

November 25, 2024

## News and notes



**White-tailed Deer *Odocoileus virginianus***

**Credit: Steve Hillebrand, U.S. Fish and Wildlife Service, public domain**

I have been hunting this past week, so I am just posting some news items I thought were interesting. Don't worry about Bambi or his mother, I am not a good hunter. Next week I will be back to normal postings.

## Geopolitics

- Gold prices go up as the Ukraine war escalates: [Gold price set for biggest weekly jump in 20 months on haven demand](#).
- G20 Summit: [Drill Baby Drill Returns as G20 Drops Fossil Fuel Phase-Out from Final Draft](#).
- [Chinese ship under investigation over 'sabotaged' Baltic undersea cables](#).
- [U.S.-Supplied ATACMS Missile Strike Inside Russia Have Begun](#).
- [Sweden issues pamphlet telling citizens how to prepare for potential war as WWII fears grow](#).
- COP29 conferenece: [The tide is turning against the green elites](#).
- Twitter/X posting with video of V.V. Putin: [Why Europe Should be Concerned About Zelensky's Latest Announcement of Plans to Fire U.S. Missiles Into Russia](#).
- Interesting opinion, posted on RT, so take with a grain of salt: [Germany has become Europe's political wasteland](#).
- [Wagner Group linked to \\$2.5 billion in illicit gold trading – report](#).

- [Megaport opens up Latin America to Chinese trade as US looks on.](#)
- This level of corruption is not surprising, but it is amusing: [Africa's New King Solomon, Equatorial Guinea's Outrageous Sex Tapes Affair](#); I discussed [Equatorial Guinea on July 22](#).

## Research and News

- Geological history: [Melting the Marinoan Snowball Earth: The impact of deglaciation duration on the sea-level history of continental margins.](#)
- [Greenstone belt-hosted Mesoarchaeon Mbarga BIF prospect, NW Congo Craton \(southern Cameroon\): Petrography, geochemistry, Sr-Nd isotopes, zircon U-Pb geochronology, petrogenetic, and tectonic implications.](#)
- [Promoting Geoheritage in the Aspiring Geopark of Taburno-Camposauro \(Southern Apennines, Italy\) with Innovative Tools.](#)
- [Sedimentary record of oceanic plateau accretion: Revisiting the Eocene to Miocene stratigraphy of the northern Olympic Peninsula, Washington \(USA\).](#)
- [December 2024 edition of Sedimentology: Volume 71, Issue 7, Pages: 2067-2512.](#)
- Post depositional geology: [Ocean crustal veins record dynamic interplay between plate-cooling-induced cracking and ocean chemistry.](#)
- [Nephrite Jade and Related Rocks from Western Washington State, USA: A Geologic Overview.](#)
- [Trace elements of pyrite in the Ediacaran Doushantuo Formation reveal ancient methane release events.](#)
- [A dendritic growth mechanism for producing oscillatory zoning in igneous zircon.](#)
- Weird geology: [The Enigmatic Pockmarks of the Sandy Southeastern North Sea.](#)
- Great Oxidation Event: [The molybdenum cycle in the oxygenated Neoproterozoic ocean was coupled to manganese carbonate mineralization.](#)
- Zircons: [Detrital zircon provenance links between outcrop and subsurface, Rocas Verdes and Magallanes-Austral Basins, Patagonia.](#)
- More zircons: [Detrital zircon geochronology of Paleoproterozoic metasedimentary rocks from Jämsä, Central Finland](#); appendices [here](#).
- [The Influence of Rotation on the Preservation of Heterogeneities in Magma Oceans.](#)
- Geophysics: [Why Is Earth's Magnetic North Pole Moving Eastwards Across The Globe?](#)
- [The effect of seeing scientists as intellectually humble on trust in scientists and their research.](#)

- More on the Messinian Salinity Crisis: [Chlorine isotopes constrain a major drawdown of the Mediterranean Sea during the Messinian Salinity Crisis](#); SciTechDaily summary [here](#); see also this edition of the [Common Descent Podcast](#).
- Chemical weathering patterns: [The chemical index of alteration \(CIA\) and interpretation of ACNK diagrams](#).
- Mineralogy: [Lower mantle water distribution from ab initio proton diffusivity in bridgmanite](#).

## Bad Science

- [The paper mills helping China commit scientific fraud](#).
- Opinion from The Conversation: [The peer review system no longer works to guarantee academic rigour – a different approach is needed](#).
- [Mega journal Cureus kicks out organizations critics called paper mills](#).
- [Scientist behind superconductivity claims ousted](#).

## Plate Tectonics

- [Upper and lower crustal deformation and residual topography in a continental back-arc: Inferences from the Pannonian-Transylvanian Basins](#).
- [Reconstructing Tarim within Rodinia: Constraints from early Tonian accretionary and collisional records in the Altyn belt](#).
- [Fluid-mediated transition from dynamic rupturing to aseismic slip at the base of the seismogenic continental crust](#).
- [Thrust system, flower structures and transpressive duplexes in Zeidun-Kareim Belt, Central Tectonic Province, Egyptian Nubian Shield \(East African Orogen\)](#).
- [The lithosphere of South America from seismic tomography: Structure, evolution, and control on tectonics and magmatism](#).

## Paleontology

- [Ediacaran paleobiology and biostratigraphy of the Nama Group, Namibia, with emphasis on the erniettomorphs, tubular and trace fossils, and a new sponge, \*Arimasia germsi\* n. gen. n. sp.](#)
- Mass extinction: [A high-resolution palynological and geochemical study of the end-Triassic mass-extinction based on a new cored succession at Winterswijk \(the Netherlands\)](#).
- *Apatosaurus*: [Largest dinosaur ever auctioned sells for over \\$6 million — and it's twice as long as a school bus](#).
- [\*Klastomycter conodontatus\*, gen et sp. nov., a small early Permian parareptile with conical teeth from Richards Spur, Oklahoma](#).
- [Bioturbators as ecosystem engineers in space and time](#).

- [Occurrence of \*Centrosaurus apertus\* \(Ceratopsidae: Centrosaurinae\) in Saskatchewan, Canada, and expanded dinosaur diversity in the easternmost exposure of the Late Cretaceous \(Campanian\) Dinosaur Park Formation](#); Phys.org summary [here](#).

## Mining and Energy

- Solar energy and a mine: [World's largest diamond mine has hid this for centuries: 4.2 million kW at the bottom](#).
- [ConocoPhillips completes acquisition of Marathon Oil Corporation](#).
- [BP to Spend \\$7 Billion on Indonesia Gas Field With Carbon Capture](#).
- [Earth AI, Legacy Minerals make first greenfield palladium discovery using artificial intelligence](#).
- News report: [Why Germany is betting on Canadian geothermal energy tech](#).
- China: [Auction for Bankrupt Sinochem Refineries Fails to Attract Interest](#).
- Video: [The Largest Prehistoric Copper Mine in the World](#).
- [North Dakota oil production hits 5-month high in Sept, state regulator says](#).
- [Permitting delays impact British Columbia projects valued at C\\$38 billion, AME says](#).
- Horrors, “green energy” means more mining: [Green Energy Needs Minerals, Yet America Blocks New Mines](#).
- Ore deposit geology: [A stable isotope \(S, C and O\) study of metamorphosed polymetallic sulphide deposits in the Bergslagen district, Sweden: The Stollberg example](#).
- NY Times: [Why Oil Companies Are Walking Back From Green Energy](#).
- [Queensland's copper sector lives on beyond Mt Isa](#).
- Columbia: [A drug gang stole 3 tons of gold in a scam so perfect it's still going](#).

## Environmental Geology and Hydrogeology

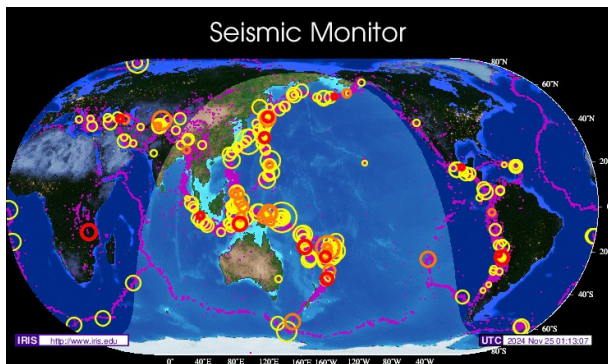
- Whiskey's for drinking, water's for fighting: [Farmers in southern Arizona face uncertain future under new groundwater rules](#).
- [Five firms in plastic pollution alliance 'made 1,000 times more plastic than they cleaned up](#).
- Groundwater removal: [Quantification of record-breaking subsidence in California's San Joaquin Valley](#); Phys.org summary [here](#).
- [Advancing Sustainable Groundwater Management With a Hydro-Economic System Model: Investigations in the Harney Basin, Oregon](#); Phys.org summary [here](#).
- [The potential water quality impacts of hard-rock lithium mining: Insights from a legacy pegmatite mine in North Carolina USA](#); Phys.org summary [here](#).

- [Microplastics and per- and polyfluoroalkyl substances \(PFAS\) in landfill-wastewater treatment systems: A field study](#); Phys.org summary [here](#).

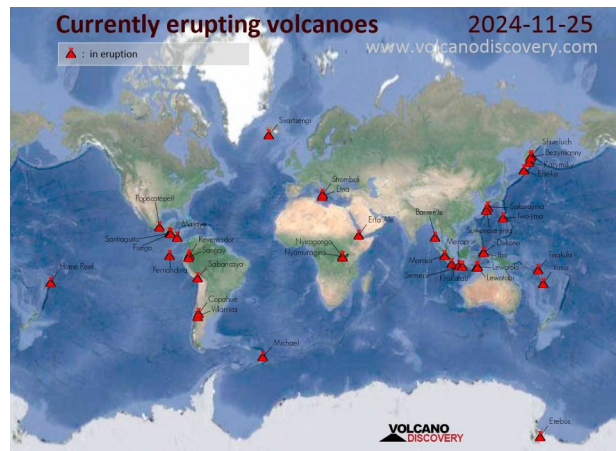
## Glaciers and Climate Change

- Subglacial water flow: [Onyx River: Antarctica's Longest River Flows Away From The Ocean](#).
- [Smoothed monthly Greenland ice sheet elevation changes during 2003–2023](#).
- [Where Glaciers Melt, the Rivers Run Red](#).
- [Weakening of the Atlantic Meridional Overturning Circulation driven by subarctic freshening since the mid-twentieth century](#).
- [Twenty-first century global glacier evolution under CMIP6 scenarios and the role of glacier-specific observations](#).

## Volcanoes, Earthquakes and Geohazards



[Seismic Monitor](#)



[Active Volcano Map](#)

## Volcanoes

- United States Geological Survey (USGS) Volcano Watch: [Quantifying corrosion downwind of Kīlauea](#).
- USGS Yellowstone Volcano Observatory: [A brief history of YVO webcams](#).
- [Smithsonian / USGS Weekly Volcanic Activity Report](#).
- [Evidences of the structures controlling the unrest in Campi Flegrei, Italy; Joint interpretation of ambient noise and local earthquake tomography](#).
- Grindavik, Iceland: [Lava flow from Iceland volcano creeps towards homes](#); related: [Lava River Heads towards Blue Lagoon, Downs Power Pole](#).

- Research: [Evolution of eruption rate between two caldera-forming eruptions in the Jemez Mountains volcanic field, New Mexico, USA.](#)
- New Zealand's Mount Taranaki: [Earth from space: Eerily circular 'Goblin Forest' surrounds sacred volcano with human rights](#); geological history of the mountain published [here](#).
- Hunga Tonga-Hunga Ha'apai Volcano: [A Seismic Precursor 15 min Before the Giant Eruption of Hunga Tonga-Hunga Ha'apai Volcano on 15 January 2022](#); Science Alert summary [here](#).

### **Earthquakes**

- [Euro-Mediterranean Seismological Centre \(EMSC\).](#)
- [Earthquakes Monitoring Live Worldwide.](#)
- Earthquake database: [Neural phase picker trained on the Japan meteorological agency unified earthquake catalog.](#)
- Earthquake research: [Stable-to-dynamic expansion of fault slipping area through fluid injection observed in laboratory experiments using a sub-meter scale specimen.](#)
- [Slip History, Tectonic Evolution, and Fault Zone Structure Along the Southern Alpine Fault, New Zealand.](#)
- More on New Zealand: [Southland's hidden quake-prone crust uncovered.](#)
- [Dynamic rupture inversion on the M5.9 pre-event before the 2024 M7.6 Noto-Peninsula, Japan, earthquake.](#)

### **Upcoming Events**

- The Geological Society: [Hybrid Conferences, November 25, 2024 – September 9, 2025, Climate and Ecology: Off the Rails.](#)
- [University of Saskatchewan, November 27, 2024, 2025 Darcy Lecture: Deep Groundwater, Deep Time.](#)
- [The Saskatchewan Geological Open House, December 2 to 4, Delta Bessborough Hotel, Saskatoon](#); the Bessborough Hotel is the most beautiful building in Saskatoon.
- [December 4, 2024, Thunder Bay, 12:00 – 1:00PM, Lakehead University, "Mineral Exploration in Ontario: Prospecting to Production".](#)
- [Groundwater Week 2024](#), December 10-12 in Las Vegas, Nevada; related video [here](#).
- [2024 National Pollution Prevention Training and Conference](#), U.S. Environmental Protection Agency (USEPA), Washington, D.C., Dec. 10-11.
- European Geosciences Union: [EGU General Assembly 2025, Vienna, Austria & Online 27 April–2 May 2025](#)
- [Copper to the World Conference, Tuesday 26 – Wednesday 27 August 2025](#), in Adelaide, Australia; report on 2024 conference [here](#).

- 2024-2025 [Society of Petroleum Engineers Distinguished Lecturer Schedule](#).
- [List of geoscience events in 2025 from the International Union of Geological Sciences](#).
- [American Geophysical Union List of Upcoming Meetings](#).

## **Standard Caveat**

### **J. Robert Oppenheimer on freedom and scientific inquiry**

The purpose of my weblog postings is to spark people's curiosity in geology. Don't entirely believe me until you've done your own research and checked the evidence. If I have sparked your curiosity in the subject of this posting, follow up with some of the links provided here. If you want to, go out into the field and examine some rocks on your own with the help of a good field guide. Follow the evidence and make up your own mind.

In science, the only authority is the evidence.