Mike Sowden @Mikeachim
Feb 8

I recently learned something mindblowing about the geological history of the Mediterranean Sea, and I just can't get it out of my head.

Now I'm going to make it *your* problem too. Sorry.

Hang onto your hat. This is wild.

1/

Feb 8, 2022 · 4:05 PM UTC

822 15,159 2,822 69,639

Mike Sowden @Mikeachim
Feb 8

This is the Strait of Gibraltar, where Europe and Africa reach out to *almost* touch each other.

At this point there's only 13 km/ 8 miles between them - and it's where the Med feeds into the Atlantic.

Imagine if something absurdly Roland-Emmerichy happened & it closed up?

2/

30 195 21 3,206

Mike Sowden @Mikeachim
Feb 8

No need to imagine - because it actually did.

It's called the Messinian Salinity Crisis, and it happened around 5-6 million years ago:

en.wikipedia.org/wiki/Messin...

After a presumably colossal tectonic shift, the Pillars of Hercules closed (or more correctly were bridged)....

3/

Messinian salinity crisis - Wikipedia
en.wikipedia.org

19 158 5 3,341

Mike Sowden @Mikeachim
Feb 8

...and the Mediteranean started drying up.

After some undetermined period of time, the Mediterranean was empty - evaporated down to a desert & a series of huge, super-salty lakes.

A vast, salty desert bowl - *kilometres* deep.

(This is not the wild thing.)

4/

14 120 9 3,619

Mike Sowden @Mikeachim
Feb 8

The desert bowl of the western Med was also noticeable higher than the east.

You can see this in modern sea floor maps: shallower continental crust in the west, deeper oceanic in the east - connected at the modern-day Strait of Sicily...

And primed for another cataclysm.

5/

7 95 1 2,953

Mike Sowden @Mikeachim
Feb 8

Before I read about this, I assumed that at some point the Strait of Gibraltar cracked, the water rushed in, and over centuries or millennia, our modern Mediterranean was created.

That's a manageable thought, right? Epic in scale, but - thinkable.

That's not what happened.

6/

4 75 1 2,838

Mike Sowden @Mikeachim
Feb 8

Modern borehole and siesmic data has uncovered huge grooves through the rock on either side of the Gibraltar Strait - each around 250 metres deep...

And there's a channel along the bed of the sea floor, carved with unimaginable force.

It's around 200km long.

7/

12 107 10 2,907

Mike Sowden @Mikeachim
Feb 8

At some point, maybe after a massive earthquake, the landlocked cliffs at the Strait were forced aside and the Atlantic rushed in with *mindboggling* fury.

Not a waterfall, but a long slope - down which roared up to *100 million cubic metres of water a second*.

8/

29 186 16 4,340

Mike Sowden @Mikeachim
Feb 8

I'm keeping the nerdy geological details pretty light here. There's so much, and it's all on an incredible, mindbending scale.

If you want to geek out further, I'll have a newsletter on all this next week. Sign up for free here:

everythingisamazing.substack...

OK, back to it.

9/

Everything Is Amazing

A newsletter about seeing more, feeling more, and asking better questions. Curiosity makes everything better - but can it be *learned*? Let's find out. Click to read Everything Is Amazing, by Mike...

everythingisamazing.substack.com

9 97 3 3,048

Mike Sowden @Mikeachim
Feb 8

This flood, descending a kilometre to the sea floor, had a thousand times the discharge of the modern Amazon...

And it refilled 90% of the West Med in a YEAR.

This was 5 (or 6) million years ago. Did any of our distant ancestors see it?

Can you imagine their terror?

10/

60 217 47 4,362

Mike Sowden @Mikeachim
Feb 8

(One year. Or perhaps even less time. Or perhaps a couple of years!

(The point here is: this DIDN'T take centuries, or even decades. It was terrifyingly fast.

(It must have seemed like the end of the world.)

11/

19 84 3 3,784

Mike Sowden @Mikeachim
Feb 8

If you're disappointed that the breached Straits of Gibraltar didn't form a spectacular waterfall - look to the east of this artist's reconstruction, courtesy of Wikipedia.

Remember that the eastern Med is a lot deeper?

South of Sicily, there's an underwater cliff...

12/

10 72 3 2,584

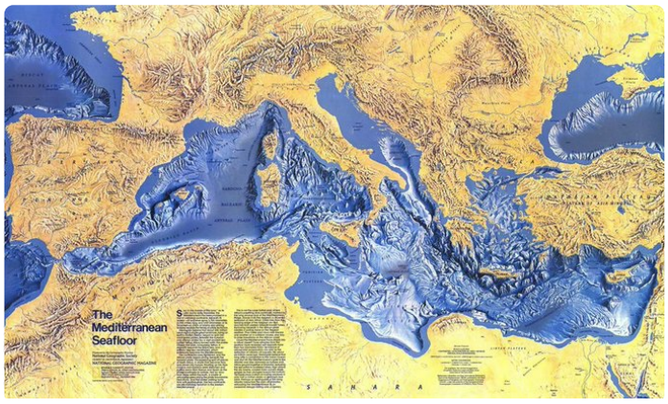
Mike Sowden @Mikeachim
Feb 8

The flood roared over it at around 160 miles an hour, forming a waterfall over 1.5km high.

And to the east, the deeper desert bowl of the dessicated Mediterranean started filling with water - rising up to 10 metres a day.

Not a typo.

13/



19 159 13 3,363

Mike Sowden @Mikeachim
Feb 8

The name for this astounding event is the ZANCLEAN MEGAFLOOD:

en.wikipedia.org/wiki/Zancle...

I've put it in All Caps because, what a hilariously epic name. I burst out laughing when I read it.

Anyone searching for a name for their new rock band?

14/

Zanclean flood - Wikipedia
en.wikipedia.org

85 306 55 6,310

Mike Sowden @Mikeachim
Feb 8

So now I'll leave you to do your own reading - although, if you want my own excitable take on all this, I'll have something in my newsletter next week (everythingisamazing.substack...)

And also? Let me say this very loudly:

AS YOU CAN SEE, GEOLOGY IS NOT BORING.

Thanks for reading. :)

Everything Is Amazing | Mike Sowden | Substack
A newsletter about seeing more, feeling more, and asking better questions. Curiosity makes everything better - but can it be *learned*? Let's find out. Click to read Everything Is Amazing, by Mike...
everythingisamazing.substack.com

76 97 5 3,781

Mike Sowden @Mikeachim
Feb 8

And lastly, since this is starting to go a bit nuts with shares & likes (thank you!) - you may also enjoy this thread I did in December, about light pillars:

nitter.net/Mikeachim/status...

Ta!

Mike Sowden @Mikeachim
3 Dec 2021

In January of this year, photos started bouncing round the internet of this deeply weird thing happening in the sky above Glasgow. Photoshop trickery?

The bizarre truth:
- yes, everyone really saw these
- no, they're not faked or manmade
- they absolutely don't exist.

1/
Show this thread

12 110 6 2,356

Mike Sowden @Mikeachim
Feb 8
And! A hat-tip to @frod_san for steering me towards this reconstruction of the Mediterranean flood:

F Rodriguez-Sanchez @frod_san
Feb 8
Replying to @Mikeachim
Nice thread. Here's a nice video reconstruction of the event:

piped.kavin.rocks/B5uW7Qg6rXM

7 59 2 1,626

Mike Sowden @Mikeachim
Feb 9
And and! @math_vet reminded me that the Zanclean Megaflood featured in one of the finest things on the Web: nitter.net/math_vet/status/... You really should check it out. It's a wonderful journey.

Dan A @math_vet
Feb 9
Replying to @Mikeachim
XKCD did a fantastic piece centered around people observing this event. It was super cool, published a frame at a time in like 30 minute increments
en.m.wikipedia.org/wiki/Time…

67 51 1 1,350

Mike Sowden @Mikeachim
Feb 9
OK. Breaking from this Big Terrifying Geological Nope No Thanks theme for a second, I'd like to recommend to you some other curious, interested writers.

1) Mr @douglasmack, a travel writer who now has a delightfully curious newsletter about snacks: snackstack.net/

Snack Stack
A bite-sized newsletter about snacks around the world, with three new snacks every week. Flavored with curiosity. Click to read Snack Stack, by Doug Mack / Snack Stack, a Substack publication with...
snackstack.net

2 4 1 174

Mike Sowden @Mikeachim
Feb 9
2) Jodi (@legalnomads) whose newsletter is the aptly-named Curious About Everything: jodiettenberg.substack.com/

Read this just-published piece by her at CNN to learn what a terrific writer she is: edition.cnn.com/travel/amp/j...

Curious About Everything
Personal updates, occasional rants, & the best monthly writing from around the web. Click to read Curious About Everything, by Jodi Ettenberg, a Substack publication with thousands of readers.
jodiettenberg.substack.com

1 5 1 152

Mike Sowden @Mikeachim
Feb 10

3) The mighty @celbrash, ridiculously accomplished travel writer (recently in National Geographic) who can currently be found farming pearls in Tahiti: kamokapearls.com/

Her daily life is ridiculously interesting (sorry, Celeste, but it's true). Follow her for the stories.

KAMO

Tahitian Pearl Jewelry by Kamoka

Tahitian black pearl jewelry that's sustainable, eco-friendly, fair trade, farm-to-you and naturally beautiful. Earrings, necklaces, rings, bracelets and more. We use responsibly sourced and recycled...

kamokapearls.com

17 8 1 159

Mike Sowden @Mikeachim
Feb 14

If anyone''s interested: in advance of my Zanclean Megaflood writeup, here's why this season of my newsletter is about the 71% of the Earth's surface we have a tendency to tune out (because we're massively biased that way):

everythingisamazing.substack...

Ta.

3 1 27

Mike Sowden @Mikeachim
Feb 18

ANOTHER UPDATE:

My Megaflood writeup's a few days delayed - for the best of reasons! Because of the *bonkers* reaction to my Twitter thread, I ended up with dozens of new rabbit-holes to scurry down. What a journey.

Thank you for all the suggestions! Hope I can do them justice.

3 50

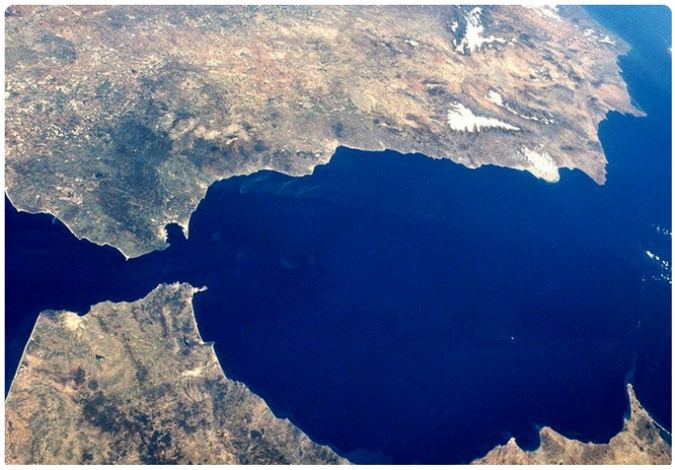
Mike Sowden @Mikeachim
Feb 23

At long last - here's my newsletter on the Zanclean Megaflood, with a lot more detail and some huge numbers that will *really* make your head hurt:

everythingisamazing.substack...

Whew. What an absolute thing.

OK. I need sleep.



4 7 48

Mike Sowden @Mikeachim
Mar 26

And it turns out that Britain has its own Megaflood story, much more recently - and involving highly terrified prehistoric people:

> **Mike Sowden** @Mikeachim
> Mar 25
>
> I thought I knew the story of the "lost world" off the east coast of Britain, inhabited by Mesolithic people until rising sea waters engulfed it around 8,000 years ago...
>
> But I didn't know about the *tsunami*.
>
> Holy hell.
>
> 1/
>
> (Image: bigissue.com/opinion/discove…)
> Show this thread

1 3 24

Mike Sowden @Mikeachim
Apr 2

And as a reminder that xkcd continues to do the most experimentally interesting and creatively pants-off bonkers things on the Internet, here's today's delightful barminess:

> **Andy Baio** ✔ @waxpancake
> Apr 1
>
> Today's xkcd is a 9-hour-long text-to-speech audio transcription of a LOGO program that presumably draws something… but good luck converting it back to syntactically-correct code. xkcd.com/2601/
> Show this thread

2 2 12

Mike Sowden @Mikeachim
Apr 25

My latest thread! No need to cast your imagination back in time for this one - it's about what the bottom of the Atlantic looks like, right *now*:

> **Mike Sowden** @Mikeachim
> Apr 24
>
> If today's a slow one, how about a stroll along the world's longest mountain chain?
>
> No, not Himalaya (2,500km). And not the Andes (7,000km) either.
>
> This one's....65,000km long.
>
> But it's ok. We'll just do a bit of it.
>
> 1/
>
> Show this thread

1 1 3

Load more