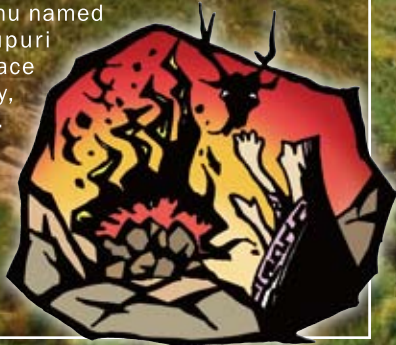


● Mt. Apoi is an accredited member of the Japanese Geoparks Network, an affiliated organization of the Global Geoparks Network. The Geoparks initiative, which began in Europe and is supported by UNESCO, aims at revitalizing local communities by using natural heritage sites with precious and beautiful geology and terrains for education and tourism purposes.

Once upon a time, there were no deer in this area. Deer were an important source of foodstuff for the Ainu, who held discussions and decided to pray to the gods of heaven to be bestowed with the animal. The Ainu chose the summit of what is currently Mt. Apoi as a religious site, and set up an altar and erected a forked tree, on which they placed their treasured swords. They piled up grass and made a big fire as if to burn the sky, created a large fireball, made offerings of inaw (prayer sticks) and sake, and prayed to the gods (kamuy nomi) in earnest for their wishes to be granted.

Their efforts were rewarded. After the ceremony, the population of deer increased, improving their standard of living. The Ainu named the place ape-o-i-nupuri (ape = flame, o-i = place where there are many, nupuri = mountain). Ape-o-i-nupuri means a mountain where a big fire burned, and the name Apoi is derived from this Ainu word.



— To hikers —

- The Mt. Apoi alpine plant community is the property of all the people of Japan, and should be protected forever for future generations. Special natural monuments are nature's national treasures.
- The illegal digging-up of plants is an unforgivable criminal act. Such actions in designated natural monument areas violate the Cultural Assets Preservation Act, the Natural Parks Act, the Forest Act and prefectural ordinances, and are punishable under these laws. If you witness such a crime, please have the courage to report it to the police.
- The most serious damage to the alpine plant community is caused by being trampled on by careless hikers (those taking photos). Each hiker is requested to take care so as not to veer from the trails when walking on the mountain.
- In order to protect precious alpine plants, please wash the soles of your shoes in the stream near the trailhead, to prevent the infiltration of alien species.

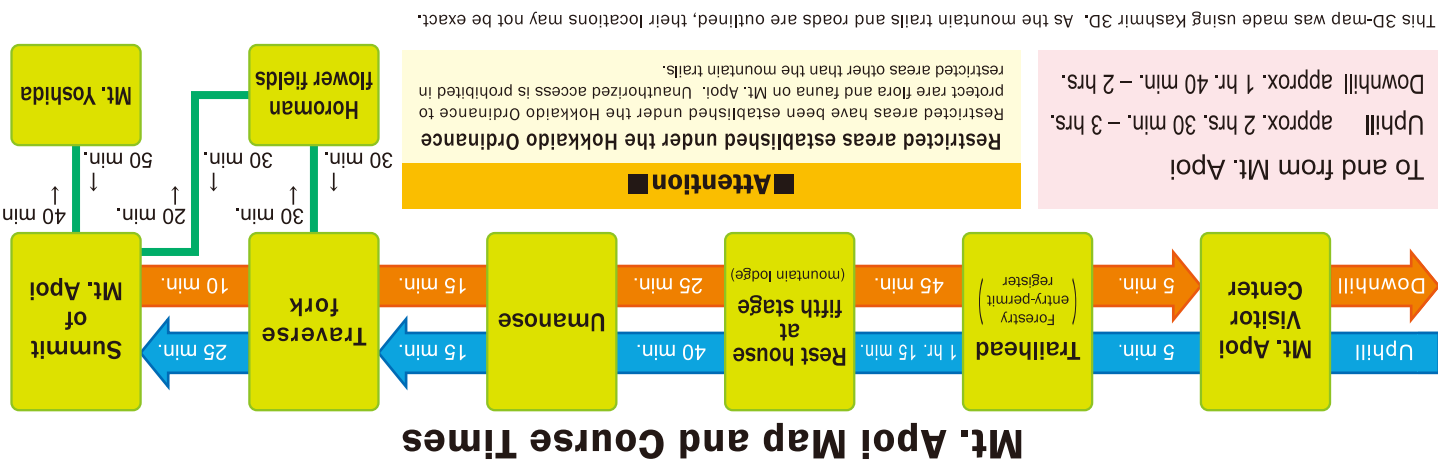


*Hidakaso (Callianthemum miyabeanum)*

[Published by]

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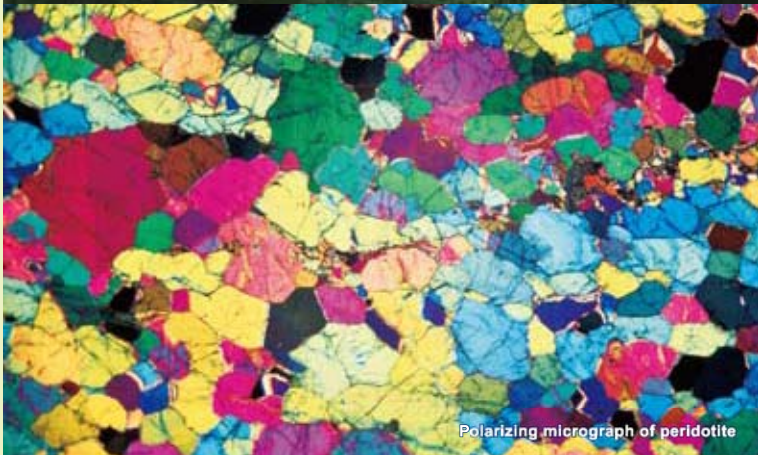


## Mt. Apo! Map and Course Times



# Mt. Apo

Mt. APOI



**Polarizing micrograph of peridotite**

## Mt. Apo Visitor Center

Hirau, Samani-cho Tel: 0146-36-3601

As a result of years of illegal digging up of plants and vegetation change probably caused by global warming, it is said that the Mt. Apoi alpine plants community has shrunk to less than one fifth of the scale at the time it was originally designated as a special natural monument half a century ago. The Mt. Apoi Fan Club and the Comeback 1952 Mt. Apoi Regeneration Committee, which consists of researchers and administrative bodies, are working on nature regeneration experiments on the hillside to restore the flower fields to their original states.

seen. *Himechamadarasesseri*, an alpine butterfly that is not found anywhere in Japan except Mt. Apoi, black woodpeckers and Blakiston's fish owls inhabit this area, and all of them are designated as natural monuments. In addition, *Apolimaina*, a land snail endemic to the Apoi mountain mass, and Japanese pikas, a relict species from the Ice Age can also be seen there.

The area is under the special soil conditions of ultrabasic peridotite, and is significantly affected by sea fog and strong winds as it is close to the coast. Moreover, it has less snow during winter, and these conditions enable alpine plants to grow along the ridge line despite the low altitude, and many endemic plants including *hidakaso* (*Callianthemum myabeanum*), *ezokozorina* (*Hypochaeris crepidioides*) and *apokanba* (*Betula apjensis*) can be

Mt. Apo (810.2 m) is situated at the southernmost tip of the Hidaoka Mountains, near the coast to the west, and the mountain mass, which includes Mt. Pinneshiri (958.2 m) in the north and Mt. Horoman (685.4 m) in the southeast, is made up of the Horoman peridotite complex, which was pushed up from the upper mantle several 10 km deep under the ground when the Hidaoka Mountains was formed approximately 13 million years

Designated in 1952

## Mt. Apo! Alpine Plant Community

## Nationally-designated special natural monument



Endemic plants of Mt. Apoi

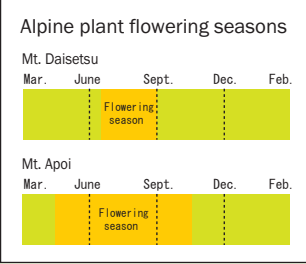
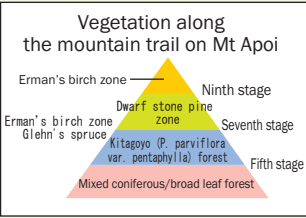
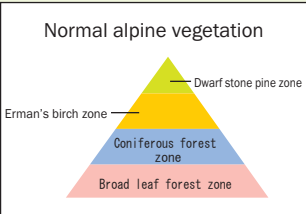
Endemic species	Apoiazami Ezokozorina Apoikanba Samaniotogiri Hidakaso Ezoinunohige Hidakaiwazakura Miyamahamodoki Samanikaramatsu Ezotakanenigana Apoitanukiran Hidakatohiren Hosobatoki	Cirsium apoiese Hypochoeris crepidioides Betula apoensis Hyericum samaniense Callianthemum miyabe anum Eriocaulon perplexum Primula hidakana Rhamnus isidae Thalictrum integrilobum Crepis gymnopus Carex apoensis Saussurea riederi ssp. kudoana Angelica acutiloba ssp. lineariloba
Quasi-endemic species	Apoiazumagiku Samaniyukiwari Himeshiraneninjin Apoi Yamabukishoma Apoitsumekusa Apoimantema Apoikinbai Apoikaramatsu Chaboyamahagi Hidakatorikabuto Himeezonegi Ezosaiko Ezokisumire Birodoezoshio gama Apoizekisho	Erigeron thunbergii var. angustifolius Primula modesta var. samanimontana Primula modesta var. angustissima Aruncus dioicus var. subrotundus Arenaria katoana var. lanceolata Silene repens var. apoensis Potentilla matsumurae var. apoensis Thalictrum folitidum var. apoiese Lespedeza bicolor var. nana Aconitum yuparense var. apoiese Allium schoenoprasum var. yezomonticola Bupleurum nipponicum var. yezoense Viola brevistipulata var. hidakana Pedicularis yezoensis var. pubescens Tofieldia coccinea var. kondoi
Endemic subspecies	Hidakatohiren Hosobatoki	Saussurea riederi ssp. kudoana Angelica acutiloba ssp. lineariloba
Quasi-endemic subspecies	Apoiazumagiku Samaniyukiwari Himeshiraneninjin Apoi Yamabukishoma Apoitsumekusa Apoimantema Apoikinbai Apoikaramatsu Chaboyamahagi Hidakatorikabuto Himeezonegi Ezosaiko Ezokisumire Birodoezoshio gama Apoizekisho	Erigeron thunbergii var. angustifolius Primula modesta var. samanimontana Primula modesta var. angustissima Aruncus dioicus var. subrotundus Arenaria katoana var. lanceolata Silene repens var. apoensis Potentilla matsumurae var. apoensis Thalictrum folitidum var. apoiese Lespedeza bicolor var. nana Aconitum yuparense var. apoiese Allium schoenoprasum var. yezomonticola Bupleurum nipponicum var. yezoense Viola brevistipulata var. hidakana Pedicularis yezoensis var. pubescens Tofieldia coccinea var. kondoi
Endemic variant species	Apoiazumagiku Samaniyukiwari Himeshiraneninjin Apoi Yamabukishoma Apoitsumekusa Apoimantema Apoikinbai Apoikaramatsu Chaboyamahagi Hidakatorikabuto Himeezonegi Ezosaiko Ezokisumire Birodoezoshio gama Apoizekisho	Erigeron thunbergii var. angustifolius Primula modesta var. samanimontana Primula modesta var. angustissima Aruncus dioicus var. subrotundus Arenaria katoana var. lanceolata Silene repens var. apoensis Potentilla matsumurae var. apoensis Thalictrum folitidum var. apoiese Lespedeza bicolor var. nana Aconitum yuparense var. apoiese Allium schoenoprasum var. yezomonticola Bupleurum nipponicum var. yezoense Viola brevistipulata var. hidakana Pedicularis yezoensis var. pubescens Tofieldia coccinea var. kondoi
Endemic varieties	Apoikuwagata Apoi hahako Apoimisebaya	Veronica schmidtiana var. yezoalpina f. exigua Anaphalis alpicola f. robusta Hylotelephium cauticolum f. montanum
Quasi-endemic varieties	Ezonohakusanbofu	Peucedanum multivittatum f. linearilobum

Mysterious vegetation of Mt. Apoi

**Abnormal vertical distribution of Erman's birch forest at the summit**  
Mountain vegetation in Hokkaido usually changes as altitude increases: broad leaf forest zone → coniferous forest zone → Erman's birch zone → dwarf stone pine zone. On Mt. Apoi, however, there are Erman's birch forests in the area from the ninth stage to the summit, despite the area being at a higher altitude than the dwarf stone pine forest zone. Weaker winds are considered to be one reason, but the underbrush includes plants that usually grow at the foot of mountains, such as lilies of the valley and ezoosakuraso (*Primula jesoana* var. *pubescens*), which only adds to the mystery.



Erman's birch forest immediately below the summit



 <i>Callianthemum miyabe anum</i>	 <i>Hypochoeris crepidioides</i>	 <i>Betula apoensis</i>	 <i>Primula modesta</i> var. <i>samanimontana</i>	 <i>Erigeron thunbergii</i> var. <i>angustifolius</i>	 <i>Viola sachalinensis</i> var. <i>alpina</i>	 <i>Viola brevistipulata</i> var. <i>hidakana</i>
 <i>Primula hidakana</i>	 <i>Thalictrum folitidum</i> var. <i>apoiese</i>	 <i>Arenaria katoana</i> var. <i>lanceolata</i>	 <i>Veronica schmidtiana</i> var. <i>yezoalpina</i> f. <i>exigua</i>	 <i>Tofieldia coccinea</i> var. <i>kondoi</i>	 <i>Anaphalis alpicola</i> f. <i>robusta</i>	 <i>Aruncus dioicus</i> var. <i>subrotundus</i>
 <i>Allium schoenoprasum</i> var. <i>yezomonticola</i>	 <i>Potentilla matsumurae</i> var. <i>apoensis</i>	 <i>Eritrichium nipponicum</i> var. <i>yezoense</i>	 <i>Silene repens</i> var. <i>apoensis</i>	 <i>Lespedeza bicolor</i> var. <i>nana</i>	 <i>Hyericum samaniense</i>	 <i>Thalictrum integrilobum</i>

Himechamadaraseseri

*Pyrghus malvae* Nationally-designated natural monument (designated in 1975)

*Himechamadaraseseri* (*Hesperiidae* family) is a small butterfly with a wingspan of 2.5 cm. This brownish-red butterfly with white spots is distributed mainly in northern areas including Russia and Mongolia, and in Japan it is found only at the alpine zone of Mt. Apoi. The butterfly was discovered on Mt. Apoi in 1973 by students of the Hokkaido University Insect Research Group, and its biology was clarified by the group the following year. The butterflies in their larval stage consume shrubby cinquefoils, an alpine plant, and adult butterflies are seen only during a period of approximately one month from early May to early June. *Himechamadaraseseri* were widely distributed in the Ice Age, but are considered to have remained here on Mt. Apoi by chance as global warming spread.



Apoimaimai

*Paraegista apoensis*

*Apoimaimai* is a snail endemic to the Apoi mountain mass and its surroundings, as well as the area along the Horoman River (registered as a new species in 1970). This snail is a species related to *takahidemaimai* of the *Himemaimai* genus that inhabits Hokkaido, and lives in cracks among piles of peridotite rocks. The shell of an adult snail measures approximately 1 cm and is characterized by the stiff, thin hairs on its surface.



Japanese pika

*Ochotona hyperborea*

The Japanese pika is a kind of hare well known as a relict species from the Ice Age. The brown animal, which measures approximately 15 cm in length, has rounded ears and gives off a high-pitched warning call. It inhabits central Hokkaido and the alpine zone of the Hidaka Mountains. The southern part of Hidaka is almost the southernmost limit of pika's habitat in the world, and the animal is distributed there at very low altitudes. It is found not only in the upper part of the Apoi mountain mass but also in a 50-m-high conglomerate area along the Horoman River.



Other animals on Mt. Apoi



Black woodpecker  
*Dryocopus martius*

Hokkaido sika deer  
*Cervus nippon*

Hokkaido squirrel  
*Sciurus vulgaris orientis*

Chipmunk  
*Tamias sibiricus*

Japanese crayfish  
*Cambaroides japonicus*

Peridotite

A message from the mantle

Mt. Apoi is formed of a rare rock known as peridotite. The rock, the specific gravity (3.3 g/cm³) of which is the heaviest on earth, is high in magnesium and iron, and is classified as ultramafic (ultrabasic) rock with low silica content, in which plants tend to develop special properties. One of major minerals of peridotite is olivine, and the word olivine is derived from its color, which is similar to that of olives. When a slice of peridotite is observed under a polarizing microscope, it looks like beautiful stained glass (see the front cover). The picture on the front page looks like a garden of colorful flowers spreading under the alpine plant community. A large crystal of olivine is known as peridot, and is used as a gemstone (the birthstone of August).



Peridotite



Peridot

