The Transition of Mineral Composition by Weathering

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All kinds of rock are weathered in nature. Minerals in rock are changed into other minerals as time goes on. In this study, a process of weathering was presumed by observing minerals of olivine-bearing two-pyroxene andesite under a polarization microscope collected at Nagaotoge, Hakone. Some kind of reddish brown substance was in orthopyroxene. The substance turned out to be limonite derived from a main ingredient of orthopyroxene. In addition, a cross sectional diagram which shows a look of weathering with depth from a surface of the rock was made based on the observations of three thin sections. It is thought that the dissolution or formation of minerals is happening near the surface. However, the weathering process was not presumed enough because the number of thin sections was small.

Keywords: weathering, thin sections, andesite, orthopyroxene, limonite, the weathering process

