

"BOUDIN" STRUCTURES IN SRI LANKAN PRECAMBRIAN
ROCKS AS PRECURSOR : TO ARCHAEOLOGICAL CAVE SITES

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Field geological studies at the Sigiriya Fortress and the Pidurangala temple sites [5th Century (A.D.)] have revealed the existence of several cave-like abodes within dark lithological bands. The dark bands rich in ferromagnesian minerals are found interbanded with pink coloured gneisses of dominant quartz-feldspar composition. The dark bands are lens-like elongated bodies which for the most part have been removed from the parent rocks due to topical processes of weathering and erosion and perhaps with the intervention of man.

The dark bodies are the result of Precambrian deformation and metamorphism processes on two adjacent relatively strong layers of rocks. The bodies formed of the more competent layer have an oval shape in cross section and are called "boudins". The cave-like structures could result in rock sequences due to the removal of the boudins and the subsequent formation of voids. Such cave-like structures of varying dimensions have served as abodes for monasteries and as sites for fresco paintings. The monastery and image house complex at Pidurangala and the famous fresco pocket at Sigiriya are two such examples.