knew what it took to be a scientist.’ ... Crumpler is also on the team using the Perseverance Rover right now to map Mars and collect rock samples.” Crumpler, who’s on the staff of the Museum of Natural History, spoke to NMSR in October 2021.

<https://www.krqe.com/news/space-news/longtime-unm-professor-honored-on-latest-map-of-mars/>



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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Marilyn Savitt-Kring, Science Mom

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*,
Adjunct Professor, University of New Mexico.
- *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: V = P, Y = V.

Bonus Puzzle Clue: Allow “x” to be equal to something.

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, April 13th 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: APRIL 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.

```
" O W           O N           H G F G Q ' N           W P F
G X G K N F O K O N S           H G ' I           L X X           Z G
H L N K E O Q U           N G X G Y O D O P Q           Z S
K L Q I X G X O U E N . "           -           E M T P F O D N
U G P F U G           U P Z G X ,           P Q           N E P T L D           L .
G I O D P Q ' D           O Q Y G Q N O P Q
P W           N E G           O Q K L Q I G D K G Q N           X L T V
```

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

MARCH CYPHER SOLUTION

"WHAT PUTIN IS SAYING NOW IS THAT UKRAINE DOESN'T BELONG TO UKRAINIANS. IT BELONGS TO HIM AND THE PAST." - FORMER NATIONAL SECURITY COUNCIL ADVISOR FIONA HILL

Esteemed March Code Crackers: Mike Arms* and Austin Moede*!

*Secret Word: "DARKLY SOVIET BUNCH"

SOCORRO STUMPER

Need more Secret Word Cryptograms?

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

April Bonus: “Celebrate Your Roots”

Submitted by Dave Thomas

The April Bonus:

What is the solution to the following? Is there more than one?

$$\sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}}$$

March Bonus Solution: “A Marriage Ensemble”

Submitted by Dave Thomas

Dan and Terry are two husbands. Their wives are Betty and Julia, not necessarily in that order. The combined ages of the foursome is 106 years. Each husband is 5 years older than his wife. Terry is 4 years younger than Dan. The combined ages of Dan and Betty is 53 years.

The March Bonus: Which husband is married to which wife? How old is each individual?

Answer: Dan (31) is married to Julia (26), and Terry (27) is married to Betty (22).

Congrats to: Rocky Stone (NM), Mike Arms (NM), Harold H. Gaines (KS), Earl Dombroski (NM), Eiichi Fukushima (NM)

March 9th, 2022 NMSR Meeting:

Dr. Al Zelicoff on “Long COVID: Some unexpected and troubling findings as of early 2022”



Al Zelicoff has several medical and physics degrees, This was his 5th appearance at NMSR. He started by asking “What is ‘Long COVID’?” Al said that a “clinical” definition (i.e. what doctors would expect to see in clinical settings) includes, inter alia, the following symptoms:

- Neurologic
 - Headaches
 - “Brain Fog”
- Respiratory
 - Shortness of breath
 - Chronic Cough
- Psychiatric/Psychological
 - Anxiety
 - Depression
- Non-specific
 - Fatigue
 - Sleep disturbance
 - Rashes
 - Gastro-intestinal “issues”

What are the objective findings in COVID after acute illness? There are now results regarding the Brain, the Heart, and Lungs/other tissue. Here is the summary:

- Brain
 - UK BioBank Study, February 2022
 - Liu et al, March 2022
- Heart
 - Xie, et. al. Feb 2022
- Lungs and other tissue

- Maccio et. al. Feb. 2022

Al described the UK BioBank Study in detail. Between 2006-2010, about 9.2 million adults were invited to participate in a detailed set of scans. The results included about 500,000 participants. Imaging of 5 body areas was performed:

- Brain (via MRI)
- Cardia (via MRI)
- Abdominal (via MRI)
- Dual X-ray absorption (DXA)
- Carotid Doppler US

There were also Baseline assessments, which included:

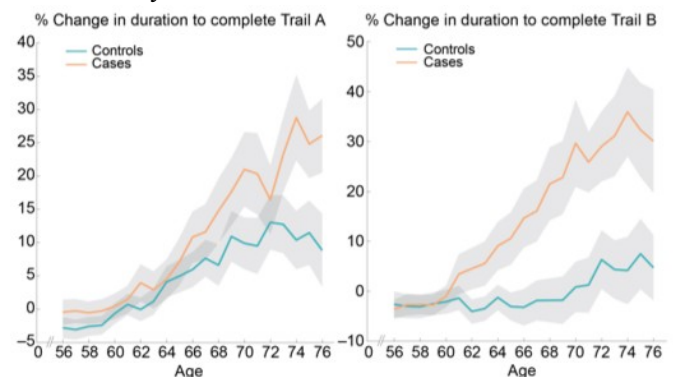
- Lifestyle
- Socio-demographic
- Genotyping
- Standard screening blood tests
- Hearing
- Arterial stiffness
- Cardiorespiratory fitness
- Collection of physical activity data over 7 days
- Dietary
- Cognitive Function
- Pain

The UK study enabled analysis of SARS-CoV2 associated brain structure changes; 785 participants who have been imaged twice, aged 51-81, included 401 SARS-CoV2 infected people, with 141 days separating COVID diagnosis and the second scan. There were also 384 controls (age and sex-matched more or less), allowing a good analysis of the effects of long COVID on the brain.

The Primary Findings in COVID patients vs. controls were:

- Reduced grey matter thickness in orbitofrontal cortex and parahippocampal gyrus
- Markers of tissue damage in olfactory cortex
- Reduction in global brain size
- Larger cognitive decline

Here is an analysis of increased time for taking tests from the study:



Al’s preliminary conclusions were that:

- There are anatomically consistent patterns of brain volume and diffusivity changes comparing post-COVID patients to

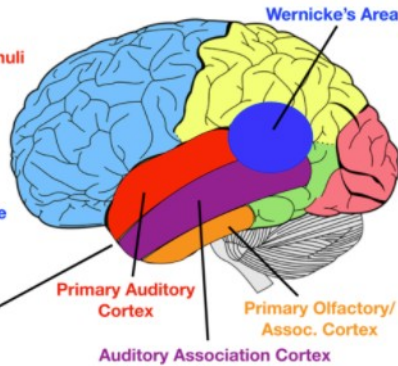
controls

• There is clear involvement of the olfactory cortex and functionally-connected regions (the same region of the temporal lobe responsible for the noted loss of smell in COVID patients is also related to basic brain function).

Functional Areas

- **Primary Auditory Cortex**
 - Awareness of Auditory Stimuli
- **Auditory Assoc. Cortex**
 - Process, Analyze, Understand, Recognize, Memory of Sounds
- **Wernicke's Area**
 - Comprehend/Understand Written & Spoken Language
- **Primary Olfactory Cortex/ Association Cortex**
 - Awareness of Smell & Processing of Smell

Temporal



• This includes left parahippocampal gyrus which plays an integrative role in temporal order of episodic memory events

• More than 95% of COVID patients were either asymptomatic or mild, suggesting that the effects seen were from the virus itself, rather than the stress of severe infection and associated anxiety

• Post-COVID cognitive decline (by various measures) is documented in two large studies over the course of ~1 year.

• Post-hoc analysis of cases of non-COVID pneumonia cases in the dataset do *not* demonstrate the same COVID-related changes

- Mechanism of effect of the SARS-CoV2 virus may be:
 - Anterograde degeneration of nerves
 - Neuro-inflammatory process
 - Effect of direct spread of virus

AI also discussed Cardiovascular outcomes of COVID-19, and research that shows an Increased burden of

cardiovascular outcomes in patients with long COVID. He also discussed long-term infections in COVID-19.

AI's overall conclusions were:

- COVID is clearly a multi-organ disease
- Virus may persist for many weeks post-infection
- Long-term objective consequences of COVID have now been demonstrated for:
 - Brain : Imaging and "clinical" → cognitive decline, even among mild or asymptomatic COVID
 - Heart : Clinical → multiple cardiovascular effects
 - Lung: Severity of diffuse alveolar damage correlates with persistence of virus

Overall, he said, the impacts of the various forms of "Long COVID" will be huge. A vigorous Q&A followed the talk.

NMSR thanks AI Zelicoff for a fascinating discussion. In addition to a video of this presentation, AI's slides are [posted on NMSR](#).

As usual, **videos of this and past 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.

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

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 Future Meetings Announced
 New Puzzles!
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April Meeting:
 Nick Souther
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 UPDATES
 Weds 13th 7PM
 Online/Zoom