

Mudrocks are Flood rocks

John Michael Fischer, www.newgeology.us Mudstones from a January 28, 2021 article at crev.info by David F. Coppedge <https://crev.info/2021/01/mudstone-paradigm-shifts/>

Conventional geological “thinking for a century or more has been that mudstones, like some of the fine-grained strata throughout the southwestern United States, required placid conditions for their formation. Microscopic particles needed vast ages to slowly settle out of solution and accumulate on the bottoms of inland lakes or seas. Creationists might have had some evidence of rapid formation for some of the sandstones and limestones, but mudstones? No; those disproved rapid formation.”¹ Three sets of experiments changed all that:

First: “Mudstones make up the majority of the geological record.”² “Using flume experiments, we have investigated the bedload transport and deposition of clay floccules and find that this occurs at flow velocities that transport and deposit sand.”² “Because mudstones were long thought to record low-energy conditions of offshore and deeper water environments, our results call for reevaluation of published interpretations of ancient mudstone successions and derived paleoceanographic conditions.”² “The results call for critical reappraisal of all mudstones previously interpreted as having been continuously deposited under still waters. Such rocks are widely used to infer past climates, ocean conditions, and orbital variations.”³

Second: “We tested the hypothesis that abrasion of carbonate sand during sediment transport might produce carbonate mud using laboratory experiments and a sediment transport model. We documented experimental mud production rates up to two orders of magnitude [100 times] faster than rates estimated for other mechanisms. Combined with model calculations, these results illustrated that transport and abrasion of carbonate sand is a major source of carbonate mud.”⁴

Third: “Using analog experiments, the authors found that organic matter from plants alone was sufficient for the formation of flocs—aggregates of small silt and clay particles—which are required to deposit mudrock.”⁵ “In experiments, we observed that clay readily flocculated for organic and clay concentrations common to modern rivers, yielding settling velocities three orders of magnitude [1000 times] larger than those without organics. Using a transport model, we found that flocculation substantially increased mud deposition, resulting in muddier floodplains. Thus, organic-induced flocculation may have been more critical than deep-rooted plants in the proliferation of muddy floodplains.”⁵

Conclusion: “Transport implies current flow. Abrasion implies an erosional process on pre-existing larger particles. If this new model is correct, it overthrows the picture of tiny silt particles sinking slowly in placid water. Mudstones, therefore, could form rapidly in dynamic conditions.”¹ “So far, the paradigm shift over mudstones includes (1) forming in moving water, (2) forming 100 times faster in high-energy environments, and (3) flush with abundant flocculating nuclei around which to form”¹ 1000 times faster.

Making ingredients of sedimentary rocks

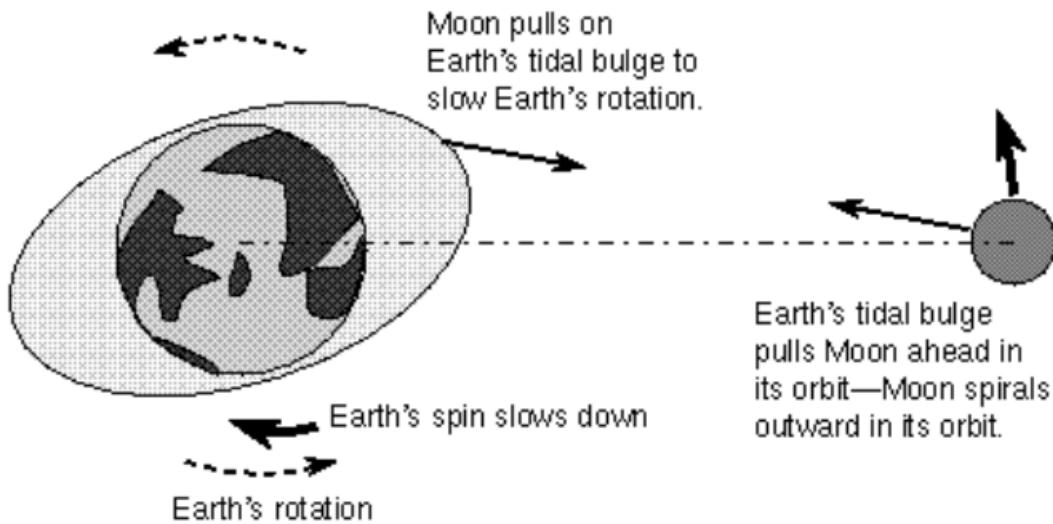
Sedimentary rocks are made of grains eroded from continental crust granites and igneous rocks, organic remains of living plants and animals, and chemicals in water and air. The time needed to erode enough granite to make the sandstone layers deposited by the Flood is enormous.

The Young Biosphere Creation (YBC) model is the only one that allows enormous time before the rapid (6 days) creation of the biosphere by God *ex nihilo*.

An approximation of time from the formation of continental crust to biosphere creation can be measured by how far the Moon has moved away from Earth.

The conventional belief is that the Moon was formed by a giant impact with Earth 4.51 billion years ago, only 33 million years after Earth formed and it was still extremely hot, but that is apparently wrong. The Moon is currently moving away from the Earth at 3.82 centimeters per year. Using orbital mechanics, the Moon can be no older than 1.2 billion years old.

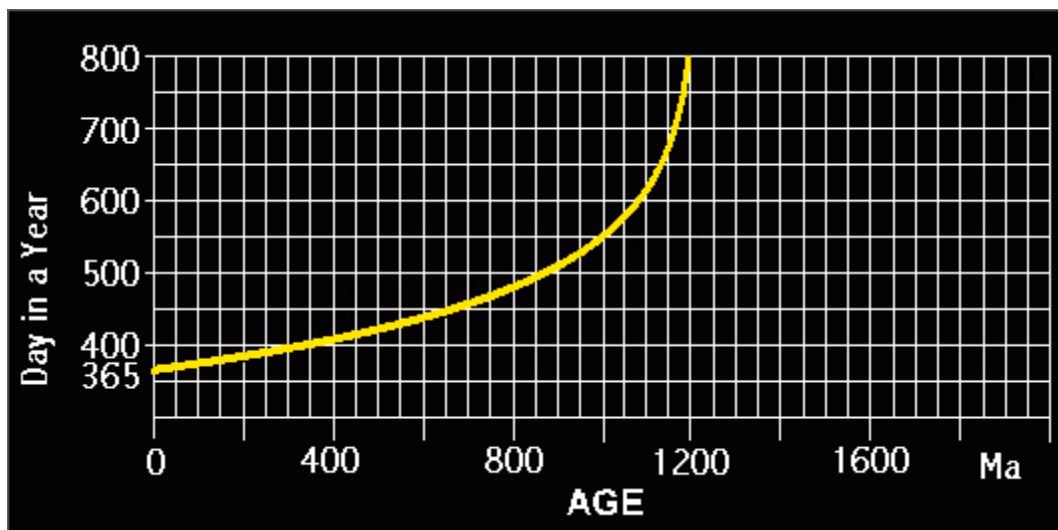
Gravity dominates the Earth-Moon relationship; all other factors are minor. As the moon orbits the earth, its gravity pulls on the earth's oceans, causing tides. Since the earth rotates faster than the moon orbits, the tidal bulges induced by the moon are always "ahead" of the moon. For this reason the tides actually "pull forward" on the moon, which causes the moon to gain energy and gradually spiral outward. The Moon's gravity exerts a drag on the Earth that slows its rotation, and the Earth's gravity exerts a pull on the Moon that expands its orbit. The two effects balance out, conserving angular momentum.



The force of gravity changes with the square of the distance (the inverse square law) so that, for example, getting two times closer increases gravity by four times.

Due again to gravity, the material thrown out from the giant impact must have coalesced to form the Moon a short distance beyond the Roche limit, something like 15,000 miles (24,140 kilometers) from the Earth. With the Earth and Moon that close, tides would have been very powerful. Also, the Earth would have been spinning faster than it does today since all past Moon orbits have slowed Earth's rotation to what it is now. Faster Earth rotation caused tidal bulges to be even farther ahead of the Moon, increasing the tidal force and causing the moon to recede even faster.

This means that the Moon would have moved away from the Earth very fast in the beginning, and slowed exponentially to the 3.82 cm/year it is today, according to the inverse square law. Also, Earth's rotation rate (hours in a day, days in a year) would have slowed down. It is a matter of physics.



It means the Earth's surface had cooled to a solid basalt shell by the time the Moon-forming impact occurred, in accordance with the Shock Dynamics geology theory. That is important because the mixing of basalt, water, and mantle in a magma ocean is a recipe for continental crust. Thus the giant impact that formed the Moon also made a protocontinent. Much later, in the "Late Pleistocene", the Shock Dynamics meteorite split that protocontinent, producing the features on Earth's surface we see today, as well as the appearance of plate tectonics.

1. Coppededge, David F., 2021 article at crev.info <https://crev.info/2021/01/mudstone-paradigm-shifts/>
2. Juergen Schieber, John Southard, Kevin Thaisen, Accretion of Mudstone Beds from Migrating Floccule Ripples, Science 14 Dec 2007: Vol. 318, Issue 5857, pp. 1760-1763 DOI: 10.1126/science.1147001
3. Macquaker and Bohacs, "Geology: On the Accumulation of Mud," Science, 14 December 2007: Vol. 318. no. 5857, pp. 1734-1735, DOI: 10.1126/science.1151980.

4. Elizabeth J. Trower Michael P. Lamb Woodward W. Fischer, The Origin of Carbonate Mud, Geophysical Research Letters, Volume46, Issue5, 16 March 2019, Pages 2696-2703, <https://doi.org/10.1029/2018GL081620>

5. Sarah S. Zeichner, Justin Nghiem, Michael P. Lamb, Nina Takashima, Jan de Leeuw, Vamsi Ganti, Woodward W. Fischer. Science 29 Jan 2021: Vol. 371, Issue 6528, pp. 526-529 DOI: 10.1126/science.abd0379