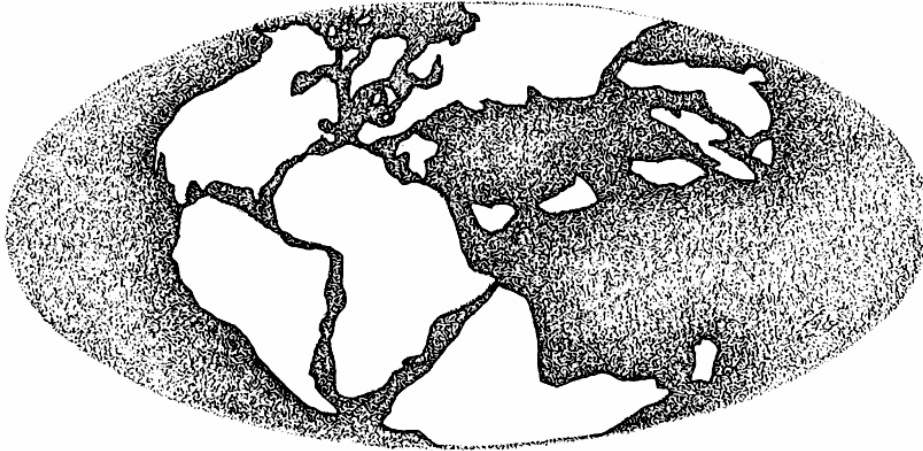


# The Theory of Continental Drift

by Kenn Oberrecht

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*German meteorologist Alfred Wegener wasn't the first to observe similarities among the continents that suggested the landmasses might have*

*once been connected. He was the first, however, to gather ideas and evidence into a palpable theory, which he turned into a treatise entitled "The Formation of the Major Features of the Earth's Crust (Continents and Oceans)."*

*The earth was cooling, according to the theory, and in the process it was contracting, causing sea levels to rise and cover the land bridges.*

In 1912, at age 32, Wegener must have seemed a brazen upstart to the esteemed members of the Geological Association in Frankfurt and the Society for the Advancement of Natural Science in Marburg when he delivered lectures on his theory that defied the geological thinking of the time, which was based on the contracting-earth theory.

Continental similarities were being explained away with the notion that the continents had once been connected by land bridges. The earth was cooling, according to the theory, and in the process it was contracting, causing sea levels to rise and cover the land bridges.

Like others before him, Wegener noticed that the eastern outline of South America fit the western outline of Africa like pieces of a jigsaw puzzle. He later noticed similar, if imperfect, fits among the other continents.

Geologists, paleontologists, and other scientists had collected a good bit of evidence of matching but misplaced rocks, uncovered fossils in places they shouldn't have been, and discovered evidence of astounding climatological changes.

*Plant fossils indicated that tropical forests once existed only a few hundred miles from the North Pole.*

Fossil remains of a prehistoric reptile known as the Mesosaurus had been uncovered on both sides of the South Atlantic, yet the creature was no great swimmer. Plant fossils indicated that tropical forests once existed only a few hundred miles from the North Pole.

Glacial sediments were found in sub-tropical areas. Coal seams and sedimentary rock formations on one continent matched those on another. Mountain ranges that ended at one coastline seemed to begin again on another.

Wegener theorized that a single supercontinent he called Pangaea existed sometime during the late Paleozoic Era, 350 million to 225 million years ago. He maintained that the landmass broke up and that its pieces dispersed and drifted, eventually reaching their present positions. Although Wegener's theory had its weak points, his arguments were compelling. The idea of continental drift certainly would explain many mysteries and answer a lot of questions. Nevertheless, the scientific community wanted no part of it, and Wegener's theory was rejected from all quarters.

Prominent geophysicist Harold Jeffreys attacked Wegener's theory as specious. In his rejection of the theory, Jeffreys focused on its greatest weakness: Wegener's failure to explain how continents could move across the hard ocean floor.

Few scientists outside his native Germany ever accepted Wegener's theory or his later additions to it and explanations of it. In fact, by the time of his death in 1930, Wegener's theory seemed well on its way to obscurity.

It would be several decades before new technology, new discoveries, and new thinking would lead to the revolutionary theory of plate tectonics, which incorporated Wegener's theory of continental drift and improved upon it.

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