

Meteorites did not enrich ocean life: study

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Credit: NASA

An explosion of ocean life some 471 million years ago was not sparked by a meteorite bombardment of Earth, said a study Tuesday that challenges a leading theory.

Without offering an alternative explanation for what is known as the Great Ordovician Biodiversification Event (GOBE), researchers from Sweden and Denmark said the creature expansion started some two million years before the space rock bombardment.

This was based on fresh dating of crystals from meteorite-bearing sediments in Sweden.

"This study shows that the two phenomena were unrelated," researchers wrote in the journal *Nature Communications*.

For study co-author Anders Lindskog of Lund University in Sweden, the data showed "there is no measurable 'extraterrestrial' influence on biodiversity" in Earth's oceans.

The GOBE, which vastly expanded marine life diversity, kicked off about 70 million years after the first explosion of life on Earth during the preceding Cambrian period, some 540 million years ago.

Some scientists contend that the Ordovician event was sparked by a collision of objects in the asteroid belt between Mars and Jupiter raining debris down on our planet.

Such a bombardment may have changed the environment just enough to stimulate diversification of existing life, the theory goes.

The question of what caused it remains open, but Lindskog speculated it was likely a combination of events and processes.

"It is reasonable that the very high sea levels that prevailed during the Ordovician... simply gave more space for [life](#) to thrive," he told AFP.

"Combined with the presence of many small continents (allowing for more endemic faunas, adding to the sum of different species) and beneficial climate change (cooling, most likely), we have a pretty nice 'recipe' for biodiversification," he said by email.

More information: Refined Ordovician timescale reveals no link

between asteroid breakup and biodiversification, *Nature Communications*, [nature.com/articles/doi:10.1038/ncomms14066](https://doi.org/10.1038/ncomms14066)

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