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### **Geoscience Bulletin Board – 7 October 2019 – compiled by Elaine J. Hanford**

The deep roots of the lithosphere

- <https://www.nature.com/articles/s41561-019-0447-y>

“Global warming” is not a new craze

- <https://sciencenordic.com/climate-change-denmark-forskerzonen/concern-for-global-warming-is-not-a-new-craze/1456317>

Glacial mass loss along the Andes over the past two decades

- Paper: <https://www.nature.com/articles/s41561-019-0432-5>

Siliceous sponges as an important sink of silicon in the ocean

- Paper: <https://www.nature.com/articles/s41561-019-0430-7>

Co-seismic & inter-seismic fault propagation produce distinct propagation angles

- <https://eos.org/editor-highlights/can-we-tell-if-faults-grew-during-or-between-earthquakes>

Massive iceberg breaking off Antarctica is normal event not related to climate change

- <https://phys.org/news/2019-10-massive-iceberg-antarcticabut.html>

Look back at 1968 landmark plate tectonics paper: “Rises, Trenches, Great Faults, & Crustal Blocks”

- <https://eos.org/agu-news/this-is-how-the-world-moves>

Early warning signals prior to fatal collapse of 2018 flank of Anak Krakatau

- <https://www.sciencedaily.com/releases/2019/10/191001132703.htm>
- <https://phys.org/news/2019-10-early-heralded-fatal-collapse-krakatau.html>

In memoriam: Louise Kellogg (1960-2019) – combining geochemistry & geophysics

1. <https://eos.org/features/louise-kellogg-geoscientist-mentor-science-communicator>

2017 wildfires in California increased atmospheric CO<sub>2</sub> by 2 ppm

- <https://eos.org/articles/golden-state-blazes-contributed-to-atmospheric-carbon-dioxide>

Navajo Sandstone reflects the real Jurassic Park as a desert with dunes & inter-dune lakes

- [https://www.nsf.gov/discoveries/disc\\_summ.jsp?cntn\\_id=299301&org=GEO&from=news](https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=299301&org=GEO&from=news)

Link between deep sea methane emissions & ice ages – is it cause & effect?

- [http://www.spacedaily.com/reports/Geologists\\_found\\_links\\_between\\_deep\\_sea\\_methane\\_emissions\\_and\\_ice\\_ages\\_999.html](http://www.spacedaily.com/reports/Geologists_found_links_between_deep_sea_methane_emissions_and_ice_ages_999.html)

Estimating quantities of global CO<sub>2</sub> venting & total carbon on Earth

- <https://phys.org/news/2019-10-scientists-quantify-global-volcanic-co2.html>

What did ancient crocodiles eat?

- [https://www.eurekalert.org/pub\\_releases/2019-09/uota-wda093019.php](https://www.eurekalert.org/pub_releases/2019-09/uota-wda093019.php)

Isostatic adjustment as Antarctic ice sheet melts could slow down melting

- <https://sciencenordic.com/antarctica-climate-change-denmark/could-rising-land-slow-down-antarctic-ice-melt/1458045>
- Paper: <https://science.sciencemag.org/content/360/6395/1335>

Hurricane Lorenzo hit Cat 5 farther east than any other storm – normally water is too cold

- <https://www.sciencenews.org/article/hurricane-lorenzo-hit-category-5-farther-east-than-any-other-storm>
- <https://www.livescience.com/hurricane-lorenzo-farthest-east.html>

The Dresser Formation stromatolites – evidence of early life but not the oldest on Earth

- <https://www.livescience.com/earliest-signs-of-life-on-earth.html>

Tibesti – another mining-induced landslide

- <https://blogs.agu.org/landslideblog/2019/09/27/tibesti-mining-landslide/>
- <https://in.reuters.com/article/chad-mining-landslide/update-1-about-30-killed-in-landslide-at-chad-gold-mine-idINL5N26H300>

Design & construction secrets of the Parthenon – triple anti-seismic protection

- <https://greece.greekreporter.com/2019/10/02/the-engineering-secrets-that-enabled-the-parthenon-to-survive-time-nature-and-man-video/>

Humans take what water they want – rivers run dry

- <https://www.nationalgeographic.com/science/2019/10/groundwater-pumping-killing-rivers-streams/>

5 myo sediments off the coast of New Zealand yield clues to Antarctic melting

- <https://www.newsroom.co.nz/@environment/2019/10/03/841143/whanganuis-ancient-rock-yields-worrying-clues-about-antarctic-melting#>

Uganda hoping for sustainable future using Uganda Geoscience Data Portal

- <http://www.scoop.co.nz/stories/WO1910/S00017/uganda-enables-a-sustainable-future-with-geoscience-data.htm>
- Portal: <http://ugandageosciencedataportal.minerals.go.ug/gdp/search>

The geology beneath Seneca Lake, New York

- <http://www.observer-review.com/the-geology-beneath-seneca-lake-cms-6567>

Using machine learning to identify hidden cave entrances

- <https://www.sciencedaily.com/releases/2019/09/190923101926.htm>

Oklahoma Geological Foundation to honor four leaders in O&G industry & the geology profession

- <https://oklahoman.com/article/5642412/oklahoma-geological-foundation-to-honor-four-legends>

Geology & technology combined to recognize Permian Basin & extract petroleum

- <https://www.mysanantonio.com/business/oil/article/AAPG-president-Geology-gave-Permian-oil-14470809.php>

History & geology of Oya stone

- <https://japantoday.com/category/features/travel/utsunomiya-a-place-to-quarry-out-the-history-and-geology-of-oya-stone>

Book Review: Applications of Petroleum Tools for Field Geologists

- <https://virtual-strategy.com/2019/09/28/sonatrach-geological-engineer-documents-new-field-discoveries/>

On the anniversary of the 1969 Murchison meteorite

- <https://www.abc.net.au/news/science/2019-10-02/murchison-meteorite-50th-anniversary-1969-science-geology/11528644>

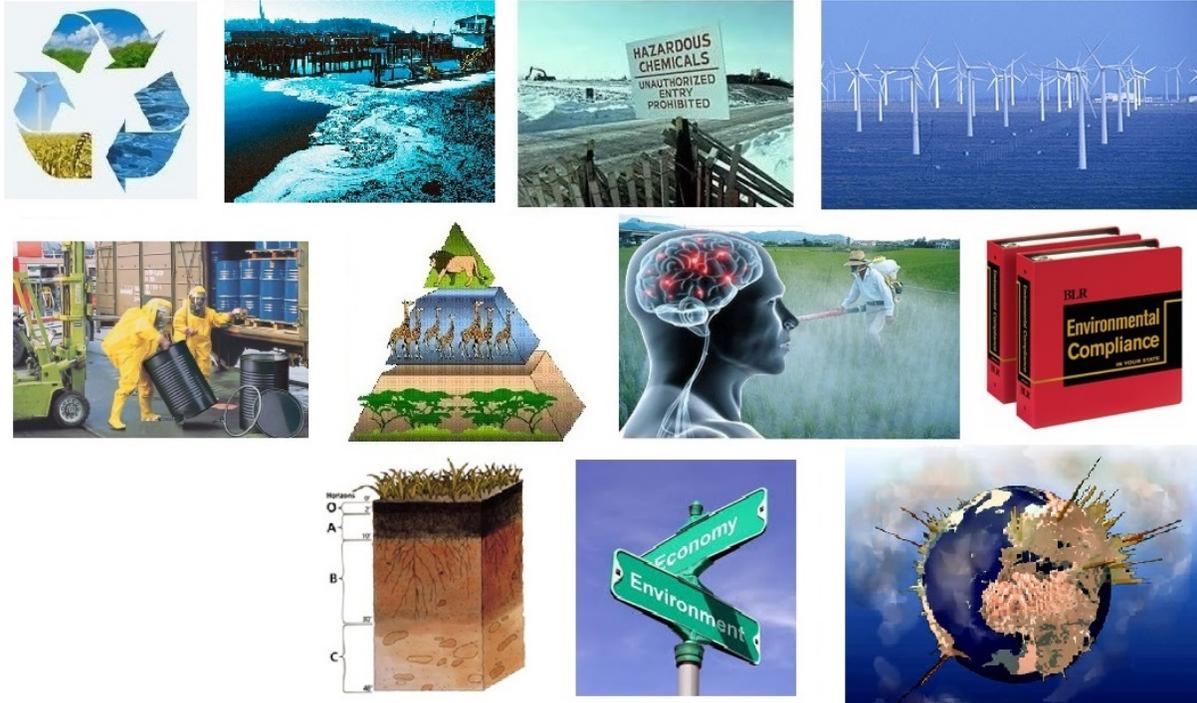
Yellowknife sandpits were deposited about 11,000 years ago – now “wrecked forever”

- <https://www.cbc.ca/news/canada/north/yellowknife-sandpits-1.5303584>

Participants of 7<sup>th</sup> “Large Igneous Provinces through Earth History” conference study Siberian rocks

- <https://www.miragenews.com/geologists-from-seven-countries-are-studying-samples-from-siberia/>

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## Environmental Science Bulletin Board – 7 October 2019 – compiled by Elaine J. Hanford

Sometimes ... zebras do not have stripes!!

- <https://www.forbes.com/sites/grrlscientist/2019/09/26/rare-zebra-foal-with-polka-dots-spotted-in-kenya/amp/>

3 Native American tribes fighting to protect sacred lands from logging, oil pipelines & \$B telescope

- <https://www.msn.com/en-us/news/us/how-3-native-american-tribes-are-fighting-to-protect-sacred-land-from-logging-oil-pipelines-and-a-billion-dollar-telescope/ar-AAHTfjl>

Perspective: Cynical plot behind global warming hysteria

- [https://www.americanthinker.com/articles/2019/09/the\\_cynical\\_plot\\_behind\\_global\\_warming\\_hysteria.html](https://www.americanthinker.com/articles/2019/09/the_cynical_plot_behind_global_warming_hysteria.html)

Auburn One Health program integrates human, veterinary & environmental sciences

- [https://www.idahostatejournal.com/news/national/auburn-university-s-one-health-program-prepares-professionals-to-take/article\\_37b71459-55e6-5dc9-bd5c-69e6a68cf1d6.html](https://www.idahostatejournal.com/news/national/auburn-university-s-one-health-program-prepares-professionals-to-take/article_37b71459-55e6-5dc9-bd5c-69e6a68cf1d6.html)

CDC warns deer can transmit tuberculosis to humans – *Mycobacterium bovis*

- <https://www.kron4.com/news/national/cdc-warning-deer-with-tuberculosis-can-pass-it-on-to-people/>

Raising question of carcass disposal if African swine fever hits the US

- <https://www.agriculture.com/livestock/hogs/how-to-dispose-of-pigs-if-asf-hits>

First wild wolf to return to Belgium in more than a century believed shot & killed

- <https://currently.att.yahoo.com/news/hunters-shoot-dead-belgiums-first-094602218.html>

Conservation is fundamental to our survival...overcome greed, apathy & selfishness

- <https://www.yahoo.com/lifestyle/prince-harry-says-part-problem-230800861.html>

Louisiana draft action plan for mitigating flood risk is currently estimated to cost \$1.2B

- [https://www.thecentersquare.com/louisiana/louisiana-s-billion-anti-flooding-plan-taking-shape-though-questions/article\\_844b2c34-e16c-11e9-9632-e78ac462a0bc.html](https://www.thecentersquare.com/louisiana/louisiana-s-billion-anti-flooding-plan-taking-shape-though-questions/article_844b2c34-e16c-11e9-9632-e78ac462a0bc.html)
- DAP: [https://www.doa.la.gov/OCDDRU/Action%20Plan%20Amendments/Mitigation/2019-09-25\\_CDBG-MITAP\\_Draft.pdf](https://www.doa.la.gov/OCDDRU/Action%20Plan%20Amendments/Mitigation/2019-09-25_CDBG-MITAP_Draft.pdf)

Norway selected preferred design for estimate \$1.3B longest floating bridge across Bjørna fjord

- <https://www.enr.com/articles/47627-norway-picks-design-for-worlds-longest-floating-bridge>

California governor vetoes bill on environmental policy

- <https://apnews.com/cd991a10e9b34c4cad4832dffb101d6>

Technological hazard: GAO report warns of cybersecurity risks to US power grid

- <https://dailyenergyinsider.com/news/21949-gao-report-warns-of-cybersecurity-risks-to-us-electric-grid/>
- Report: <https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/GAO%20Cybersecurity%20Grid%20Report%202019.pdf>

Hummingbirds are ecological super-specialists vulnerable to climate change & habitat destruction

- <https://sciencenordic.com/animals--plants-denmark-forskerzonen/hummingbirds-are-ecological-super-specialists/1459119>

Outbreak of EEE claimed 9 lives among 31 cases as of 1 October - mostly in eastern US

- <https://www.sciencenews.org/article/rare-disease-eastern-equine-encephalitis-killed-nine-people-2019>

Camden, New Jersey, using abandoned industrial sites to capture stormwater – good idea if past pollution has been addressed at those sites

- <https://www.yaleclimateconnections.org/2019/09/a-new-jersey-city-reuses-abandoned-industrial-sites-to-capture-stormwater/>

11 facts about coastal redwoods in California

- <https://www.treehugger.com/natural-sciences/11-facts-about-coast-redwoods-worlds-tallest-trees.html>

James Cameron says “Stop treating the ocean like a toilet”

- <https://www.treehugger.com/ocean-conservation/james-cameron-wants-us-stop-treating-ocean-toilet.html>

Perspective: on this single planet, how we divide up finite resources will define our future

- <https://www.ehn.org/environment-climate-change-globalism-2640656714.html>

What happens to what is flushed down the toilet?

- <https://www.ehn.org/what-happens-when-you-flush-toilet-2640438859.html>

Possible cover-up of Ebola outbreak in Tanzania prompts warnings to travelers

- <https://arstechnica.com/science/2019/09/possible-cover-up-of-ebola-outbreak-in-tanzania-prompts-travel-warnings/>

Perspective: Does it really matter if one animal goes extinct?

- <https://sciencenordic.com/denmark-forskerzonen/does-it-really-matter-if-one-animal-goes-extinct/1458601>

Model may help choose locations for wind farms & predict energy output

- [https://www.nsf.gov/discoveries/disc\\_summ.jsp?cntn\\_id=299302&org=GEO&from=news](https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=299302&org=GEO&from=news)

You are what you eat - eat nuts & stay healthier

- <http://www.sci-news.com/medicine/daily-nut-consumption-weight-gain-obesity-risk-07629.html>

Invasive species, unsustainable logging & urban development put endemic trees at risk of extinction across Europe

- [http://www.terradaily.com/reports/Over\\_half\\_of\\_Europes\\_endemic\\_trees\\_risk\\_extinction\\_experts\\_999.html](http://www.terradaily.com/reports/Over_half_of_Europes_endemic_trees_risk_extinction_experts_999.html)

Tracking the invasion of herbicide-resistant weeds into southwestern Ontario Canada

- [https://www.eurekalert.org/pub\\_releases/2019-09/uot-btt093019.php](https://www.eurekalert.org/pub_releases/2019-09/uot-btt093019.php)

Cases of rape on university campuses likely under-reported nationwide

- <https://www.msn.com/en-us/news/us/a-texas-university-reported-8-rapes-on-campus-in-2016-17-but-now-admits-there-were-38-experts-say-this-problem-is-happening-nationwide/ar-AAI7Mzu>

How hibernating squirrels live for months without water

- <https://www.sciencemag.org/news/2019/10/here-s-how-hibernating-squirrels-live-months-without-water>

Author of environmental study that linked toxic pollution to high incidence of cancer in western Turkey is sentenced to 15 months in jail – Ministry commissioned the study & did not deny study results

- <https://www.sciencemag.org/news/2019/09/turkish-scientist-gets-15-month-sentence-publishing-environmental-study>

New “reverse genomics” method for culturing bacteria

- <https://www.sciencemag.org/news/2019/09/new-reverse-genomics-method-brings-previously-hidden-bacteria-life>

DNA from genetically modified mosquitoes has spread to local mosquito population in Brazil

- <https://www.sciencemag.org/news/2019/10/dissent-splits-authors-provocative-transgenic-mosquito-study>

Wolves in Scandinavia have no dog-wolf hybrid DNA

- <https://sciencenordic.com/animal-behaviour-dna-forskningno/wolves-but-no-dogs-in-scandinavian-wolf-populations-heritage/1554132>

Three decades of urban expansion in Quito, Ecuador, revealed in false color Landsat images

- <https://earthobservatory.nasa.gov/images/145654/three-decades-of-urban-expansion-in-quito>

Clandestine fish handoffs – exacerbates overfishing

- <https://www.hakaimagazine.com/news/clandestine-fish-handoffs/>

US Army COE recommends extension of support for Arkansas River levee at Yoestown Bottoms

- <https://www.swtimes.com/news/20191002/corps-of-engineers-extend-yoestown-bottoms-levee>

\$2.6B pipeline EIS approved but deemed inadequate – PUC ordered issues to be addressed

- <http://www.startribune.com/process-to-approve-enbridge-s-proposed-2-9b-minnesota-pipeline-back-in-motion/561879232/>

Lawsuit filed by environmental groups wants removal of Glen Canyon Dam from Colorado River

- <https://news.yahoo.com/environmentalists-push-removing-dam-along-235958376.html>

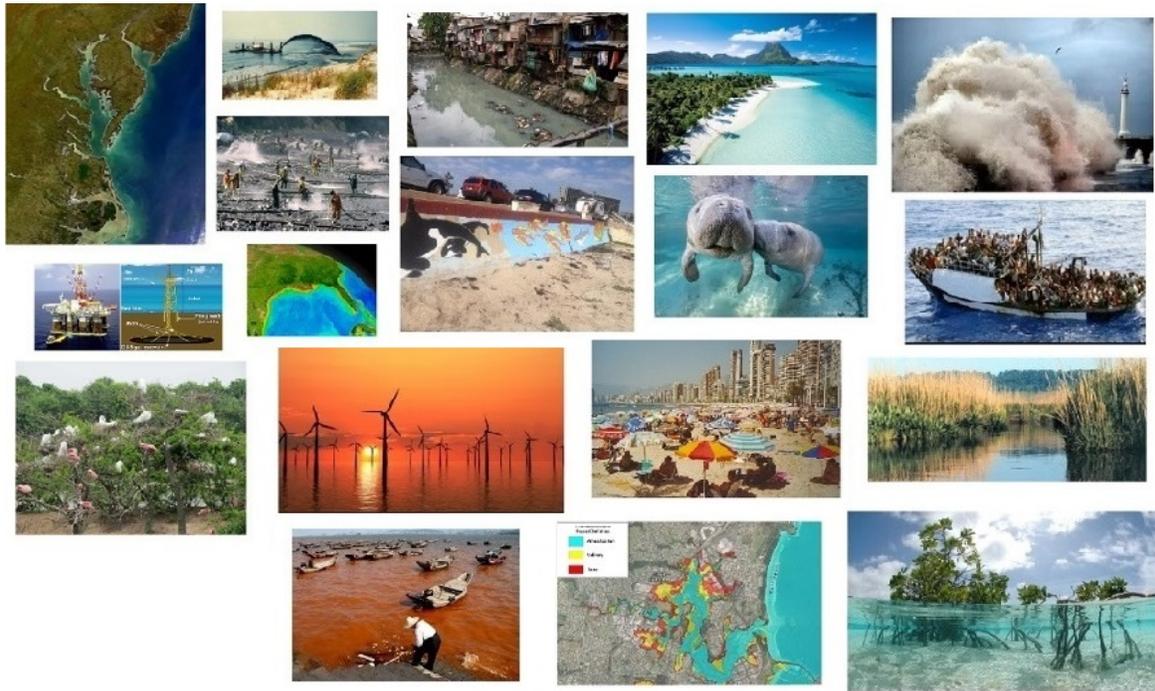
19-year-old charged with death of 20 kangaroos in hour-long killing spree with his vehicle – some orphaned

- <https://www.yahoo.com/news/australian-driver-19-charged-killing-035656594.html>

New species of worms temporarily dubbed *Auanema* found in Mono Lake – 3 different sexes resistant to high levels of arsenic and pH 10 waters & carry young inside the body

- <https://www.sciencedaily.com/releases/2019/09/190926141715.htm>

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## Coastal Zone Management Bulletin Board – 7 October 2019 – compiled by Elaine J. Hanford

Illegal immigrants from Libya to Europe – boat capsizes – rescued then flee

- <https://wnmtradio.com/news/articles/2019/sep/28/boat-with-over-50-passengers-capsizes-off-libyan-coast-un/942048/>
- <https://kfgo.com/news/articles/2019/sep/29/scores-of-migrants-flee-after-being-rescued-off-libyan-coast-officials/942133/>

Explosion then fire spread across two oil tankers in South Korean port

- <https://kfgo.com/news/articles/2019/sep/28/fire-on-oil-tankers-at-south-korean-port-injures-nine-yonhap/941974/>

Fish habitat being constructed in former estuary in Snohomish County, Washington

- <https://www.kiro7.com/news/north-sound-news/wsdot-building-fish-habitat-in-snohomish-county/991221455>

Nitrogen levels 10 to 12 times healthy limit found in waters of Herring & Guinea Creeks near Rehoboth Bay

- <https://www.capegazette.com/article/herring-guinea-creeks-have-high-nutrient-concentration/188842>

Indigenous carving stolen from Port Hardy Estuary – update: not stolen, just moved

- <https://www.northislandgazette.com/news/indigenous-carving-taken-from-port-hardy-estuary-on-hardy-bay-road/>
- <https://www.northislandgazette.com/news/update-port-hardy-estuary-indigenous-carving-found/>

List of environmental problems with cruise ships continues to grow

- <https://finance.yahoo.com/news/worried-climate-skip-cruise-220006278.html>

Hurricane Lorenzo to bring 70-foot waves to the Azores Islands – next stop: Ireland

- <https://phys.org/news/2019-10-hurricane-lorenzo-foot-azores.html>
- <https://www.msn.com/en-us/weather/topstories/hurricane-lorenzo-ireland-braces-itself-for-powerful-storm/ar-AAIapU4>

1964 Great Alaska EQ tsunami may have washed tropical fungus onto coastal Pacific Northwest

- [https://www.eurekalert.org/pub\\_releases/2019-10/jhub-dla092619.php](https://www.eurekalert.org/pub_releases/2019-10/jhub-dla092619.php)

Nanfangao Bridge in Yilan County, Taiwan, collapses – possible cause

- <https://www.cbsnews.com/news/bridge-collapse-in-taiwan-caught-on-video-oil-tanker-falls-onto-boats-nanfangao-bay-today-2019-10-01/>
- <http://www.taipeitimes.com/News/taiwan/archives/2019/10/02/2003723260>

Uncertain how much coastal erosion will occur along Massachusetts this winter

- <https://wellfleet.wickedlocal.com/news/20191002/outer-cape-faces-more-coastal-erosion-this-winter>

Study underway to examine coast storm impacts on Outer Banks

- <https://wtkr.com/2019/10/02/pilot-study-examining-coastal-storm-impacts-on-obx-begins/>

Pilot whale strandings on Edisto Beach and in Georgia appear to be linked

- <https://abcnews4.com/news/local/edisto-beach-pilot-whales-were-from-pod-that-stranded-in-georgia-cargo-ship-not-a-factor>

140-meter offshore aquaculture pen being assembled & will be installed near Fujian coast in China

- <https://www.undercurrentnews.com/2019/09/30/dutch-firm-close-to-launching-140m-offshore-pen-in-china/>

Near-shore currents trap a lot of plastic debris in coastal waters

- <https://www.theinertia.com/environment/the-oceans-plastic-problem-is-likely-way-closer-to-home-than-you-thought/>

Citizen science project to document dolphins and whales in Atlantic Ocean & Gulf of Mexico

- <https://www.tcpalm.com/story/news/local/indian-river-lagoon/health/2019/10/02/report-sightings-dolphins-whales-fau-harbor-branch/3821547002/>

Littoral combat ship successfully launches Naval Strike Missile during exercise Pacific Griffin

- <https://defence-blog.com/news/littoral-combat-ship-successfully-launches-naval-strike-missile.html>

New near-shore oil response vessels (OSRVs) will be added to fleet

- <https://www.workboat.com/news/offshore/canadas-west-coast-is-where-to-find-new-oil-spill-response-vessels/>