***April 21, 2025***

## News and notes

Before going on to discuss the geology and geopolitics of Jamaica, here are some news items I thought were interesting.

### Geologists in the News

- Resident geologist shares her love of mining in three-part series.
- Geologist warns prospect of a mineral bonanza in Greenland is a mirage; the geologist is a Greenlander.

### Geopolitics

- Critical minerals:
  - Is Canada the new mecca for raw materials?
  - Bill Gates and Jeff Bezos invest $537 million in Africa to mine rare metals.
  - The Mine Is American. The Minerals Are China's.
  - U.S.′ inability to replace rare earths supply from China poses a threat to its defense, warns CSIS.
  - China suspends rare earth exports, kneecapping US industry reliant on Beijing's 'monopoly.
  - Why Tesla, GM, and Rivian will be hurt most by China's critical minerals export ban.
- Dr. Nostradamus, your office called: from Bloomberg Five Signs That the US and China Will Go to War; or you can listen to this guy.
- Bjorn Lomborg: Global warming policies hurt the poor.
- China urges US to follow international law on reported deep-sea metals stockpile plan.

### Research and News

- Multiple Seamount Subduction and Lithological Variability Possibly Control Pore Fluid Pressure and Shallow Slow Earthquake Activity in Nankai Trough off Muroto.
- Assessment of Seawater Nd Isotope Signatures Extracted From Foraminiferal Shells and Authigenic Phases From Volcanogenic Sediments of the Adriatic Sea.
- Inefficient melt mixing below a fast-spreading ridge revealed by Hess Deep lower gabbros (ODP Leg 147 and IODP Expedition 345).
- Evidence for Lithospheric Mantle Uniformity Beneath Cratons.
- Normal Fault Interactions in Seismic Cycles and the Impact of Fault Network Geometry.

- A Deep Dive Into a Ridge-Transform Fault Intersection: Volcano-Tectonic Relationships in an Enhanced Cold-Edge Effect at the Romanche Fracture Zone.
- Archean deep melting and post-Archean metasomatism of the cratonic mantle: A garnet Lu-Hf isotope record.
- Characterisation and Architecture of Subsurface Strata in the Whatcom Sub-Basin, Georgia Basin, Canada and USA.
- Late Paleozoic Diachronous Subduction Initiation of the SE Paleo-Asian Ocean: Implications for Tectonic Transition From Passive to Active Continental Margin Along Northern North China Craton.
- Sedimentary Diversity of Tsunami Deposits in a River Channel Associated with the 2024 Noto Peninsula Earthquake, Central Japan.
- Textural and chemical inheritance during a pseudomorphic double mineral transformation.
- Zircon-monazite geochronology, petrogenesis and deformation of the Gyangarh-Anjana monzogranites (Aravalli Craton): records of two Proterozoic orogenic events in Northwestern India.
- Holocene coastal evolution and paleogeography of the Izumo Plain and Lake Shinji, Western Japan: Incised-valley fills in a wave-dominated estuary environment.
- Geophysics: The structure of Precambrian crust in sub-Saharan Africa: An AfricaArray synthesis and review.
- Reappraisal of the Continental Rifting and Seafloor Spreading That Formed the South China Sea.
- Ophiolites: Mantle Source Evolution Along the South Atlantic Transect (31°S) Records a Transition From HIMU Plume Component to Depleted MORB.
- Deep-Time Marine Sedimentary Element Database.
- Archaean oxygen oases driven by pulses of enhanced phosphorus recycling in the ocean.
- Magnetization of Oceanic Lithosphere From Modeling of Satellite Observations.
- Deformation of the “Anorogenic” Wolf River Batholith, Wisconsin, USA: Understanding the Baraboo Orogeny Hinterland.
- The Cambrian ROECE and DICE carbon isotope excursions in western Gondwana (Montagne Noire, southern France): Implications for regional and global correlations of the Miaolingian Series.
- Geophysical Investigations of the Fujairah Basin, East Coast of United Arab Emirates: Insights Into Tectonic Evolution.

- Evidence for crustal brines and deep fluid infiltration in an oceanic transform fault; Phys.org summary here.
- Weak asthenosphere beneath the Eurasian interior inferred from Aral Sea desiccation; Live Science summary here.

## Paleontology

- Shell sclerochronology of the limpet Gmelin, 1791: Implications for growth patterns and reconstruction of past sea surface temperatures.
- 'Dispiriting and exasperating': The world's super rich are buying up fossils and it's hampering research.
- A new thyreophoran ichnotaxon from British Columbia, Canada confirms the presence of ankylosaurid dinosaurs in the mid Cretaceous of North America.
- Parastacid (Decapoda, Parastacidae) fossil mandible remains from the Early Miocene, New Zealand.
- The emergence of eukaryotes as an evolutionary algorithmic phase transition; Phys.org summary here.
- New remarkably complete skeleton of reveals arboreality in a large Paleocene primatomorphan mammal following the Cretaceous-Paleogene mass extinction; SciTechDaily summary here.

## Mining and Energy

- RANKED: World's biggest copper mines.
- U.S. Refining Giant Valero to Shut California Refinery.
- It's official: a rare mineral deposit estimated at several billion discovered in metropolitan France, the exact location is kept secret by the State.
- Ore geology: Lithium from magma to mine in an early Yellowstone hotspot caldera.
- How exploding demand for uranium could spell opportunity for Canada.
- Manitoba redirecting hydro exports from U.S. to Canadian projects.
- America in big trouble: We've got our future in the ground, but we don't know how to get it out.
- Drilling technology: Weighing 42,600 tons, this new Chinese "monster" was built for one purpose: to break the world record for the deepest drill at 7 miles; designed to drill to 11,000 m.

## Environmental Geology and Hydrogeology

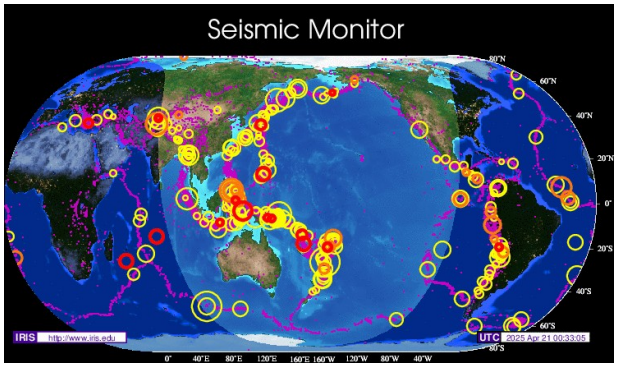
- Environmental Council of the States Publishes Compendium of State PFAS Actions.
- Toxic metals abound in soils worldwide, new global map reveals.

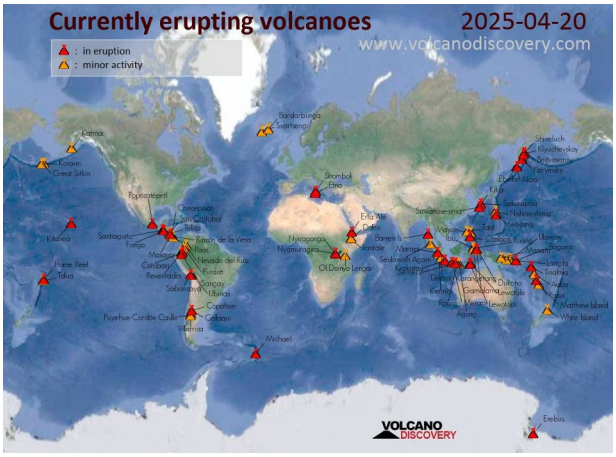
- Harnessing the Power of Geophysical Imaging to Recharge California's Groundwater.
- Charted: The End-of-Life Recycling Rates of Select Metals.

## Glaciers and Climate Change

- Subglacial Precipitates Record Antarctic Ice Sheet Response to Southern Ocean Warming.
- Pockmark Occurrence in the Northern Gulf of Mexico Influenced by Glacial Cycles and Hydrate Stability.
- Droughts and conflicts during the late Roman period; University of Cambridge press release here.
- Fiber Optics Detect Crevasse Icequakes on Alpine Glacier; SciTechDaily summary here.

## Volcanoes, Earthquakes and Geohazards




**Seismic Monitor** **Active Volcano Map**

***Volcanoes***

- Smithsonian / USGS Weekly Volcanic Activity Report.
- United States Geological Survey (USGS) Volcano Observatories:
  - Kilauea Message 2025-04-20 11:45:48 HST.
  - Cascades Volcano Observatory Weekly Update.
  - Volcano Watch – How to build a beach: Pohoiki growth over the years.
  - Even small lakes can tell big earthquake stories in the Yellowstone region
- Evolution of the crustal reservoir feeding La Palma 2021 eruption. Insights from phase equilibrium experiments and petrologically derived time scales.

***Earthquakes***

- Euro-Mediterranean Seismological Centre (EMSC).

- Earthquakes Monitoring Live Worldwide.
- Research briefs from the Seismological Society of America 2025 Annual Meeting.
- Comparison of Paleoearthquake Elapsed-Times and Mean Interevent-Times for a Global Data Set of Active Faults: Implications for Future Earthquakes and Seismic Hazard.
- Circum-Antarctic Glacially Induced Fault Reactivation Since the Last Glacial Maximum.
- The Afghanistan Earthquake of 21 June 2022: The Role of Compressional Step-Overs in Seismogenesis.
- Induced earthquakes: Effects of Periodic Normal Stress Oscillations on Frictional Properties of Simulated Natural Fault Gouges Under In Situ P-T Conditions.
- More induced earthquakes: Revisiting the Seismicity in the Eagle Ford Shale: The Overlooked Role of Wastewater Disposal.
- Fluids from deep subducted sediments control the seismic behavior of the Lesser Antilles megathrust.
- Seismologists Share Early Analyses of Myanmar Earthquake, "rupturing faster than the speed of sound"; related Satellite Data Show Motion of Burma Earthquakes.
- Magnitude 5.2 earthquake rattles San Diego; USGS summary here; report from the Los Angeles Times; Shawn Willsey video here.
- Distinct triggering mechanisms of the 2023 Türkiye earthquake doublet.

***Landslides***

- Review and Inventory of Pedological and Stratigraphical Knowledge for Investigating Shallow Landslides: A Case Study of the Cervinara Area (Central Campanian Apennines, Southern Italy).
- Evaluating the Physics-Based Slope Stability Program PISA-m at a Regional Scale.

***Geohazard Research***

- A review of subsurface geosystems and de-risking offshore construction in the Danish North Sea.

## Comments

If anyone has comments on any of my postings, please leave a comment on the Linkedin page for the posting or email me at raymondreichelt@gmail.com.

## Free Geology Books and Other Stuff

Free geology books can be downloaded from these sites:

- OreZone Readers and Experts Telegram Channel; the Ore Zone channel also shows employment opportunities for geologists.
- The Groundwater Project has many groundwater geology books for free download.

- Free Groundwater Modeling Course – HydroGeoCenter.
- From Western Australia: Carbonatite, lamprophyre and host rocks in the northern Aileron Province.
- Two volumes of Geology of Indonesia now can be accessed for FREE/GRATIS. The books can be accessed from: vol 1 https://lnkd.in/eH6Gcka4; vol 2 https://lnkd.in/egTYmpjk.

## Upcoming Events

- Williston Basin Petroleum Conference, April 28-30, Regina Saskatchewan
- European Geosciences Union: EGU General Assembly 2025, Vienna, Austria & Online 27 April–2 May 2025.
- ISMAR 2025 – International Symposium on Controlled Aquifer Recharge April 28 – May 2, 2025 – Stellenbosch, South Africa
- The USGS David A. Johnston Cascades Volcano Observatory will be hosting an Open House for the public on May 10, 2025!
- Geoscience Beyond Borders, GAC-MAC-IAH-CNC 2025 Ottawa, Ontario, May 11-14, 2025.
- GeoConvention 2025, Calgary Telus Convention Center May 12 – 14, 2025.
- Sedimentary Geology and the Energy Transition Conference, June 2-5, 2025 – Salt Lake City, UT USA.
- Society for Sedimentary Geology conference, Mountjoy IV – August 10-13, 2025, in Montreal, Canada.
- Copper to the World Conference, Tuesday 26 – Wednesday 27 August 2025, in Adelaide, Australia; report on 2024 conference here.
- GeoManitoba 2025 78th Annual Canadian Geotechnical Society Conference & 9th Canadian Permafrost Conference, RBC Convention Centre, Winnipeg, Manitoba, September 21 – 24, 2025.
- 29 September – 1 October 2025, Stuttgart, Germany, Nature Conference on Advancing Perovskite-Based Photovoltaics.
- November 3 – 4, 2025 Central Canada Mineral Exploration Convention 2025 Victoria Inn Hotel & Convention Centre, 1808 Wellington Avenue, Winnipeg, Manitoba R3H 0G3, Canada.
- 5th International Professional Geology Conference (IPGC), November 5 to 7, 2025, Zaragoza, Spain.
- 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.
- The Geological Society: Events & Courses.

***April 21, 2025***

# Geology and the Fate of Societies – Jamaica


**Figure 1a – Jamaica**
**Credit: CIA World Factbook, public domain**

**Figure 1b – Location of Jamaica**
**Credit: CIA World Factbook, public domain**

Jamaica is an island nation in the Caribbean Sea, part of what is often called the West Indies. Cuba is 145 kilometres (km) to the north; the Island of Hispaniola, including Haiti and the Dominican Republic, is 191 km to the east; and the Cayman Islands are 215 km to the west. 652 km to the southwest, across the Caribbean Sea, are Honduras and Nicaragua. Jamaica is a parliamentary constitutional monarchy; the Head of State is King Charles III; the King's representative in Jamaica, the Governor-General, is Patrick Allen; and the Prime Minister is Andrew Holness. Jamaica's legislature is called Parliament; it has two houses: an Upper House called the Senate, and a Lower House called the House of Representatives. King Charles' days as King of Jamaica may be numbered, the Jamaican Parliament is considering the "The Constitution (Amendment) (Republic) Act, 2024". The Capital and largest city in Jamaica is Kingston (pop. 1,190,000 in the).

According to the Central Intelligence Agency's World Factbook on Jamaica, the country has a total area of 10,991 $km^2$, of which 10,831 $km^2$ is land and 160 $km^2$ is water. Also according to the CIA, 2,823,713 people live in Jamaica, 57.4% of whom live in urban areas including almost 1/2 in Kingston's metropolitan area. There are also approximately 1,300,000 expatriate Jamaicans living in the United States, the United Kingdom, and Canada as well as other places such as the nearby Cayman Islands. There are another approximately 700,000 people outside Jamaica who identify as having Jamaican descent.

Of the approximately 2.8 million people in Jamaica, most are of African descent. 76.3% identify as Afro-Jamaican; 15.1% identify as Afro-European; 3.4% have Indian or mixed Indian/African heritage; 3.2% are White; 1.2% are of Chinese or mixed Chinese/African descent; and 0.8% are something other. English is the official language although Jamaican Patois is widely spoken.

Most, 64.8%, Jamaicans identify as Protestant Christians; the various Protestant sects include: 12.0% Seventh Day Adventist; 11.0% Pentecostal, 9.2% other Church of God, 7.2% New Testament Church of God, 6.7% Baptist, 4.8% Church of God in Jamaica, 4.5% Church of God of Prophecy, 2.8% Anglican, 2.1% United Church, 1.6% Methodist, 1.4% Revived, 0.9% Brethren, and 0.7% Moravian. 2.2% of Jamaicans are Roman Catholic; 1.9% are Jehovah's Witness; 1.1% are Rastafarian; 8.8% are something

other or unspecified; and 21.3% have no religion. In terms of education; 88.7% of the total population aged 15 and over has ever attended school and most people spend about 12 years in school.

Economically; the per capita GDP (PPP) in Jamaica is $12,283; the Gini coefficient is 40.2, indicating medium inequality; and the Human Development Index is high at 0.706. In 2023, the top exports of Jamaica were aluminium oxide ($517m), refined petroleum ($314m), petroleum gas ($240m), hard liquor ($102m), and other processed fruits and nuts ($73.8m). The top destinations were United States ($709M), Russia ($138M), Latvia ($131M), Iceland ($127M), and United Kingdom ($93.9M). In 2023, the top imports of Jamaica were refined petroleum ($1.04b), petroleum gas ($520m), cars ($414m), crude petroleum ($390m), and packaged medications ($168M). The top origins were United States ($3.11B), China ($852M), Brazil ($315M), Colombia ($293M), and Japan ($293M). Revenue from tourism contributes over 30% of Jamaican GDP.

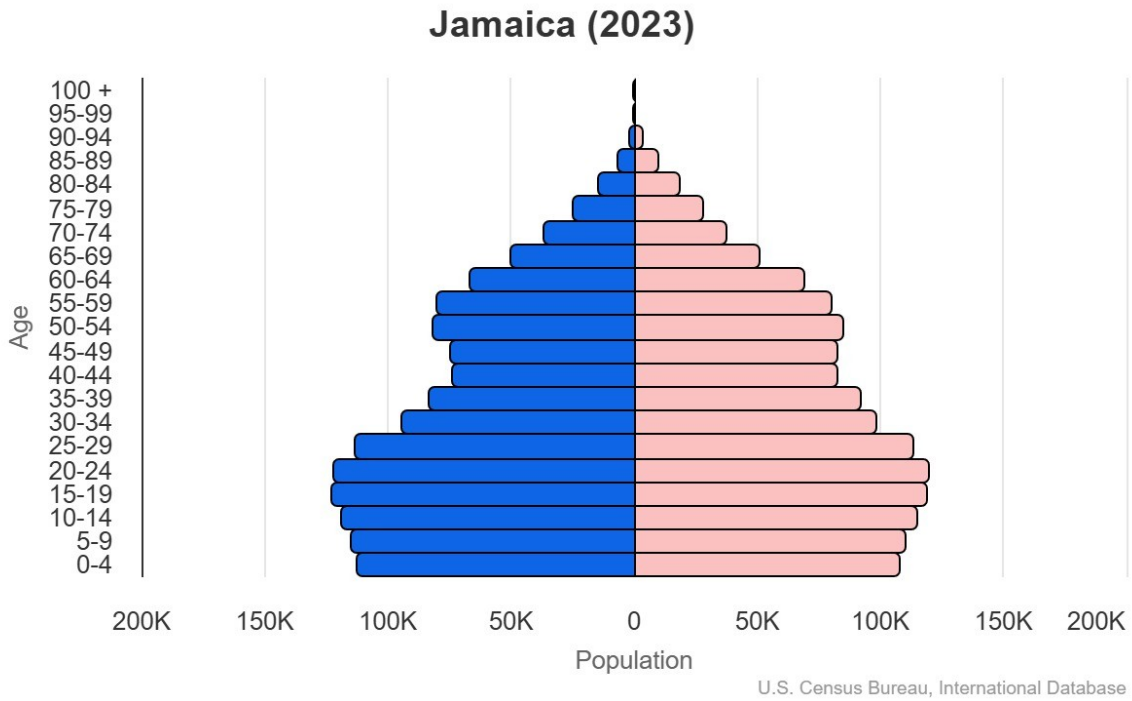



**Figure 2 – Jamaican Demographics**
**Credit: U.S. Census Bureau, International Database, public domain**

Jamaica has a youngish verging on middle aged population, the median age is 30.9 years for both sexes. 23.8% of the population is under 15 and 65.7 is between 15 and 64 years old. The fertility rate is 2.05 births per woman (just under the replacement rate of 2.1) and the annual growth rate is 0.09%, indicating a fairly stable population. As you might guess from the number of expatriate Jamaicans, there is quite a bit of out migration: the net migration rate for Jamaica is -7.1 migrant(s)/1,000 population. Jamaicans can expect to live 76.0 years.

## Geology


**Figure 3 – Tectonic Environment**
**Credit: NWCaribbean satellite.png, public domain**

Tectonically, Jamaica sits on the intersection of the Caribbean Plate and the Gonâve Microplate; north of the Gonâve Microplate is the North American Plate. Separating the Gonâve Microplate and Caribbean Plate are the Walton Fault Zone and the Enriquillo-Plantain Garden Fault Zone. To the west is an ocean spreading rift, the Mid-Cayman Rise that has some neat hydrothermal vents and associated biota.

If you think that all that tectonic activity would lead to lots of earthquakes, you'd be right. The Jamaican Information service lists two major historical earthquakes, the Port Royal Earthquake on June 07, 1692 and another on January 14, 1907. This site lists two more, one on March 1, 1957 and another on January 13, 1993. Evaluating geological risks and disaster preparedness in Jamaica is serious business.

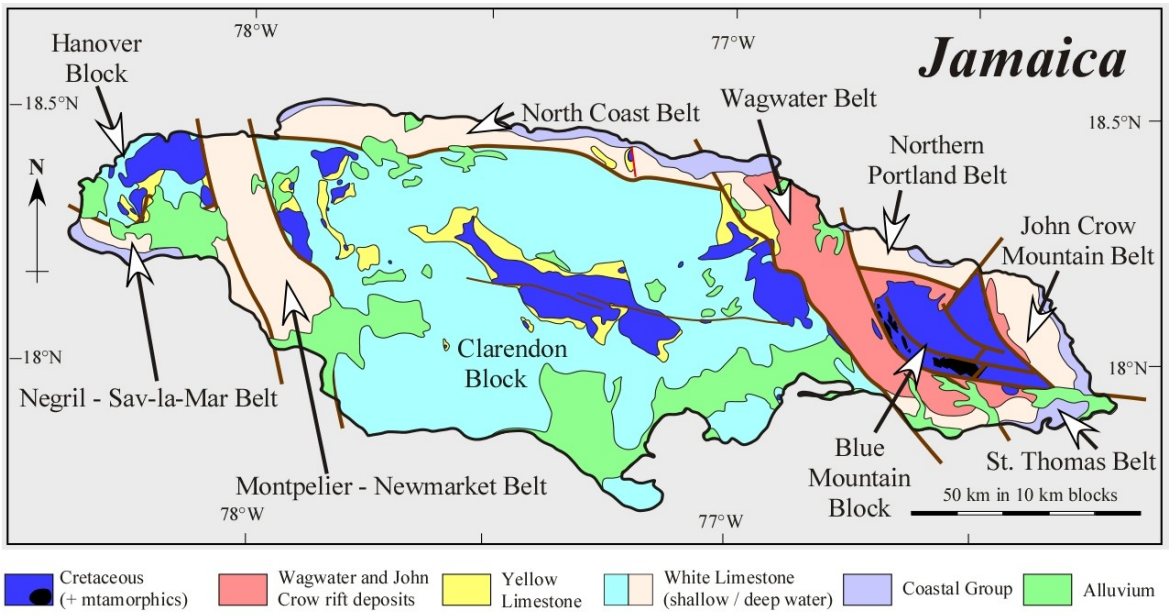



**Figure 4 – General Geology of Jamaica**
**Credit: Simon F. Mitchell's Geology Website**

Structurally, Jamaica is divided into about 10 major blocks: the Negril-Sav-la-Mar Belt, the Hanover Block, the Montpelier-Newmarket Belt, North Coast Belt, the Clarendon Block, the Wagwater Belt, the North Portland Belt, the Blue Mountain Belt, the St. Thomas Belt, and the John Crow Mountain Belt.

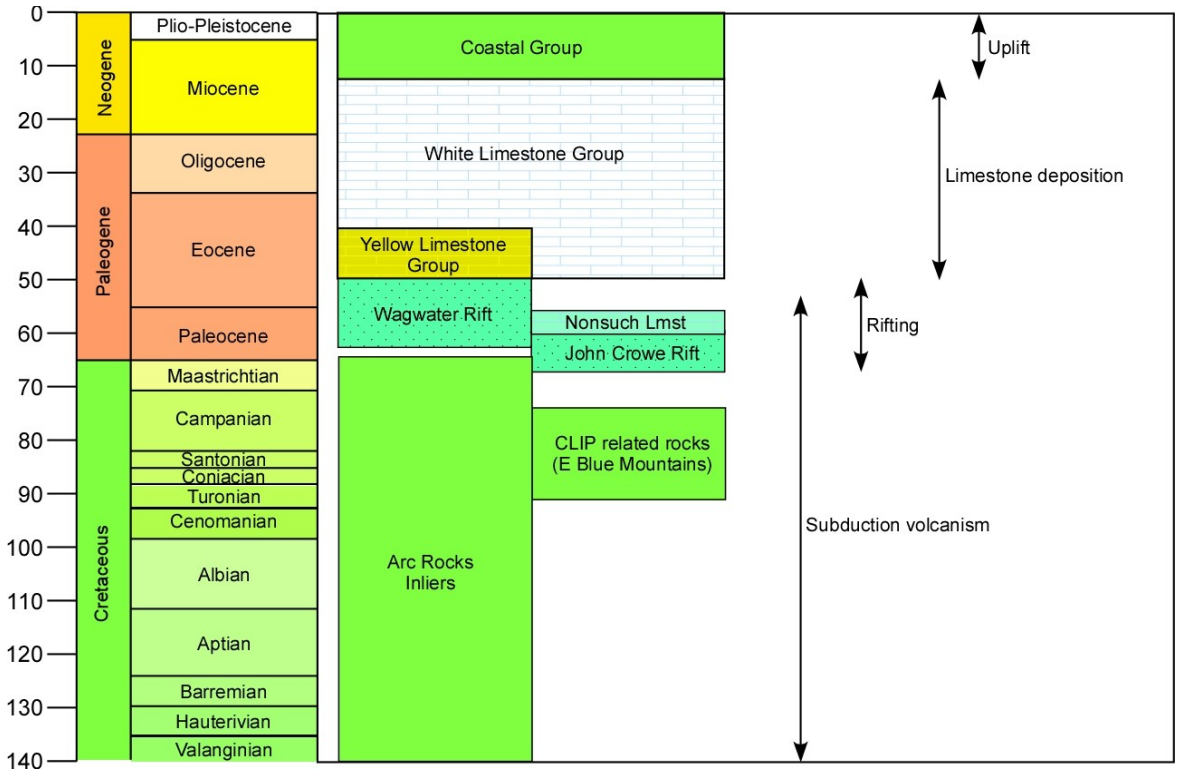



**Figure 5 – Stratigraphic Column of Jamaica**
**Credit: Simon F. Mitchell's Geology Website**

The oldest rocks in Jamaica are Cretaceous aged inliers. Also of Cretaceous age are the rocks of the Eastern Blue Mountains that are part of the Caribbean Large Igneous Province (CLIP). The dark colour of the mafic and ultramafic rocks are the origin of the term “Blue” Mountains.

Crossing the Cretaceous-Paleogene boundary are the clastic rocks of the John Crowe Rift. Overlying the John crow Rift is the Paleocene aged Nonsuch Limestone. Also of Paleocene age is the Wagwater Rift that is, in turn, overlain by the Eocene aged the Yellow Limestone Group.

Ranging in age from Eocene to Miocene is the White Limestone Group. The youngest rocks in Jamaica, ranging in age from Miocene to Pleistocene, are those of the Coastal Group.

For more information on the geology of Jamaica, check out Simon F. Mitchell's Geology Website as well as the links in the discussion above.

## Resources

### *Agriculture and Food Production*

**Figure 6 – *Cannabis* Farm, Westmoreland, Jamaica**
**Credit: Cannabis Pictures, Creative Commons Attribution 2.0 Generic license**

According to the World Factbook, 38.5% of Jamaica is agricultural land (11.1% arable land, 6.3% permanent crops, 21.1% permanent pasture). Of the remainder, 55.8% is forest and 5.7% is other. There are 250 $km^2$ of irrigated land in Jamaica. Agriculture accounts for 9% of the nations GDP. The top ten agricultural products, based on tonnage produced, are sugarcane, goat milk, yams, chicken, oranges, coconuts, bananas, plantains, pumpkins/squash, pineapples. Production statistics from the United Nations Food and Agriculture Organization (FAO) can be found here. The FAO also estimates that 55.1% of Jamaicans suffered moderate to severe food insecurity in 2021-23.

One commodity not found in the FAO list is _____ Decriminalized in 2015, , locally called ganja, has a long history of use in Jamaica, often associated with the Rastafarian culture. Production quantity estimates are hard to come by, however the Government of Jamaica expects to see its revenue in the market reach US$44.38m by 2025. We will see how the experiment with legalizing works out for Jamaica. Certainly, the government will welcome the revenues. However, the use of is not without its deleterious effects on health and it is a subtle shift from tolerating a practice that cannot really be stopped to encouraging it in order to increase government revenue in what is essentially a cynical exploitation of stoners. I will leave it up to you, dear reader, to decide on the moral implications of the legalization of both in Jamaica and in your own country.


**Figure 7 – Blue Mountain Coffee Bags**
**Credit: Mariordo, Creative Commons Attribution-Share Alike 3.0 Unported license**

Another famous, and less deleterious, agricultural product of Jamaica is Blue Mountain Coffee. Some coffee connoisseurs (a.k.a coffee snobs) claim that it is the best in the world, certainly there is plenty of counterfeit coffee marketed as "Blue Mountain" that isn't. Again, I leave it up to you to decide on the merits of this product. In 2023 Jamaica produced 8,152 tonnes of coffee, according to the FAO.


**Figure 8 – Sugar Cane Field, Jamaica, ca.1875-ca.1940**
**Credit: Unknown author, public domain**

Finally, since we're talking about indulgences, we should talk about the most historically significant crop in Jamaica – sugarcane. Sugarcane has been cultivated for more than 500 years in Jamaica, first by the Spanish and later by British planter. Prior to 1833, the work was done by slaves; thereafter by (barely) paid workers

According to the FAO, 414,769 tonnes of sugarcane were produced in Jamaica in 2023.

### *Fisheries*

**Figure 9 - Fishing Boat, Pagee Beach near Main St., Port Maria**
**Credit: CaptJayRuffins, Creative Commons Attribution-Share Alike 4.0 International license**

The Jamaican fishing industry includes a wild caught fishery, aquaculture, and a sports fishery. Production statistics from the FAO can be found here. In the wild caught fishery, over 325 species are harvested. The most common types of fish caught are sardines, black jacks, and herring. Other finfish caught include 11 species of snapper, as well as dogfish, glasseye, grey, lane, mutton, red, silk, vermillion and yellowtail. Invertebrates harvested include lobster and conch. Overfishing has become a serious problem. The aquaculture business is growing in Jamaica, one estimate is, that by 2027, Jamaican fish farmers will be producing 3,500 tonnes of fish per year from aquaculture. If the sports fishery interests you, check out this site.

### *Forestry*

**Figure 10 – Forest at Newmarket, Jamaica**
**Credit: pismay, Creative Commons Attribution-Share Alike 3.0 Unported license**

Forests cover 55.8% of the land in Jamaica. The forests in Jamaica include both natural forest and plantations. Natural forest biomes include Jamaican moist forests, Jamaican dry forests, and mangrove forest. Plantations include hardwood, such as teak, and conifers such as pine and cedar. Production statistics from the FAO can be found here.

For more information, check out the report: State of Jamaica's Forests 2024 from the Jamaican Forestry Department. You might also want to check out this report on deforestation in Jamaica, here. The World Rainforest Movement blames the deforestation on mining and tourism.

***Mineral Resources***

**Figure 11 – Bauxite Mine, 1984, South of Discovery Bay in Cockpit Country**
**Credit: Paul Morris, Creative Commons Attribution-Share Alike 2.0 Generic license**

According to the USGS report on the Islands of the Caribbean, the major mineral commodity mined in Jamaica is bauxite and alumina. Jamaica was ranked sixth among the world's leading producers of alumina and exports account for 50% of the country's total export revenue. Other minerals produced in Jamaica are industrial minerals for the building trade such as cement, clay, gypsum, lime, limestone, pozzolan, sand and gravel, and silica. There is no current current petroleum production, although there have been attempts at finding oil and some assessments (here, here, and here) of the potential for petroleum production.

Here is a good place to quickly discuss the formation of bauxite. Bauxite is a subset of a larger group of geological materials called laterites. Laterites are formed in tropical environments, like Jamaica, when heavy rainfall causes intense weathering of bedrock. The weathering silica-rich rocks in tropical conditions results in the removal of relatively mobile elements such as calcium, sodium, potassium and magnesium leaving behind relatively immobile metals such as aluminium, iron, titanium, and zirconium

remain. Aluminum rich laterites are called bauxite. The principal minerals in bauxite are gibbsite, boehmite, and diaspore.

Figure 12 links to an interactive mineral occurrence map of Jamaica.

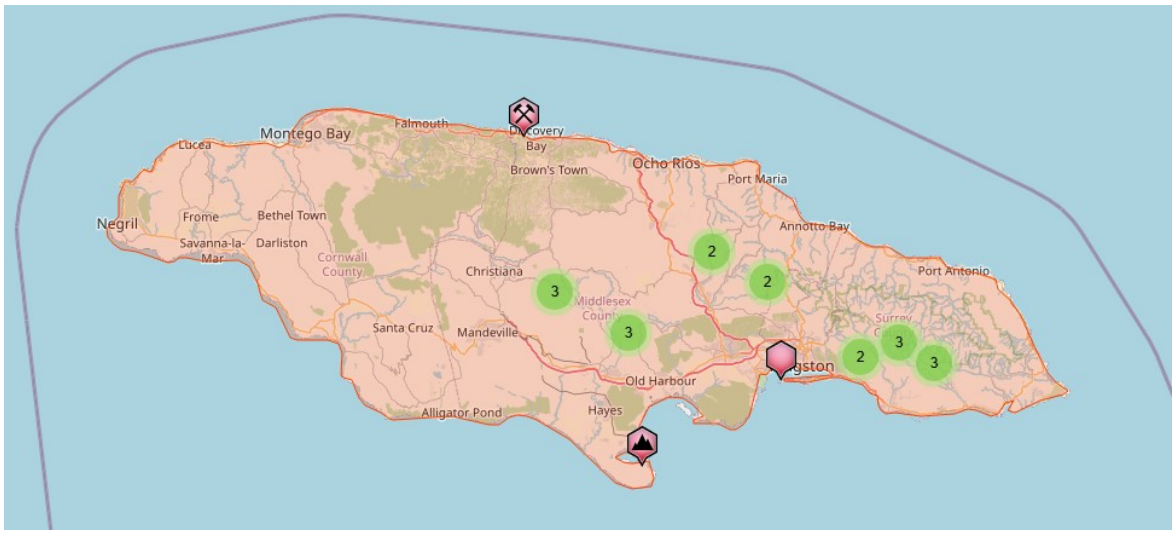



**Figure 12 – Interactive Mineral Occurrence Map of Jamaica**
**Credit: ©Mindat.org**

## Climate

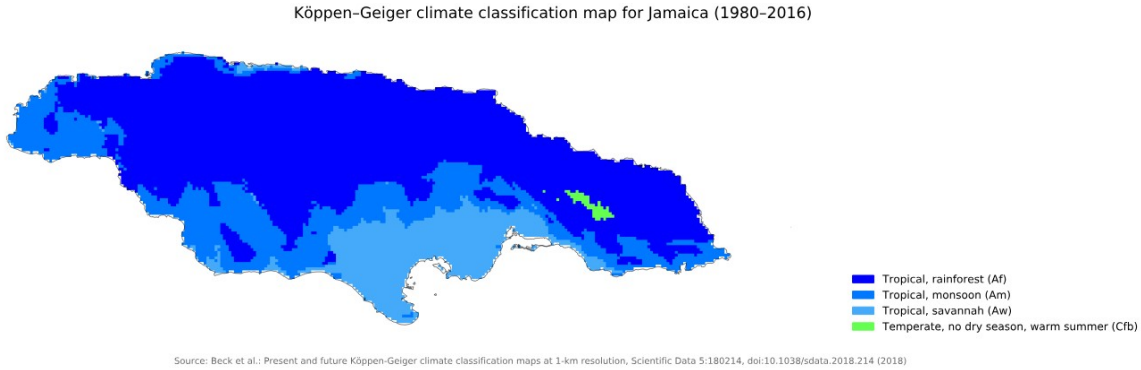



**Figure 13 – Köppen-Geiger Classification Map for Jamaica**
**Credit: Beck *et al*, 2018, Creative Commons Attribution-Share Alike 4.0 International license**

The CIA World Factbook describes the climate of Jamaica as tropical, i.e. hot and humid with more temperate climates in the interior of the country. Climate types include tropical rainforest (Af), tropical monsoon (Am), tropical savannah (Aw), and temperate (Cfb).

As noted above, tourism is big business in Jamaica. Before you go, check out the travel advisories here and here. It looks like crime is a big problem. If you still want to go, check out Climates to Travel and Lonely Planet.

## History and Geopolitics

### *History*


**Figure 14 – A Picturesque Tour of the Island of Jamaica**
**Credit: James Hakewill (1778–1843), public domain**

The history of Jamaica begins with the settlement of the islands sometimes around 600-650 AD by a group people that archaeologists call the Redware People. By around 800 AD, Arawak speaking people, including the Taino, moved onto the island.

In 1494, Christopher Columbus discovered Jamaica and claimed it for the Spanish Empire. Later, the Spaniards conquered the island and established a colony. The Spaniards enslaved the native inhabitants and worked them to death in the sugarcane fields or in the search for gold. This left the Spaniards with a labour shortage problem. They weren't going to do the work themselves, you didn't think that proud Spanish hidalgos would do manual labour, do you? To solve the labour problem, the Spaniards imported slaves from Africa beginning in 1517. Spanish treatment of their black slaves was little better than their treatment of the Taino, except that the Africans had a slightly better resistance to the tropical diseases introduced by the Spaniards to the island. Also, not all the African slaves were resigned to their situation, many escaped to the mountains and formed new communities of people called Maroons.

In 1655, as part of the wider Anglo-Spanish War, a British fleet arrived in Jamaica and conquered the islands for what was then the English Commonwealth. British rule of Jamaica was formalized under the Treaty of Madrid in 1670. The British ruled Jamaica until the island was granted self-rule in 1962.

British rule of Jamaica was little better than that of the Spaniards. The British continued to employ slaves to produce sugar, mostly Africans. The British sent some Irish prisoners and indentured servants (not quite slaves, but not much better) to Jamaica, but few survived the tropical diseases.

In addition to the sugar economy, the British based pirates and privateers on the island. One notorious pirate town, Port Royal, called the "wickedest city on earth" flourished for a while. Compared to ancient Sodom in its iniquity, the destruction of Port Royal by an earthquake in 1692 was seen by many as divine retribution. One of Port Royal's most famous citizens was Captain Henry Morgan, privateer, pirate and inspiration for a brand of rum.

Natural disasters weren't the only problem for the British rule in Jamaica. The Maroons rebelled in 1728–1739 and again in 1795–1796. A major slave revolt, called Tacky's War, broke out in 1760 and lasted till the next year, 1761. Another slave revolt, called the Baptist War, lasted for 11 days from December 25, 1831 until January 5, 1832. The Slavery Abolition Act of 1833 couldn't come soon enough.

Although slavery was abolished, living conditions for poor Blacks were abysmal and a rebellion, called The Morant Bay Rebellion occurred October 11, 1865. After the Morant Bay rebellion, Jamaica was ruled directly from London as a Crown Colony since the English couldn't trust the free Blacks to vote for a local assembly in a way that favoured the British landowners.

In the 20th Century, the Rastafarian religious movement began in the 1930's. As well, increasing agitation for independence began after 1945. By 1962, the Jamaicans were granted self-rule under the British Crown. As noted at the beginning of this post, the Jamaican Parliament is now considering a bill to cut off their ties to the British monarchy.

Since independence, Jamaica has ruled itself as a representative democracy. It has not been entirely without conflict. There is an ongoing dispute between the left and right in their politics. However, the violence has mostly been low level involving riots and violent demonstrations. Adding to the dispute has been the pernicious influence of narcotics dealers and interference by foreign agencies like the CIA.

***Geopolitics of Contraband***

**Figure 15 – Kingston Jamaica**
**Credit: Blofeld of SPECTRE, Creative Commons Attribution-Share Alike 3.0 Unported license**

The major internal problem for Jamaica is crime. From the petty crime of small time thieves to organized criminal syndicates, the disorder caused by crime affects all of Jamaican society. It limits opportunities for legitimate economic activity, deters foreign investors, scares off tourists, and increases the misery of ordinary, law-abiding, Jamaicans. The despair of living in a society with limited opportunity and rampant crime leads some people to turn to drugs and alcohol, a situation that the drug gangs are happy to profit from.

The ghost of Captain Henry Morgan and other pirates still haunts Jamaica through the activities of Jamaican crime syndicates. These activities affect Jamaica's foreign affairs. American agencies, such as the Drug Enforcement Administration, have a strong interest in suppressing the flow of drugs from Jamaica to the USA. Many of these drugs originate in South and Central America and the Jamaican gangs are making a killing off of the transshipment of drugs such as cocaine to the North American market. The drug trade is the major problem for Jamaica's foreign relations and geopolitics, especially in its relationship with the United States, the regional hegemon.

Another geopolitical aspect of Jamaica has been the large numbers of people who have left Jamaica for other countries such as the United States, the United Kingdom, and Canada. One consequence of this migration is that the Jamaican Diaspora maintains connections between Jamaica and their new adopted homes. Some of these are legitimate family and businesses connections; others are not. It remains to be seen if the not-so-legitimate connections outweigh the positive contributions of ex-pat Jamaicans in their new homes.

That kind of wraps up this quick look at Jamaica. I am optimistic for Jamaica, they are a resilient people. If the Jamaicans can get the drug trade under control, they have a great opportunity to improve their country. Unfortunately, the incentives of the illegal narcotics trade are so compelling that even the most strenuous enforcement activity is unlikely to make all but a minor dent in the trade. The real answer – easy to say but almost impossible to implement – is to reduce or remove the demand for the drugs in the consumer countries. But that is a whole other conversation.

Follow up on the links if any of this interests you.

## 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.