

PATAGONIA: A FAR TRAVELLED TERRANE

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Patagonia, a crustal block located in southern South America, was the focus of research in the last 25 years, in order to evaluate its origin. Autochthonous and allochthonous hypotheses have been advanced and consensus was far to be reached (Ramos, 2008). However, new findings in northern Patagonia seem to shed light in this controversy. The description of archeocyatids in limestone blocks of the Jagüelito Formation (Middle to Late Cambrian) is the first robust evidence of Antarctic affinities of the Patagonian block (González *et alii*, 2011a). These affinities have been speculated in several hypotheses (see Ramos and Palma, 1996; Aceñolaza *et alii*, 2002), but paleogeographic reconstructions were not supported by hard data. A comprehensive hypothesis should explain the following facts (1) the basement has Gondwanian affinities based on the common occurrence of Brasiliano-age inherited zircons (Pankhurst *et alii*, 2006); (2) an Ordovician magmatic arc was close to the present east margin of Patagonia (González *et alii*, 2011b); (3) late Paleozoic deformation with northeast vergence was dominant in its northern boundary as described by Keidel in 1914, and Du Toit in 1937 in his SAMFRAU geosyncline; and (4) a late Paleozoic magmatic arc bounded the northern Patagonia parallel to the previous deformation belt (Llambías *et alii*, 1999). All these facts could be explained with (a) Patagonia attached to the passive margin of Eastern Antarctica; (b) receiving debris from the Transantarctic Mountains from the extensive Shackleton Limestone; (c) being part of the magmatic arc during the Ordovician times and (d) deformed by the Ross orogeny. Patagonia rifted away in Silurian times, and subsequent drift to the present setting was the result of subduction along its northern boundary until final collision with Gondwana in early Permian times. Subsequent post-collisional granites and a large rhyolitic plateau were developed in the Late Permian-Early Triassic along northern Patagonia. Although this hypothesis explains most of the known data, further research is still needed to reconstruct the relationships with the Antarctic Peninsula, which until the Early Jurassic was attached to South America.

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