The Wetlands at the Base of Mt. Yakeyama

Toward the base of Mt. Yakeyama—around 800 meters to 1,000 meters above sea level—are wetlands such as Obayachi Marsh and Maeyachi Marsh. Wetland plants like Amur daylily, bog rosemary, bog cranberry, and Tateyama gentian flourish here.

In high-elevation wetlands such as these, humidity and cold temperatures combine to create an environment in which dead plant matter does not decompose fully. Instead it accumulates and compresses over the years to form peat.

Though most wetlands form when ponds fill with soil and other sediment, the wetlands in high-elevation areas of the Tohoku region were formed by an accumulation of volcanic ash. This type of wetland often develops on gently sloping mountainsides; thus, beneath the layers of peat there is still ash from volcanic eruptions that took place long ago.

In the highly acidic peatland environment, bacterial activity is limited, slowing decomposition. Pollen grains, which have a tough outer shell, are slow to decay. Surviving in pristine condition even after eons, these pollen grains can provide valuable information concerning the area's past, including changes in climate and vegetation.