Life on Earth began in the water. The subsequent rise of plants on land dramatically influenced most major processes on Earth's surface. Without plants, the climate would be markedly different, and terrestrial life as we know it would not exist. However, a spotty fossil record has made it difficult to pin down exactly when and where plants transitioned from sea to shore. Now, Rubinstein et al. describe new evidence—fossils of spore-forming embrophytes in Middle Ordovician sedimentary deposits—that pushes back the timing of the earliest land plants by ~10 million years (from ~462 to ~472 million years ago). The specimens represent five genera of plants, meaning that diversification had occurred even earlier. What's more, they were found in the current-day Central Andes of northwest Argentina, implying that land plants may have originated along the eastern margin of the former supercontinent of Gondwana. Because previous evidence discovered in present-day Saudi Arabia and the Czech Republic—both near what was previously the western edge of Gondwana—dates from a later point in time, land plants may have arrived at those sites via transport mechanisms across land.

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