

## **Tsuta Bird Sanctuary Trail Map**

1.

### *Walking the Trail*

The circular main trail is approximately 3 kilometers long, and takes about 90 minutes to walk at a leisurely pace. A back-and-forth trip on the level 500-meter trail to Tsutanuma swamp is recommended for those who don't want to make the entire circuit. The complete trail offers visible examples of the transition of this land from wetlands to forest, and from a damp environment of mainly Japanese horse chestnut and Japanese wingnut to an all-beech forest. The route that begins from the Hyotannuma trailhead, located just to the right of the shop on the other side of the parking lot, offers the most dramatic view of Tsutanuma near the end of the trail.

2.

### *Majestic Woodlands*

Try to distinguish between the two major species of trees and the two varieties of vines that make up much of the Tsuta Forest. The trunk of the beech tree is smooth and colored a light gray, while the bark of the Japanese horse chestnut tree is rougher and darker. The forest was most likely named after the many vines (*tsuta*) that climb the tree trunks to reach sunlight above the forest canopy. The crimson glory vine (*yamabudo*) is black with large leaves and clusters of a purple fruit that is a kind of wild grape. The hardy kiwi vine (*sarunashi*) is a light gray to grayish brown. Its small kiwi fruit, like that of the crimson glory vine, appears in the fall. The bark of both species peels off as the vine grows.

3.

### *Water Underground*

Water is a major force in the growth of the Tsuta Forest. Underground channels are everywhere, as the groundwater table is very near the surface. In certain parts of the trail, there are damp spots that never dry—in fact, there are few completely dry areas anywhere on the forest floor. If you stop and listen quietly, you can often hear the sound of water from various sources making its way through the forest.

4.

### *Singular Swamps*

Each of the swamps along the trail has its own individual characteristics, despite their

close proximity. Try to spot what makes each one different.

- Hyotannuma: This swamp, once shaped like a gourd (*hyotan*), is shrinking as it turns into marshland.
- Sugenuma: The western end of this artificially created swamp is a tree-dotted marshland that is in the preliminary stage of becoming dry land.
- Naganuma: The size of this swamp expands and contracts depending on the season and the rainfall.
- Tsukinuma: This small swamp, surrounded by forest, is fed by spring water.
- Kagaminuma: This is another artificial swamp, created by diverting the water from Tsukinuma. The bridge near the outlet is a good place for viewing white-spotted char.
- Tsutanuma: The largest of the six swamps, this one also has the best view of Mt. Akakura, the origin of the debris avalanche that created the area's landscape.

5.

#### *The Seismic Event*

The landscape of the Tsuta Forest area was created by a debris avalanche from Mt. Akakura, one of seven peaks of the Minami Hakkoda Mountains, which were formed by volcanic activity between 800,000 and 300,000 years ago. Sometime between 100,000 and 15,000 years ago, the eastern side of Mt. Akakura collapsed, and the rock, gravel, and volcanic ash carried down the mountain by the avalanche transformed the entire valley.

Large lava and pyroclastic rocks can be found throughout the forest, particularly between Sugenuma and Naganuma. These are from the original volcanic activity that formed the mountain and were transported by the debris avalanche to their present location.

6.

#### *Watching for Wildlife*

From forest floor to forest canopy, Tsuta is a haven for wildlife. To spot birds, focus on their movement and listen for the source of the birdsong. Be aware of your surroundings at all times. If your senses tell you something is watching you, they are probably right. Often it is the Japanese serow, a cloven-hoofed herbivore that does not run from humans, but usually just stops and stares. Black bears also populate the area.

7.

### *The Micro-Universe*

While walking on the trail, don't ignore the world that can be found around you, even at your feet. Mosses, lichens, and mushrooms grow everywhere, from the trunks of trees to the trail banks, bridges, and rocks along the way. A magnifying glass can bring this world even closer and illuminate the intricacies of its life forms. Take a good look at the trunk of a beech tree, for example. Those mottled areas are not patterns on the gray bark, but lichens growing on its smooth surface.

## **The Natural Calendar of the Tsuta Forest**

### January

- The tracks of martens, foxes, and other animals are clearly visible on the snow (until late March).

### February

- The swamps freeze over during the coldest month of the year.
- Stoneflies and other insects can be seen on top of the snow.
- The first songs of the brown dipper bird can be heard.

### March

- The first songs of the Japanese tit and similar birds are heard.
- Mandarin ducks appear at the swamps.

### April

- Asian skunk cabbage blooms in the marshlands.
- The montane brown frog lays its eggs.
- Early spring flowers, like the russet spider lily, begin to bloom.

### May

- Beech trees flower; the forest greenery is at its freshest.
- The best season for bird-watching lasts until the middle of the month.
- The Ezo-haru cicada begins singing (until July).

### June

- The chirping of the ruddy kingfisher begins (Hyotannuma and Sugenuma).
- Spawning season begins for the forest green tree frog (Hyotannuma).

#### July

- Ezo hydrangeas are in full bloom.
- Several species of fireflies appear.

#### August

- Moonlight mushrooms that glow in the dark can be found (until October).
- Baneberry flowers bloom late in the month.

#### September

- Beech, horse chestnut, and hawthorn trees begin to drop their nuts.

#### October

- Fall foliage is at its peak.
- The fruit of the two vine species, crimson glory and hardy kiwi, appear.
- Moths of the autumn season make their appearance.

#### November

- Fall colors and the first snowfalls bring the best of two seasons at the same time.
- Whooper swans, tufted ducks, and other winter birds migrate to Tsuta (Naganuma, Tsutanuma, and Sugenuma).

#### December

- The green of the cowtail pine makes a vivid contrast with the winter snow.
- The snow at the foot of the trees becomes a constant, never melting until spring.

#### Winter Closure

The trail is closed to unaccompanied visitors from late November to early May due to the heavy snowfall. Guided tours on skis or snowshoes, however, are available.