



Sharing Knowledge to create a Better World!



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# Weekly Science Report

December 16, 2022

**“Right up to the very end, life must be worn gloriously, because until our last moment the future is what we make it.”**

Star Trek: Strange New Worlds

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## Introduction

Steve Detwiler created this publication with the support of Graham Hancock and the late John Anthony West to share news and information on various disciplines to include but not limited to paleontology, space sciences, genetics, and archaeology. His goal behind sharing this publication has always been very simple, by sharing knowledge we can make our world a better place. This publication is Mr. Detwiler's contribution to bring people together and share ideas and discoveries with his fellow humans.

I hope you enjoy this publication and that the content challenges and inspires you!

The Weekly Science Report is also on social media at:

- Facebook: <https://www.facebook.com/weeklysciencertpt/>
- Twitter: <https://twitter.com/wklysciencertpt>

## News Articles

### Paleontology, Evolution and Prehistoric Studies

Mysterious ancient humans may have given people of Papua New Guinea an immune advantage

<https://www.science.org/content/article/mysterious-ancient-humans-may-have-given-people-papua-new-guinea-immune-advantage>

Homo Sapiens Rediscovered review: Hunting human origin stories

<https://www.newscientist.com/article/mg25634161-200-homo-sapiens-rediscovered-review-hunting-human-origin-stories/>

Oldest DNA sheds light on a 2 million-year-old ecosystem that has no modern parallel

[https://www.cnn.com/2022/12/07/world/oldest-dna-sequence-discovered-greenland-scn/index.html?utm\\_medium=social&utm\\_content=2022-12-08T01%3A01%3A13&utm\\_source=fbCNN&utm\\_term=link](https://www.cnn.com/2022/12/07/world/oldest-dna-sequence-discovered-greenland-scn/index.html?utm_medium=social&utm_content=2022-12-08T01%3A01%3A13&utm_source=fbCNN&utm_term=link)

Mammoth problem found with extinction timeline

<https://phys.org/news/2022-11-mammoth-problem-extinction-timeline.html>

Researchers unveil evolution of paleodiet at Neolithic Qujialing site

<https://phys.org/news/2022-11-unveil-evolution-paleodiet-neolithic-qujialing.html>

Scientists Find Plaster Copies of Fossil Destroyed by Nazis

[https://www.smithsonianmag.com/smart-news/scientists-find-plaster-copies-of-fossil-destroyed-by-nazis-180981080/?utm\\_source=facebook.com&utm\\_medium=socialmedia](https://www.smithsonianmag.com/smart-news/scientists-find-plaster-copies-of-fossil-destroyed-by-nazis-180981080/?utm_source=facebook.com&utm_medium=socialmedia)

Ancient skull uncovered in China could be million-year-old Homo erectus

<https://www.nature.com/articles/d41586-022-04142-0>

Scientists Revive 48,500-Year-Old Virus, Setting World Record

[https://www.smithsonianmag.com/smart-news/scientists-revive-48500-year-old-virus-setting-world-record-180981208/?utm\\_source=facebook.com&utm\\_medium=socialmedia](https://www.smithsonianmag.com/smart-news/scientists-revive-48500-year-old-virus-setting-world-record-180981208/?utm_source=facebook.com&utm_medium=socialmedia)

Fossil discovery in storeroom cupboard shifts origin of modern lizard back 35 million years

<https://phys.org/news/2022-12-fossil-discovery-storeroom-cupboard-shifts.html>

The Discovery of the Oldest Human Footprints in North America Thrilled Researchers. It Turns Out They May Not Be So Old

<https://news.artnet.com/art-world/oldest-ice-age-human-footprints-new-mexico-not-that-old-2212969>

Tiny flakes tell a story of tool use 300,000 years ago

<https://phys.org/news/2022-12-tiny-flakes-story-tool-years.html>

Scientists discover what was on the menu of the first dinosaurs

<https://phys.org/news/2022-12-scientists-menu-dinosaurs.html>

## History

In 2 U.S. cities haunted by race massacres, facing the past is painful and divisive

<https://www.npr.org/2022/12/11/1137090651/elaine-massacre-tulsa-race-riot?sc=18&f=1001>

Film depicting landmark Native American case to be shot in Oklahoma

[https://kfor.com/news/local/film-depicting-landmark-native-american-case-to-be-shot-in-oklahoma/?utm\\_source=facebook.com&utm\\_campaign=socialflow&utm\\_medium=referral](https://kfor.com/news/local/film-depicting-landmark-native-american-case-to-be-shot-in-oklahoma/?utm_source=facebook.com&utm_campaign=socialflow&utm_medium=referral)

Biden signs Respect for Marriage Act, reflecting his and the country's evolution

<https://www.npr.org/2022/12/13/1142331501/biden-to-sign-respect-for-marriage-act-reflecting-his-and-the-countrys-evolution?sc=18&f=1001>

Australia to beef up laws to safeguard Aboriginal heritage

[https://www.reuters.com/world/asia-pacific/australia-sets-out-national-plan-safeguard-aboriginal-heritage-2022-11-23/?fireglass\\_rsn=true#fireglass\\_params&tabid=a1a167cfb0a78315&start\\_with\\_session\\_counter=3&application\\_server\\_address=isolation2-us-east-1.wss.prod.fire.glass](https://www.reuters.com/world/asia-pacific/australia-sets-out-national-plan-safeguard-aboriginal-heritage-2022-11-23/?fireglass_rsn=true#fireglass_params&tabid=a1a167cfb0a78315&start_with_session_counter=3&application_server_address=isolation2-us-east-1.wss.prod.fire.glass)

Unmasking "The Scholar": The Colorado woman who helped a global art smuggling operation flourish for decades

[https://www.denverpost.com/2022/12/01/emma-bunker-douglas-latchford-cambodian-art-denver-art-museum/?fireglass\\_rsn=true#fireglass\\_params&tabid=add8fc5cedd2cdf0&start\\_with\\_session\\_counter=3&application\\_server\\_address=isolation2-us-east-1.wss.prod.fire.glass](https://www.denverpost.com/2022/12/01/emma-bunker-douglas-latchford-cambodian-art-denver-art-museum/?fireglass_rsn=true#fireglass_params&tabid=add8fc5cedd2cdf0&start_with_session_counter=3&application_server_address=isolation2-us-east-1.wss.prod.fire.glass)

Bob McGrath, original cast member and 'Sesame Street' legend, dies at 90

<https://wjactv.com/news/entertainment/bob-mcgrath-original-cast-member-and-sesame-street-legend-dies-at-90-actor-musician-childrens-author-childhood-show-1969-premiere-neighbor-bob-johnson-final-appearance-2017-sing-along-with-mitch>

A Woman's Name Uncovered in the Margins of a 1,200-Year-Old Medieval Manuscript Provides a Fresh Clue About Its Real Significance

<https://news.artnet.com/art-world/oxford-hodgkinson-medieval-inscription-eadburg-2219709>

National Archives releases thousands of JFK assassination records

<https://thehill.com/homenews/administration/3776939-national-archives-releases-thousands-of-jfk-assassination-records/>

Maria Ressa's 'How to Stand Up to a Dictator' is a memoir and manifesto

<https://www.npr.org/2022/12/15/1142428212/maria-ressa-new-book-how-to-stand-up-to-a-dictator-a-memoir-and-manifesto?sc=18&f=1001>

U.S. Postal Service honors the late civil rights leader Rep. John Lewis with a stamp

<https://www.npr.org/2022/12/14/1142688969/john-lewis-stamp-usps?sc=18&f=1142688969>

What Fingerprints Tell Us About Jerusalem's Ancient Artisans

<https://www.smithsonianmag.com/history/what-fingerprints-tell-us-about-jeruselems-ancient-artisans-180981238/>

Drought encouraged Attila's Huns to attack the Roman empire, tree rings suggest

<https://phys.org/news/2022-12-drought-attila-huns-roman-empire.html>

Assyrian Soft Power

<https://www.archaeology.org/issues/489-2211/digs/10899-digs-turkey-assyrian-relief>

The Little-Known Story of the First Washington Monument

<https://www.smithsonianmag.com/history/the-little-known-story-of-the-first-washington-monument-180981268/>

Spain's Oft-Forgotten Nazi Ties

<https://www.smithsonianmag.com/history/spains-oft-forgotten-ties-to-the-nazis-180981304/>

## Archaeology

More than 60 ancient Roman-era graves were discovered in Gaza

<https://www.npr.org/2022/12/11/1142146031/ancient-graves-tombs-gaza-discovered?sc=18&f=1001>

An Archeological Dig in Michigan Turns Up Some Surprising Artifacts

<https://www.scientificamerican.com/video/an-archeological-dig-in-michigan-turns-up-some-surprising-artifacts/>

Mass evictions at Angkor Wat leave 10,000 families facing uncertain future

<https://www.theguardian.com/global-development/2022/nov/29/evictions-cambodia-angkor-wat-unesco-world-heritage-site>

Developers Found Graves in the Virginia Woods. Authorities Then Helped Erase the Historic Black Cemetery.

<https://www.propublica.org/article/how-authorities-erased-historic-black-cemetery-virginia>

Researchers Crack Secret of 1,400-year-old Inscription From Catacomb in Israel

<https://www.haaretz.com/archaeology/2022-11-28/ty-article/researchers-crack-secret-of-1-400-year-old-inscription-from-catacomb-in-israel/00000184-be7c-d53c-a3cf-be7e00e00000>

Archaeologists Ask Netflix to Reclassify Graham Hancock's 'Unfounded' Netflix Docuseries 'Ancient Apocalypse' as Fiction

<https://news.artnet.com/art-world/archaeologists-graham-hancocks-ancient-apocalypse-fiction-2222060>

Storm erosion brings 200-year-old shipwreck to the surface of a Florida beach

<https://www.popsci.com/science/daytona-beach-florida-shipwreck/>

German archaeological project traces early occupants of Qasr Burqu

<https://jordantimes.com/news/local/german-archaeological-project-traces-early-occupants-qasr-burqu>

Precise solar observations fed millions in ancient Mexico

<https://phys.org/news/2022-12-precise-solar-fed-millions-ancient.html>

Early-career archaeologists are pessimistic about future careers

<https://phys.org/news/2022-12-early-career-archaeologists-pessimistic-future-careers.html>

5,000-year-old 'bog body' found in Denmark may be a human sacrifice victim

<https://www.livescience.com/bog-body-human-sacrifice-found-denmark>

University of Cambridge to return looted Benin bronzes

<https://www.independent.co.uk/news/uk/benin-university-of-cambridge-charity-commission-british-london-b2245453.html>

U.K. archaeologists unearth 7th century treasures owned by woman who may have been Christian religious leader

<https://www.cbsnews.com/news/harpole-treasure-7th-century-artifacts-unearthed-uk/>

Sr-Nd isotope baseline in Silk Road regions enables archaeological plant-ash glass provenance

<https://phys.org/news/2022-12-sr-nd-isotope-baseline-silk-road.html>

Medieval necklace found near Northampton 'internationally important'

<https://www.bbc.com/news/uk-england-northamptonshire-63860132>

Cretan Antiquing

<https://www.archaeology.org/issues/489-2211/digs/10890-digs-greece-crete-antiques>

Aztec Offerings

<https://www.archaeology.org/issues/494-2301/features/11028-mexico-templo-mayor-wood-artifacts>

## Egyptology

Ancient mummy portraits and rare Isis-Aphrodite idol discovered in Egypt

<https://www.livescience.com/fayum-mummy-portraits-discovered-ancient-egypt>

Who Gets to Tell the Story of Ancient Egypt?

<https://www.smithsonianmag.com/history/who-gets-to-tell-the-story-of-ancient-egypt-180981263/>

Egyptian ring featuring 'god of fun' discovered in ancient burial

<https://www.livescience.com/gold-jewelry-ancient-egypt-burial>

Magical Mystery Door

<https://www.archaeology.org/issues/488-2211/features/10882-egypt-stela-false-door>



General Science

Nothing to report

## Physics, Earth and Space Sciences

China's new space station opens for business in an increasingly competitive era of space activity  
<https://theconversation.com/chinas-new-space-station-opens-for-business-in-an-increasingly-competitive-era-of-space-activity-195882>

Six Nations Meet to Discuss Space Security  
<https://www.hstoday.us/subject-matter-areas/emergency-preparedness/six-nations-meet-to-discuss-space-security/>

NASA's Artemis I returns from the moon with hopes to get astronauts back there soon  
<https://www.npr.org/2022/12/11/1141946917/nasa-artemis-splashdown-moon-mission?sc=18&f=1001>

The Dead Sea is dying. These beautiful, ominous photos show the impact  
<https://www.npr.org/sections/pictureshow/2022/12/11/1139524126/photos-dead-sea-water-level-dropping-sinkholes-erosion?sc=18&f=1001>

Construction starts on the world's biggest radio telescope, which will 'hear' signals billions of light-years away  
[https://www.popsci.com/technology/radio-telescope-australia/?utm\\_campaign=trueanthem\\_AI&utm\\_medium=social&utm\\_source=facebook&utm\\_term=popularscience](https://www.popsci.com/technology/radio-telescope-australia/?utm_campaign=trueanthem_AI&utm_medium=social&utm_source=facebook&utm_term=popularscience)

Alberta researchers identify new minerals from meteorite found in Somalia  
<https://www.cbc.ca/news/canada/edmonton/alberta-researchers-identify-new-minerals-from-meteorite-found-in-somalia-1.6675305>

Artemis I's solar panels harvested a lot more energy than expected  
[https://www.popsci.com/science/artemis-solar-panels/?utm\\_campaign=trueanthem\\_AI&utm\\_medium=social&utm\\_source=facebook&utm\\_term=popularscience](https://www.popsci.com/science/artemis-solar-panels/?utm_campaign=trueanthem_AI&utm_medium=social&utm_source=facebook&utm_term=popularscience)

Japanese astronaut keeps International Space Station mission amid research scandal  
<https://www.space.com/japanese-astronaut-international-space-station-mission-research>

Hundreds report seeing a bright fireball in northeastern U.S.  
<https://www.space.com/hundreds-report-bright-meteor-northeastern-us>

Space Startup Wants to Build a Manufacturing Platform in Low Earth Orbit  
[https://gizmodo.com/space-space-junk-think-orbit-think-platform-1849887942?utm\\_campaign=Gizmodo&utm\\_content=Giz+Space&utm\\_medium=SocialMarketing&utm\\_source=facebook](https://gizmodo.com/space-space-junk-think-orbit-think-platform-1849887942?utm_campaign=Gizmodo&utm_content=Giz+Space&utm_medium=SocialMarketing&utm_source=facebook)

Io volcano world comes into view of Juno probe  
<https://www.bbc.com/news/science-environment-63982190>

Webb Space Telescope reveals previously shrouded newborn stars  
<https://www.eurekalert.org/news-releases/974763>

Team of physicists suggests LIGO could be used to detect giant alien spacecraft  
<https://phys.org/news/2022-12-team-physicists-ligo-giant-alien.html>

Astronomers may have uncovered how galaxies change their shape  
<https://phys.org/news/2022-12-astronomers-uncovered-galaxies.html>

## Environment, Climate Change and Alternative Energy Sources

In a Major Breakthrough, Nuclear Fusion Just Produced Net Energy Gain for the First Time

[https://www.popularmechanics.com/science/energy/a42230285/nuclear-fusion-ignition-achieved/?utm\\_source=facebook&utm\\_medium=social-media&utm\\_campaign=socialflowFBPOP&fbclid=IwAR2KtuFJE9GEeBnKmuKH6R2w0Zf0kipWGjSUc-W4rv0Ntvqm8ZsSKRj9Axs](https://www.popularmechanics.com/science/energy/a42230285/nuclear-fusion-ignition-achieved/?utm_source=facebook&utm_medium=social-media&utm_campaign=socialflowFBPOP&fbclid=IwAR2KtuFJE9GEeBnKmuKH6R2w0Zf0kipWGjSUc-W4rv0Ntvqm8ZsSKRj9Axs)

Fight to curb food waste increasingly turns to science

<https://apnews.com/article/business-climate-and-environment-df1114de488c2d48836f538591ec9de2>

Salt Lake City's efforts to fight pollution face a new challenge: Toxic dust

<https://www.nbcnews.com/science/environment/salt-lake-citys-efforts-fight-pollution-face-new-challenge-toxic-dust-rcna44508>

Sale jumpstarts floating, offshore wind power in U.S. waters

<https://www.nbcnews.com/science/environment/sale-jumpstarts-floating-offshore-wind-power-us-waters-rcna60230>

Rare good news from the Amazon: Gigantic fish are thriving again

<https://www.npr.org/2022/12/07/1139978552/brazil-amazon-fish-pirarucu-conservation?sc=18&f=1001>

A New NASA Satellite Will Map Earth's Rising Seas

[https://www.wired.com/story/a-new-nasa-satellite-will-map-earths-rising-seas/?bxdid=5bd6790424c17c1048020acb&cndid=41291302&esrc=twitter-newsletter-c&mbid=mbid%3DCRMWIR012019%0A%0A&source=EDT\\_WIR\\_NEWSLETTER\\_0\\_DAILY\\_ZZ&utm\\_brand=wired&utm\\_campaign=aud-dev&utm\\_content=WIR\\_Daily\\_121522&utm\\_mailing=WIR\\_Daily\\_121522&utm\\_medium=email&utm\\_source=nl&utm\\_term=P7](https://www.wired.com/story/a-new-nasa-satellite-will-map-earths-rising-seas/?bxdid=5bd6790424c17c1048020acb&cndid=41291302&esrc=twitter-newsletter-c&mbid=mbid%3DCRMWIR012019%0A%0A&source=EDT_WIR_NEWSLETTER_0_DAILY_ZZ&utm_brand=wired&utm_campaign=aud-dev&utm_content=WIR_Daily_121522&utm_mailing=WIR_Daily_121522&utm_medium=email&utm_source=nl&utm_term=P7)

Model shows extinction cascades caused by land use and climate change will wipe out more than 25% of world biodiversity

<https://phys.org/news/2022-12-extinction-cascades-climate-world-biodiversity.html>

## Biological, Genetics and Medical Sciences

CRISPR gene-editing may boost cancer immunotherapy, new study finds

<https://www.npr.org/sections/health-shots/2022/12/13/1140384354/crispr-improves-cancer-immunotherapy-car-t-cell>

New immune therapy for advanced melanoma offers hope for hard-to-treat disease

<https://www.nbcnews.com/health/cancer/melanoma-new-immunotherapy-cancer-treatment-rcna60468>

Researchers develop nano-based technology to fight osteoporosis

<https://phys.org/news/2022-12-nano-based-technology-osteoporosis.html>

New technique to make complex molecules for antibiotics and anti-fungal medicines

<https://phys.org/news/2022-12-technique-complex-molecules-antibiotics-anti-fungal.html>

## Other

A peculiar protected structure links Viking knots with quantum vortices  
<https://phys.org/news/2022-12-peculiar-links-viking-quantum-vortices.html>

## Additional Informational

Robotic cubes shapeshift in outer space

[https://news.mit.edu/2022/robotic-cubes-electrovoxels-shapeshift-outer-space-0223?fbclid=IwAR2z-0DU4khPmGieAkbHWH5MobelLOZzdQK03VZ2uUjBPCIU4oEGnCFNgg\\_8](https://news.mit.edu/2022/robotic-cubes-electrovoxels-shapeshift-outer-space-0223?fbclid=IwAR2z-0DU4khPmGieAkbHWH5MobelLOZzdQK03VZ2uUjBPCIU4oEGnCFNgg_8)

Indigenous fire management and cross-scale fire-climate relationships in the Southwest United States from 1500 to 1900 CE

[https://www.science.org/doi/10.1126/sciadv.abq3221?fireglass\\_rsn=true#fireglass\\_params&tabid=af14cc99959c8782&start\\_with\\_session\\_counter=3&application\\_server\\_address=isolation1-us-west-2.wss.prod.fire.glass](https://www.science.org/doi/10.1126/sciadv.abq3221?fireglass_rsn=true#fireglass_params&tabid=af14cc99959c8782&start_with_session_counter=3&application_server_address=isolation1-us-west-2.wss.prod.fire.glass)

NASA's Perseverance Rover Investigates Intriguing Martian Bedrock

[https://mars.nasa.gov/news/9304/nasas-perseverance-rover-investigates-intriguing-martian-bedrock/?utm\\_source=iContact&utm\\_medium=email&utm\\_campaign=nasas-mars-public-engagement-team&utm\\_content=20221208\\_MarsNewsletter](https://mars.nasa.gov/news/9304/nasas-perseverance-rover-investigates-intriguing-martian-bedrock/?utm_source=iContact&utm_medium=email&utm_campaign=nasas-mars-public-engagement-team&utm_content=20221208_MarsNewsletter)

Preserving an ancient culture under threat from genocide

[https://www.chathamhouse.org/publications/the-world-today/2022-12/preserving-ancient-culture-under-threat-genocide?fireglass\\_rsn=true#fireglass\\_params&tabid=adf255548aaa03eb&start\\_with\\_session\\_counter=3&application\\_server\\_address=isolation2-us-east-1.wss.prod.fire.glass](https://www.chathamhouse.org/publications/the-world-today/2022-12/preserving-ancient-culture-under-threat-genocide?fireglass_rsn=true#fireglass_params&tabid=adf255548aaa03eb&start_with_session_counter=3&application_server_address=isolation2-us-east-1.wss.prod.fire.glass)

Ashoka and the Maurya Dynasty: The History and Legacy of Ancient India's Greatest Empire (Dynasties)

[https://www.amazon.com/gp/product/1789145961?ref=em\\_1p\\_0\\_ti&ref\\_=pe\\_2313400\\_68828584\\_0](https://www.amazon.com/gp/product/1789145961?ref=em_1p_0_ti&ref_=pe_2313400_68828584_0)

National Park Service announces new American World War II Heritage Cities

<https://www.nps.gov/orgs/1207/national-park-service-announces-new-american-world-war-ii-heritage-cities.htm>

Widespread glasses generated by cometary fireballs during the late Pleistocene in the Atacama Desert, Chile

[https://pubs.geoscienceworld.org/gsa/geology/article/50/2/205/609354/Widespread-glasses-generated-by-cometary-fireballs?fbclid=IwAR3LMmaFeJQKzfDbhUg\\_VasrdMOwHRwnnDP7Bk0oNDcjAzOCecnylVe0jcc](https://pubs.geoscienceworld.org/gsa/geology/article/50/2/205/609354/Widespread-glasses-generated-by-cometary-fireballs?fbclid=IwAR3LMmaFeJQKzfDbhUg_VasrdMOwHRwnnDP7Bk0oNDcjAzOCecnylVe0jcc)

4000-year-old hair from the Middle Nile highlights unusual ancient DNA degradation pattern and a potential source of early eastern Africa pastoralists

<https://www.nature.com/articles/s41598-022-25384-y>

Unlocking the organic residues preserved in the corrosion from the Pewsey Hoard vessels

<https://www.nature.com/articles/s41598-022-24400-5>