

Attractive collaboration of global "peridotite geoparks"

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Mt. Apoi is located at the southern end of the Hidaka mountains, and composed totally of peridotites derived from the upper mantle of the Earth's interior. The geological history of the uplifting of the Mt. Apoi peridotites has been explained as a westward thrusting of the North American plate on the Eurasian plate during the building stage of the Hidaka mountains (Niida, 1999, 2010). Mt. Apoi geopark's appeal is summarized with the main theme 'A story of gifts from deep inside the Earth connecting land and people together'. The first subtheme is on peridotite, which is aimed at the interior and the dynamic movement of the Earth. Here are some 'peridotite geoparks' in the world, which are organizing geosites of peridotites, as follows:

1. Sesia-Val Grande Geopark (Italy): Orogenic lherzolites are exposed in the Ivrea-Verbano zone in NW Italy. The Balmuccia and the Finero peridotites are well studied as well as Horoman peridotites of the Mt. Apoi geopark.
2. Geopark Harz Braunschweiger Land Ostfalen (Germany): The type locality of 'harzburgite', which represents a peridotite type formed after a high degree of partial melting, is organized as geosite (No. 100) in a mountain valley.
3. Lands of Knights Global Geopark (Portugal; Terras de Cavaleiros Geopark) has become a new member of the global networks in 2014, organizing many geosites in the area of very old ophiolite complexes generated during the European Variscan orogen (560~245 Ma).
4. Oman is also planning a global geopark. Oman ophiolite is well known as a representative ophiolite complex in the world, showing a perfect succession of the oceanic lithosphere from the upper mantle to the crustal sections.
5. Global geoparks organizing geosites with peridotite xenoliths: (1) Jeju Island Geopark (Korea), and (2) Azores Geopark (Portugal), which are both on volcano islands, have beautiful geosites of lava including a lot of peridotite xenoliths.

The above 'peridotite geoparks' are all organizing some excellent geosites of peridotites derived from the upper mantle of the Earth's interior. Through geosites containing peridotites such as orogenic lherzolites and ophiolitic ones, these geoparks allow visitors to experience large-scale global movement and the history of the Earth's dynamic changes from the past to the present. In this presentation, explore the goal of Mt. Apoi Geopark working together with the 'peridotite geoparks' in the world in order to share world-wide the fascinating mutual themes of the Earth's interior and the global dynamic movement.

Keywords: Mt. Apoi Geopark, peridotite, upper mantle, magma, Earth's interior, global dynamic movement