Evidence for evolution: continental drift

Continental drift

- The landmasses on Earth’s surface are constantly moving. They are carried by immense forces generated by convection currents in the liquid rock in the mantle of the planet.
- Scientists can observe these movements using satellite images that show, for example, that the North American and Eurasian landmasses are moving apart by approximately one centimeter every year. This movement is called continental drift.
- By plotting these movements backward, we can reconstruct the landmasses as they were millions of years ago. At one point 250 million years ago, all the continents were combined in a single landmass called Pangaea (Greek for “all land”). Over millions of years, this broke up into our present-day continents.

Fossil relatives

- The Mesosaurus is a type of lizard that is now extinct. Its fossils are found only in South America and South West Africa.
- This surprising fact is easily explained by continental drift. When Mesosaurus was alive, South West Africa and South America must have been joined.
- This is evidence for a single species on a single landmass rather than two identical species having to evolve separately—a far less likely scenario.