

May 6, 2024

News and notes

Before going on to discuss the geology and geopolitics of the [Czechia](#), a.k.a the Czech Republic, here are some news items I thought were interesting.

Geopolitics

- [Key mining town seized – DR Congo rebels.](#)
- Also on the DR Congo: [Congo's \\$7 billion infrastructure deal with China will depend on copper prices.](#)
- Problems in the European Union: [This is not the EU that Hungary joined – Orban.](#)
- [America's War Machine Runs on Rare-Earth Magnets. China Owns That Market;](#) related: [China's Rare Earth Dominance Faces Challenges As Global Supply Chain Shifts.](#)

Research and News

- [Anthropogenic Geology and the Role of Public Sector Organisations.](#)
- [Can these awesome rocks become central Asia's first UNESCO Geopark?](#)
- Mineralogy: [Nundorite: a geological oddity of critical minerals significance from the Mount Arrowsmith Volcanics, northwestern NSW.](#)
- Geodesy: [Enhancing the Digital Earth via Digital Decimal Geolocation and the FAIR Data Principles.](#)
- Geological history: [A clock in the rocks: what cosmic rays tell us about Earth's changing surface and climate.](#)
- An [earth-shattering](#) kaboom: [A two stage impact melting process in an impact glass strewn field from the Atacama Desert.](#)

Geophysics

- [Local earthquake tomography of the Aegean crust: Implications for active deformation, large earthquakes, and arc volcanism.](#)
- [Continental Residual Topography Extracted From Global Analysis of Crustal Structure;](#) Phys.org summary [here.](#)
- Geophysics and geopolitics: [New Nevada experiments aim to improve monitoring of nuclear explosions.](#)

Plate Tectonics

- [Megathrust locking encoded in subduction landscapes.](#)
- Africa: [The Atlantic Jigsaw Puzzle and the geoheritage of Angola;](#) Phys.org summary [here.](#)

- [Reconstructing the Evolution of Foreland Fold-And-Thrust Belts Using U-Pb Calcite Dating: An Integrated Case-Study From the Easternmost Jura Mountains \(Switzerland\).](#)
- [Variable \$\delta^{11}\text{B}\$ signatures reflect dynamic evolution of the Mariana serpentinite forearc.](#)

Paleontology

- [Engineering is evolution: a perspective on design processes to engineer biology.](#)
- Plant evolution: [Genomes of multicellular algal sisters to land plants illuminate signalling network evolution](#); Phys.org summary [here](#).
- Geophysics and paleontology: [Near-collapse of the geomagnetic field may have contributed to atmospheric oxygenation and animal radiation in the Ediacaran Period](#); Live Science summary [here](#).
- [How La Brea tar pit scientists uncover mammoths and saber-tooth cats.](#)
- [Skull of a new periptychid mammal from the lower Paleocene Denver Formation of Colorado \(Corral Bluffs, El Paso County\)](#); [Denver Museum of Nature and Science](#) press release [here](#).
- Australia: [Cavers and scientists unearth near-complete short-nosed kangaroo fossil from East Gippsland cave.](#)
- [A High-Altitude Sauropod Trackway Site in The Jurassic of Colorado: The Longest Known Consecutive Footprint Sequence Reveals Evidence Of Sharp Turning Behavior](#); Earth Sky summary [here](#).
- [How smart was T. rex? Testing claims of exceptional cognition in dinosaurs and the application of neuron count estimates in palaeontological research](#); Phys.org summary [here](#).
- [Meet Vasuki indicus, among the longest snakes that ever lived](#); Times of India summary [here](#).
- Video: [The Satanic Frog That Ate Dinosaurs.](#)

Mining and Energy

- Ore deposit geology: [Epithermal Gold Discoveries in the Emerging Khundii Metallogenic Province, Southwest Mongolia.](#)
- [Visualizing Global Gold Production in 2023.](#)
- Correcting mistakes or uncovering crooked dealing: [Wawa junior miner's stock plummets as it retracts assay results.](#)
- Probably won't last long: [2 Gold Mining Stocks to Buy While They're Cheap.](#)
- Tailings pond geotechnical research: [Application of Sentinel-1 InSAR to monitor tailings dams and predict geotechnical instability: practical considerations based on case study insights.](#)
- [Barrick's Mali mine feeds Russian war machine, advocacy group says.](#)

- [We are building the Saudi Arabia of Uranium here in Saskatchewan: NexGen Energy CEO.](#)
- [Cameco reports first-quarter loss as uranium miner hit by charges linked to Westinghouse Electric deal.](#)
- Mine closure news: [Province takes control of former Cluff Lake mine site.](#)
- [Lithium Faces Challenge From Sodium Batteries.](#)
- [Canadian Natural Resources considering major expansion of Horizon oil sands mine.](#)
- Petroleum reservoir geology: [Impact of palaeokarsts on the pinnacle reef reservoirs in the Sirt Basin, Libya](#); sorry, behind a paywall, [Researchgate](#) has an option to request a copy of the study.
- More petroleum reservoir geology: [Sedimentary characteristics of turbidite fan and its implication for hydrocarbon exploration in Lower Congo Basin.](#)
- [Unexpected Crude Inventory Build Weighs on Oil.](#)
- [US oil output rose by the most in Feb since Oct 2021, EIA says.](#)
- [Nigeria to divest 26 oil blocks of 8.211m barrels reserves](#); leases going to local companies.
- Normal business or crooked dealings? [American oil tycoon accused of trying to conspire with OPEC to inflate prices](#); related: [OPEC collusion claim sends tremor through US shale oil patch.](#)
- [US stands to lose Canadian natural gas when LNG Canada terminal starts up.](#)
- [A second new nuclear reactor is completed in Georgia. The carbon-free power comes at a high price.](#)
- [Alberta funding study for geothermal test site in the province.](#)
- Geothermal research: [Developing meshing workflows in Gmsh v4.11 for the geologic uncertainty assessment of high-temperature aquifer thermal energy storage.](#)

Environmental Geology and Hydrogeology

- Remediation research: [Near-complete destruction of PFAS in aqueous film-forming foam by integrated photo-electrochemical processes.](#)
- More remediation research: [Adsorption of uranyl ion on hexagonal boron nitride for remediation of real U-contaminated soil and its interpretation using random forest](#); Phys.org summary [here](#).
- [Tetracycline \(TC\) removal from wastewater with activated carbon \(AC\) obtained from waste grape marc: activated carbon characterization and adsorption mechanism.](#)
- Not the recycling we were sold on: [Plastic bags from Walmart US recycling bins tracked to facilities in Southeast Asia.](#)

- [‘Everywhere we looked we found evidence’: the godfather of microplastics on 20 years of pollution research and the fight for global action.](#)
- [‘This is Chernobyl’: Texas ranchers say ‘forever chemicals’ in waste-based fertilizers ruined their land.](#)
- Iowa: [Waterloo idles drinking water well contaminated by ‘forever chemicals’.](#)
- [White House Launches Groundwater Working Group.](#)
- [Seismic waves used to track LA's groundwater recharge after record wet winter.](#)

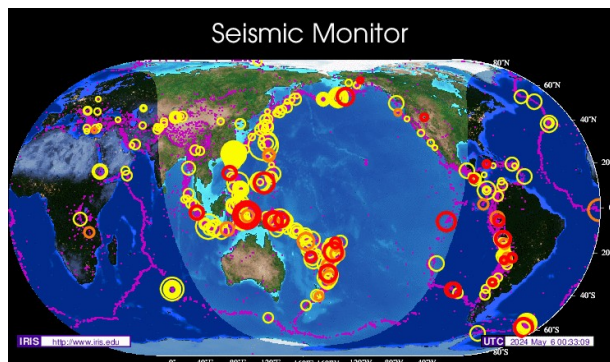
Glaciers and Climate Change

- [Polynyas in Antarctica: Ekman-driven salt transport as a key mechanism for open-ocean polynya formation at Maud Rise](#); Science Alert summary [here](#).
- [Observed meltwater-induced flexure and fracture at a doline on George VI Ice Shelf, Antarctica](#); Phys.org summary [here](#).

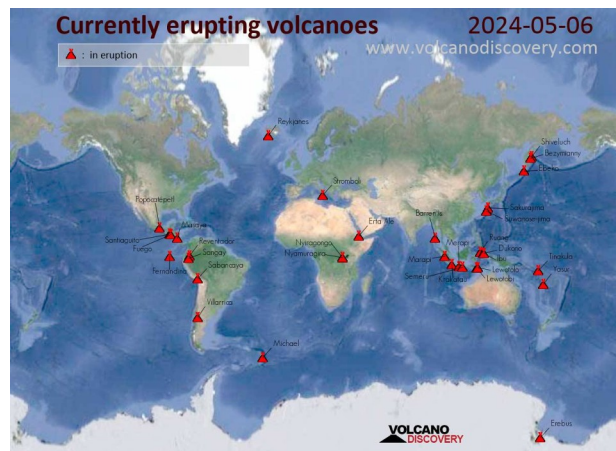
Geologists in the News

- [Podcast interview with Luisa Hendry, FGS.](#)
- [Presentation of the Mineralogical Society of America Award for 2023 to Shaunna M. Morrison](#); response by Ms. Morrison: [Acceptance of the Mineralogical Society of America Award for 2023.](#)
- [Presentation of the 2023 Roebling Medal of the Mineralogical Society of America to Georges Calas.](#)

Volcanoes, Earthquakes and Geohazards



[Seismic Monitor](#)



[Active Volcano Map](#)

- United States Geological Survey (USGS) Volcano Watch: [What’s shaking at the summit of Kīlauea?](#); related, lives stream: [Kīlauea Volcano, Hawaii \(Halema‘uma‘u crater\).](#)

- USGS Yellowstone Volcano Observatory: [Thermal infrared remote sensing at Yellowstone 301: Thermal metrics](#); [Mount St. Helens VS Yellowstone \(Yellowstone Monthly Update – May 2024\)](#).
- [Smithsonian / USGS Weekly Volcanic Activity Report](#).
- Washington State: [May is Volcano Preparedness Month](#); related: [Lahar detection system upgraded for Mount Rainier](#).
- Iceland: [Alert level has been raised in Grindavík](#); [LIVE: Iceland Volcanic Eruption Coverage \(Multi-cam\)](#); research: [Medieval and recent SO2 budgets in the Reykjanes Peninsula: implication for future hazard](#).
- Video: [Apr 29, 2024 Earth Space View: Brown ash plume from Ruang volcano eruption in Indonesia, from ISS](#).
- [How Indonesia's Toba Volcano Changed Human Evolution](#).
- Volcano research: [A numerical model for precursory time sequences of the phreatic eruptions of Mt. Ontake, central Japan](#).
- [Euro-Mediterranean Seismological Centre](#)
- [Earthquakes Monitoring Live Worldwide](#).
- [M5.7 earthquake in the Leyte Gulf, Philippines](#); USGS summary [here](#), Philippine Institute of Volcanology and Seismology summary [here](#).
- [Lake Tsunamis Pose Significant Threat Under Warming Climate](#).

Upcoming Events

- If you are in Calgary, AB for the Stampede: [Bootleggin' Breakfast 2024](#), July 9 & 11, 2024.



[Register Now! Coming up on May 19-22, 2024](#)



[Goldschmidt is the foremost annual, international conference on geochemistry and related subjects](#), organized by the Geochemical Society and the European Association of Geochemistry

May 6, 2024

Geology and the Fate of Societies – Czechia, The Czech Republic



Figure 1a – The Czech Republic

**Credit: [CIA World Factbook – Czechia](#),
public domain**



Figure 1b – Location Map

**Credit: [CIA World Factbook – Czechia](#),
public domain**

The [Czech Republic](#), or Czechia, is a land locked country in [Central Europe](#) made up of the ancient principalities of [Bohemia](#) and [Moravia](#). The Czech Republic is bordered by [Austria](#) to the south, [Germany](#) to the west, [Poland](#) to the northeast, and [Slovakia](#) to the southeast. Czechia is a [unitary parliamentary republic](#). The President is [Petr Pavel](#) and the Prime Minister is [Petr Fiala](#). The [Czech Parliament](#) consists of a [Senate](#) and a [Chamber of Deputies](#). The Capital and largest city is [Prague](#) (pop. 2,267,817 in the metropolitan area).

According to the American [Central Intelligence Agency](#) (CIA) [World Factbook on Czechia](#), the total area of the country is 78,867 square kilometres (km²), of which 77,247 km² is land and 1,620 km² is water. Also according to the CIA, 10,837,890 people live in the Czech Republic. Of that approximately 10.8 million people, [the official 2022 census of Czechia](#) lists 89% of the population as ethnic [Czechs](#), 3.3% are [Moravians](#), 0.9% are [Slovaks](#), 0.7% are [Ukrainians](#), 2.1% are listed as [other](#), and 4.0% describe themselves as having two nationalities. The official language of the country is [Czech](#), spoken by 88.4% of the population; 1.5% of the people speak [Slovak](#), and 9.8% speak other languages or did not specify their main language.

Most of the population have either no religion (47.8%) or did not specify their religion in the census (30.1%). Of the remaining, 9.1% are Christian believers unaffiliated with a religious society, 7% are [Roman Catholic](#) and 6% are other believers belonging to a church or religious society such as the [Evangelical United Brethren Church](#) and [Czechoslovak Hussite Church](#).

The demographic profile of the Czech Republic (Figure 2) shows a middle aged society, [typical of a modern industrial society](#), with a median age of 44.2 years. Life Expectancy at birth, for both sexes is 78.3 years, the total fertility rate is 1.74 births per woman and the annual growth rate is 0.1%.

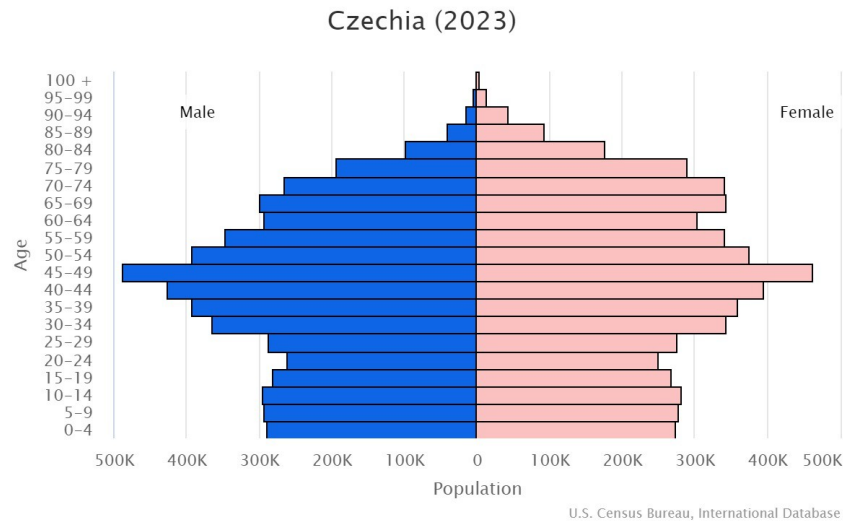


Figure 2 – Demographic Profile – Czech Republic
Credit: U.S. Census Bureau, International Database – Czechia, public domain

Geology

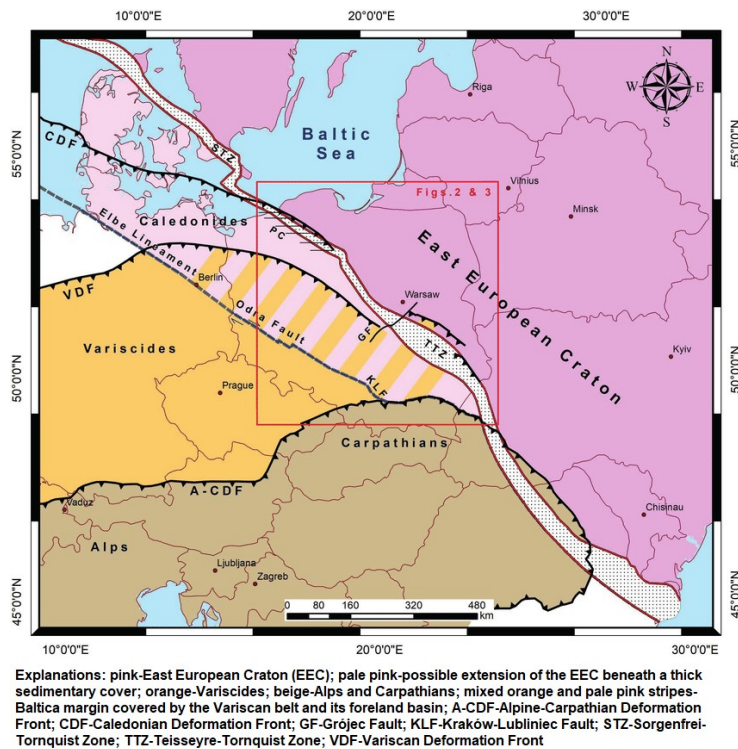


Figure 3 – Tectonic Map of Central Europe
Credit: Figure 1 in Mazur et al, 2018

The tectonic framework of Czechia consists of two main tectonic blocks:

- The [Bohemian Massif](#), and
- The [Western Carpathian Mountains](#).

The Bohemian Massif was [assembled](#) during the [Variscan Orogeny](#). The Variscan Orogeny was a tectonic event during the [Paleozoic](#) where the [Rheic Ocean](#) separating the two supercontinents [Gondwana](#) and [Laurussia](#) progressively [closed](#) until the two supercontinents joined to form the even larger supercontinent, [Pangea](#). This process began during the [Cambrian](#) and was complete by the [Late Carboniferous](#) ([Mississippian](#)). The Variscan Orogeny occurred concurrent with the [Appalachian](#), [Alleghanian](#), and [Ouachita](#) orogenies now found in [North America](#). Tectonic [sutures](#) of the Variscan – Alleghanian – Ouachita orogenies today stretch 10,000 km (6,200 mi) from [Mexico](#) to [Turkey](#). Among the many geological features of the Bohemian Massif is the [Prague Basin](#), which was originally an archipelago of humid volcanic islands in the Rheic Ocean lasting from the [Ordovician](#) to the [Devonian](#) periods. Figure 4 shows the geology of the Bohemian Massif.

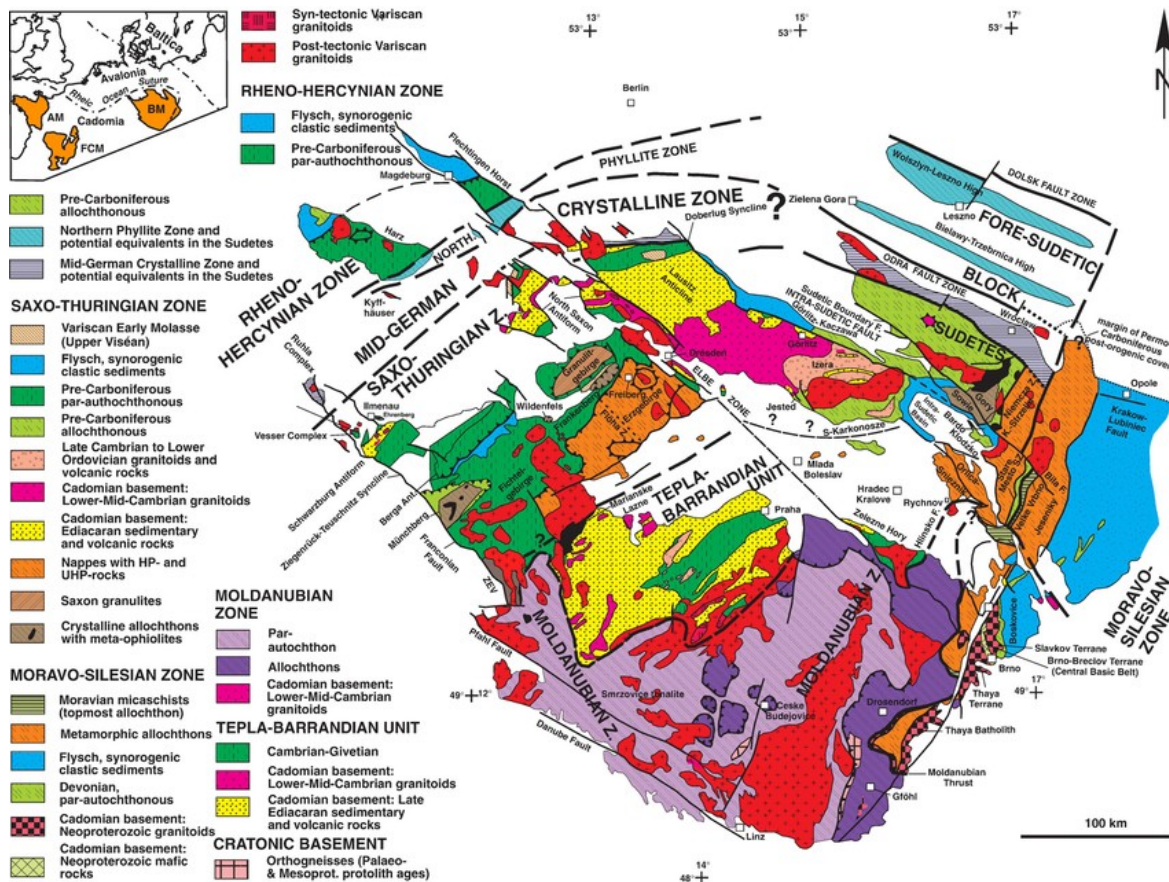


Figure 4 – Geology of the Bohemian Massif
 Credit: Figure 6 in [Nance et al., 2010](#)

The [Carpathian Mountains](#) were formed during the [Alpine orogeny](#) that began during the Late [Mesozoic](#) when the continents of [Africa](#), [Arabia](#), [India](#), and the small [Cimmerian Plate](#) collided, from the south,

with [Eurasia](#) in the north, closing the [Tethys Ocean](#). Figure 5 shows the geology of the Western Carpathian Mountains.

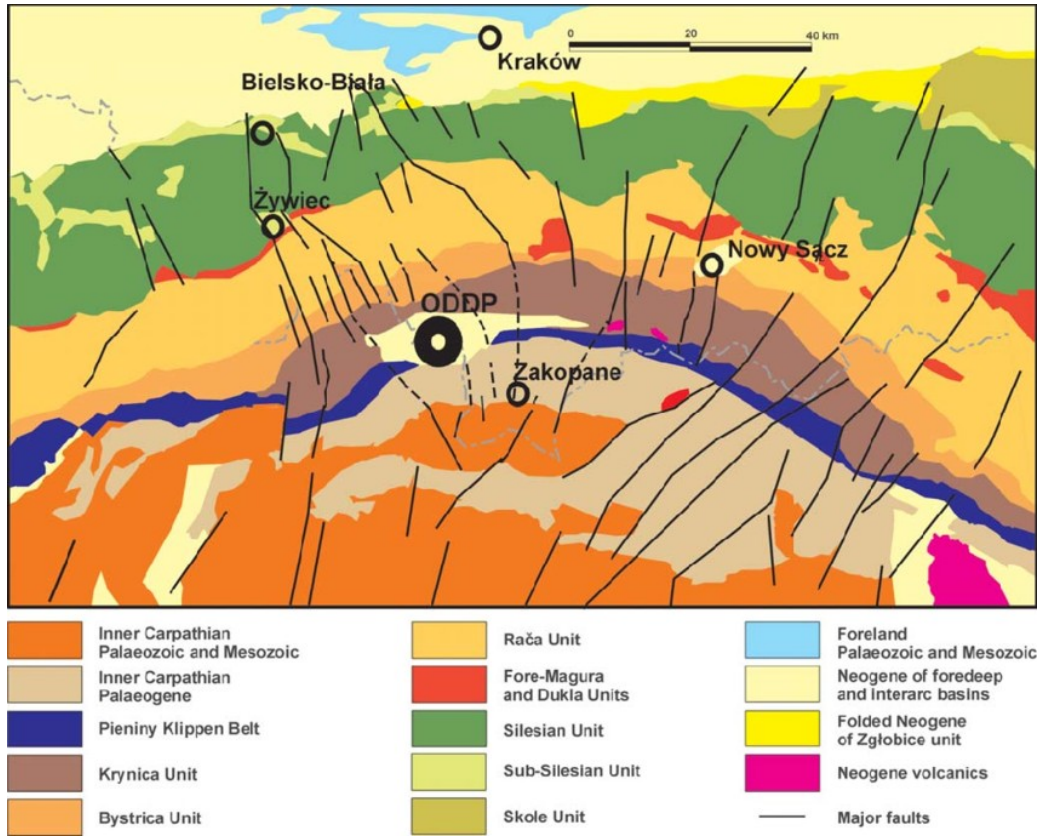


Figure 5 – Geology of the Western Carpathian Mountains
 Credit: Figure 2 in [Golonka et al 2005](#)

Figure 6 shows an overall look at the Geology of Czechia.

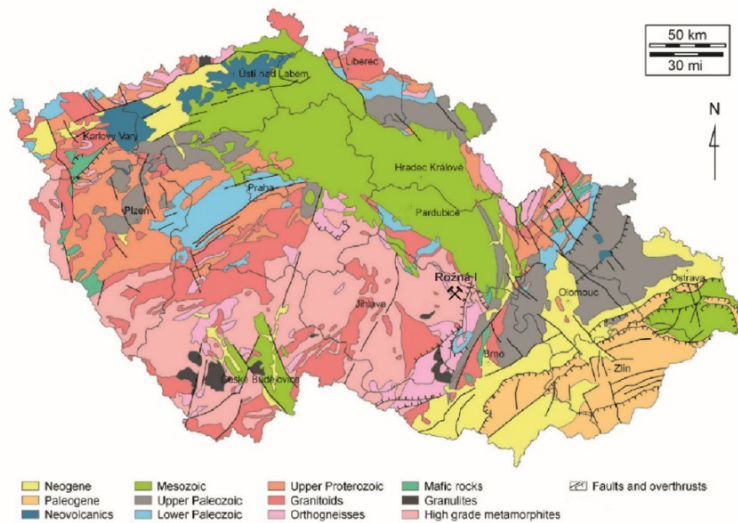


Figure 6 – Simplified Geology of Czechia
 Credit: Figure 1 in [Vokurka et al, 2022](#)

For more information of the [geology of the Czech Republic](#), look up the information available in the links and from the [Czech Geological Survey](#).

Resources

Agriculture



Figure 7 – Harvesting on a Farm Near [Hoslovice, Czechia](#)

Credit: [Michal Klajban, Creative Commons Attribution-Share Alike 3.0 Unported](#) license

According to the CIA World Factbook on Czechia, 54.8% of the country is agricultural land (41% [arable land](#), 1% [permanent crops](#), 12.8% [permanent pasture](#)). Of the remaining, forest covers 34.4% of the land and the final 10.8% has other, or no use.

Crop [production](#) in the Czech Republic includes [grains](#) (wheat, rye, barley, maize, oats), [pulses](#) (peas, beans, lentils), [potatoes](#), [carrots](#), and fodder plants ([alfalfa](#) and [hay](#)). Technical and special crops include vines ([grapes](#) and [currants](#)), [sugar beet](#), [oil crops](#), fruit, vegetables, and [hops](#) (for their famous [beer](#)).



Figure 8 – Czech Beer

Credit: [Øyvind Holmstad, Creative Commons Attribution-Share Alike 3.0 Unported](#) license

[Livestock production](#) is largely focused on [bovine animals](#), [pigs](#), [poultry](#), [sheep](#) and [goats](#). Other livestock operations include [stud farms](#) and [fish farms](#).

Production figures for crops and livestock from the [United Nations Food and Agriculture Organization](#) (FAO) can be found [here](#). The FAO also notes that [food insecurity in the Czech Republic](#) is fairly low, at about 8.5%, as you would expect for an advanced industrial country.

Forestry



As noted above, forests cover 34.4% of the land in the Czech Republic. Two areas known for their forest cover are the in the Bohemian Massif: the [Bohemian Forest](#) and the [Český les or Upper Palatine Forest](#). The [Western Carpathian Mountains](#) in Czechia are also partly forested (not to be confused with the Norwegian [black metal](#) band [Carpathian Forest](#)). Forests in Czechia are predominately [conifers](#) in the higher elevations and [beech](#) in the lower ones.

In 2010, the [Czech Republic had 1.68 Mha of natural forest](#), extending over 41% of its land area. During 2023, it lost 5.77 kha of natural forest to various land clearing operations but mostly to make farmland.

Forestry production statistics, from the FAO, can be found [here](#).

Figure 9 – Forest in Czechia

Credit: Trachemys, [public domain](#)

Mineral Resources

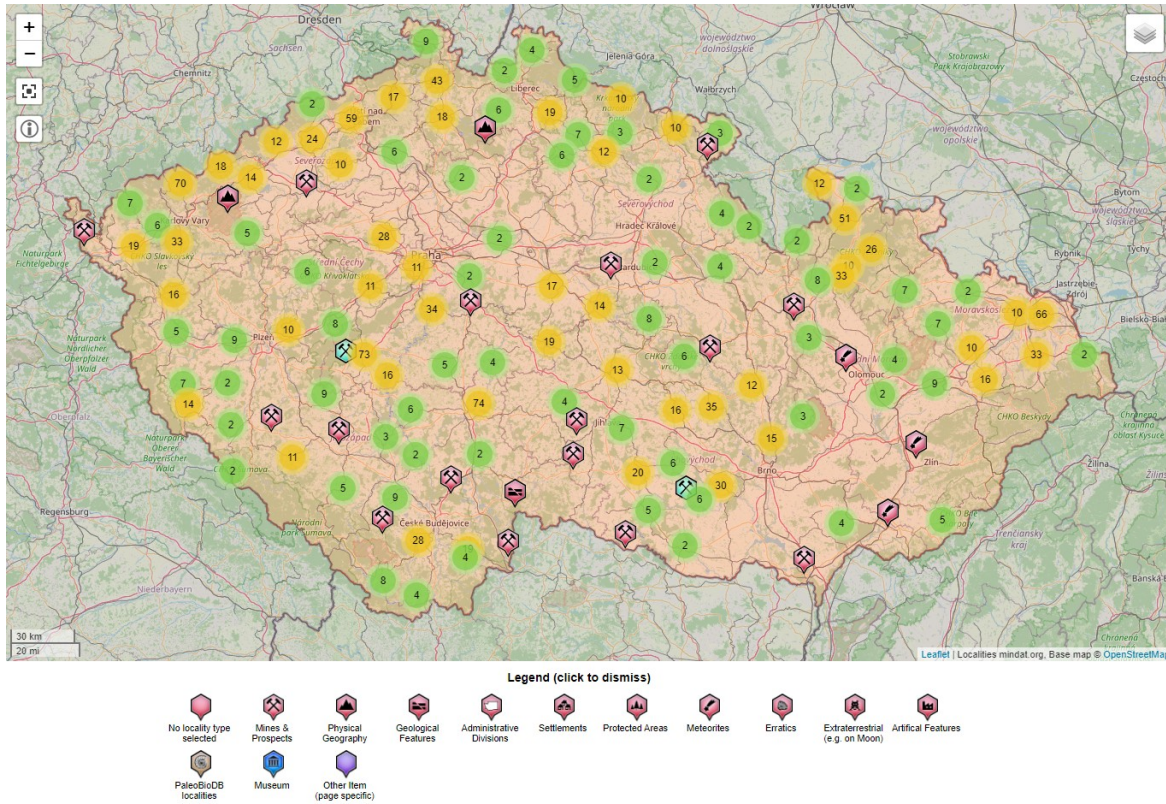


Figure 10 – Alexander Coal Mine, ca. 2005

Credit: Petr Štefek, [Creative Commons Attribution-Share Alike 3.0 Unported](#) license

The [mineral industry in Czechia](#) includes the mining of [aggregates](#), [antimony](#), [arsenic](#), [barite](#), [bismuth](#), [coal](#), [cobalt](#), [copper](#), [dimension stone](#), [feldspar](#), [fluorite \(fluorspar\)](#), [gold](#), [granite](#), [graphite](#), [iron](#), [magnetite](#), [iron pyrite](#), [kaolin](#), [lead](#), [limestone](#), [manganese](#), [marble](#), [molybdenum](#), [peat](#), [silver](#), [slate](#), [tin](#), [tungsten](#), [uranium](#), [zeolites](#) and [zinc](#).

Figure 11 links to an interactive map of mines and mineral occurrences in the Czech Republic



Legend (click to dismiss)

- No locality type selected
- Mines & Prospects
- Physical Geography
- Geological Features
- Administrative Divisions
- Settlements
- Protected Areas
- Meteorites
- Erratics
- Extraterrestrial (e.g. on Moon)
- PaleoBioDB localities
- Museum
- Other Item (page specific)

The small symbol inside an icon describes the class of locality listed. This can be combined with the three base icon colours (red, green, white) in any combination.

- Red icons have coordinates entered into the system directly.
- Green icons have coordinates estimated by the system and may also display a blue margin of error circle around them.
- White icons are shown in certain pages to distinguish the locality in question from nearby localities.
- When multiple icons are close together they may be clustered into a group represented by a green circle, click to reveal the contents.

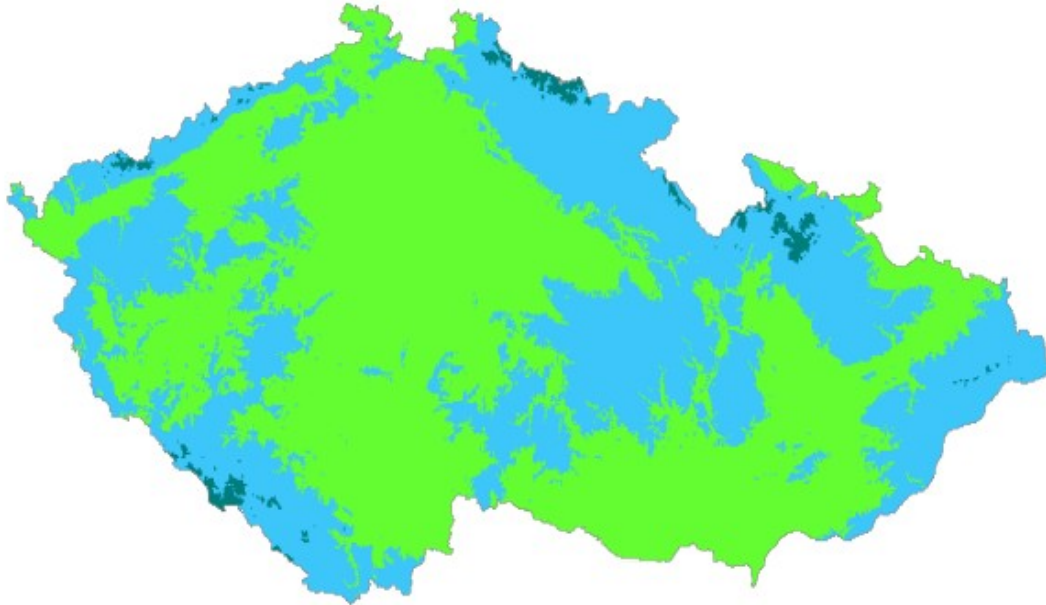
Figure 11 – Link to Interactive Map, Mines & Mineral Occurrences, Czechia
Credit: mindat.com, Czech Republic

[Mineral fuel extraction](#) also includes [petroleum](#), and [natural gas](#) deposits in the [Vienna Basin](#) near the municipalities of [Paskov](#), [Hodonin](#), [Ostrava](#), and [Hrabova](#). Some natural gas is also produced by [coal bed gas extraction](#) in the Czech part of the [Upper Silesian Coal Basin](#)





Statistics on mineral production can be found on the [USGS Minerals Yearbook](#) [here](#).

Climate

Köppen climate types of the Czech Republic



Köppen climate type

 ET (Tundra)	 Dfb (Warm-summer humid continental)
 Dfc (Subarctic)	 Cfb (Oceanic)

**Isotherm used to separate temperate (C) and continental (D) climates is -3 °C
Data source: Climate types calculated from data from WorldClim.org*

Figure 12 – Köppen Climate Types of the Czech Republic

Credit: Adam Peterson, Creative Commons Attribution-Share Alike 4.0 International license

The CIA World Factbook on Czechia describes its climate as temperate with cool summers and cold, cloudy, humid winters. The climate in the Czech Republic varies with altitude. The highest elevations in the Bohemian Massif and the Carpathian Mountains have Tundra (ET) and Subarctic (Dfc) climates. The lower elevations have Warm-summer humid continental climate (Dfb) and the lowest elevations have a Temperate Oceanic climate (Cfb).

Czechia is reputed to be one of the most [beautiful countries in Europe](#). It has all the amenities of a modern country. Travel advisories ([here](#) and [here](#)) recommend normal precautions. If you plan to visit, as I hope to some day, you might want to consult these websites: [Climate to Travel](#) and [Lonely Planet](#).

History and Geopolitics

History

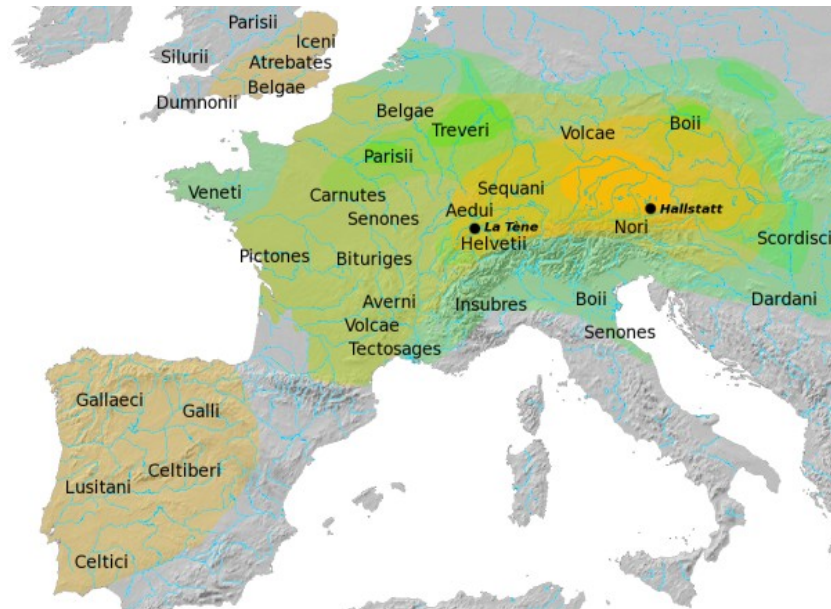


Figure 13 – Areas of the Hallstatt (yellow) and La Tène (green) Cultures
Credit: [Dbachmann](#), [Creative Commons Attribution-Share Alike 3.0 Unported](#) license

The land that is now the Czech Republic was occupied during the [Middle](#) and [Late Pleistocene](#) by various prehuman hunters/gathers such as [Homo neanderthalensis](#). Near the end of the [Pleistocene](#) and into the [Holocene](#) modern [Homo sapiens](#) occupied the modern Czech lands. Examples of archaeological sites in Czechia include:

- [Přezletice](#) near Prague
- [Stránská skála](#) near Brno
- [Kůlna Cave](#) in central Moravia
- [Koněprusy Caves](#) in [Zlatý kůň](#) at [Beroun District](#)
- [Mladeč caves](#)
- [Pavlov](#) and [Předmostí at Přerov](#); and
- [Dolní Věstonice](#) in south Moravia.

Between 5500 and 4500 BC, [Neolithic cultures](#) such as the [Linear Pottery culture](#), the [Lengyel culture](#), the [Funnelbeaker culture](#) and the [Stroke-ornamented ware culture](#) were found in the area of modern Czechia.

During the [Copper Age](#) and the [Bronze Age](#) various cultures came and went in Central Europe such as the [Corded Ware culture](#), the [Baden culture](#), the [Bell Beaker culture](#), the [Únětice culture](#), the [Urnfield culture](#) and the [Hallstatt culture](#).

The rise of the [La Tène culture](#) around 450 BC marks the beginning of the Iron Age in Central Europe. It is also around this time that we get names of these tribes from [Greek](#) and [Roman](#) sources. The Halstatt and La Tène cultures appear to be associated with [Celtic](#) tribes such as the [Boii](#). Later, the Celtic tribes were displaced (conquered and/or assimilated) by [Germanic](#) tribes such as the [Marcomanni](#), [Quadi](#), and [Lombards](#). The [Dacians](#) under King [Burebista](#) also established a loose rule over the area.

With the [fall of the Roman Empire](#) most of the Germanic tribes left to join in the fun of looting, pillaging, and otherwise causing mischief in the now lawless lands of the former [Western Roman Empire](#). The Lombards, for instance, ended up in [Northern Italy](#). During the [Migration Period](#), [West Slavic tribes](#) such as the [Czechs](#), [Moravians](#) and [Slovaks](#) moved into the region. A [Central Asian](#) tribe, the [Avars](#) also moved into the modern Czech lands and established the Avar Khaganate in and around the [Pannonian Basin](#). In 623 AD, according to the [Chronicle of Fredegar](#), the Slavic tribes revolted against the Avars and established their own polities.

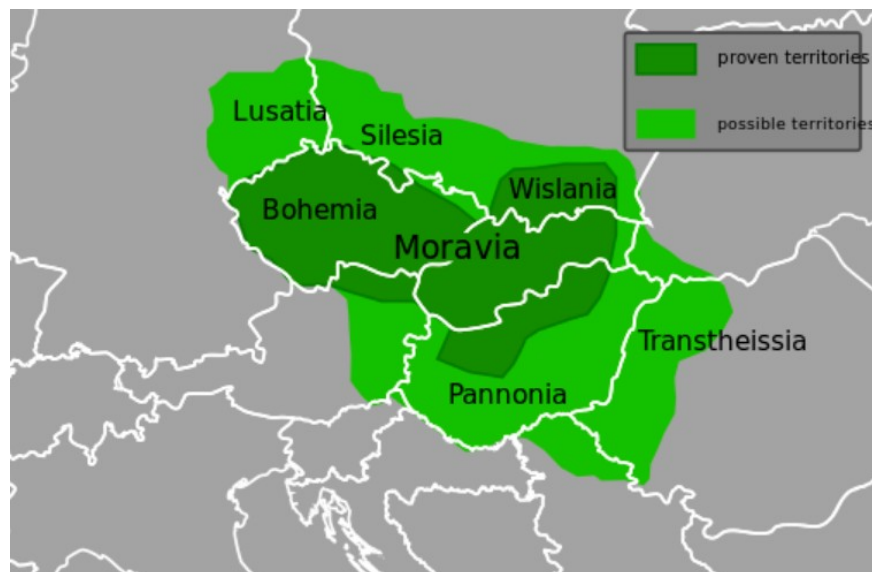


Figure 14 – Map of Great Moravia under [Svatopluk](#)
Credit: Daniel Perout, [Creative Commons Attribution-Share Alike 4.0 International](#) license

Among the polities created in Central Europe during the [Middle Ages](#) were [Great Moravia](#), the [Duchy of Bohemia](#) and later the [Kingdom of Bohemia](#). One of the main accomplishments of Great Moravia was the [conversion of the Slavs to Christianity](#) and the [translation of the Bible](#) into [Old Church Slavonic](#) by [St. Cyril and St. Methodius](#) in 863 AD. Bohemia is known in the English-speaking world by saintly life of [Wenceslaus I, Duke of Bohemia](#) (907–935) in the song [Good King Wenceslas](#).

In 1346, with the [election](#) of [Charles IV](#) of Bohemian as first [King of the Romans](#), and later, in 1355, as [Holy Roman Emperor](#); the Bohemian lands became part of the [Holy Roman Empire](#). One major event during the rule of the Holy Roman Empire were the [Hussite Wars](#) (1419 to 1434) which were a revolt against both the Church and the Empire by the predominately Czech followers of [Jan Hus](#).

After the dissolution of the Holy Roman Empire in 1806, the Bohemian and Moravian realms became part of the [Austrian Empire](#) and then, after 1867, the [Austro-Hungarian Empire](#). The Czech lands remained part of the Austro-Hungarian Empire until 1918.

With their loss in the cataclysm of the [First World War](#), the Austro-Hungarian Empire [fell apart](#) in 1918 and the Czech, Moravian, and Slovak lands were formed into a new polity: [Czechoslovakia](#). The new state inherited much of the heavy industry of the former Austro-Hungarian Empire. They also acquired a large number of German-speaking citizens, the [Sudeten Germans](#). The rise of [National Socialist](#) dictator, [Adolf Hitler](#), in Germany was accompanied by demands for re-unification of all German-speaking peoples. The cause of the Sudeten Germans was used by Hitler to threaten war if he did not get his way. Shamefully, the Czechoslovak Republic was betrayed by the Western Powers ([France](#) and the [United Kingdom](#)). In the [1938 Munich Agreement](#) Czechoslovakia was essentially carved up to “preserve the peace”. It didn’t work – by 1939 Europe was [at war again](#).

Life under [German occupation](#) (1938 to 1945) was anything but gentle. The Czechs and the Slovaks revolted against their German rulers frequently. The [Czech Resistance](#) [assassinated](#) the German governor [Reinhard Heydrich](#) in 1942 and the [Slovak Resistance](#) [rose in revolt in 1944](#). In 1945, with arrival of the [Red Army](#) (which included recently raised [Czech and Slovak units](#)) Czechoslovakia was “liberated”, if you can call replacing National Socialism with [International Socialism](#) “liberation”. To be fair, many Communists and other socialists honestly believed that [International Socialism](#) was more humane than either [Fascism](#) (of which German National Socialism was considered a part) or the [Capitalism](#) of [Liberal Democracies](#). Also, it was the Western liberal democracies that betrayed the Czechoslovak Republic in 1938, so a turn to the Communist east was not entirely illogical.

In the immediate aftermath of World War 2, from [1945 till 1948](#) Czechoslovakia had a somewhat democratic system, although the [Communists](#) were a major part of the government. Among the first action of the Czechoslovak government after WW2 was the [expulsion of the Sudeten Germans](#) – can you blame them? In 1948, the Communists seized power in a [coup d’etat](#) and the country was ruled by a [communist government](#) until 1989.



Figure 15 – Soviet Invasion of Czechoslovakia, 1968
Credit: [Central Intelligence Agency, public domain](#)

As a major industrial state, Czechoslovakia was a valuable part of the [Warsaw Pact](#) and its ruler, the [Soviet Union](#). When the government of [Alexander Dubček](#) attempted reforms in the so-called [Prague Spring](#), the Soviet Union [sent in the troops](#) out of [fear](#) that the Communists would lose control if any reforms were allowed. Given the events leading up to the [fall of the Soviet Union](#), perhaps they weren't entirely wrong. Either way, Soviet and other Warsaw Pact soldiers [ruthlessly crushed](#) the Prague Spring.

Interestingly enough, Alexander Dubček wasn't killed but rather removed from power and expelled from the Communist Party, dying peacefully in November 1992. He was always [a loyal Communist](#) and that is what probably saved him. The 82 other people who [died during the Prague Spring](#) weren't so lucky.

With the [Velvet Revolution of 1989](#), Czechoslovakia threw out its Communist rulers, as did all the other members of Warsaw Pact (except for the Soviet Union which had to wait till 1991). In 1992, the Czechs and the Slovaks came to the conclusion that whatever their shared past, [the two peoples were better off as separate nations](#) and the Czech Republic, Czechia, and the Slovak Republic, Slovakia, were born.

Since 1992, Czechia has had the normal political churn of a democratic country. It gained entry to the [North Atlantic Treaty Organization](#) (NATO) in 1999 and the [European Union](#) in 2004.

Geopolitics of a Small Industrial Country



Figure 16 – A Škoda 15T Tram in Prague

Credit: [Paul Korecky, Creative Commons Attribution-Share Alike 2.0 Generic license](#)

The internal politics of Czechia are fairly simple, it is a modern democracy generally at peace with itself and with the usual democratic disputes revolving around who gets into power. However, the Czech Republic is in a dangerous part of the world.

The most important external relation of Czechia is with the EU. Not all [Czech's are happy](#) with the influence of the EU in their affairs. One of the big issues is the issue of [how to deal with migrants](#), the EU passed a new policy on [migrants and asylum seekers](#) in April 2024. While the Czech government supports the policy, the opposition is, of course, opposing it. The policy does not come into effect until all the EU members ratify it.

Speaking of migrants, the [Ukrainian War](#) has caused many people to leave that unfortunate country. As of November 30, 2023, some [371,325 refugees from Ukraine have registered](#) for temporary protection in Czechia, according to national authorities. This is not an inconsequential number, it is bound to strain Czech hospitality. The Kiev government, meanwhile, [would like some of those refugees](#) to return in order to join in the fight against [Russia](#). This situation bears close watching.

This brings us to the two big powers outside the EU who can influence events in Czechia – the [United States](#) and Russia. The United States is the big player in NATO, it strongly [influences](#) NATO policy and maintains a large [army and air force in Europe](#). However, [should the United States ever back out of NATO](#), the EU could create an [independent armed force](#) and the Czech Republic will have to contribute to it, or essentially become defenceless.

[Russia dominates Eurasia](#) by its very size and it is hard for any country in Europe to ignore Russia. Russia is [effectively allied](#) with [China](#) and this has played out in [the current Ukrainian War](#). Looking ahead, some fear a [great power struggle](#) over the Eurasian land mass between Russia, China and the USA. How a small country like Czechia, even as part of the EU, will fare under such a situation is anyone's guess. The story of Czechia suggests that History is not kind to small players.

That kind of winds it up for our look at the Czech Republic. Follow up on any of the links if this interests you.

Standard Caveat

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.