

Mosses in "Kaede-sawa"

Shikotsuko Branch, Natural Parks Foundation

■ Outline

Pyroclastic flow deposits formed the Morappu area from the July 1739 eruption of Mt. Tarumae, which deposited nearly 1 meter of pumice on the Chitose city. There are four dry valleys in this area. The "**Koke-no-kairo Gulley (Moss Corridor)**" is a part of "**Kaede-sawa**", which is the most western of the four. "Kaede-sawa" is a box-shaped dry valley divided into a lower part (about 500 meters) and an upper part (about 300 meters).

"Kaede-sawa" shows the box-shaped gulley, and this terrain is thought to have been formed by debris flow erosion after pyroclastic deposits cooled down. This area comprises welded tuff derived from pyroclastic flow deposits and has a high water retention capacity. Therefore, the moss thrives with rainwater that permeates the rock, groundwater, and moisture (fog) from the lake.

It is believed that the reason why the inside of the corridor is cold is that the whole area is like a refrigerator condition for the following two reasons: 1) the narrow width between the walls, the steep walls, and the trees growing on top of the walls, cause short daylight hours, and 2) the weakly welded tuff that makes up the corridor can contain water and the water that permeates into the rock freezes then act like a freezer for an extended time.

Humidity is maintained because the stream is only a few meters wide, and the canopy is closed by forests spreading on the top of the rock walls on both sides of the stream. Therefore, these favorable natural conditions allow the moss population to grow.

In the lower part, "*Bryoxiphium norvegicum* subsp. *japonicum*" dominates in the downstream area, while "*Rhizomnium striatulum*" looms in the upstream region. It is estimated that about 100 species of mosses inhabit this area, like "Koke-no-domon Gulley" in the Shisyamonai area. However, a detailed survey has not been conducted yet.



Bryoxiphium norvegicum subsp. *japonicum*



Pogonatum japonicum

■ O-1

▼ *Hypopterygium flavolimbatum*



■ Fallen tree in front of the entrance to the box-shaped gully



▼ Hypnum oldhamii



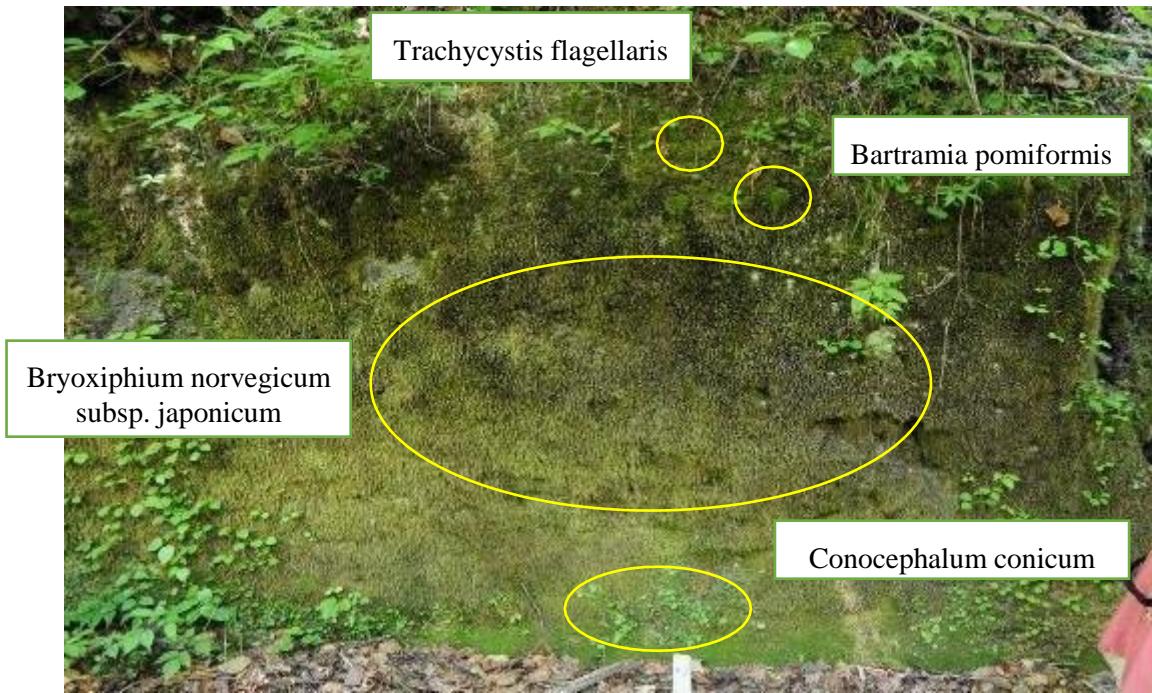
▼ Rhizomnium striatulum



▼ *Trachycystis flagellaris*



■ K-1



▼ *Bartramia pomiformis*



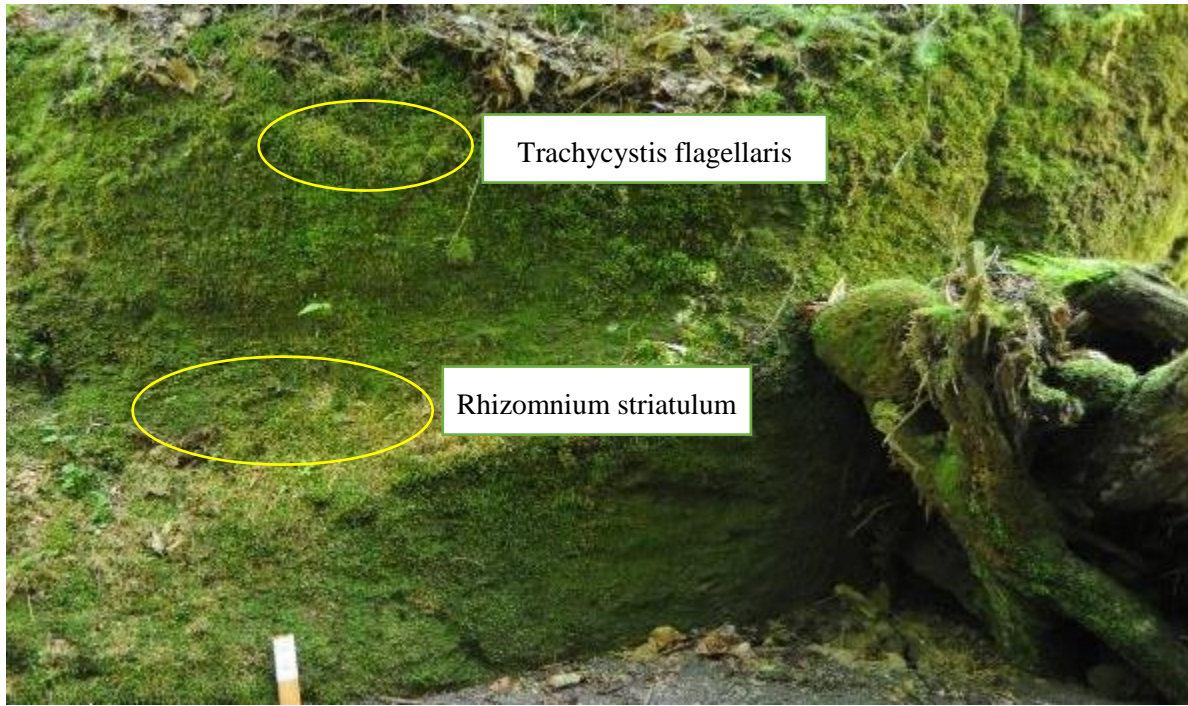
▼ *Trachycystis flagellaris*



▼ *Conocephalum conicum*



■ K-2



▼ *Trachycystis flagellaris*



▼ *Rhizomnium striatulum*





Rhizomnium striatulum

Plagiothecium nemorale

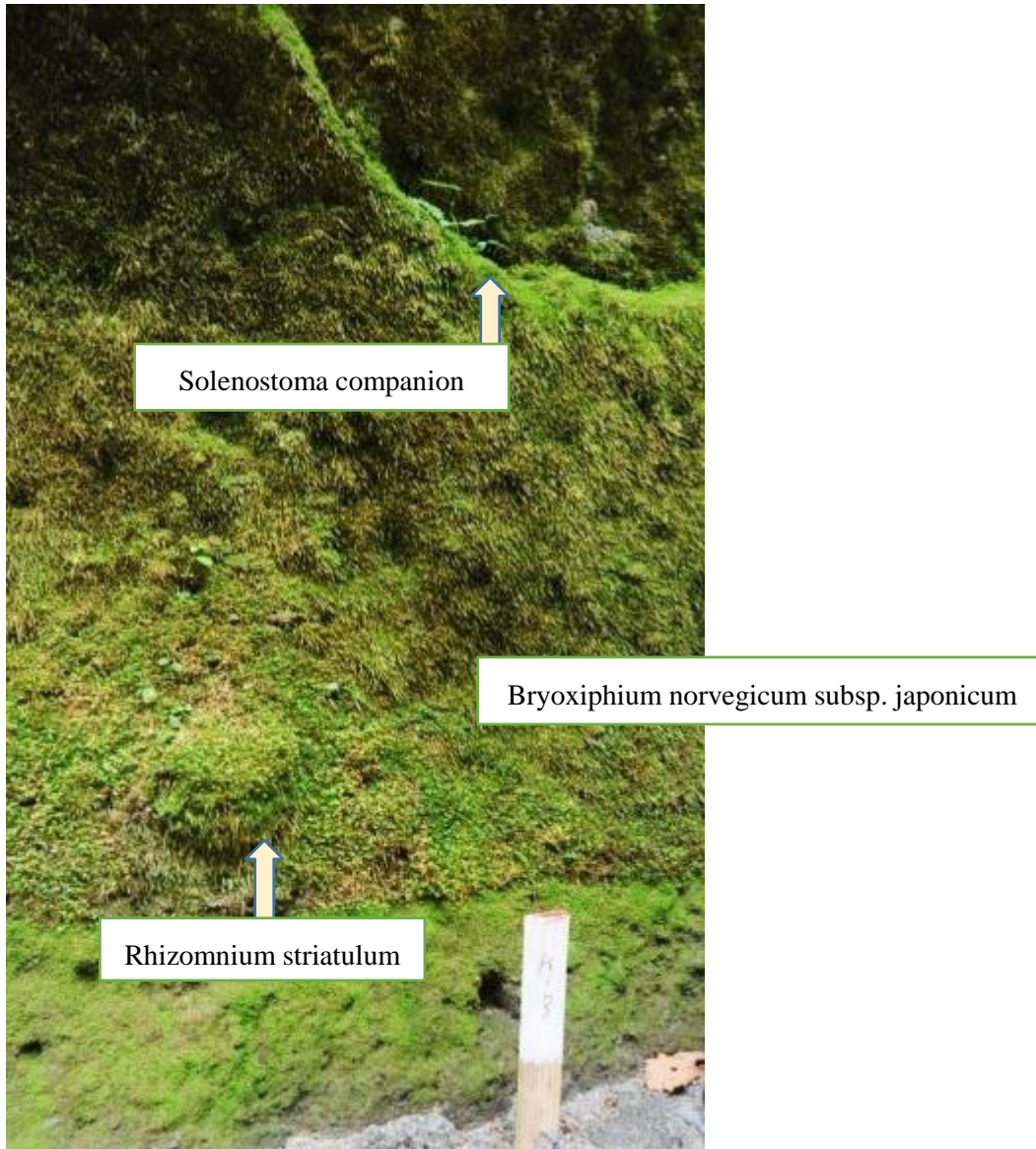
■ On a fallen tree



▼ *Callicladium haldanianum*



■ K-3

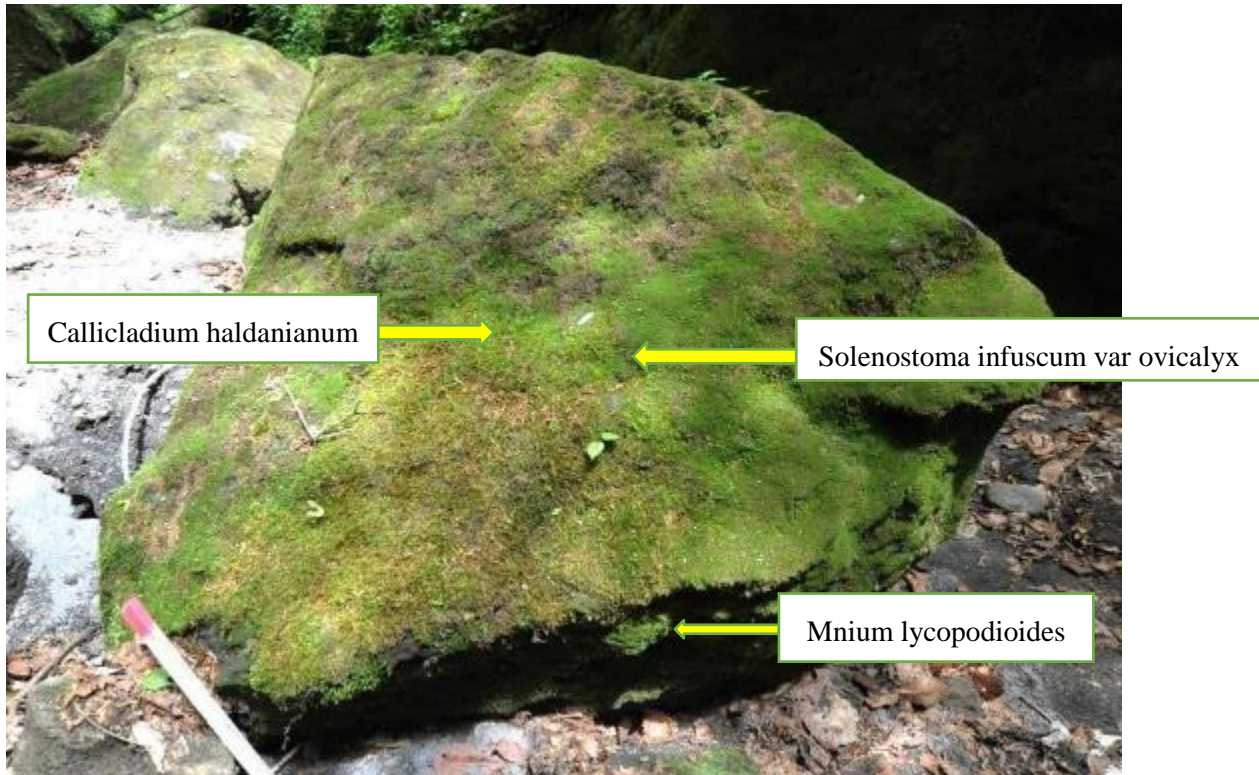


★From K-3 to the split point, the number of *Bryoxiphium norvegicum* subsp. japonicum becomes extremely small, and *Rhizomnium striatulum* becomes dominant.

▼ *Rhizomnium striatulum*



■ Large rock at the end of the lower part



▼ Callicladium haldanianum



▼ *Solenostoma infusum* var *ovicalyx*



▼ *Mnium lycopodioides*



■ Scientific names of introduced bryophytes

Table 1 Marchantiophyta

| Scientific Name | Japanese Name |
|--|---------------|
| <i>Solenostoma infusum</i> var <i>ovicalyx</i> | タカネツボミゴケ |
| <i>Solenostoma companion</i> | ツボミゴケの仲間 |
| <i>Conocephalum conicum</i> | ジャゴケ |

Table 2 Mosses

| Scientific Name | Japanese Name |
|---|---------------|
| <i>Callicladium haldanianum</i> | クサゴケ |
| <i>Hypnum oldhamii</i> | ヒメハイゴケ |
| <i>Bartramia pomiformis</i> | タマゴケ |
| <i>Rhizomnium striatulum</i> | スジチヨウチンゴケ |
| <i>Trachycystis flagellaris</i> | エゾチヨウチンゴケ |
| <i>Mnium lycopodioides</i> | ナメリチヨウチンゴケ |
| <i>Plagiothecium nemorale</i> | ミヤマサナダゴケ |
| <i>Bryoxiphium norvegicum</i> subsp. <i>japonicum</i> | エビゴケ |
| <i>Pogonatum japonicum</i> | セイタカスギゴケ |
| <i>Hypopterygium flavolimbatum</i> | クジャクゴケ |