

End-Ordovician Mass Extinction

AOSC 680

Ross Salawitch

Class Web Sites:

<http://www2.atmos.umd.edu/~rjs/class/fall2024>

<https://umd.instructure.com/courses/1367293>



Anticosti Island Photo Credit: [Pascal Bernatchez](https://flytrippers.com/visit-anticosti-island)
<https://flytrippers.com/visit-anticosti-island>

Lecture 24

26 November 2024

Announcement

11/26	The End-Ordovician Mass Extinction	Chapter 2 of <i>Ends of the World</i> , Brannen to be handed out in class 44 pages	AT 24	Lecture 24: Kyle Ross Video	Anticosti Island Recent CNN Article	
12/03 We will need to start early or go late	Student Presentations, Day 1		No AT	Presentations students 1 to 7	Each Presentation is 12 minutes, with 3 mins for discussion. 7 x 15 = 105 minutes Paper due 4 Dec, 11:59 pm	
12/05 We will need to start early or go late	Student Presentations, Day 2		No AT	Presentations students 8 to 14	Each Presentation is 12 minutes, with 3 mins for discussion. 7 x 15 = 105 minutes Paper due Dec 6, 11:59 pm	

I'd like to start at the regular time on Tues and stay late.

Does this work for students 1 to 7 (Danny, Amanda, Vincent, Jasmine, Logan, Kenny, & Emily) ?

On Thurs, we should end on time due to the AOSC seminar (undergraduate dissertations).

Suggest we meet here at 1:20 pm on Thursday.

Does this work for students 8 to 14 (Joo Eun, Hee-Sung, Julia, Dylan, Shujun, Sam, & Kyle) ?

Recent CNN Article

Earth ring theory may shed light on an unexplained ancient climate event, scientists say

By Taylor Nicioli, CNN

🕒 6 minute read · Updated 11:32 AM EST, Mon November 18, 2024

(CNN) — Famously known for its extensive ring system, Saturn is one of four planets in our solar system that have the distinctive feature. And now, scientists hypothesize that Earth may have sported its own ring some 466 million years ago.

During the Ordovician Period, a time of significant changes for Earth's life-forms, plate tectonics and climate, the planet experienced a peak in meteorite strikes. Nearly two dozen impact craters known to occur during this time were all within 30 degrees of Earth's equator, signaling that the meteoroids may have rained down from a rocky ring around the planet, according to a study published September 12 in the journal Earth and Planetary Science Letters.

"It's statistically unusual that you would get 21 craters all relatively close to the equator. It shouldn't happen. They should be randomly distributed," said lead author Andrew Tomkins, a geologist and professor of Earth and planetary sciences at Monash University in Melbourne, Australia.

The study authors hypothesize that a large asteroid, estimated to be about 7.5 miles (12 kilometers) in diameter, instead reached Earth's Roche limit, which might have been about 9,800 miles (15,800 kilometers) from the planet based on the measurements of past rubble-pile asteroids. The asteroid would have been largely beat up from other collisions, making rubble loose and easy to pull apart by Earth's tidal force, Tomkins said.

The ring would have formed along the equator due to Earth's equatorial bulge, similar to how the rings of Saturn, Jupiter, Uranus and Neptune are also around each of those planets' equatorial planes, he added.

<https://www.cnn.com/2024/11/18/science/earth-saturn-ring-asteroid-study/index.html>

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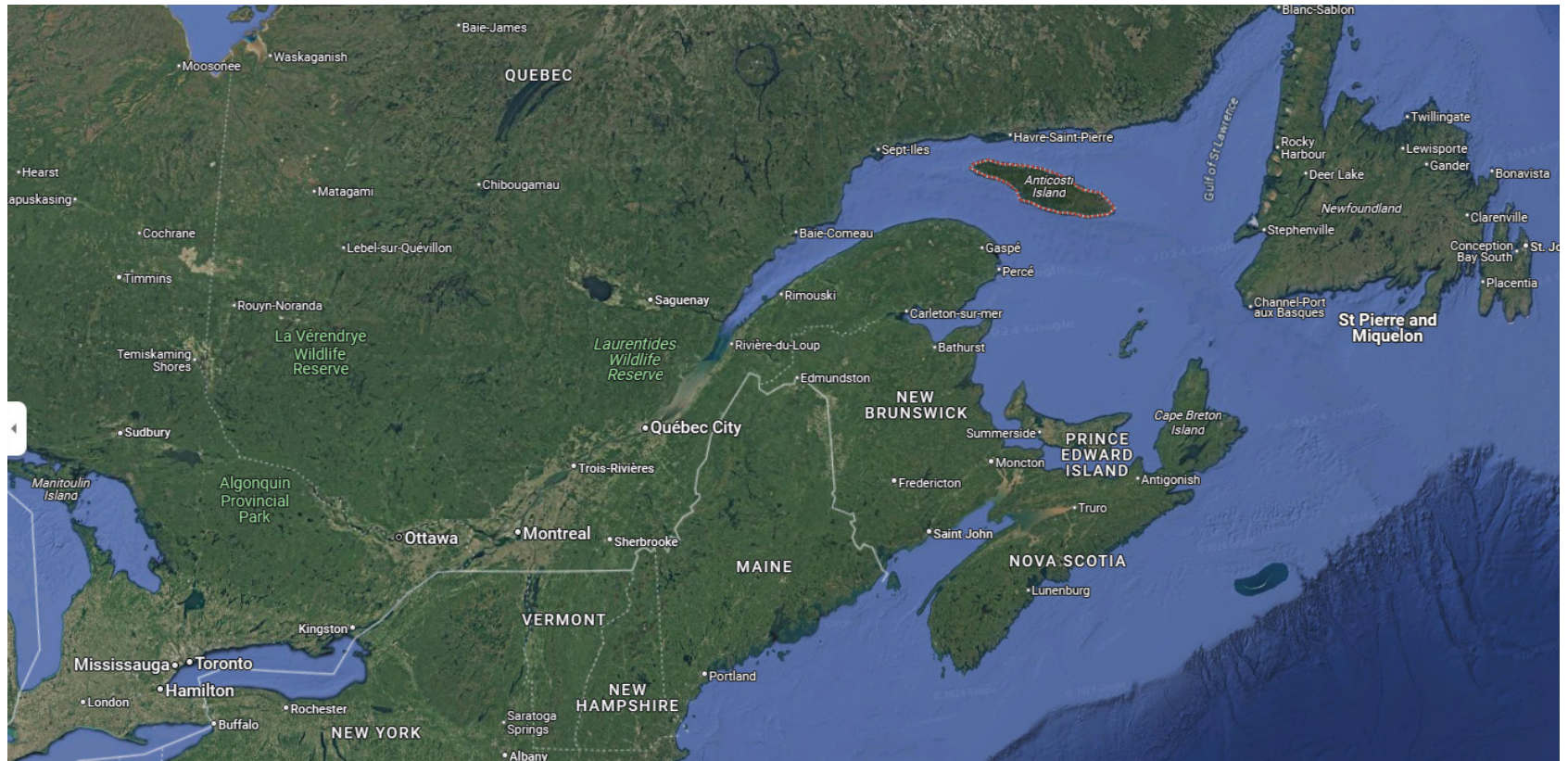
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Not only does the new hypothesis shed light on the origins of the spike in meteorite impacts, but it also may provide an answer to a previously unexplained event: A global deep freeze, one of the coldest climate events in Earth's history, may have been a result of the ring's shadow.

<https://www.cnn.com/2024/11/18/science/earth-saturn-ring-asteroid-study/index.html>

Anticosti Island



<https://tinyurl.com/btmh9r5b>

Anticosti Island

Montreal

Quebec's Anticosti Island named UNESCO World Heritage Site

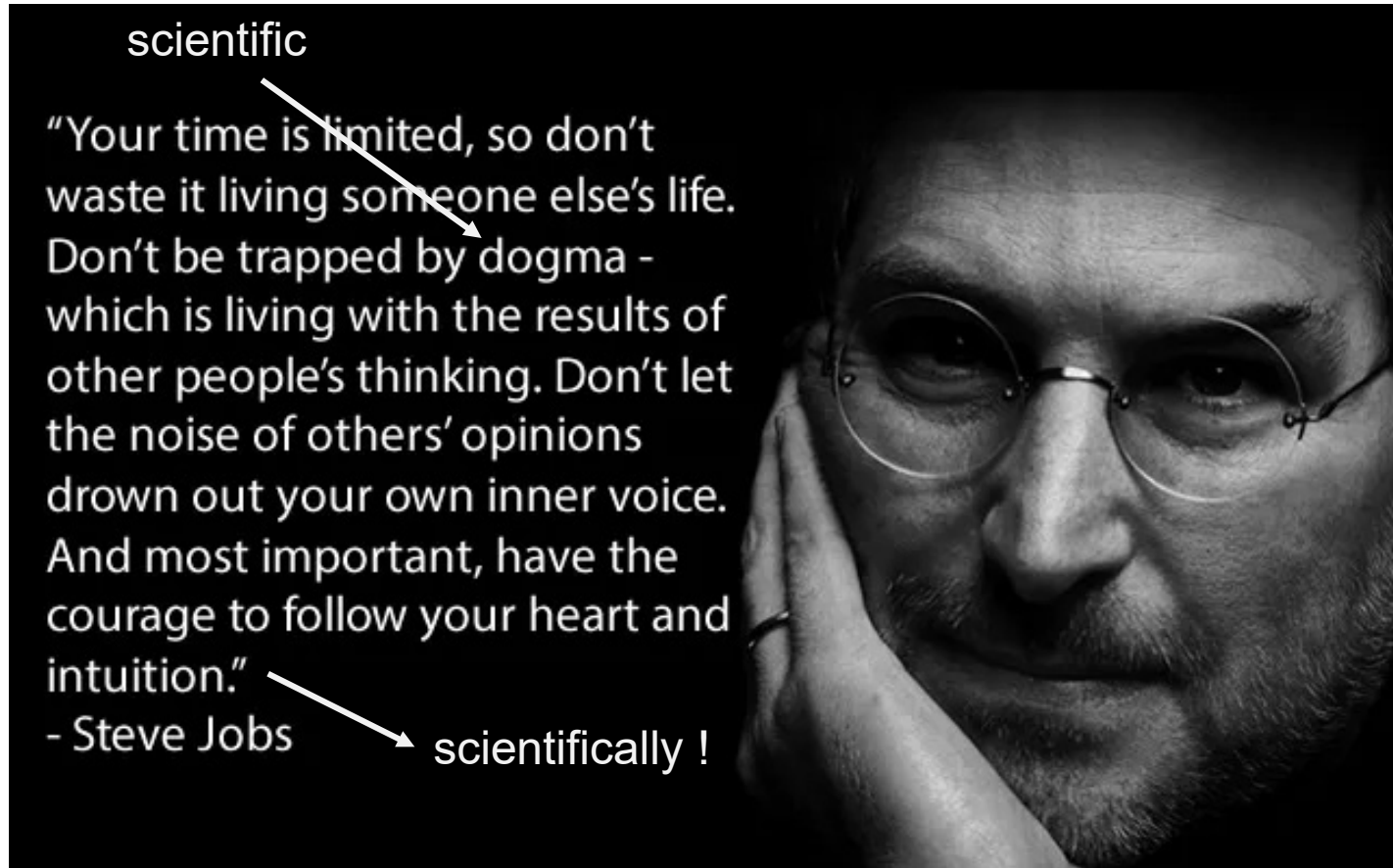
Island's geology dates back more than 440 million years

CBC News · Posted: Sep 19, 2023 11:37 AM EDT | Last Updated: September 20, 2023



<https://www.cbc.ca/news/canada/montreal/anticosti-island-world-heritage-site-1.6971150>

Final Word



dogma: a principle or set of principles laid down by an authority as incontrovertibly true.

<https://twitter.com/BaptisteVicini/status/1859327986832637985/photo/1>
<https://www.google.com/search?client=opera&q=dogma+meaning&sourceid=opera&ie=UTF-8&oe=UTF-8>