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Geosciences Bulletin Board – 26 September 2016 - compiled by Elaine J. Hanford

World Scientists to meet at Moab, Utah, 26-30 September 2016 to discuss desert bio-soil crusts and climate

Sedgwick (yes, that Sedgwick) Museum has exhibit of hammers that belonged to prominent geologists

USGS to measure flooding on Cedar River and Shell Rock River in Northeast Iowa

Did you celebrate the Autumnal Equinox? Here are some interest facts

Explaining how diatoms got high up in the mountains of Antarctica
Seismic retrofits and upgrading needed in British Columbia before the “big one” hits

Seismic CT scans reveal deep dynamics of Cascadia subduction zone

Mapping effects of solar storms on Earth using magnetosphere model

“Data sonification” turns geological & climatic data into music
  • http://www.smithsonianmag.com/smart-news/music-was-composed-climate-change-180960560/

Sonar sensing images of structures on the ocean floor

Videos of Piz Cengala landslide in the Swiss Alps
  • http://blogs.agu.org/landslideblog/2016/09/19/piz-cengalo/

Production in North Dakota Bakken Oil Field peaked in 2015
  • http://peakoil.com/production/the-death-of-the-bakken-field-has-begun-big-trouble-for-the-u-s

World Meteorological Organization certifies the longest lightning bolt in the world over Oklahoma in 2007 & longest duration lightning flash over France in 2012
  • https://www.rt.com/viral/359685-worlds-longest-lightning-bolt/
  • https://www.sciencedaily.com/releases/2016/09/160920165610.htm

Book Review: THIRTY-EIGHT - The Hurricane That Transformed New England

How do layered sedimentary & metamorphic rocks succumb to stresses and strains?

Understanding color variations from place to place in the ocean
  • http://phys.org/news/2016-09-ocean-true.html

GAO report finds 40 percent of federal buildings are in EQ areas prone to very strong to extreme shaking
One engineer says there is a short & simple explanation for the tilting Millennium Tower in San Francisco & his “educated guess” on how to fix it

Conference at Oxford, England, focused on scour, erosion & sediment transport

Humans are to blame for rock falls traveling farther than in prehistoric time

Are long-term climatic conditions in California changing to aridity?

Take a virtual field trip to Peninsula Sandston on Table Mountain, South Africa

Oldest crustal rocks dated at 4.02 billion years suggest early Earth was largely covered with oceanic crust-like surface

Wave dynamics and water flow impact coral reefs

Geo-poetry – recounting the history of Virginia

Planetary geology – why Pluto has an icy heart

Largest deposit of “black granite” in the world found in Angola

Geomagnetic survey using “Dreamcatcher” fails to find mother lode of Yukon gold

Mining in “copper country” of the Upper Peninsula of Michigan

*Jeddaherdan aleadonta*, 90 myo fossil discovered in Morocco is iguanian lizard
Psittacosaurus, Cretaceous ornithischian dinosaur from China, had countershading camouflage

Massive algae bloom helping to explain formation of the White Cliffs of Dover

Iconic Rainbow Bridge in Utah hums with natural & man-made vibrations

Constantly changing distribution of microbial species in the ocean related to biochemical function

Melting process of metals at extreme pressure conditions in the core of the Earth

Katla volcano on Iceland continues to rumble and belch, but is eruption imminent?

Damages from August 2016 EQ in Italy in excess of 4 billion euros


Does naming storms increase awareness, speed recovery, and save lives?

Shaking hands with Pele – where solid rock behaves like a liquid

East African countries need regional center responsible for surveying & monitoring geological patterns

Werenskioldbreen (SW Svalbard) ablation season provides insights into biogeochemical cycles based on glacial meltwater chemistry
Australia will adjust maps to account for northward plate tectonic movement of about 2.7 inches per year


Enviro-Sciences Bulletin Board – 26 September 2016 – compiled by Elaine J. Hanford

Can humanity survive 10 complexly interwoven man-made threats in the 21st century?


United Nations holds “High-Level Meeting on Antimicrobial Resistance”

- Crisis is here: [http://www.huffingtonpost.com/entry/antibiotic-resistance-crisis-un_us_57d8ea87e4b0fbd4b7bc66c4](http://www.huffingtonpost.com/entry/antibiotic-resistance-crisis-un_us_57d8ea87e4b0fbd4b7bc66c4)
Is the threat of a Canary Island generated tsunami an absolutely extreme scenario?
• http://blogs.agu.org/landslideblog/2016/09/20/canary-islands-megatsunami/

Ironic and the moral value of taking “climate change” tours – what is the impact on the environment?
• http://www.smithsonianmag.com/articles/visiting-melting-glaciers-can-be-profound-it-morally-wrong-180960514/

Science working with, instead of against, Aboriginal people
• http://www.nature.com/news/geneticists-attempt-to-heal-rifts-with-aboriginal-communities-1.20629
• Oldest people: http://www.smithsonianmag.com/smart-news/dna-tests-suggest-aboriginal-australians-have-oldest-society-planet-180960569/

Recognizing five conservationists who helped shaped the modern conservation movement
• http://www.treehugger.com/slideshows/conservation/5-historical-conservationists-you-should-know/#slide-top

Trans-Canada Trail will be almost 15,000 miles from the Atlantic to the Pacific to the Arctic Ocean
• Explore the Trail: https://thegreattrail.ca/

Great Wall of China, a UNESCO site, suffers from “an ugly repair job”
• http://www.dailyherald.com/article/20160922/news/309229960/

Perspective: Army Corps of Engineers serially mistaken Cuyahoga River dredge approach

Revision to 2007 law now requires clinical trials to be registered and published
• http://www.nature.com/news/us-clampdown-on-clinical-trial-reporting-is-long-overdue-1.20655

Over-fishing devastating populations of sharks in the Red Sea
• http://www.smithsonianmag.com/articles/it-too-late-save-red-sea-sharks-180960504/

NRDC and 6 other environmental groups petition FDA to limit use of 7 classes of antibiotics in livestock that are also important for human medicine

South Carolina nuclear plant under construction is site of media tour

Americans have complicated relationship with wild horses
Mating rituals of the redback spider include multiple matings & copulatory cannibalism

Federal appeals court orders halt to construction of portion of Dakota Access oil pipeline while it reviews Standing Rock Sioux Tribe request for emergency injunction

Presence of PFCs (perfluorinated compounds) in drinking water on military bases to be investigated

Urban growth threatens to overtake agricultural land and natural areas in Florida (interactive map)

In aftermath of August 2016 EQ in Italy, a crisis unit begins rescuing the heritage of the region

Colonial Pipeline ordered to conduct testing & analysis following spill in Alabama which caused gasoline shortage (& higher prices) in at least five states

Atmospheric acidity has decreased since the 1970s (in part, due to the Clean Air Act)

Conservation summit was held in Glacier National Park in Montana

Diego, the hooded tortoise, returned to the Galapagos and helped save his species

18 underrated National Parks – how did they get on the list as they are spectacular places?
User-friendly EQ hazard zoning maps with details at country, state and district level in India

Some history of Mount Rushmore National Memorial in South Dakota
• http://www smithsonianmag.com/history/sordid-history-mount-rushmore-180960446/

Moral questions and environmental costs of letting your house cat roam outdoors
• http://www smithsonianmag.com/science-nature/moral-cost-of-cats-180960505/

Migratory birds navigate by genetic code and hybrids follow a slightly different path
• http://www smithsonianmag.com/science-nature/migratory-birds-programmed-genetic-google-maps-180960442/

Another example of how homeland security is failing to keep the country safe

Micro-plastic pollution is increasing, not just in the ocean, but also in the Mississippi River

University of Oxford study criticizing hydropower-dams is criticized
• http://www.enr.com/articles/40262-critics-counter-oxford-research-on-viability-of-large-dams

New models designed to improve forecasts of effects of environmental change on food webs
• https://www.sciencedaily.com/releases/2016/09/160921084717.htm

Study shows smoking causes “footprint” on genome through DNA methylation
• http://www.ibtimes.com/smoking-leaves-permanent-footprint-human-dna-study-finds-2419660

Stewart Udall envisioned our Earth-observing space technology to view our Earth; Canyonlands National Park is an excellent example of the results
• https://www.usgs.gov/news/vision-observe-earth

Environmental impact studies to assess the Grand Renaissance Dam project in Ethiopia on the Nile River
• http://www.spacedaily.com/reports/French_firms_to_gauge_impact_of_Nile_dam_project-999.html

Perspective: Policy decisions are made on unproven “eco-friendly” desalination technology
2016 NSF Dimensions of Biodiversity Awards attempt to remedy what Immanuel Kant accurately described as nature beyond our understanding


Final proof of concept demonstration of SPARTACUS in Romania to evaluate integrated satellite & terrestrial technologies to manage disaster situations


A broader perspective and a bit of history on our insecure southern border with Mexico