



Weekly Science Report

September 8, 2023

"The true meaning of Islam will not only focus on how Muslims worship but also on who we are: mothers, fathers, spouses, students, neighbors, friends. People who smile with pride at their child's first step; laugh with friends over the old times; worry about exam results; cry at the sight of our children in pain. People just like you!"

Her Majesty Queen Rania Al Abdullah of the Kingdom of Jordan on being Muslim

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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/weeklysciencerpt/

• Twitter: https://twitter.com/wklysciencerpt

News Articles

Paleontology, Evolution and Prehistoric Studies

How Neanderthal genetic material could influence nose shapes to this day https://www.popsci.com/science/modern-facial-features-nose-neanderthal-genetics/?fbclid=lwAR10uXzQ_WITWqdywllgmXCbxhFUV3DFVp1AdEwsYzH0OlWKG5GQZTP ascq

Is it time to change the way we talk about human evolution?

https://www.popsci.com/science/new-human-species-homo-bodoensis/?fbclid=lwAR39KQuDaG9qcbWF20NZKHO8azmcvXpzEwEAUPmYCVX2lkI1Z5pbQyJcLFM

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Neandertals were the first hominids to turn forest into grassland 125,000 years ago https://www.sciencenews.org/article/neandertals-first-hominid-modify-environment-forest-grassland?fbclid=lwAR15L-XYEMS0OfSmfVhsp4sVfPA6_Yjbw8NIBQFYaC5N6pEGG-OZjtV6BW8

An 'ancestral bottleneck' took out nearly 99 percent of the human population 800,000 years ago https://www.popsci.com/science/human-population-pleistocene/?fbclid=lwAR2ZtddRV5zTXre-0gpA4YyXdw9qUO0ByMhMKs9jWDzFdWOJpnDGi4AHbCk

Oregon may be oldest site of human occupation in North America, archaeologists say https://www.kcbd.com/2023/08/28/oregon-may-be-oldest-site-human-occupation-north-america-archaeologists-say/?outputType=amp

Human and ape ancestors arose in Europe, not in Africa, controversial study claims https://www.livescience.com/archaeology/human-and-ape-ancestors-arose-in-europe-not-in-africa-controversial-study-claims

How ancient bee burrows led to a better understanding of Neanderthals https://phys.org/news/2023-08-ancient-bee-burrows-neanderthals.html

Centuries-old technique reveals hidden '3D' animals in Paleolithic cave art https://www.livescience.com/archaeology/centuries-old-technique-reveals-hidden-3d-animals-in-paleolithic-cave-art

Ancient humans in Israel once ate elephants. When tusks went bust, weapons improved https://www.timesofisrael.com/ancient-humans-in-israel-once-ate-elephants-when-they-disappeared-weapons-improved/

Paleolithic hunter-gatherer hearths reveal changing vegetation in response to climate https://phys.org/news/2023-09-paleolithic-hunter-gatherer-hearths-reveal-vegetation.html

History

A muddy reveal for mysterious West Point time capsule from 1820s https://www.bbc.com/news/world-us-canada-66641401

Ancient Yazidi heritage still under threat after Isis genocide

https://www.theartnewspaper.com/2023/09/05/ancient-yazidi-heritage-still-under-threat-after-isisgenocide

German Nazi-looted art panel calls for more powers and a new law https://www.theartnewspaper.com/2023/09/05/german-nazi-looted-art-panel-calls-for-more-powers-and-a-new-law

Pope says 'backward' U.S. conservatives have replaced faith with ideology https://apnews.com/article/pope-francis-vatican-conservatives-abortion-us-bbfc346c117bd9ae68a1963478bea6b3

Who Was the Real Pope's Exorcist?

https://www.smithsonianmag.com/smart-news/the-real-popes-exorcist-father-gabriel-amorth-180981993/?utm_medium=social&utm_source=facebook&utm_campaign=editorial&utm_term=8182023&utm_content=recent&fbclid=lwAR2EzdaZqXC-ulwaGzmyyybMh DWfACvksS6DTrgIPP aDQROUd9q3e7YRM

Loss of cultural landmarks in Lāhainā deeply affects community, Hawai'i historians https://www.hawaiipublicradio.org/local-news/2023-08-10/loss-of-cultural-landmarks-in-lahaina-deeply-affects-community-hawaiian-historians

Evidence found of German mass execution by French Resistance after D-Day https://www.bbc.com/news/world-europe-66608891

'Stolen' totem pole prepared for return to Canada

https://www.bbc.com/news/uk-scotland-

66615589?at_medium=social&at_bbc_team=editorial&at_ptr_name=facebook_page&at_link_origin=BBC_News&at_link_id=28284D0C-45BC-11EE-B493-

E9233AE5AB7B&at format=link&at link type=web link&at campaign type=owned&at campaign=Social_Flow&fbclid=lwAR3_ty79Vei90qk9Q0bBRpoBaCm85B_2XOFVv3rqb0UkjObdJzHLY0sm5Oo

New book looks into the life of Ira Hayes

https://ictnews.org/news/new-book-looks-into-the-life-of-ira-

hayes?fbclid=IwAR1vw7uZ7YC1fFsGdF7OFXEOXVJA9VVhv2JqqxMRGu3txwFndH80K4DsZY4

Minnesota to make amends, return state land to Dakota people

 $\underline{\text{https://kstp.com/kstp-news/top-news/minnesota-to-make-amends-return-state-land-to-dakota-people/}$

Chile will search for 1,000+ victims of forced disappearance by Pinochet dictatorship https://www.npr.org/2023/08/31/1197019905/chile-search-disappeared-victims-pinochet-dictatorship?sc=18&f=1001

98-year-old German charged in thousands of Holocaust deaths at Nazi camp https://www.nbcnews.com/news/world/98-year-old-german-charged-thousands-holocaust-deaths-nazi-camp-rcna103082

Nazi camp guard Josef Schütz dies at 102 https://www.bbc.com/news/world-europe-65402024 Artefacts stolen from British Museum 'may be untraceable' due to poor records https://www.theguardian.com/culture/2023/aug/25/artefacts-stolen-from-british-museum-may-be-untraceable-due-to-poor-records

Jimmy Buffett, who sang of wastin' away in 'Margaritaville', dies at 76 https://www.npr.org/2023/09/02/1197419502/jimmy-buffett-margaritaville-dies?sc=18&f=1001

Roman emperor statue seized from Cleveland Museum of Art in smuggling investigation https://www.npr.org/2023/09/01/1197229128/roman-emperor-statue-seized-cleveland-museum-marcus-aurelius?sc=18&f=1001

German tourist accused of damaging 16th-century statue in Florence https://www.cnn.com/travel/article/german-tourist-florence-statue-intl-scli/index.html

A Vietnam veteran helicopter pilot receives the Medal of Honor for a daring rescue https://www.npr.org/2023/09/06/1197819795/a-vietnam-veteran-helicopter-pilot-receives-the-medal-of-honor-for-a-daring-resc?sc=18&f=1001

Rare archaeological finds show monastery was a social and religious hub https://phys.org/news/2023-09-rare-archaeological-monastery-social-religious.html

DNA analyses show St Helena's 'liberated' Africans came from West Central Africa between northern Angola and Gabon

https://phys.org/news/2023-09-dna-analyses-st-helena-liberated.html

The Baseball Player-Turned-Spy Who Went Undercover to Assassinate the Nazis' Top Nuclear Scientist

https://www.smithsonianmag.com/history/the-baseball-player-turned-spy-who-went-undercover-to-assassinate-the-nazis-top-nuclear-scientist-180982813/

Why Historical Markers Matter

https://www.smithsonianmag.com/history/why-historical-markers-matter-180982833/

The Remarkable Story of WWII's 6888th Battalion, as Told by the Women Who Were There https://www.smithsonianmag.com/history/the-remarkable-story-of-wwiis-6888-as-told-by-the-women-who-were-there-180982854/

The Unlikely, Enduring Friendship Between Ireland and the Choctaw Nation https://www.smithsonianmag.com/history/unlikely-enduring-friendship-between-ireland-choctaw-nation-180982700/

Amid the Horrors of the Holocaust, Jewish Musicians Composed Songs of Survival https://www.smithsonianmag.com/arts-culture/horrors-holocaust-jewish-musicians-composed-songs-survival-terezin-180982704/

Archaeology

Archaeologists Find Perplexing 4,000-year-old Canaanite Arch in Northern Israel https://www.haaretz.com/archaeology/2023-08-17/ty-article/archaeologists-find-perplexing-4-000-year-old-canaanite-arch-in-northern-israel/00000189-fcfa-d9d1-a79b-ffbab460000?fbclid=lwAR3_frJUmZAwxViBqeCIUCyOWssuBE7ID0LjhAhGasQAKfkfBEkO3VNjFnA

Great Wall of China severely damaged by workers looking for a shortcut https://www.nbcnews.com/news/world/great-wall-china-damaged-workers-looking-shortcut-excavator-rcna103331

Remains of Tuskegee pilot who went missing during World War II identified after 79 years https://abcnews.go.com/US/missing-tuskegee-pilot-identified/story?id=102911761

Sacred Burial Site Discovered in Peru Predates The Inca Empire https://www.sciencealert.com/sacred-burial-site-discovered-in-peru-predates-the-inca-empire

Archaeologists in Turkey have identified massive structures below a Roman-era castle https://www.npr.org/2023/09/01/1191263572/turkey-archaeology-zerzevan-castle-discoveries?sc=18&f=1001

Stone human 'effigies' unearthed at Aztec temple in Mexico City were likely looted in battle and offered to the gods

https://www.livescience.com/archaeology/stone-human-effigies-unearthed-at-aztec-temple-in-mexico-city-were-likely-looted-in-battle-and-offered-to-the-

gods?utm_campaign=socialflow&utm_content=livescience&utm_source=facebook.com&utm_medium=social&fbclid=lwAR1_gwURIupCiYJeJ1d7GaDhYLksU0QJHxbDPUQOTPg0uOPxjyUpL0sbRdY

Archaeologists in Norway found an arrow that was likely trapped in ice for 4,000 years https://www.npr.org/2023/09/06/1198032134/archeologists-norway-arrow-stoneage-4000-years-old?sc=18&f=1001

Archaeologists find 'mystery' ducts near biblical Jerusalem relics

https://www.reuters.com/world/middle-east/archaeologists-find-mystery-ducts-near-biblical-jerusalem-relics-2023-08-

30/#:~:text=JERUSALEM%2C%20Aug%2030%20(Reuters),palace%20that%20once%20stood%20nearby.

Archaeologists find 3,000-year-old priest's tomb in Peru https://www.cnn.com/travel/article/priest-tomb-peru-intl-scli-scn/index.html

Roman swords discovered in Dead Sea cave 1,900 years after Jewish rebellion https://www.nbcnews.com/news/world/roman-swords-discovered-dead-sea-cave-1900-years-jewish-rebellion-rcna103580

Archaeologists uncover parts of long-lost temple of a cult of Poseidon https://www.jpost.com/archaeology/article-756915

Salmon bones confirm sustainable chum fishery for 2,500 years under Tsleil-Waututh Nation https://phys.org/news/2023-08-salmon-bones-sustainable-chum-fishery.html

Multiple types of testing reveal details of Bronze Age cremation remains https://phys.org/news/2023-08-multiple-reveal-bronze-age-cremation.html Archaeologists uncover complete Neolithic cursus on the Isle of Arran https://www.theguardian.com/science/2023/sep/04/archaeologists-uncover-complete-neolithic-cursus-on-the-isle-of-arran

Bronze Age girl buried with more than 150 animal ankle bones, potentially to help her to the next world

https://www.livescience.com/archaeology/bronze-age-girl-buried-with-more-than-150-animal-ankle-bones-potentially-to-help-her-to-the-next-world

Mysterious 17th-century 'cauldron' may be primitive submarine used to salvage treasure from a sunken galleon

https://www.livescience.com/archaeology/mysterious-17th-century-cauldron-may-be-primitive-submarine-used-to-salvage-treasure-from-a-sunken-galleon

Israeli teen finds 1,700-year-old bronze ring in ruins of Greek city https://www.jpost.com/archaeology/article-757958

Egyptology

Unbottling the scent of the afterlife: New study of ancient Egyptian mummification balms https://phys.org/news/2023-08-unbottling-scent-afterlife-ancient-egyptian.html

Archaeologists Are Using Modern Tools to Learn About Visitors to an Ancient Egyptian Temple https://www.smithsonianmag.com/history/archaeologusts-using-21st-century-tools-learn-about-visitors-ancient-egyptian-temple-graffiti-180982725/

General Science

First revamped science policy falls short of fulfilling Biden's promise to protect scientists, watchdogs say

https://www.govexec.com/management/2023/09/first-revamped-science-policy-falls-short-fulfilling-bidens-promise-protect-scientists-watchdogs-say/389993/

New physics-based self-learning machines could replace current artificial neural networks and save energy

https://techxplore.com/news/2023-09-physics-based-self-learning-machines-current-artificial.html

Physics, Earth and Space Sciences

A new international space race is on — and it could junk up our pristine moon https://www.vox.com/science/2023/8/24/23844280/india-moon-landing-russia-crash-lunar-south-pole-science-consequences-junk

Scientists map 1,000 feet of hidden 'structures' deep below the dark side of the moon

https://www.livescience.com/space/the-moon/chinas-rover-maps-1000-feet-of-hidden-structures-deep-below-the-dark-side-of-the-

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Russia reports 'abnormal situation' as Luna-25 tries to begin moon landing

https://www.theguardian.com/world/2023/aug/19/russia-reports-abnormal-situation-as-luna-25-tries-to-begin-moon-landing

Physicists use a 350-year-old theorem to reveal new properties of light waves

https://phys.org/news/2023-08-physicists-year-old-theorem-reveal-

properties.html?fbclid=IwAR1RjIn-3NV-3yX2VSJzWIb5-XPpQYuuflBm-

uUGfLqvoSQKnl4Wby2dAD4

Predictions for the next 50 years of astronomy

https://www.astronomy.com/science/the-next-50-years-of-

<u>astronomy/?utm_campaign=organicsocial&utm_content=what_will_astronomy_look_&utm_mediu_m=social&utm_source=facebook&fbclid=lwAR0NVeF68TYqZllmxIF2SbRQXalAX0tDBRFfxdHXeXtwQVwESop-zCbKijg</u>

What is OSIRIS-REx? Everything you need to know about the 1st NASA spacecraft to land on an asteroid

https://www.livescience.com/space/asteroids/what-is-osiris-rex-everything-you-need-to-know-about-the-1st-nasa-spacecraft-to-land-on-an-

asteroid?utm_source=facebook.com&utm_campaign=socialflow&utm_medium=social&utm_cont ent=livescience&fbclid=lwAR0vVbyROLieUyc-

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Japanese astrophysicists suggest possibility of hidden planet in the Kuiper Belt

https://phys.org/news/2023-09-japanese-astrophysicists-possibility-hidden-

planet.html?fbclid=lwAR2U1R_l1w-

dmp73qNxkPSL2bPswwgqZYHzEx1JZiWD3O8wX59as5bUspGI

Study hints at the existence of the closest black holes to Earth in the Hyades star cluster https://www.eurekalert.org/news-releases/1000958

Environment, Climate Change and Alternative Energy Sources

What's the most sustainable way to mine the largest known lithium deposit in the world? https://www.popsci.com/environment/lithium-mining-mcdermitt-caldera/?fbclid=lwAR2wwmv3XXACbubXDbgUvgGA6HcPB5ob6vcyanv0uYNAysGaEy5j2nEuGzk

Judge: Trump-era rule change allowing the logging of old-growth forests violates laws https://www.npr.org/2023/08/31/1197160846/judge-trump-era-rule-change-allowing-the-logging-of-old-growth-forests-violates-?sc=18&f=1001

Former SpaceX Engineers Tout New Microreactor https://www.powermag.com/former-spacex-engineers-tout-new-microreactor/

This summer was the hottest on record across the Northern Hemisphere, the U.N. says https://www.npr.org/2023/09/06/1197825362/this-summer-was-the-hottest-on-record-across-the-northern-hemisphere-the-u-n-say?sc=18&f=1001

We studied more than 1,500 coastal ecosystems - they will drown if we let the world warm above 2°C

https://theconversation.com/we-studied-more-than-1-500-coastal-ecosystems-they-will-drown-if-we-let-the-world-warm-above-2-211431

Lack of evidence hampers progress on corporate-led ecosystem restoration https://www.eurekalert.org/news-releases/1000355

Nudging food delivery customers to skip the fork drastically cuts plastic waste, study shows https://www.eurekalert.org/news-releases/1000423

Where's the trust? US climate deniers have no faith in university researchers https://phys.org/news/2023-09-climate-deniers-faith-university.html

Heat waves are hitting Antarctica too now https://phys.org/news/2023-09-antarctica.html

Bioengineered E. coli generates electricity from wastewater https://techxplore.com/news/2023-09-bioengineered-coli-generates-electricity-wastewater.html

Artificial Intelligence: A step change in climate modeling predictions for climate adaptation https://phys.org/news/2023-09-artificial-intelligence-climate.html

Biological, Genetics and Medical Sciences

Scientists Tried to Re-create an Entire Human Brain in a Computer. What Happened? https://www.scientificamerican.com/article/scientists-tried-to-re-create-an-entire-human-brain-in-a-computer-what-

happened/?utm_source=facebook&utm_medium=social&utm_campaign=socialflow&fbclid=lwAR 1ER8ZUrTvKRsEawn7c8SaWjpc4ZQZ 4BBZ4WwblhnobFH3jSrYqPafpAY

From fatal allergies to heart attacks and cholera – the devastating health effects of global warming in Africa

https://theconversation.com/from-fatal-allergies-to-heart-attacks-and-cholera-the-devastating-health-effects-of-global-warming-in-africa-212564

Artificial intelligence could help build pollen jigsaw of present and ancient flora https://www.eurekalert.org/news-releases/1000516

First device to monitor transplanted organs detects early signs of rejection https://www.eurekalert.org/news-releases/1000528

Study reveals proton beam therapy may shorten breast cancer treatment https://medicalxpress.com/news/2023-09-reveals-proton-therapy-shorten-breast.html

Study finds vaping renders frontline immune cells unable to move to meet threats https://medicalxpress.com/news/2023-09-vaping-frontline-immune-cells-unable.html

Exercise-induced hormone irisin may reduce Alzheimer's disease plaque and tangle pathology in the brain

https://medicalxpress.com/news/2023-09-exercise-induced-hormone-irisin-alzheimer-disease.html

Fifth of known species on Earth found in Unesco world heritage sites – survey https://www.theguardian.com/environment/2023/aug/31/fifth-of-known-life-on-earth-found-in-unesco-world-heritage-sites-survey-finds-aoe

<u>Other</u>

Women working in Antarctica say they were left to fend for themselves against sexual harassers https://apnews.com/article/women-working-antarctica-sexual-harassment-assault-mcmurdo-ba0e550fddf1ab0afd031ff4d25143cb

The Australian town where people live underground https://www.bbc.com/future/article/20230803-the-town-where-people-live-underground

Additional Informational

New Standards for Museums with Native American Collections https://www.aam-us.org/2023/07/25/new-standards-for-museums-with-native-american-collections-smnac-now-available/

Interior Department, Hualapai Tribal Leaders Celebrate Historic Indian Water Rights Settlement https://www.doi.gov/pressreleases/interior-department-hualapai-tribal-leaders-celebrate-historic-indian-water-rights

MIT expert explains how concrete can serve as a natural 'carbon sink' <a href="https://www.weforum.org/agenda/2023/08/concrete-natural-carbon-sink-mit-expert-explains?utm_source=twitter&utm_medium=social_scheduler&utm_term=Engineering+and+Construction&utm_content=22%2F08%2F2023+09%3A00

World Monuments Fund, Easter Island (Rapa Nui)—Orongo https://www.wmf.org/project/easter-island-rapa-nui%E2%80%94orongo

World Monuments Fund, La Jalca Grande Project https://www.wmf.org/project/la-jalca-grande

Water Heritage and the Importance of Local Knowledge in Climate Action https://link.springer.com/article/10.1007/s41636-023-00415-1

Earth as a Transiting Exoplanet: A Validation of Transmission Spectroscopy and Atmospheric Retrieval Methodologies for Terrestrial Exoplanets https://arxiv.org/abs/2308.14804?fbclid=lwAR1PEXvd7kCTGHD9QnVGp3MUI4-e5qAVFqKkqGLlSBXleddZqiXrwYXi3oo

International Science Council Newsletter
https://us5.campaign-archive.com/?e=725b365f54&u=2e9b648776114e2888e7ea8c5&id=9770ffb4e6

Asteroid Day, The Boulders of Dimorphos https://asteroidday.org/news-updates/the-boulders-of-dimorphos/