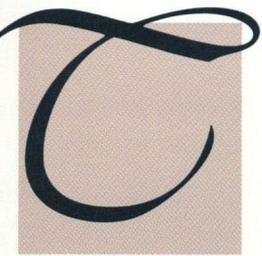


Cordillera del Paine, Chile



he Cordillera del Paine is part of Chile's Parque Nacional Torres del Paine in the southern Andean foothills. The white rock is the

Cordillera del Paine granite, and the darker

rocks at the summits and bases of peaks are sedimentary rocks of the Cero Toro formation.

A shallow sea covered this region about 100 million years ago. It deposited mud and sand that eventually became shale and conglomerates. Twelve million years ago, granitic magma intruded the sedimentary rocks from below. By studying the chemistry of the granite, we know that the magma solidified about 5 kilometres below Earth's surface. The dark rock capping the spires was the roof of that magma chamber, and dark rock at the base of the spires made up the walls of the chamber.

Since intrusion of the granite, the crust has been uplifted about 7 kilometres, and it has been deeply eroded in the recent past, mostly by glaciers that covered the area only a few thousand years ago.

Today a vast ice sheet covers the Andes only 10 kilometres to the west; small glaciers below the granite spires are remnants of that once more extensive ice sheet. Rock pulverized by glaciers gives the surrounding lakes their light green, blue, and gray hues.





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