

Alpine plant communities on Mt. Apoi and their conservation and utilization

TAKUMI HARADA, KATO SATOMI, AND ALLISON A. BARLOWS - *Mt. Apoi Geopark Promotion Council, Mt. Apoi Geopark Visitor Center, Hirau Samani-cho Hokkaido, 058-8501, Japan <apoi.gvc@iris.ocn.ne.jp>*

The Hidaka Mountains of Hokkaido – the northernmost island in the Japanese Archipelago – were formed by a collision of crustal plates approximately 13 million years ago. Situated in the southwestern part of the mountains, Mt. Apoi is made up of peridotite formed when part of the upper mantle was thrust up from the depths of the Earth. Despite its low altitude (810 metres), Mt. Apoi provides habitats for large numbers of alpine plants. This mountain of flowers has been designated as a special natural monument of Japan.

Alpine vegetation thrives on this low-altitude mountain due largely to the presence of ultrabasic peridotite rock, which forms a barrier preventing the penetration of flatland plants. In recent years, however, rapid vegetation changes that cannot be prevented by this barrier have been taking place, presumably as a result of global warming.

Local government officials, researchers and area residents have worked together closely to protect Mt. Apoi's valuable and beautiful flowers for over 15 years. Their activities initially focused on responses to damage caused by the illegal removal of plants, and included patrols, networking with other regions and regulatory improvement. Recently, however, their work has centered on exploring the possibility of reviving flower habitats through artificial environmental modification efforts such as flower restoration experiments and the removal of dwarf stone pines. Meanwhile, Mt. Apoi continues to attract some 6,000 climbers and researchers annually, and serves as the heartland of education and tourism in Mt. Apoi Geopark.

This paper highlights the current situation of alpine plant conservation initiatives promoted in Mt. Apoi Geopark and their utilization in the context of geotourism and geological heritage education as well as conservation activities.

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