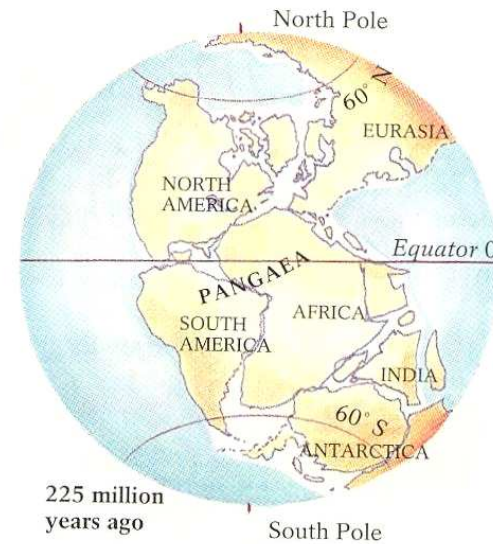
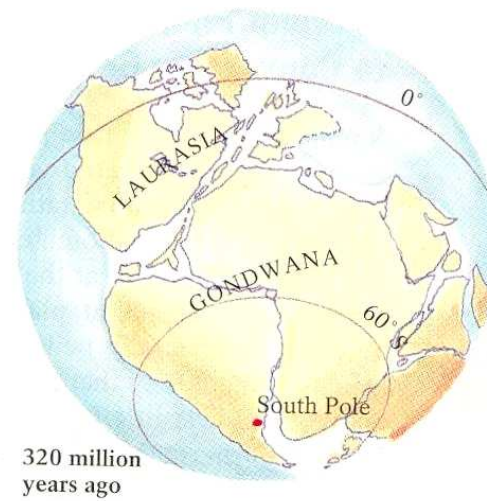
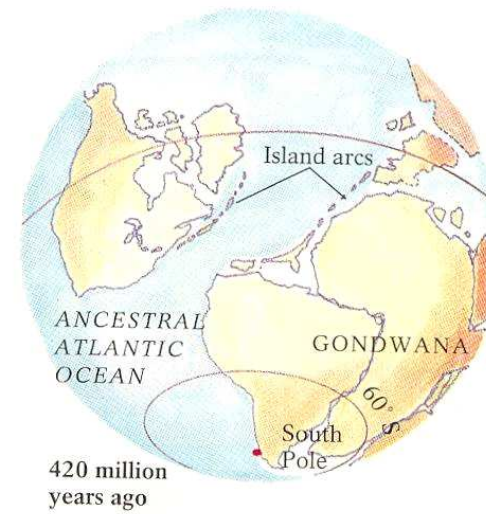
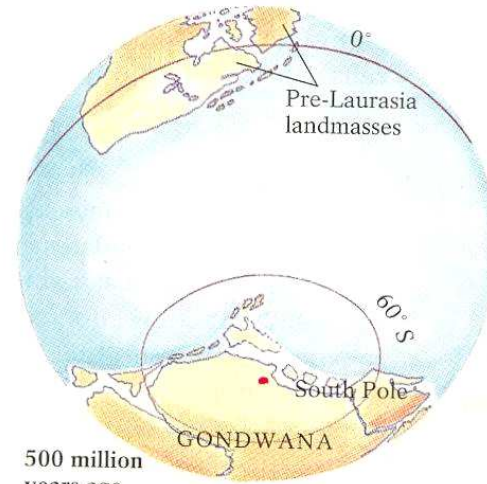


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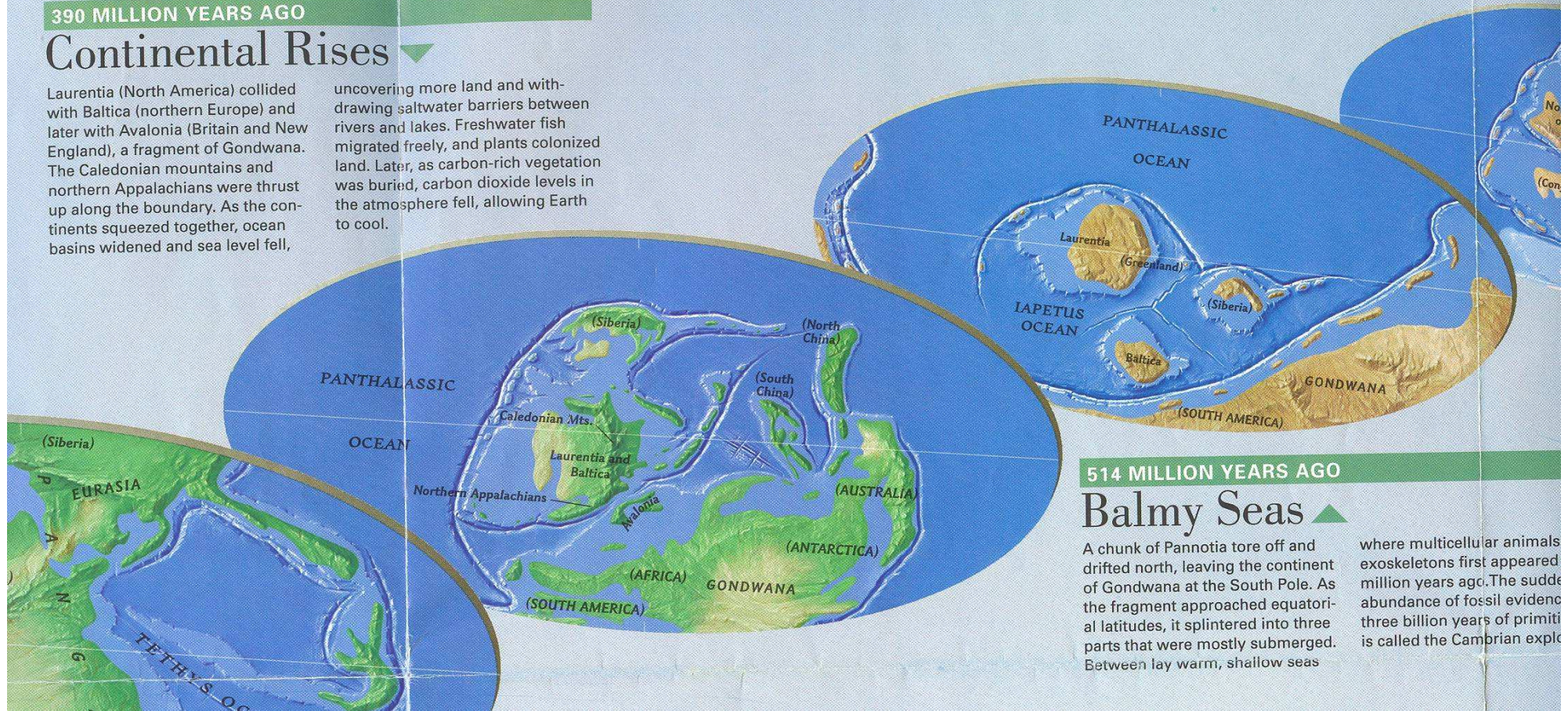
tion of the southern Appalachians. By about 225 million years ago, at the close of the Paleozoic Era, Pangaea was one vast landmass that stretched from pole to pole. Virtually all of the Earth's continental lithosphere remained joined together for the next 50 million years or more, until Pangaea began to rift and water flowed in to form the modern oceans.

390 MILLION YEARS AGO

Continental Rises

Laurentia (North America) collided with Baltica (northern Europe) and later with Avalonia (Britain and New England), a fragment of Gondwana. The Caledonian mountains and northern Appalachians were thrust up along the boundary. As the continents squeezed together, ocean basins widened and sea level fell,

uncovering more land and withdrawing saltwater barriers between rivers and lakes. Freshwater fish migrated freely, and plants colonized land. Later, as carbon-rich vegetation was buried, carbon dioxide levels in the atmosphere fell, allowing Earth to cool.



514 MILLION YEARS AGO

Balmy Seas

A chunk of Pannotia tore off and drifted north, leaving the continent of Gondwana at the South Pole. As the fragment approached equatorial latitudes, it splintered into three parts that were mostly submerged. Between lay warm, shallow seas

where multicellular animals exoskeletons first appeared million years ago. The sudden abundance of fossil evidence three billion years of primitive life is called the Cambrian explosion.

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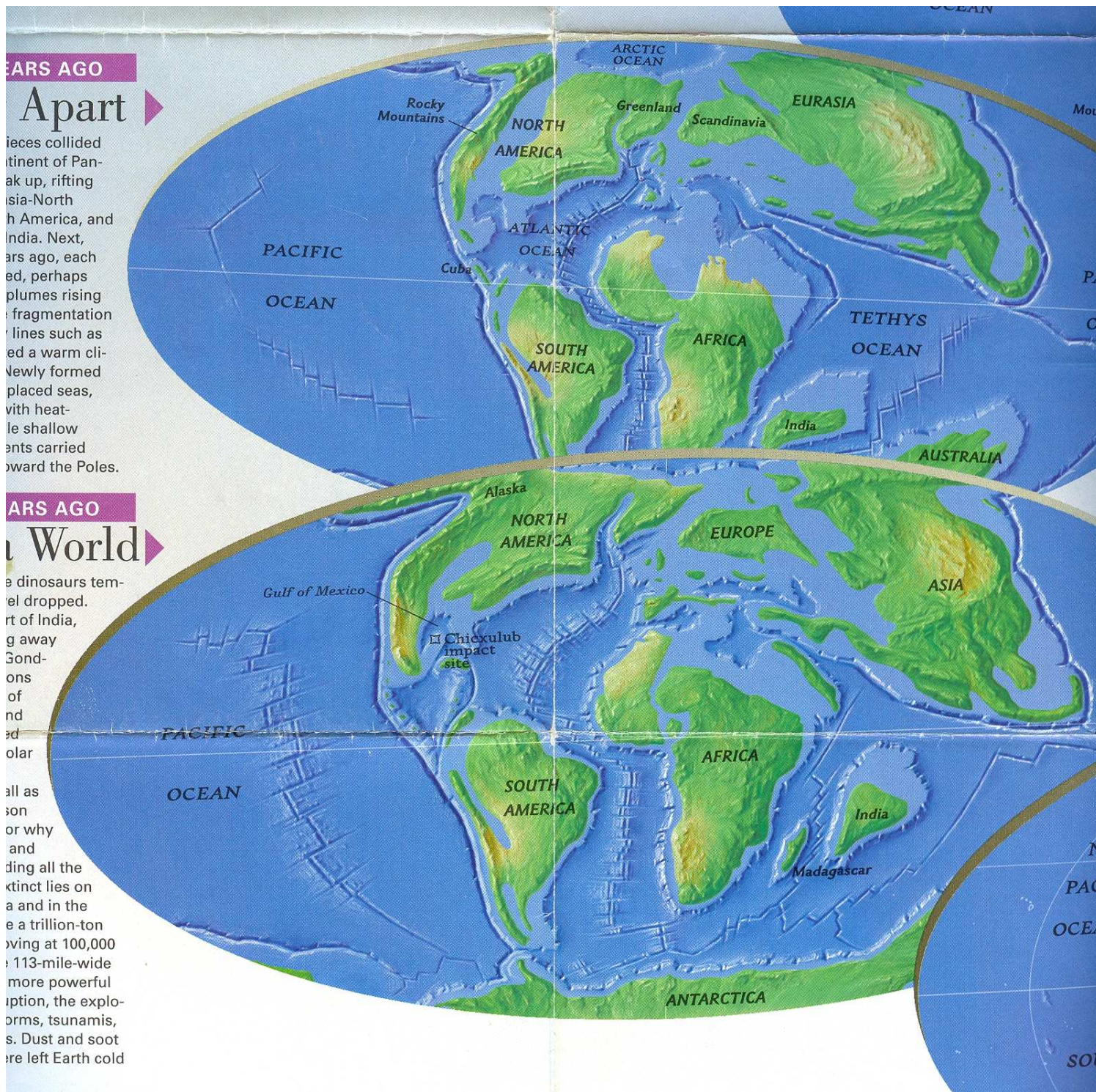
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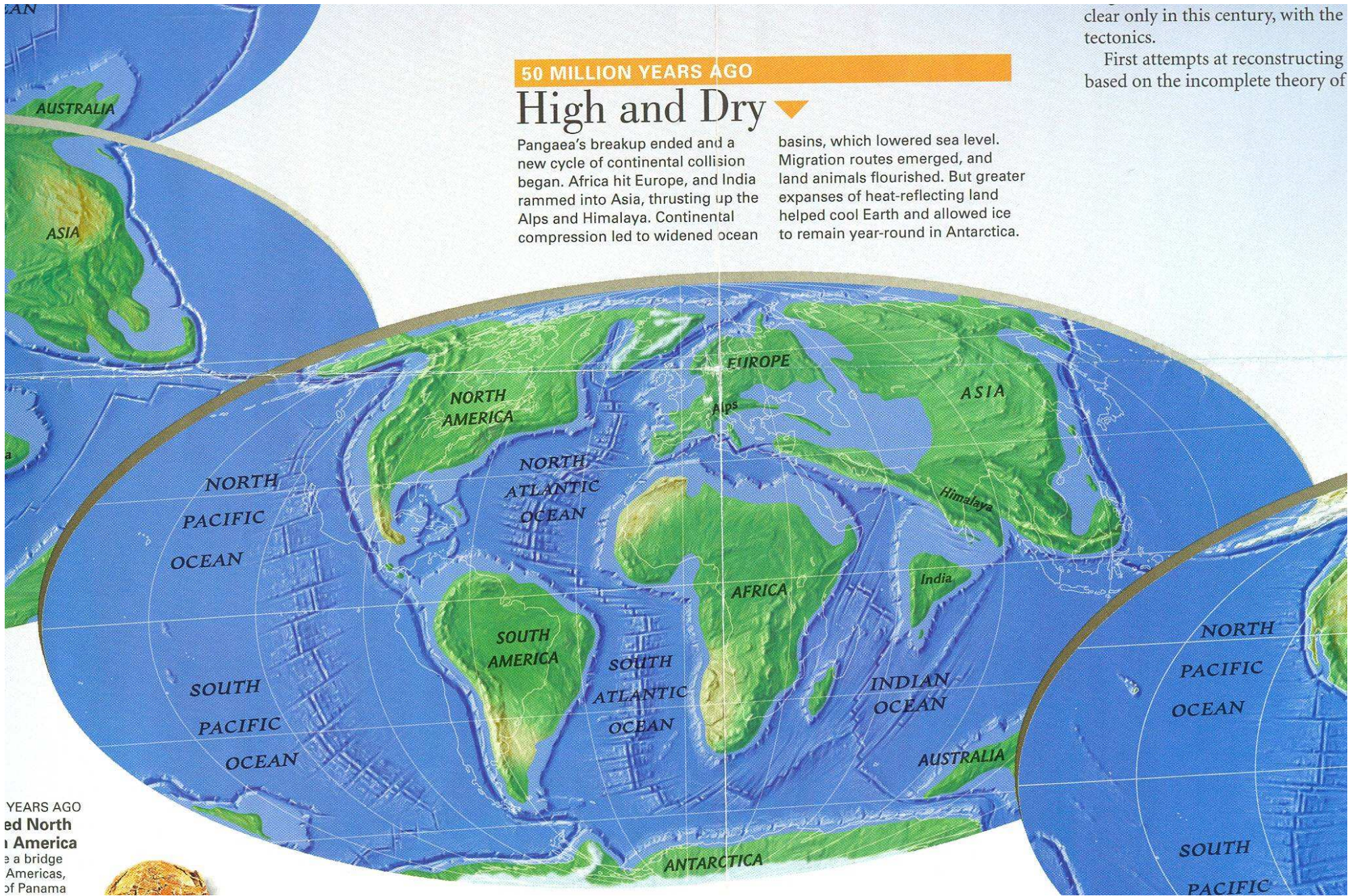
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50 MILLION YEARS AGO

High and Dry

Pangaea's breakup ended and a new cycle of continental collision began. Africa hit Europe, and India rammed into Asia, thrusting up the Alps and Himalaya. Continental compression led to widened ocean

basins, which lowered sea level. Migration routes emerged, and land animals flourished. But greater expanses of heat-reflecting land helped cool Earth and allowed ice to remain year-round in Antarctica.

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First attempts at reconstructing based on the incomplete theory of

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18,000 YEARS AGO Deep Freeze

At the peak of the last great ice age, glaciers frosted northern Europe, northern North America, and Antarctica. Water locked in ice transformed familiar continental outlines, lowering sea level 300 to 500 feet and exposing continental shelves and a land bridge from Asia to the Americas. Within the

next 8,000 years the glaciers receded, the oceans rose, and the climate turned warmer and wetter. Along its farthest margin the retreating ice left signs of its passage, such as the Great Lakes, pressed into the landscape.



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