

Weekly Science Report

April 19, 2024

**“These virtues do not have ineffable meaning but offer a sense of morality-
a way to be, and a way to behave, as a member of the human family.”**

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/weeklysciencertp/>
- Twitter: <https://twitter.com/wklysciencertp>

News Articles

Paleontology, Evolution and Prehistoric Studies

Untangling the enigmatic origins of the human family's newest species

<https://institutions.newscientist.com/article/2426655-untangling-the-enigmatic-origins-of-the-human-family-s-newest-species/>

Enormous snake in ancient India was longer than a school bus

https://www.popsci.com/environment/giant-snake-india-fossil/?fbclid=IwZXh0bqNhZW0CMTEAAR0XSPSrSKs_GSZ_1EBfLda0psw2VhIAG01nHTfIGKd-oAF4O9SP0cc-LyE_aem_ATLSw2eJGbH3ghn7JAJjQq3HMqDpdGMobH5eMj_iUW4fig8Hoxto8TWiTVESgexu4CECALquEG8FG29TuoAMSF1j

Occupation of Cave in Saudi Arabia Dates Back 10,000 Years

<https://www.archaeology.org/news/12334-240419-saudi-arabia-cave>

What Factors Drove Human Evolution?

<https://www.archaeology.org/news/12333-240419-human-evolution-competition>

Ancient Artifacts Have Been Found in the Grand Canyon, Going Back 12,000 Years

<https://www.discovermagazine.com/planet-earth/ancient-artifacts-have-been-found-in-the-grand-canyon-going-back-12-000>

History

5 years after fire ravaged Notre Dame, an American carpenter is helping rebuild Paris' iconic cathedral

https://www.cbsnews.com/news/notre-dame-paris-fire-american-carpenter-helps-rebuild-cathedral/?tag=CNM-00-10aab6a&linkId=398078617&fbclid=IwAR1K7Osol-T8gk9E_fIU4FJrdAtFJL2EhPVOt8c1Z9As8v9L7y2Q3CTx26Y

The Amazon's ancient complex of 'lost cities' flourished for a thousand years

https://www.nbcnews.com/science/science-news/lost-cities-oldest-ancient-complex-found-amazon-1000-years-rcna133608?utm_campaign=trueantheam&utm_medium=trueantheam&utm_source=facebook&fbclid=IwAR3YvaFTJvxni93a4H6cZ4Za5PCSPHky94tbYJpopX7YQrVj7TN5UAD5QLQ&branch_mach_id=1307234702528523229&branch_referrer=H4slAAAAAAAAA8soKSkottLXz0tKzkstL9ZLLCjQy8nMy9YPTXYryDZ39fL3TLJPS0rOyUyx9Sx3DDKOLEt0C%2FEqq8jLtDRONPEwS44yiUo0DXAODvDwrrQ0KUmK9CrIL4gwjwwsCssyD%2FEzDXV0MQ30CQQAn4Cd72kAAAA%3D

Tracing the lineage of North America's native Blackfoot Confederacy

<https://phys.org/news/2024-04-lineage-north-america-native-blackfoot.html>

Genomes of Modern Japanese People Analyzed

<https://www.archaeology.org/news/12336-240419-japan-population-ancestry>

Burned Bodies at Maya Site May Reflect Regime Change

<https://www.archaeology.org/news/12335-240419-maya-burned-royals>

To Help the Allied War Effort, These Scientists Got Drunk on Nitrogen

<https://www.smithsonianmag.com/history/to-help-the-allied-war-effort-these-scientists-got-drunk-on-nitrogen-180984147/>

What You Need to Know About China's Terra-Cotta Warriors and the First Qin Emperor

<https://www.smithsonianmag.com/history/what-you-need-know-about-chinas-terra-cotta-warriors-first-qin-emperor-30942673/>

This Play Within a Play Confronts the Power Dynamic Between Sally Hemings and Thomas Jefferson

<https://www.smithsonianmag.com/history/this-play-within-a-play-confronts-the-power-dynamic-between-sally-hemings-and-thomas-jefferson-180984144/>

Archaeology

Ancient skeletons unearthed in France reveal Mafia-style killings

https://www.cnn.com/2024/04/17/europe/european-neolithic-people-ritual-sacrifice-intl-scli-scn/index.html?utm_medium=social&utm_source=blueskyCNN&utm_content=2024-04-17T11%3A14%3A15&Date=20240417&Profile=CNN%20International&fbclid=IwZXh0bgNhZWOCMTEAAR2iNLdTMB3DAbLEIEj9jBi6eiiXYgOK0fBdbswRiUXVHv1To7OxSgCV_Ww_aem_ASmFh_zkHZP_ZMx0-vnkdmk-6k7GsVD4QJ0R49lz6TsB4VGCp3dX6fh95UaQko0pSqvzZO1gUDigPhshxjR1w2PZM

Archaeologists uncover ancient city in the Kingdom of Tonga

<https://www.abc.net.au/pacific/archaeologists-uncover-tonga-ancient-city/103699150>

The Notre Dame fire revealed a long-lost architectural marvel

https://www.popsci.com/science/notre-dame-fire-iron-gothic-architecture/?fbclid=IwAR31DnoGv2w2podVUPDDNhERZk74FQPyethv8ss3kjYrhjY6uu_yTOVagLc

'Unprecedented' discovery of mysterious circular monument near 2 necropolises found in France

<https://www.livescience.com/archaeology/unprecedented-discovery-of-mysterious-circular-monument-near-2-necropolises-found-in-france>

Why the Daughter of an American Archaeologist Sent Her Father's Collection to Peru

<https://www.smithsonianmag.com/history/why-the-daughter-of-an-american-archaeologist-sent-her-fathers-collection-to-peru-180984171/>

Egyptology

Speaking in Golden Tongues

<https://www.archaeology.org/issues/552-2405/digs/12295-dd-egypt-oxyrhynchus-tombs>

General Science

Crucial connection for 'quantum internet' made for the first time

<https://phys.org/news/2024-04-crucial-quantum-internet.html>

Trash to treasure—Researchers turn metal waste into catalyst for hydrogen

https://phys.org/news/2024-04-trash-treasure-metal-catalyst-hydrogen.html?fbclid=IwZXh0bgNhZW0CMTEAAR2Tcl3-VdmrM2d-BPrL-Ri4X8BjkC3JW8sfR44v09r0GqfDvbOYWF-7Slk_aem_AchPYU24DgTxK2RwM0qRCJhds3w9UCT_eUSv5jTZnISqFgEuoYVRd3GalCKRXUdvWE88zTIkR4xM_Z43Q5EJVkX

Development of organic semiconductors featuring ultrafast electrons

<https://phys.org/news/2024-04-semiconductors-featuring-ultrafast-electrons.html>

Physics, Earth and Space Sciences

Since Peregrine, Astrobotic has been busy building a future in space

https://www.post-gazette.com/business/tech-news/2024/04/15/peregrine-astrobotic-nasa-moon-griffin-northside-cmu/stories/202404140037?fbclid=IwAR0xiCAHrjAW87n5ezTedUQypkS1m1c2MFwsXY_DzTVgsvH2lyz6lBTGMnk

NASA Langley shows off solar sail spacecraft

https://www.wavy.com/news/science/nasa-langley-shows-off-solar-sail-spacecraft-set-to-launch-next-week/?utm_campaign=socialflow&utm_medium=referral&utm_source=facebook.com&fbclid=IwZ Xh0bgNhZW0CMTEAAR3A0n2xqwnWfIMQ08XzOCK3MXVDm2hVW5j53FhPRTHEP4ubGQbp-2kyPA0_aem_ATszRmlM7tPiHca7V83UO7J3TZipvQAHJesbNlui18cP9-pW_aReFiu-iRplAxNCmVBR1jhhFvz2p5l9bHzPxvtV

NASA Mars samples, which could contain evidence of life, will not return to Earth as initially planned

<https://www.livescience.com/space/mars/nasa-mars-samples-which-could-contain-evidence-of-life-will-not-return-to-earth-as-initially-planned>

NASA confirms International Space Station object crashed through home in Naples, Florida

<https://abcnews.go.com/US/nasa-confirms-international-space-station-object-crashed-naples/story?id=109317561>

Astronomers spot a massive 'sleeping giant' black hole less than 2,000 light-years from Earth

<https://www.cnn.com/2024/04/16/world/milky-way-massive-stellar-black-hole-scn/index.html>

Exotic 'Einstein ring' suggests that mysterious dark matter interacts with itself

<https://www.space.com/dark-matter-interactions-distant-einstein-ring-jwst>

6 strange things observed during the April 8 solar eclipse: From doomed comets to 'diamond rings'

<https://www.livescience.com/space/the-sun/6-strange-things-observed-during-the-april-8-solar-eclipse-from-doomed-comets-to-diamond-rings>

BepiColombo detects escaping oxygen and carbon in unexplored region of Venus's magnetosphere

<https://phys.org/news/2024-04-bepicolombo-oxygen-carbon-unexplored-region.html>

Waste in space: Why junk in Earth orbit is becoming a huge problem

<https://www.usatoday.com/story/graphics/2024/04/16/space-junk-nasa-debris-reentry-problem/73286573007/>

Switzerland signs Artemis Accords to join NASA in moon exploration

<https://www.space.com/nasa-artemis-accords-switzerland-signing>

Scientists discover new way to extract cosmological information from galaxy surveys

<https://phys.org/news/2024-04-scientists-cosmological-galaxy-surveys.html>

Study suggests Io's volcanoes have been active for 4.5 billion years

<https://phys.org/news/2024-04-io-volcanoes-billion-years.html>

Cosmic rays streamed through Earth's atmosphere 41,000 years ago: New findings on the Laschamps excursion

<https://phys.org/news/2024-04-cosmic-rays-streamed-earth-atmosphere.html>

Weather prediction models can also forecast satellite displacements
<https://phys.org/news/2024-04-weather-satellite-displacements.html>

Environment, Climate Change and Alternative Energy Sources

Paramount+ Celebrates Earth Day With First-Ever National Park Foundation Partnership Live Streams

<https://www.thewrap.com/paramount-national-park-foundation-live-stream-earth-day/?fbclid=IwAR1ROcrtZDXH40S6LObUSOtPBOWcrStM5FoMJkXM5VeV5VkDKscW9qCsLQw>

The Nepali Army Is Removing Trash and Bodies From Mount Everest

https://www.smithsonianmag.com/smart-news/the-nepali-army-is-removing-trash-and-bodies-from-mount-everest-ahead-of-this-years-mountaineering-season-180984162/?utm_medium=social&utm_source=facebook&utm_campaign=editorial&utm_term=4172024&utm_content=new&fbclid=IwZXh0bgNhZW0CMTEAAR1ELYOtKI03J7SqabvOlq_HtAJB7zbHVKn2Osb-zn6D19pjLWM5yEh7cc_aem_AYZjJ6EMaAmdlGGDrNvE7AvK1w3qiYv3QHeW6G3YQmUuTmXZucWEmXj2oewoAgqDFnggonnq7yzKqSCnpOQLUKAD

Warming of Antarctic deep-sea waters contribute to sea level rise in North Atlantic, study finds

<https://www.eurekalert.org/news-releases/1041643>

How King's College Added 438 Solar Panels to a 500-Year-Old Chapel

<https://www.smithsonianmag.com/smart-news/kings-college-completes-controversial-project-addition-of-438-solar-panels-to-its-historic-chapel-180984160/>

Researchers develop sodium battery capable of rapid charging in just a few seconds

https://techxplore.com/news/2024-04-sodium-battery-capable-rapid-seconds.html#google_vignette

Greater access to clean water, thanks to a better membrane

<https://techxplore.com/news/2024-04-greater-access-membrane.html>

A flexible and efficient DC power converter for sustainable-energy microgrids

<https://techxplore.com/news/2024-04-flexible-efficient-dc-power-sustainable.html>

Biological, Genetics and Medical Sciences

New tagging method provides bioadhesive interface for marine sensors on diverse, soft and fragile species

https://phys.org/news/2024-04-tagging-method-bioadhesive-interface-marine.html?fbclid=IwAR1jc8OjC67F-dWWSHlbiEkAnmTK_2gXxih8XrPUbcJRqnGIT0bo5d4wIAY#google_vignette

FDA announces recall of heart pumps linked to deaths and injuries

<https://www.cbsnews.com/news/fda-announces-recall-heart-pumps-heartmate-deaths-injuries/?ftag=CNM-00-10aab7e&linkId=399552375&s=09>

Why European colonization drove the blue antelope to extinction

<https://phys.org/news/2024-04-european-colonization-drove-blue-antelope.html>

Group caught on camera pulling bear cubs from tree to take pictures with them

https://www.cbsnews.com/news/bear-cubs-pulled-from-tree-for-pictures-group-caught-on-camera-video-north-carolina/?ftag=CNM-00-10aab6a&linkId=402177576&fbclid=IwZXh0bgNhZW0CMTEAAR3QcGqNVfCzLV8OHLsylwInVXmyLKQ_mJ3nle9YaG7UPR7U2bUA6KdsLd0_aem_ATLJi03KbOMUOt0bOZLjk9pJTWC27iTkraA7RwdvXaZALdpKJaGE2nDkibnwXK0mG6GRK7ZKpWDq9aGGF9k6b-r

An artificial womb could build a bridge to health for premature babies

<https://www.npr.org/sections/health-shots/2024/04/12/1241895501/artificial-womb-premature-birth?sc=18&f=1001>

Orcas May be Smarter Than You Think, Here's What to Know About Their Behaviors

<https://www.discovermagazine.com/planet-earth/orcas-may-be-smarter-than-you-think-heres-what-to-know-about-their-behaviors>

Study uncovers neural mechanisms underlying foraging behavior in freely moving animals

https://phys.org/news/2024-04-uncovers-neural-mechanisms-underlying-foraging.html#google_vignette

Researchers develop a new way to safely boost immune cells to fight cancer

https://medicalxpress.com/news/2024-04-safely-boost-immune-cells-cancer.html#google_vignette

Researchers discover dynamic DNA structures that regulate the formation of memory

<https://medicalxpress.com/news/2024-04-dynamic-dna-formation-memory.html>

Other

Sierra Leone's science council given new lease of life

https://www.scidev.net/global/supported-content/sierra-leones-science-council-given-new-lease-of-life/?utm_source=SciDev.Net&utm_medium=email&utm_campaign=14439547_2024-04-15%20Weekly%20Email%20Digest%20-%20Global%20Template.%20For%20no%20topic%20preferences&dm_i=1SCG,8LHMJ,V1AOM,ZMELN,1

Harvard professor suggests UFOs use 'extra dimensions' for travel

https://timesofindia.indiatimes.com/home/science/harvard-professor-suggests-ufos-use-extra-dimensions-for-travel/articleshow/109184668.cms?fbclid=IwZXh0bgNhZW0CMTAAR0RI6RoZ1DJwvnB4-TIly8M3XZCHOU0oV8KJAVnR5Y8aFidwzhWgdsqppg_aem_AdNvG6PcjE3-6d0a1hkz1F_IKRKx3pkVR8ju7JsXdKQyliUImGChXbjAh-EffIL0RQYIWvfGMF-TfbBwsGncO607

Additional Informational

New Siena Galaxy Atlas Delivers Improved Measurements of Almost 400,000 Nearby Galaxies
<https://noirlab.edu/public/news/noirlab2328/?sf187314752=1>

World Monuments Fund, Notre Dame of Paris
https://www.wmf.org/project/notre-dame-paris?fbclid=IwAR1nQ8MD7Atpmxe5quuEHYAGouVSoFN1c4ufnHbJ9mJdvoBGhoYOTtjH4O8_aem_AaEyb1poitEh3nGshMI3rwXLptMsYpHGxYnTH9LjPLeHD9lwUPZ8Lhaaoj5XR3wFX7QFzOXE9E4nBlyhJf1wQJNE

Interdisciplinary team of UWF faculty help write the rules on cancer prevention in Florida
https://news.uwf.edu/interdisciplinary-team-of-uwf-faculty-help-write-the-rules-on-cancer-prevention-in-florida/?fbclid=IwAR1v3-LGFFdNxOk_larhVilm5d8jlSQVgvSJE4VTgZT2p4RNNa47e4sKNds

NASA Selects New Crew for Next Simulated Mars Journey
<https://www.nasa.gov/humans-in-space/nasa-selects-new-crew-for-next-simulated-mars-journey/>

Interspecies competition led to even more forms of ancient human – defying evolutionary trends in vertebrates
<https://www.cam.ac.uk/research/news/interspecies-competition-led-to-even-more-forms-of-ancient-human-defying-evolutionary-trends-in>

NASA's Space Sustainability Strategy
<https://www.nasa.gov/spacesustainability/>

NASA's Dragonfly Rotorcraft Mission to Saturn's Moon Titan Confirmed
https://science.nasa.gov/missions/dragonfly/nasas-dragonfly-rotorcraft-mission-to-saturns-moon-titan-confirmed/?fbclid=IwZXh0bgNhZW0CMTEAAR3R_3w-XcQJ8wTIQT2fjhN4ABWKmi0IBBaJmW9G-r6rKDVUblm5gnDK52Q_aem_AdNxcbb3XfkhvA-OMbNldDUbqKJ5XQITJLGtsvcUTTnzvbOXxcevK_ShOpnseJabISjZ7IPdXOeUPc5SS95Rg8qM

This Long Island Tribe Is Dealing with the Impact of Climate Change
<https://www.sierraclub.org/sierra/long-island-tribe-dealing-impact-climate-change>

World Monuments Fund, Fire at Denmark's Boersen Building
<https://www.wmf.org/blog/statement-fire-denmarks-boersen-building>

National Park Service officials seek help from the public on vandalism incident at Lake Mead National Recreation Area
<https://www.nps.gov/lake/learn/news/national-park-service-officials-seek-help-from-the-public-on-vandalism-incident-at-lake-mead-national-recreation-area.htm>