

## **GEOLOGICAL AND PETROGRAPHIC STUDY FROM THE BÚZIOS ISLAND, NORTHERN COAST OF SÃO PAULO STATE, SE BRAZIL.**

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Cretaceous syenites and charnockitic country rocks, both cut by dykes of varying compositions, make up the geology of Búzios Island, one of six neighbouring alkaline complex. Syenites are mainly coarse-grained, locally fine-grained, with angular decimetric to metric charnockitic xenoliths. The main syenite range from alkali feldspar syenite to quartz alkali feldspar syenites. Alkali feldspar is micro-mesoperthitic, with a slight predominance of albitic phases. Ferromagnesian include clinopyroxene and opaques, with biotite and/or amphibole. Varied mafic dykes concentrate in the western, becoming rarer in the eastern and southern, where prevail fine-grained phonolites. Most dykes are N50-55E, subvertical, with radial and dipping NW dykes appear in southeastern part. Felsic dykes vary from micro-granites to phonolites, the more SiO<sub>2</sub>-rich cutting country rocks, and the undersaturated cutting the syenites. Trachytes occur all through the island, and are made up by micro-mesoperthite and felds. Undersaturated rocks are nepheline +sodalite bearing, mostly of agpaitic character. Mafic rocks comprise alkali basalts, basanites, tephrites and trachybasalts. Alkali basalts have zoned plagioclase, interstitial alkaline feldspar and pyroxene or amphibole, opaques +biotite. The other mafic rocks are lamprophyric, olivine-, clinopyroxene-, kaersutite-, biotite- and opaque-bearing, with similar matrix, except for olivine. Interstitial spaces and ocelli contain potassium feldspar, analcite and glass. In spite of differences in petrography and chemistry, alkaline bodies of northern São Paulo coast have strong similarities, besides their proximity and same geological setting. They are likely to be synchronous, related to deep thermomechanical anomalies in the mantle, and tectonic Mesozoic evolution of Southern Brazil.