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**Geoscience Bulletin Board – 22 May 2023 – compiled by Elaine J. Hanford**

**Book Review: “Rocky Voices: The Memories of Minerals that Form the Rocky Mountains”**

- <https://eos.org/articles/rocky-voices-a-ga-with-eva-enkelmann>

**Why rocks do not burn – well, except for coal**

- <https://theconversation.com/why-dont-rocks-burn-203392>

**Series of minor tremors record on Bornholm Island caused by acoustic pressure waves from unknown source**

- [https://www.huffpost.com/entry/bornholm-mystery-tremors-denmark\\_n\\_64624be5e4b018d846bf5c2a](https://www.huffpost.com/entry/bornholm-mystery-tremors-denmark_n_64624be5e4b018d846bf5c2a)

**Using AI to predict locations for rare minerals by assessing patterns in mineral associations**

- <https://phys.org/news/2023-05-ai-rare-minerals.html>
- Paper: <https://academic.oup.com/pnasnexus/article/2/5/pgad110/7163824>

**Demonstrating high natural radioactivity of deep-sea manganese nodules – potential health risks**

- <https://phys.org/news/2023-05-high-natural-radioactivity-manganese-nodules.html>
- Paper: <https://www.nature.com/articles/s41598-023-33971-w>

**Detecting inaudible sounds of volcanic mudflows**

- <https://phys.org/news/2023-05-inaudible-volcanic-mudflows.html>
- Paper: <https://www.nature.com/articles/s41598-023-32109-2>

**Using high-quality satellite imagery to delineate post-earthquake details in Turkey – coseismic surface rupture**

- <https://phys.org/news/2023-05-high-quality-satellite-imagery-swiftly-reveals.html>
- Paper: <https://www.sciencedirect.com/science/article/pii/S2772467023000167?via%3Dihub>

**Migration & transformation of radiocesium (RCs)– regulated by clay minerals & natural weathering processes**

- <https://phys.org/news/2023-05-reveal-interactions-micaceous-minerals-weathering.html>
- Paper: <https://www.sciencedirect.com/science/article/abs/pii/S0043135423003548>

**Improved climate model reproduces cycle of Early Pleistocene Ice Ages 1.6 to 1.2 myo driven by astronomical forces – but suggest it no longer works that way since a “warm ice age”**

- <https://www.sciencedaily.com/releases/2023/05/230515132024.htm>
- [https://www.terraily.com/reports/Warm\\_Ice\\_Age\\_changed\\_climate\\_cycles\\_999.html](https://www.terraily.com/reports/Warm_Ice_Age_changed_climate_cycles_999.html)
- Paper: <https://www.nature.com/articles/s43247-023-00765-x>

## Developing biodiversity during Cambrian explosion also impacted chemistry of the Crust of the Earth

- <https://www.sciencedaily.com/releases/2023/05/230510120539.htm>
- Paper: <https://www.science.org/doi/10.1126/sciadv.ade6923>

## New York City likely sinking 1 to 2 mm per year beneath the weight of skyscrapers – isostasy in action in many large cities around the world

- <https://www.sciencealert.com/new-york-city-could-be-sinking-under-the-weight-of-its-skyscrapers>
- <https://nypost.com/2023/05/17/nyc-is-sinking-under-the-weight-of-its-buildings-geologists/>
- Paper: <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2022EF003465>
- Paper: <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2022GL098477>

## *Platytholus clemensi* – Late cretaceous species of dome-headed dinosaurs

- <https://www.sci.news/paleontology/platytholus-clemensi-11924.html>

## *Archopterus anjiensis* – 445 myo sea scorpion found in Zhejiang Province of China

- <https://www.sci.news/paleontology/archopterus-anjiensis-11919.html>

## Brontotheres (thunder beasts) evolved enormous size to survive in competitive ecological niches

- <https://www.sci.news/paleontology/brontothere-megaherbivory-11912.html>

## Critical minerals mapping in Alaska through Cooperative Geological Mapping Program

- <https://www.usgs.gov/news/national-news-release/usgs-invests-millions-critical-minerals-mapping-alaska>

## Retrospective: 10 ways the eruption of Mount St Helens changed the world – still causing impacts

- <https://www.usgs.gov/news/featured-story/10-ways-mount-st-helens-changed-our-world>
- <https://earthsky.org/earth/this-date-in-science-cataclysmic-eruption-at-mount-st-helens/>

## USGS seeks Earthquake Hazards Research Proposals for FY24

- <https://www.usgs.gov/news/technical-announcement/usgs-seeks-earthquake-hazards-research-proposals-5>

## Under forces of weathering and gravity, the Tetons continue to evolve

- <https://wyofile.com/rockfall-changes-world-famous-teton-skyline-forever/>

## The Ennedi Massif in northeastern portion of Chad in Africa

- <https://www.bbc.com/travel/article/20230515-enedi-massif-africas-remote-geological-wonder>

## Faults on the west side of Salt Lake Valley complement the Wasatch Fault Zone

- <https://www.fox13now.com/news/local-news/utah-geological-survey-studies-faults-on-west-side-of-salt-lake-valley>

## A summer of geology in Colorado

- [https://gazette.com/life/when-it-comes-to-colorado-in-the-summer-geology-is-life/article\\_9fba2060-d4ac-11ed-96a2-f3d586135584.html](https://gazette.com/life/when-it-comes-to-colorado-in-the-summer-geology-is-life/article_9fba2060-d4ac-11ed-96a2-f3d586135584.html)

## Northern Snake Range in Nevada field classroom for decades of Stanford students – legacy of hand-drawn maps

- <https://news.stanford.edu/2023/05/11/art-geology-stanford-maps-spur-international-recognition-northern-snake-range-nevada/>

## 3-D map of Central Wyoming will result from magnetic field & radiation detectors

- <https://bigfoot99.com/bigfoot99-news/geological-agencies-producing-3-d-map-of-central-wyoming/>

## Comprehensive environmental & surface geological studies at Zaachila Copper Project in Mexico

- <https://www.prnewswire.com/news-releases/vortex-metals-initiates-comprehensive-environmental-and-surface-geological-studies-at-zaachila-copper-project-in-mexico-301828301.html>

## Investigating a dormant volcano in Southern Illinois

- [https://www.wsiltv.com/news/illinois/researchers-investigate-dormant-volcano-in-southern-illinois/article\\_23daaa32-f108-11ed-a428-ef06dd66e28c.html](https://www.wsiltv.com/news/illinois/researchers-investigate-dormant-volcano-in-southern-illinois/article_23daaa32-f108-11ed-a428-ef06dd66e28c.html)

### **Geology of Clitheroe Castle – limestone & fossils**

- <https://news.lancashire.gov.uk/news/geology-rocks-at-clitheroe-castle>

### **Online AGEx maps for exploring groundwater levels in Arizona – groundwater level declines**

- <https://www.usgs.gov/news/state-news-release/new-online-maps-exploring-groundwater-levels-arizona>
- AGEx: <https://rconnect.usgs.gov/az-agex/>

### **“Geomythology” – originally ignored & now linking Maori legends & geology**

- <https://cosmosmagazine.com/earth/earth-sciences/maori-mythology-natural-disasters/>

### **St Cloud granite & the geologic history of Minnesota**

- <https://www.mprnews.org/episode/2023/05/16/st-clouds-granite-reveals-the-history-of-minnesota>

### **Uplift of the coast of New Zealand**

- <https://interestingengineering.com/science/hidden-coastal-uplift-new-zealand-caused-by-ancient-earthquake>

### **Indiana limestone is a prized building material**

- <https://www.smithsonianmag.com/science-nature/indiana-limestone-americas-most-prized-building-materials-180982119/>

### **Yellowstone is home to isolated thermal group famous for its geyserite knob biscuits**

- <https://www.usgs.gov/observatories/yvo/news/yellowstones-famous-biscuits>

### **Almanor Fault Zone – marked by two recent shallow earthquakes of M5.5 and M5.2 & aftershocks**

- <https://news.yahoo.com/almanor-fault-zone-geologist-explains-201108311.html>

### **Cultivating deep reverence for the Earth: geology helps us understand the glory of God’s creation**

- <https://www.recorder.com/faith-matters-may-13-50942065>

### **Evolution of the atmosphere of Earth – the Great Oxygenation Event**

- <https://arstechnica.com/science/2023/05/the-complicated-history-of-how-the-earths-atmosphere-became-breathable/>

### **Fracking and the “Halliburton Loophole”**

- <https://www.ehn.org/halliburton-loophole-2659983182.html>

### **Deaths caused by earthquakes at Pompeii prior to deaths by volcanic ash & gas**

- <https://www.nzherald.co.nz/travel/new-pompeii-skeletons-reveal-deadly-earthquakes-before-infamous-eruption/TSJOLVD6VRD67J2JDO6EHYJ4HY/>

### **Arctic submarine volcano emitting mud & methane within large crater named Borealis Mud Volcano**

- <https://greekreporter.com/2023/05/18/giant-volcanic-crater-seabed/>

### **Creationist paper on heat problems associated with Genesis Flood**

- <https://pandasthumb.org/archives/2023/05/creationist-paper-heat-problems.html>

### **Mapping potential pathway of proposed wastewater release from Pilgrim Nuclear Power Station**

- <https://www.who.edu/press-room/news-release/woods-hole-oceanographic-institution-sea-grant-to-map-potential-path-of-proposed-wastewater-release-from-pilgrim-nuclear-power-station/>

### **Mudslide at Mount St Helens**

- <https://www.msn.com/en-us/weather/topstories/mount-st-helens-mudslide-strands-photographers-overnight-vehicles-for-a-year-or-more/ar-AA1bn4Xy>

### **Geological formations & archeology highlighted by tours of Stark Caverns near Bagnell Dam in Missouri**

- [https://www.columbiamissourian.com/special\\_section/tourism/central\\_missouri/see-geological-formations-ancient-artifacts-at-stark-caverns-near-bagnell-dam/article\\_c61a6366-dec8-11ed-aedc-2f211ec5b1dc.html](https://www.columbiamissourian.com/special_section/tourism/central_missouri/see-geological-formations-ancient-artifacts-at-stark-caverns-near-bagnell-dam/article_c61a6366-dec8-11ed-aedc-2f211ec5b1dc.html)

## How explosive was the last caldera-forming eruption at Yellowstone? Complex phased eruptions & newly identified ignimbrite units and volcanic vents

- <https://www.scientificamerican.com/article/yellowstone-supervolcano-eruptions-were-even-more-explosive-than-we-knew/>
- USGS Circular 1508: <https://pubs.usgs.gov/circ/1508/cir1508.pdf>

## Geological investigation of the various accounts of Noah's Flood

- <https://www.livescience.com/human-behavior/religion/did-noahs-flood-really-happen>

## The South Stack Anticline on Anglesey Island in Wales

- <https://nation.cymru/culture/letter-from-south-stack/>

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## Environmental Science Bulletin Board – 22 May 2023 – compiled by Elaine J. Hanford

### The illusion of consensus – contrary to the Scientific Method which calls for rigor, humility & open discussion

- <https://www.todayville.com/the-illusion-of-consensus/>
- <https://www.illusionconsensus.com/p/the-dangerous-illusion-of-scientific>

### Considering surveillance and encryption

- <https://www.csis.org/analysis/more-things-change-more-they-stay-same-0>

### The end of human life as we know it? We have crossed 6 of 9 boundaries for the future existence of humans

- <https://phys.org/news/2023-05-earth-unlivable-tide.html>
- <https://phys.org/news/2023-03-earth-boundaries-justice.html>
- Paper: <https://www.nature.com/articles/s41893-023-01064-1>

### US Military Veterans are evicted from Orange County Hotels in New York to make way for illegal immigrants

- <https://www.msn.com/en-us/news/us/outrage-grows-over-vets-evicted-from-hotels-to-house-migrants/ar-AA1b9w0x>

### PFAS forever chemicals in your home - Furniture treated with “stain resistant” chemicals not so resistant

- <https://www.fastcompany.com/90876814/those-forever-chemicals-on-our-furniture-dont-actually-prevent-stains>
- Paper: <https://journals.sagepub.com/doi/10.1177/24723444231159856>

### Hydropower is touted as a “green” renewable source of energy as others galvanize to remove existing dams since they cause harm to the environment and old dams pose a safety risk

- <https://insideclimatenews.org/news/15052023/as-the-harms-of-hydropower-dams-become-clearer-some-activists-ask-is-it-time-to-remove-them/>

**The largest ranch – King Ranch in south Texas encompasses more than 825,000 acres & Anna Creek Station in South Australia encompasses 2,000,000 acres**

- <https://www.msn.com/en-us/travel/news/the-largest-ranch-in-the-united-states/ar-AA1bbJ4v>

**Warning to Yellowstone tourists – bear spray does not always work for Bison – what works? Give them space, lots and lots of space and distance**

- <https://www.msn.com/en-us/travel/news/yellowstone-tourists-learn-the-hard-way-that-bear-spray-doesn-t-always-work-on-bison/ar-AA1bcKto>

**Congestion inequity pricing plan for New York – optimistically thinking this will solve traffic problems but will just cost more with new tolls – a nightmare in the making and a pathway to fraud**

- <https://www.nbcnewyork.com/news/local/nyc-congestion-pricing-plan-includes-toll-cuts-for-taxis-night-drivers/4328327/>

**Clarifying details for yet another new subsidy for solar energy projects**

- <https://www.reuters.com/markets/us/us-treasury-takes-middle-road-solar-panels-made-usa-2023-05-12/>

**Not a true sink hole as water from culvert undermines sidewalk on New Mexico bridge over Rio Grande**

- <https://apnews.com/article/new-mexico-sidewalk-sinkhole-bridge-rescue-a93317d3281cfb6ffaf509a29a0aa598>

**Montana passes legislation to preclude considering “climate change” (i.e., man-made global warming) when permitting large projects – a good thing since the “consensus” is not real**

- <https://newspub.live/west/montana/did-montana-just-enact-the-nations-most-aggressive-anti-climate-law-inside-climate-news/>

**Recycling is “green” – not if one considers the massive volume of micro-plastics it produces**

- <https://insideclimateneews.org/news/16052023/recycling-plastic-microplastics-waste/>

**Taiwan residents warned that endangered Formosan yellow-throated marten may look cute, but are dangerous**

- <https://currently.att.yahoo.com/news/rare-creature-adorable-dangerous-spotted-155205749.html>

**“forgotten” antibiotic may be effective against antibiotic resistant superbugs – at least for a while till they adapt**

- <https://www.yahoo.com/news/80-old-forgotten-antibiotic-may-180000655.html>

**Cityscapes not only create urban heat islands, they also create increased cloud cover which insulates and enhances the urban heat island effects**

- <https://eos.org/articles/cityscapes-create-cloud-cover-satellite-images-reveal>

**Determining how to best educate residents about hazards of living near Nyirangongo Volcano in City of Goma**

- <https://eos.org/articles/raising-hazard-awareness-at-the-foot-of-one-of-the-worlds-most-dangerous-volcanoes>

**Visualizing a Utopian Energy Economy based on uranium – remember that utopian does not exist**

- <https://www.visualcapitalist.com/sp/uranium-the-fuel-for-a-utopian-energy-economy/>

**Visualizing Sudan – conflicts, geography & climate, population with timeline of key events**

- <https://www.visualcapitalist.com/map-explainer-sudan/>

**Visualizing urbanization in the US by State**

- <https://www.visualcapitalist.com/sp/mapping-us-urbanization-by-state/>

**Efforts to recharge aquifers in California – saying the drought is over, but it is NOT**

- <https://www.npr.org/2023/05/17/1176759977/efforts-to-recharge-californias-underground-aquifers-show-mixed-results>

**Butterflies evolved in North America**

- <https://www.npr.org/2023/05/16/1176200429/butterflies-originated-in-north-america-after-splitting-from-moths-new-study-sug>
- Paper: <https://www.nature.com/articles/s41559-023-02041-9>



**UN finally recognizing toxic chemical in plastic – offering up a “Plan” to reduce plastic waste by 20240 – blocked “chemical recycling” from being incorporated into guidelines for managing plastic waste**

- <https://insideclimatenews.org/news/17052023/un-environment-program-plastic-waste-reduction/>
- Report on chemicals in plastics: <https://www.unep.org/resources/report/chemicals-plastics-technical-report>
- Report on Turning off the Tap: [https://wedocs.unep.org/bitstream/handle/20.500.11822/42277/Plastic\\_pollution.pdf](https://wedocs.unep.org/bitstream/handle/20.500.11822/42277/Plastic_pollution.pdf)

**As urbanization increases, abandoned lands become potential threat to biodiversity**

- <https://www.sciencedaily.com/releases/2023/05/230511164449.htm>

**Analyzing occurrence, fate & environmental risks of 40 pharmaceutically active compounds (PhACs) in surface waters and sediments in Pearl River Basin in South China**

- <https://phys.org/news/2023-05-fate-environmental-pharmaceutically-compounds-pearl.html>

**Link between contaminated water at Marine Corps Base Camp Lejeune, North Carolina, and risk of Parkinsons**

- <https://www.sciencealert.com/toxic-contaminant-in-water-linked-to-sharp-increase-in-parkinsons-risk>

**Bees can learn, remember, think and make decisions – New Book: “What a Bee Knows”**

- <https://theconversation.com/bees-can-learn-remember-think-and-make-decisions-heres-a-look-at-how-they-navigate-the-world-203837>

**Illegal pot farm in back country of Death Valley National Park is cleaned up**

- <https://www.nationalparkstraveler.org/2023/05/another-pot-farm-death-valley-national-park-cleaned>

**Billion new air conditioners in India, China, Indonesia & Philippines may save human lives but will “cook” the planet – concerns for impacts of harmful coolants & demands on energy**

- <https://phys.org/news/2023-05-billion-air-conditioners-cook-planet.html>

**Cough syrup may be dangerous or deadly for children**

- <https://theconversation.com/my-child-has-a-cough-so-whats-wrong-with-using-cough-syrup-205396>

**EPA proposes 50 % mercury reductions for Taconite plants after decades of advocacy by tribal nations**

- <https://nativenewsonline.net/environment/epa-proposes-mercury-reductions-for-taconite-plants-after-decades-of-urging>

**Glyphosate and/or heavy metals found in 2 of 13 popular brands of oat milk**

- <https://www.ehn.org/glyphosate-free-oat-milk-2659999493.html>
- Report: <https://www.mamavation.com/food/glyphosate-oat-milk-heavy-metals.html>

**Wild koalas are now being vaccinated against chlamydia which causes blindness, infertility & death**

- <https://www.npr.org/2023/05/09/1174940150/in-australia-scientists-begin-vaccinating-koalas-against-chlamydia>

**New hybrid EV battery safe enough for airplanes? - Not sure I would fly on a plane powered by one**

- <https://insideclimatenews.org/news/18052023/inside-clean-energy-battery-catl-energy/>

**Cleanup of oil spill from Keystone pipeline into Mill Creek in Kansas is completed**

- <https://nebraskaexaminer.com/briefs/keystone-pipeline-owner-says-recovery-of-spilled-oil-into-kansas-creek-is-complete/>

**Propose Gem City massive solar project near Dayton, Ohio, would power 13,000 homes – lose up to 260 acres of prime farm land to install free-standing solar panels – projected cost of \$75M to \$85M**

- <https://www.daytondailynews.com/local/massive-dayton-solar-project-that-could-power-13k-homes-moves-a-step-closer-to-construction/UFAMKA7KH5D6FK7KPHGQSTIXVE/>

**Slowing stormwater runoff to help protect Lake Champlain Basin**

- <https://www.mynbc5.com/article/slowng-stormwater-runoff-helping-to-protect-the-future-of-the-lake-champlain-basin/43867793#>
- Lake Champlain Basin Project: <https://www.lcbp.org/>

**“Emergency,” “crises” or “breakdown” – politicians...compete...to see who can ring the alarm the loudest” – Europe beginning to turn against prophets of man-made global warming alarmism**

- <https://www.msn.com/en-us/news/world/europe-is-beginning-to-turn-against-the-prophets-of-climate-alarmism/ar-AA1bnrPZ>

**Why Native Americans abandoned Chaco Canyon**

- <https://www.msn.com/en-us/travel/tripideas/this-is-what-happened-at-chaco-canyon-why-it-s-still-abandoned-today/ar-AA1bphJ2>

**The stratospheric ozone layer is still at risk – CHBr3 is not regulated under the Montreal Protocol**

- <https://www.msn.com/en-us/news/technology/this-ozone-killing-chemical-wasn-t-banned-and-we-underestimated-it/ar-AA1bokte>

**US DOE subsidizing carbon emission projects with \$251M**

- <https://www.enr.com/articles/56467-doe-awards-251m-for-carbon-storage-transport-projects>

**More “clean energy” subsidies – “IRA is not sufficient on its own to achieve the promise of rapid emissions reductions”**

- <https://insideclimatenews.org/news/19052023/todays-climate-colorado-minnesota-inflation-reduction-act-incentives/>

**USPS commemorating 50<sup>th</sup> anniversary of Endangered Species Act with new stamps**

- <https://about.usps.com/newsroom/national-releases/2023/0519-usps-commemorates-50th-anniversary-of-endangered-species-act.htm>

**\$4M in grants to support protection & restoration of wildlife migration paths and habitats**

- <https://www.doi.gov/pressreleases/deputy-secretary-beaudreau-announces-nearly-4-million-protect-and-restore-wildlife>

**Southern Nevad Water Authority to spend \$1.03B for major construction projects – but Las Vegas will not curb growth as water supplies dwindle**

- <https://www.reviewjournal.com/news/politics-and-government/major-water-system-projects-worth-nearly-400m-coming-to-valley-2779460/>
- [https://www.thereflector.com/stories/council-discusses-population-projection-increases-in-clark-county\\_317953](https://www.thereflector.com/stories/council-discusses-population-projection-increases-in-clark-county_317953)

**Biggest economic hurdle for nuclear energy is cost – let’s not worry about disposal of radioactive waste**

- <https://www.world-nuclear-news.org/Articles/Costs-of-new-nuclear-need-addressing,-says-Wood-Ma>
- <https://www.woodmac.com/horizons/making-new-nuclear-power-viable-in-the-energy-transition/>

**Torrential rains causing severe flooding in Somalia**

- <https://www.theguardian.com/global-development/2023/may/19/no-one-saw-this-level-of-devastation-coming-climate-crisis-worsens-in-somalia>

**Proposed EPA rule would address “legacy” waste from coal power plants**

- <https://thehill.com/policy/energy-environment/4008853-epa-proposes-crackdown-on-toxic-coal-waste-at-legacy-power-plant-sites/>

**Retrospective on the value of the Montreal Protocol – limiting CFCs**

- <https://hakaimagazine.com/news/by-fighting-the-ozone-hole-we-accidentally-saved-ourselves/>

**Toxic runoff from illegal marijuana growing puts California town at risk (slide show) as "extinction event" may be on the horizon for California pot industry**

- <https://www.msn.com/en-us/news/us/this-california-town-is-worried-about-harmful-chemicals-from-marijuana-growing/ss-AA1bs2Fd>
- <https://www.msn.com/en-us/money/markets/california-cannabis-industry-fears-a-big-crash-soon/ar-AA1brXLF>

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**Coastal Zone Management Bulletin Board – 22 May 2023 – compiled by Elaine J. Hanford**

**\$50B coastal plan still moving toward approval in Louisiana**

- <https://neworleanscitybusiness.com/blog/2023/05/18/louisianas-50b-coastal-plan-heads-toward-approval/>

**Efforts in salt marsh conservation in North Carolina**

- [https://www.carolinacoastonline.com/news\\_times/article\\_98b26280-f4f2-11ed-90fe-03bbd0588e32.html](https://www.carolinacoastonline.com/news_times/article_98b26280-f4f2-11ed-90fe-03bbd0588e32.html)

**Coastal Georgia ecosystem Report Card for 2022 gives grade of “B” at only 74% – a decline since 81% in 2021 – seems like grade inflation as 74% should be a “C” and 81% would be a “B-“**

- [https://thebrunswicknews.com/news/local\\_news/coastal-georgias-ecology-given-b-grade/article\\_fc8bd867-d610-5936-afb8-949b18bceb1c.html](https://thebrunswicknews.com/news/local_news/coastal-georgias-ecology-given-b-grade/article_fc8bd867-d610-5936-afb8-949b18bceb1c.html)
- Report Cards: <https://coastalgadnr.org/ReportCard>
- 2022 Report Card: <https://coastalgadnr.org/sites/default/files/crd/pdf/Final%20Report%20Card%202023.pdf>

**Coastal light pollution (ALAN) is harming corals**

- <https://www.plymouth.ac.uk/news/coastal-lights-trick-coral-reefs-into-spawning-earlier-than-they-should>
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