

National geographic colliding continents

[Science](#), [Geography](#)



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Continental drift is the idea that the continents were once different from the way they are today. The theory argues that some of the separate landmasses were once joined in other continental forms, and they later moved to their present locations (Frankel). Plate tectonics explains the movement and the processes that shaped the earth into plates. Continental Drift and plate tectonics were first discussed by Wegener, who was a German polar researcher, meteorologist, and geophysicist. In his research, he published 'The Origin of Continents and Oceans as outlined in the theory of Drift. The theory had five lines of evidence. However, it received a lot of criticism from scientists because he could not explain how the plates moved.

Harry Hammond Hess introduced a new theory that supported the theory of plate tectonics. In his theory, he provided evidence of plate tectonics history of ocean basins. He discovered that oceans are shallow at the center, and he also identified the mid-ocean ranges that are raised above the flat sea level by at least one and a half kilometers (Purves). In addition, he discovered that seafloors crack open at the peak of mid-ocean ridges to form new sea levels. Hess discovered that oceans' deepest parts are near continental margins in the Pacific Ocean with trenches extending to depths of 11 km or more in the United States and Japan Coasts (Tomecek).

Hess imagined that oceans originate from the center with basalt oozing from the earth in the mid-ocean ridges. The molten material creates a new seafloor that spread in both directions. The ridge expanded and drove the ocean floor away. As spreading continues the ocean floor cools and goes down to abyssal plain level. Harry believed that the ocean floor was recycled

and destroyed at the ocean trenches. Harry's theory offers a better explanation than Wegener's, and however, there must be more proof.