Researchers plumb mysteries of Antarctic Mountains

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The 3,000-kilometer-long Transantarctic Mountains are a dominant feature of the Antarctic continent, yet up to now scientists have been unable to adequately explain how they formed.

In a new study, geologists report that the mountains appear to be the remnant edge of a gigantic high plateau that began stretching and thinning some 105 million years ago, leaving the peaks curving along the edge of a great plain.

This study revolutionizes thinking about Antarctica's evolution. Previous studies have discussed ways in which the mountains may have risen; the current study says they were already high long ago, and that the adjacent land sank. After the mountain chain was isolated, its topography, with summits up to 4.5 kilometers high, was accentuated by erosion caused by glaciers.

Several of the researchers did extensive field work in Antarctica to collect rock samples and geophysical data that back their ideas.

The work, led by scientists at Columbia University's Lamont-Doherty Earth Observatory, appears in the current issue of *Geology*, which is published by the Geological Society of America.

Source: The Earth Institute at Columbia University