

Conservation and restoration activity at mountain of alpine flowers 'Apoi'

*Shiro Sakashita¹

1.Mt Apoi Geopark Promotion Council

Mt. Apoi, a main site of Mt. Apoi UNESCO Global Geopark, is a treasure trove of alpine plants even though it is 810.2 meters high. The flora is strongly affected by the ultrabasic rock 'Peridotite' and the environment around there. Peridotite has a remarkably high content of Nickel and Magnesium -elements know to inhibit plant growth. Also, the location of Mt. Apoi is a good environment for alpine plants with strong wind from the Pacific Ocean. In terms of climate, temperature is stable at low in summer and limited snow fall in winter. It is good for alpine plants.

Mt. Apoi's alpine plant communities have been designated as a Special Natural Monument of Japan since 1952. However current situation of Mt. Apoi have changed. We are facing the crisis of reduction of alpine plants. Also these are many difficulties such as illegal digging of endemic plants especially Hidakaso (*Callianthemum miyabeianum*), rapid environment change which possibly caused by global warming, and grazing pressure from deers.

Dealing with these problems, we have started activities such as patrol around the mountain and develop mountain trail to protect alpine plants with Mt. Apoi supporters club. Also, group of local people and scientists investigate the vegetation of alpine plants, the situation of overconsumption by deer and the effect of restorative alpine plants. Through these activities and investigations, we found the whole of recent situation of Mt. Apoi. However, it is necessary that we should change our actions for more effective and strategic. In addition, Mt. Apoi is located in a Hidaka-sanmyaku Erimo Quasi-National Park according to the National Parks Act. Development activities and any other activities in the area are subject to regulation by act. So it took a long time to promote rapid decision making and take a government approvals and licenses for activities inside the National Park. This is why we could not investigate and enforce our conservation activities smoothly.

Therefore, October 2015, Samani Town set up a 'Mt. Apoi Nature Restoration Expert Panel' of specialists. The panel consists 8 individual specialists (five botanists, two zoologists and one Mt Apoi supporter's club member) and secretariat is assumed by Samani Town and Hokkaido Government. The purpose of the panel is to asset and serve about alpine plants and any other natural environment at Mt. Apoi scientifically that is not restricted complex relations such as existing local rules. And the panel give advice for each related organizations which do with conservation activities and coordinate these. Depending on the instruction from panel, related organization should reflect these for Geo-conservation project. Setting up this panel, we are steadily engage in the promotion of our conservation and restoration activity with related trinity (scientists, local people and government).

Clarifying our activities, from 2016 to 2018, we start new 3-year restoration of natural monument project which is subsidized menu from Agency for Cultural Affairs. It's expected to utilize use for each investigations such as connection among increasing deer and influence on environment, numbers and distribution of individual endemic flowers, measure for overuse due to increase of visiting people, impact of the increase stone pine and other tree at upper station of Mt. Apoi, conservation and restoration of Hidakaso (*Callianthemum miyabeianum*) activity at fieldwork, and proceed monitoring and observe the existing experimentations more systematically.

Our goal is for Mt. Apoi to make a comeback as a mountain of flowers. To keep processing our activities as a Geopark, it is necessary that we set comprehensive and systematical plan and basis to operate each conservation activity in accordance with National Park Act.

The posters we made show the details of our Geo-conservation structure and plan.

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