Some mineralogical, geochemical and biological aspects of a selected number of soil profiles developed on dolomitic marble of the kandy and Matale districts, belonging to the Precambrian metasedimentary rock sequence, were examined.

The soil profiles were thinly developed on marble parent rocks with overgrown secondary vegetation. The marble rocks were dolomitic in composition and the highest $CaCo_3$ percentage and lowest acide insolubilities were recorded from rock samples of Digana. Olivine was the most common impurity observed at all locations, except at Digana, where diopside was present in appreciable quantities. Grossular garnet, apatite, spinel and pyrite were the common accessories.

The thin soil development on marble can be attributed to the sparse occurrence of silicate minerals in marble. Secondary vegetation types grow in such shallow soil profiles, in which kaolinite is the dominant clay mineral. The presence of kaolinite, indicates and advanced stage of weathering.

The $CaCo_3$ and $MgCo_3$ contents of samples from the same quarry showed sitginificant variations. The marble from Digana and Matale, formed entirely of dolomite and containing very minute amounts of accessory silicate minerals, are considered to be of better industrial quality. However, lime-kiln owners prefer to use low quality but denser marble with appreciable amounts of silicate impurities, for economic reasons. Lime kilns in all areas studied are not energy-efficient, and cause air pollution and health hazards to workers. The efficiency of conventional kilns, in which heat losses are considerable, needs to b upgraded.