

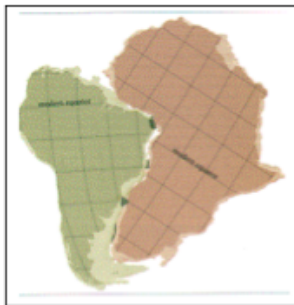
Tuesday 5-17-11

- 1) Complete Virtual EQ on your own - due by end of week
- 2) Quick review of faults and seismology concepts
- 3) Begin Plate Tectonic notes

HW: Nomogram due Wed
Report to 207 Thursday and Friday
EQ Quiz on Mon 5-23
Final on Friday 6-3

HISTORY OF PLATE TECTONICS

1620 – Sir Francis Bacon remarks on the parallelism of the shore lines



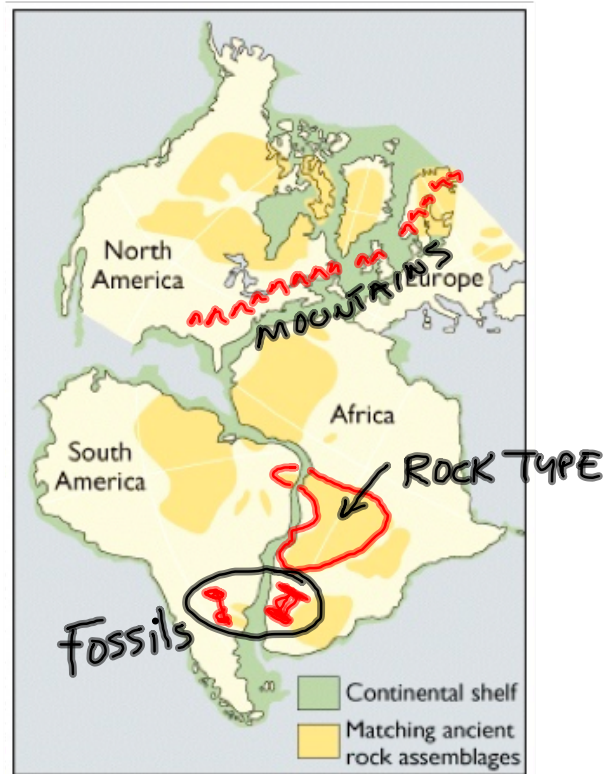
1858 – first map showing “drift” of continents

1912 – Alfred Wegener
(1880 – 1930)

- continental drift
- evidence in likeness of rocks, fossils, and geologic structures



- climate scientist
- coal in Antarctica?
- evidence of glaciers in Africa?

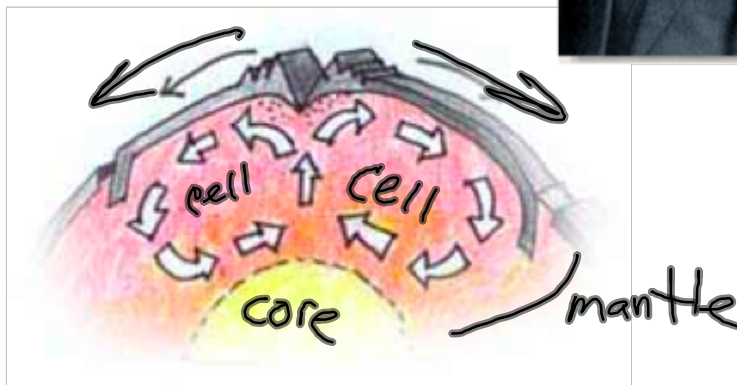


- driving force is lacking
(he tried the pull of the Moon), Wegener is ridiculed

1928 – Arthur Holmes
(1895 – 1961)



- theory that thermal convection
in the mantle is the driving force



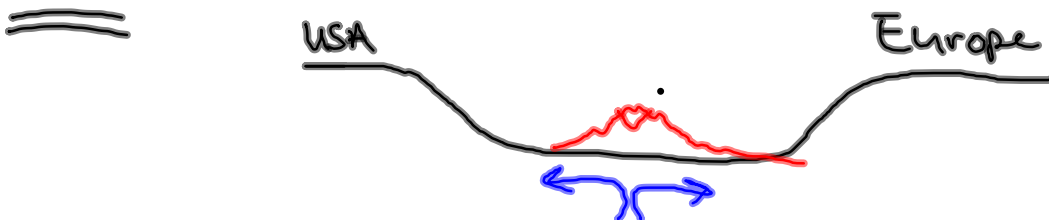
library.thinkquest.org/.../map.jpg

SCUBA

(1941-1945) SONAR

Post WWII – discovery of the mid-Atlantic ridge
using sonar data from the war

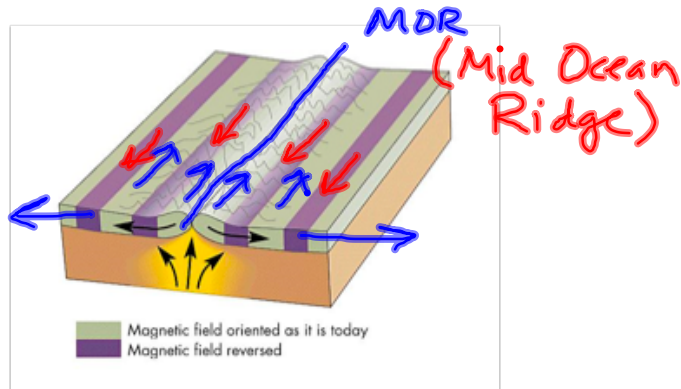
1960s – sea floor spreading idea established



Evidence for sea-floor spreading

www.mhhe.com/.../fix/student/chapter8/08f19.html

- Magnetic reversals (anomalies)
- Age and thickness of sediments increases away from the mid-ocean ridges
- Earthquakes are shallow = thin crust
- Heat flow is highest near the ridges



1970s – Theory of Plate Tectonics in place

Number of plates – 22 to 27 (7 major)

- Pacific
- North American
- South American
- Indo-Australian
- Eurasian
- African
- Antarctic

