



Continental Drift Theory



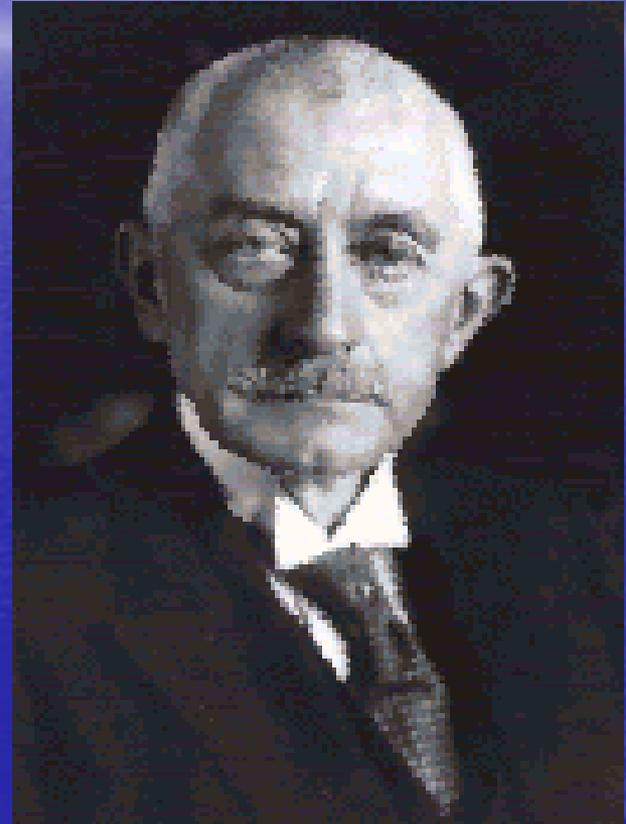
No need to take notes
I have taken them for you

"Doesn't the east coast of South America fit exactly against the west coast of Africa, as if they had once been joined?" wrote Wegener to his future wife in December 1910. "This is an idea I'll have to pursue."

Alfred was trying to get his girlfriend's father to like him. Her father was a well-known geologist!!

Alfred Wegener (Vegener)

- As a young scientist, Wegener was curious about Earth's continents.
- In 1910, Mr. Wegener formed a hypothesis which stated all the continents were once joined together in a giant landmass.
- He named this landmass PANGAEA.



Wegener used 3 types of evidence to prove his theory!

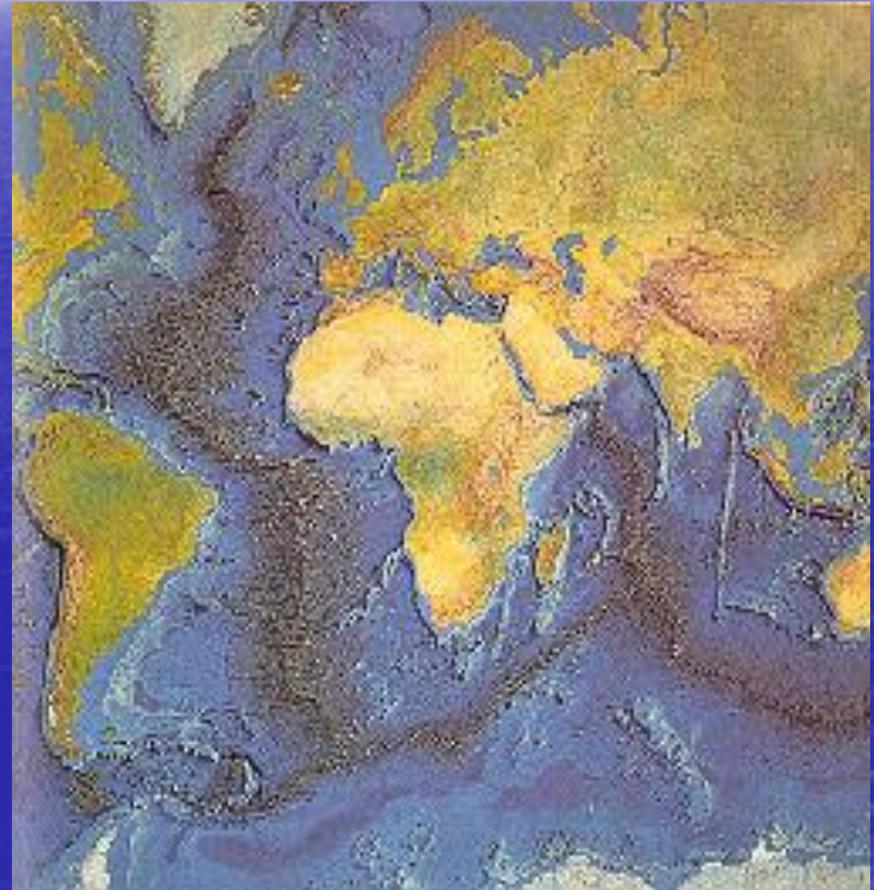
1.Evidence from landforms

2.Evidence from fossils

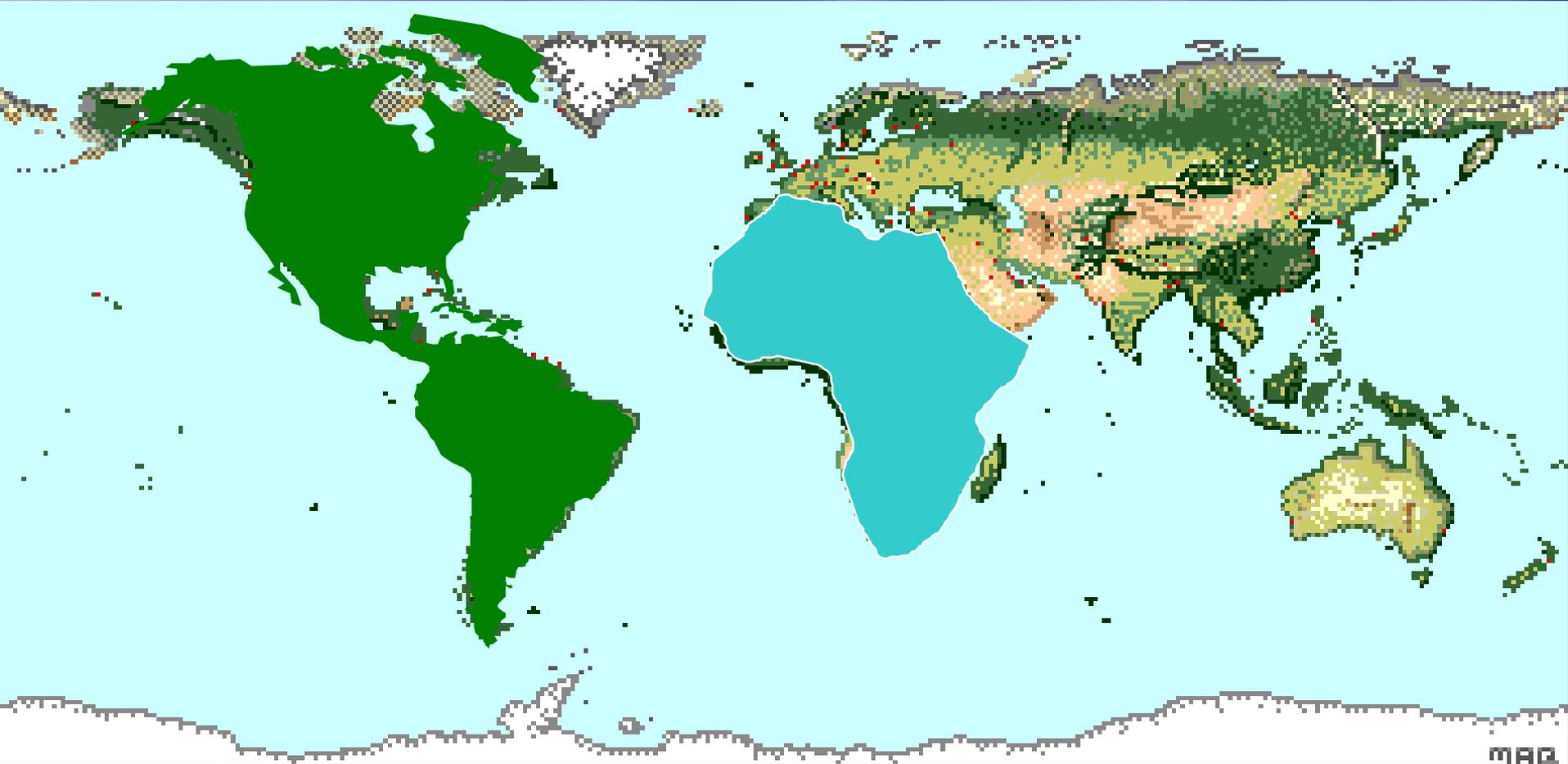
3.Evidence from climate

Evidence from landforms

- The shapes of the continents seemed to fit together.
- Mountain ranges and other features also lined up.

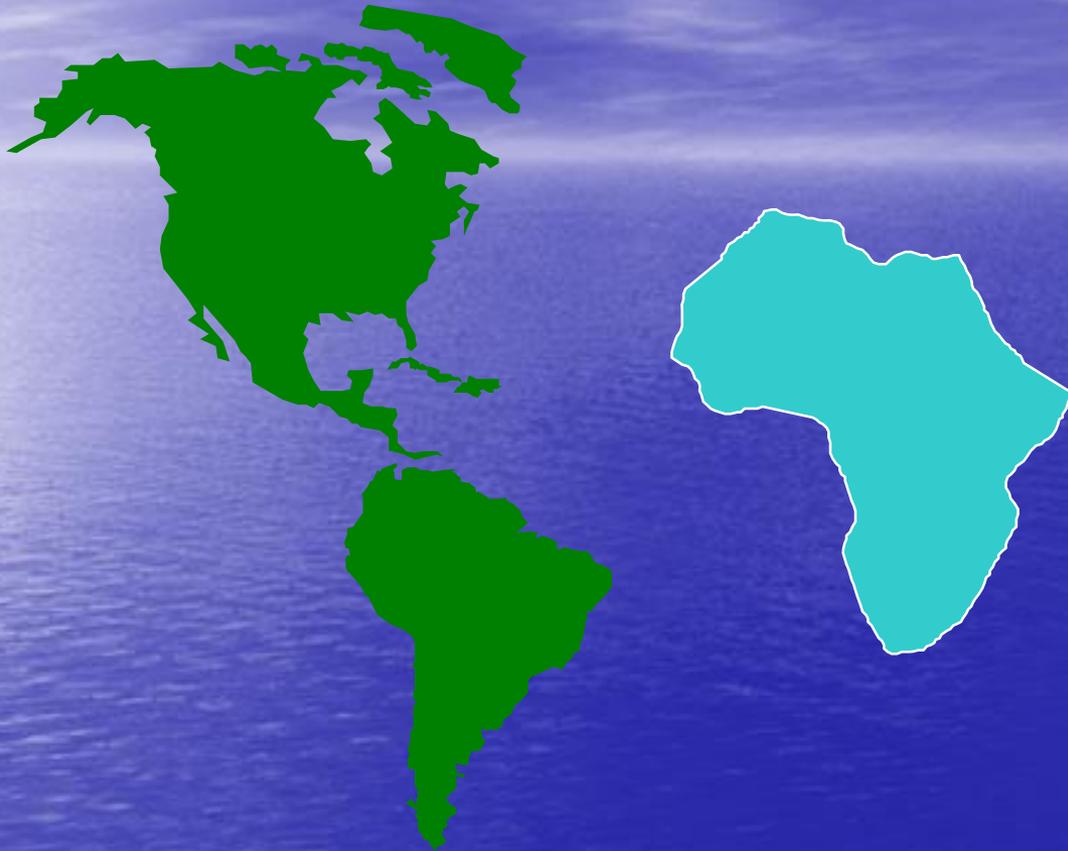


Evidence from landforms



The 'jig-saw' puzzle

Evidence from landforms



The 'jig-saw' puzzle

Evidence from landforms



The 'jig-saw' puzzle

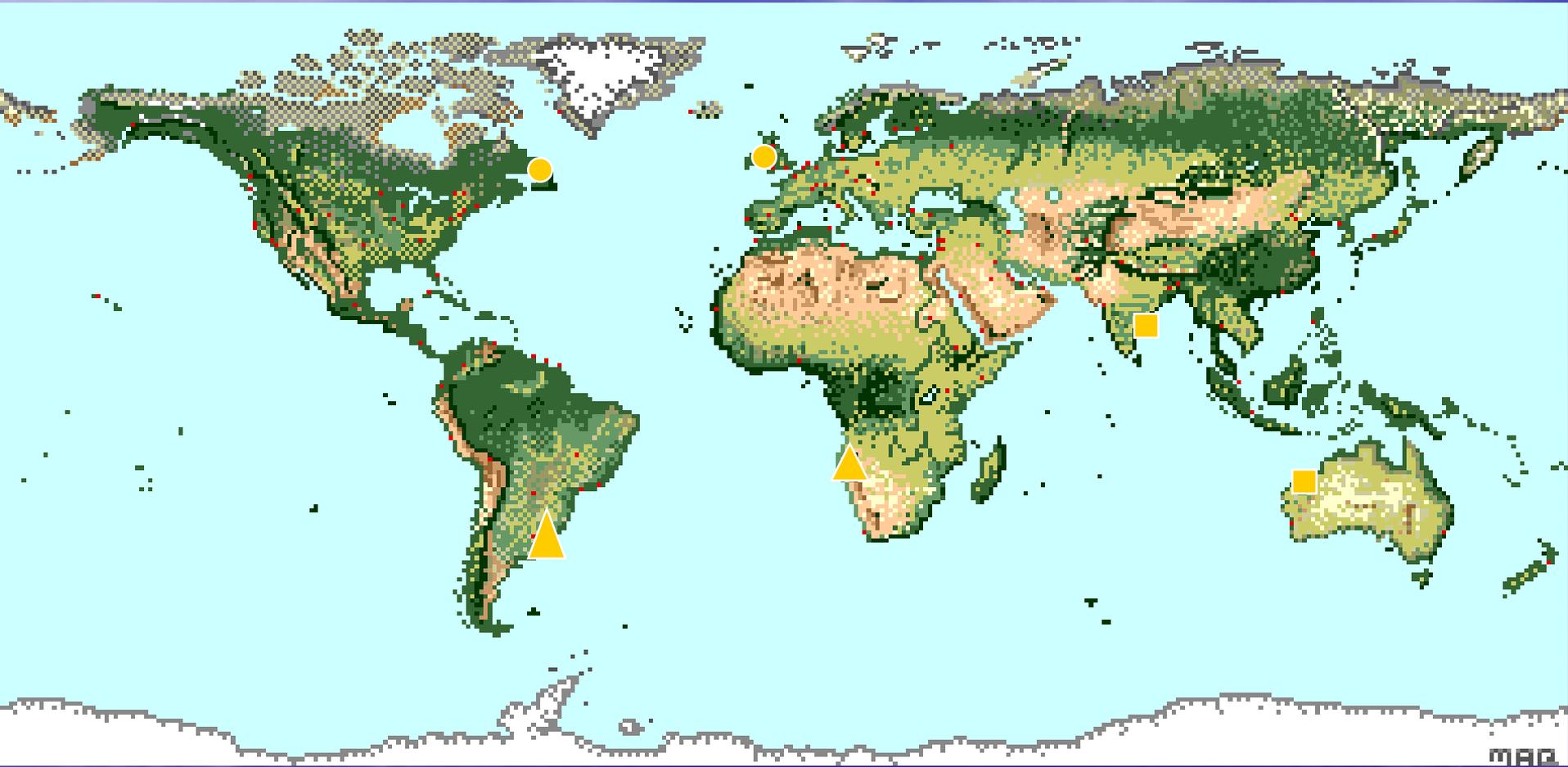
Evidence from Fossils

- Fossils from one continent matched fossils from other continents.
- Wegener used both plant and animal fossils.

Glossopteris: a fern found on the southern continents

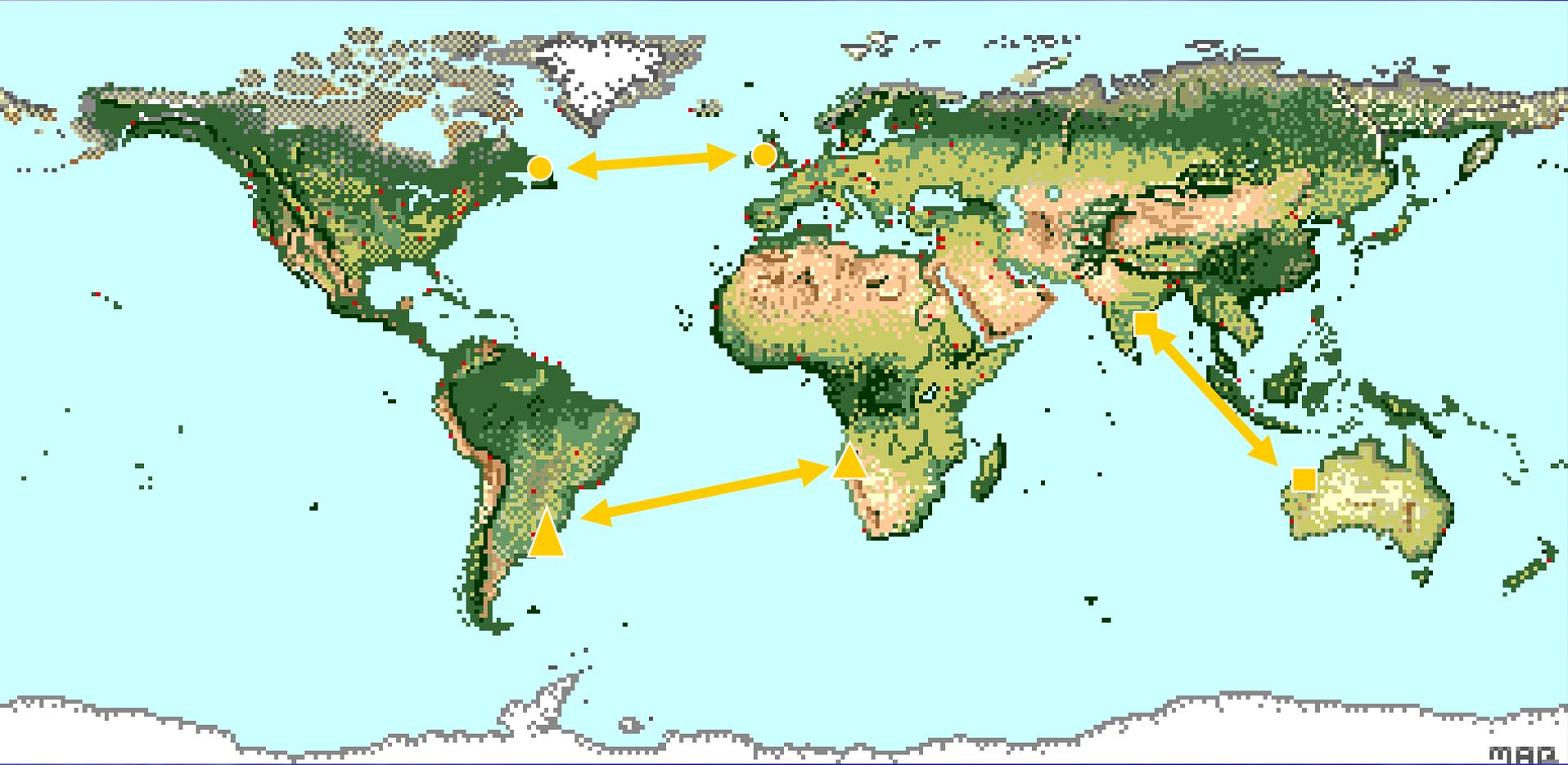
Mesosaurus: a freshwater swimming reptile found in Africa and South America

Evidence from Fossils



fossil matches

Evidence from Fossils



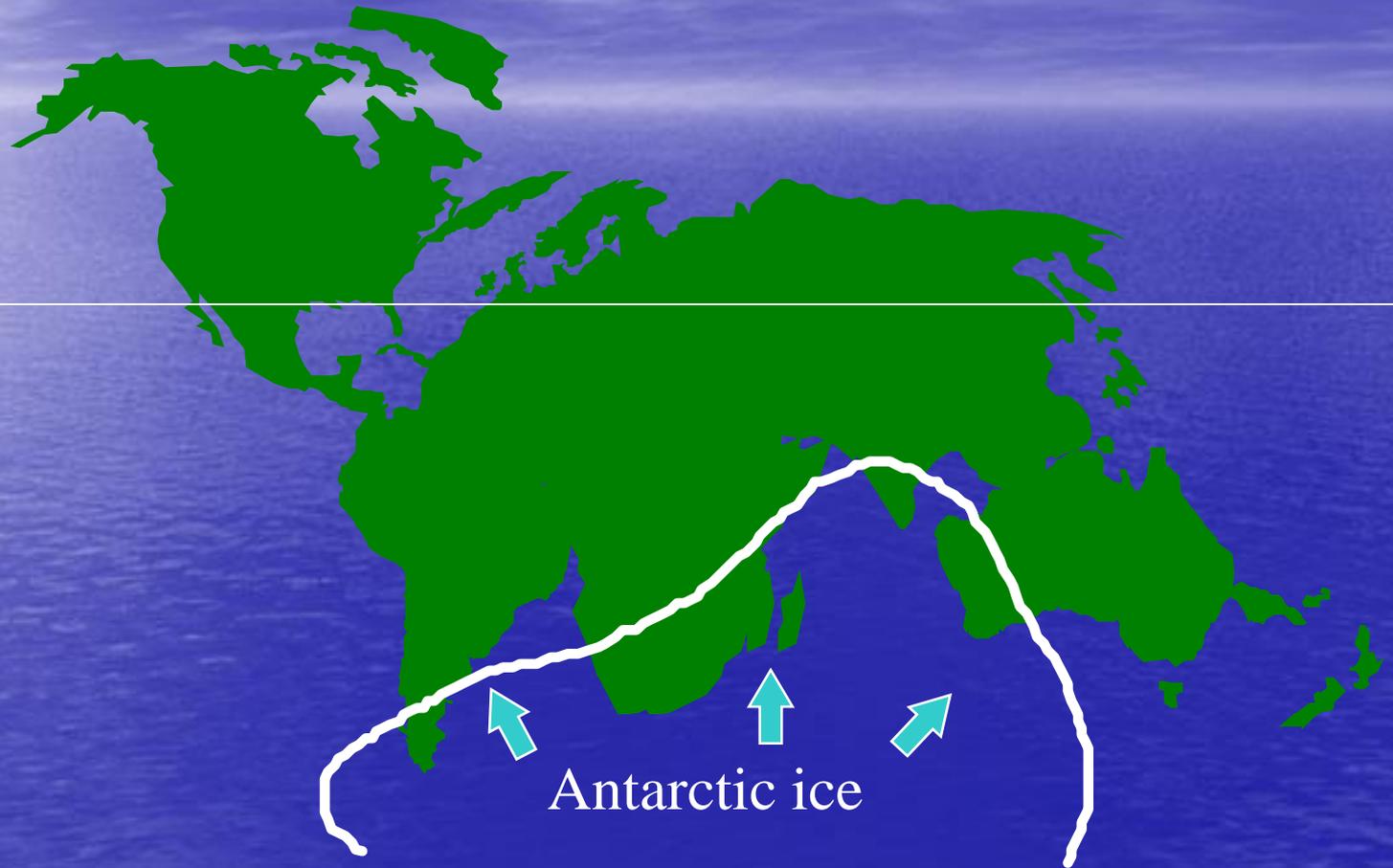
fossil matches

Evidence from Climate

- Wegener looked at certain areas on Earth and their climates
- He noted that the fossils he found on certain sections of Earth did not match the current climate
- Glacier scratches in S. Africa



Evidence from Climate



Evidence from Climate

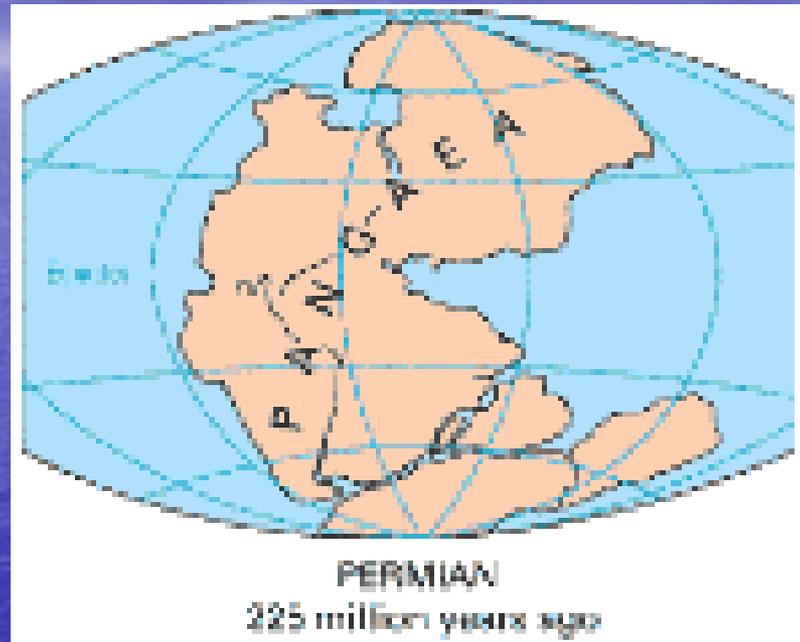


Ice could not have extended this far.
So...continents **MUST** have moved..

Continental Drift Theory

At first
nobody
believed
Alfred
Wegener's
theory.....

**WHY YOU
ASK!**



He could
not prove
how or
why the
continents
moved.

Drift away



Scientists still do not appear to understand sufficiently that all earth sciences must contribute evidence toward unveiling the state of our planet in earlier times, and that the truth of the matter can only be reached by combing all this evidence. . . . It is only by combing the information furnished by all the earth sciences that we can hope to determine 'truth' here, that is to say, to find the picture that sets out all the known facts in the best arrangement and that therefore has the highest degree of probability. Further, we have to be prepared always for the possibility that each new discovery, no matter what science furnishes it, may modify the conclusions we draw."

Alfred Wegener.

The Origins of Continents and Oceans (4th edition)