

Proterozoic paleokarst in the Barroso Formation, southern Minas Gerais State, Brazil.

¹ANDREIS, R.R., ¹PACIULLO, F.V.P., ¹RIBEIRO, A. ¹Federal University of Rio de Janeiro, Brazil.

The Barroso Formation is a succession of the Mesoproterozoic intracratonic Carandaí Basin, deformed and metamorphosed (greenschist facies) during the Brasiliano orogeny. It includes a basal part comprising thin shale-marl-limestone cycles with an upward increase of limestones. These limestone-rich succession was deposited in a shallow marine paleoenvironment. The paleokarst features are related to an intraformational unconformity developed before the deposition of the transgressive Prados pelitic succession. These pelites cover the paleokarst and onlap several small limestone paleohighs. The limestones show typical features of subaerial exposure, such as cupular forms, vuggy porosity and scarce furrows. Dissolution fractures and scarce vertical and horizontal tubular holes, some deeply dissolved canyons and few small dolines also occur. Some tubular holes are partially filled with massive clay related to infiltration from the above pelite or to the tube wall dissolution. No dolomitization was recognised. The absence of paleosoils, calcretes, *rundkarren*, and other paleokarst surface features may suggest that the uppermost part of the karst profile was partially eroded during the Prados transgression. The absence of caves and the scarcity of dolinas and dissolved deep canyons indicate that the paleokarst surface was not well developed, probably reaching the beginning of the maturity stage under temperate paleoclimatic conditions. Similar Proterozoic paleokarst features were also recognised in the Conselheiro Mata Group carbonates further north, in the Espinhaço Range.