

Did Pangaea Really Exist?

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Today, we have seven continents scattered across the globe. North America, South America, Africa, Asia, Australia, and Antarctica. But once upon a time, did all of these continents link together to form one single supercontinent? We call this theorized supercontinent Pangaea, meaning “all land.”

The views expressed in this article reflect those of the author and not necessarily those of New Creation.

How Do We Know Pangaea Even Existed?

We cannot go back and see what the earth’s surface looked like at any given point of time in history. Instead, we must look at the remaining clues here in the present and make inferences about the past. By combining all of the clues, we can assemble what Earth looked like when Pangaea existed.

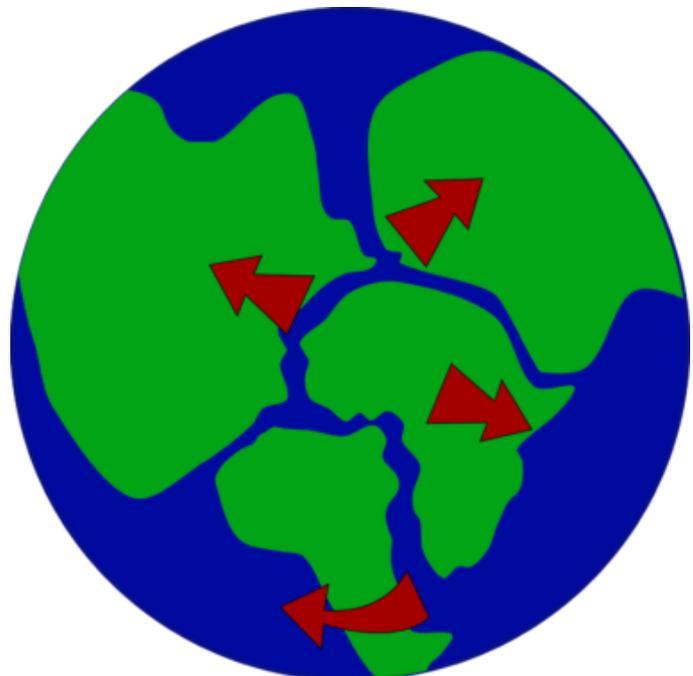
Pieces of the Puzzle

The first clue people noticed is how the outlines of the continents seem to fit together like pieces in a puzzle, especially along the Atlantic Ocean. We see this most easily with the East coast of South America, which just so happens to fit snugly along the west coast of Africa. Likewise, the eastern coastline of North America and the western coastline Europe fit almost exactly on top of Africa and South America. They fit together like pieces of a really big puzzle.

Perhaps, it should be no surprise that the first person recorded to have noticed this was a geographer.

Abraham Ortilius, Catholic

geographer and creator of the first modern atlas, proposed in 1596 that the Americas had been “torn away from Europe and Africa...by earthquakes and floods” at some point in the planet’s past. He added, “The vestiges of the rupture reveal themselves, if someone brings forward a map of the world and considers carefully the coasts of the three [continents].”¹



Diamictites

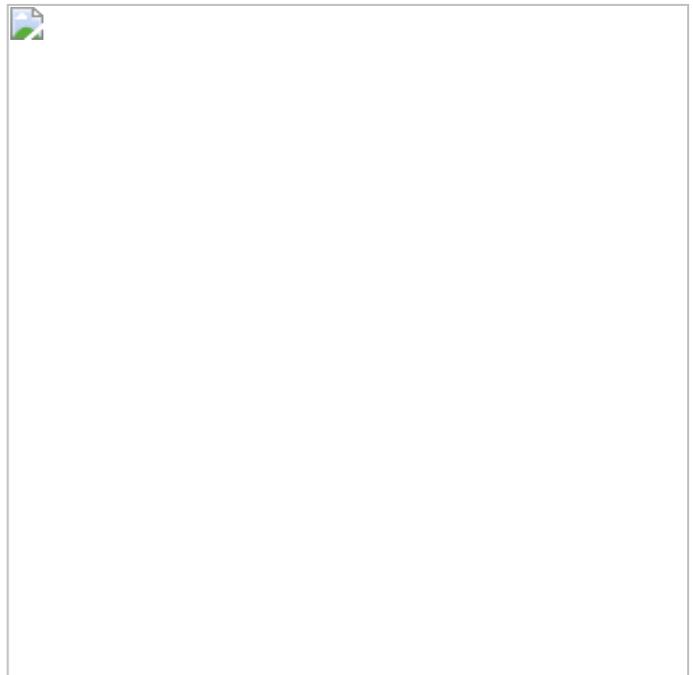
Another clue has to do with diamictites, a type of sedimentary rock composed of non-sorted or poorly sorted particles ranging in size from clay to boulders and suspended in a matrix of mudstone or sandstone. We can trace certain diamictite deposits that formed at the same time across the east coast of South America and the west coast of Africa. Yet, these deposits are absent from the Atlantic Ocean between them. Though generally interpreted as glacial deposits, some geologists have recently argued that they are more consistent with deposits formed by underwater debris flows.^{2,3} This suggests catastrophic debris flows laid down across South America and Africa *before* the Atlantic Ocean existed.



Example of a diamictite deposit.

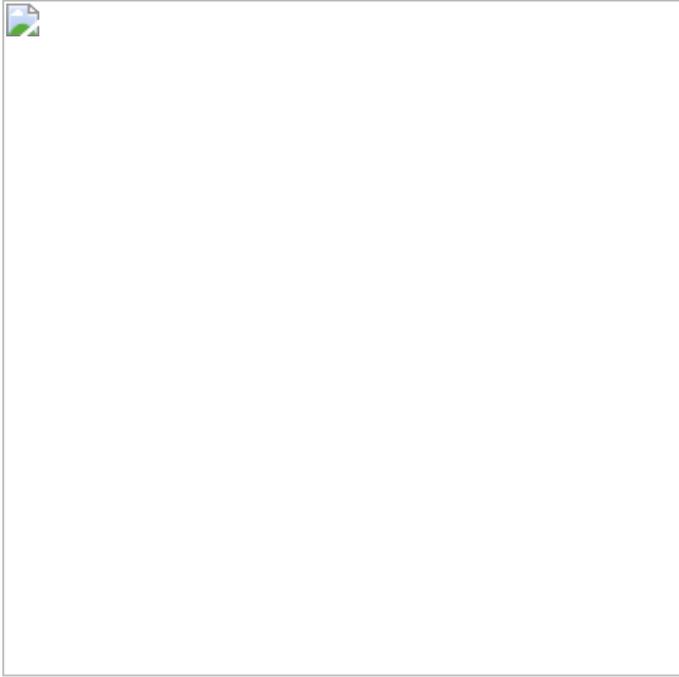
Mountains Ranging Around the Globe

Imagine the continents brought back together. The Appalachian Mountains along the eastern coast of North America link up with the Caledonian Mountains of the British Isles and Scandinavia.⁴ This mountain, too, is absent from the floor of the Atlantic Ocean. This must mean that the mountains existed before the creation of the Atlantic Ocean.



This image shows how the continents of eastern North America, Iberia, and Africa came together to form a mountain range as Pangaea came into being.

Fossils



Another piece to Pangaea's puzzle are the fossils of similar or identical types of animals and plants dispersed across multiple continents. Yet we never find these fossils in the ocean floor in between these continents.⁵

Lystrosaurus is a pig-sized non-mammalian synapsid. We find its fossils in what are today very different parts of the world: India, Antarctica, and South Africa. Fossils of *Glossopteris*, a type of plant, share much the same range, except we also find it in South America. Fossils of a small, now-extinct, freshwater reptile called *Mesosaurus* are only found in

certain regions of South America and South Africa.

Clearly, these lifeforms did not abruptly appear in all of these same places at the same time. They would have begun in one place before spreading out across their range. While land bridges could explain animals crossing short distances, there is no evidence of land bridges spanning entire oceans. Therefore, this dispersion could only have happened *before* Pangaea broke apart.

But Do the Continents Really Fit?

Despite the evidence presented above, the scientific community did not immediately embrace the existence. Some critics have pointed out that the edges of modern continents do not precisely interlock when brought together to reconstruct Pangaea.

For example, there is no space for Mexico and Central America to fit in between North America and South America. And North America was rotated clockwise while South America was rotated counterclockwise. Additionally, Africa's area is actually 35% too large and South America is 20% too small to fit.

The answers to all of these questions came with time. As it happens, the continents themselves have undergone significant changes since their Pangaeian days. For example, Central America and much of the western seaboard of North America did not exist until well after Pangaea broke apart. It formed via tectonic activity much later in geologic history.

Pangaea and Young-Earth Creationism

Ever since Christians realized that a supercontinent existed, they have held two main positions on when it divided. The earliest recorded idea suggests Pangaea broke apart in the days of Peleg, one of Noah's grandchildren living after the Flood. A later idea, most widely accepted today, is that Pangaea broke apart during the global Flood of Noah's day. Let's take a closer look at both of these positions.

Pangaea: Divided in the Days of Peleg

Some young-earth geologists propose that Pangaea formed during the Flood and remained intact for some time afterward.⁶ According to this model, the division of Pangaea took place over a period of at least several hundred years, perhaps during the life of Peleg, one of Noah's grandchildren. This allowed ample opportunity for animals that survived the Flood aboard the Ark to disperse across the planet without having to cross vast seaways.

We can trace the idea that Pangaea broke apart after the Flood back to 1756. Theodor Christoph Lilienthal, a German professor of Theology at Königsberg, proposed that [Genesis 10:25](#) contains a reference to the break-up of what we would today call Pangaea. It records that "*in the days of Peleg, the earth was divided.*"⁷

Most young-earth geologists do not accept this idea today. One reason is that current physics-based models can only demonstrate continental break-up occurring either very rapidly (see below) or at today's slow and gradual rate. However, the geophysical requirements for moderate continental movement have not yet been modeled. As such, there is no way presently to make the continents move at the speeds required for this model.

Pangaea: Fractured During Noah's Flood

Today, most young-earth geologists believe that Pangaea was a temporary supercontinent. It formed and broke apart midway during the Flood, perhaps lasting no more than a few weeks.⁸ During this time, sedimentary layers full of dead plants and animals accumulated across the continents.

According to this model, Pangaea was not the first supercontinent; Pangaea itself formed from the pieces of a previous supercontinent. They believe the first supercontinent formed during [Creation Week](#) and broke apart earlier during the Flood. We can trace this idea back to 1858 and a French geographer and scientist named Antonio-Snider Pellegrini. This seems consistent with the form of deep sea crustal movement described in [Genesis 7:11](#) which records the breaking up of the "fountains of the great deep."

Throughout the duration of its existence, Pangaea was probably mostly or completely covered by water. The water-deposited sandstones formed all around the world at this time provide evidence for this.⁹ In the 90's, a team of creation scientists, led by geophysicist Dr. John Baumgardner, developed a model called catastrophic plate

tectonics.¹⁰ This model explained how the breaking up of Pangaea may have provided a mechanism for how the Flood occurred. Currently, this is the consensus view among young-earth geologists.

Conclusion

There is good evidence that the continents we have today were once joined together to form the supercontinent of Pangaea. By piecing together clues from around the world, geologists have been able to determine what this ancient landmass would have looked like, as well as how and when it may have broken apart.

Footnotes

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