

## Yoshigadaira Wetlands

Geographical Coordinates: 36°39'N, 138°33'E / Altitude: 1200-2160m / Area: 887ha / Major Type of Wetland: Intermediate moor, crater lake, pond and swamp, river / Designation: Special Zone of National Park / Municipalities Involved: Nakanojo Town and Kusatsu Town, Gunma Prefecture / Ramsar Designation: May 2015 / Ramsar Criteria: 1, 4

## Intermediate Moor, Crater Lake, Pond and Swamp, River



Overview of Yoshigadaira moor



*Jungermannia volcanicola* communities



Spawning of Forest Green Tree Frog

### General Overview:

Yoshigadaira Wetlands in Gunma Prefecture in central Honshu (island) of Japan is a cluster of wetlands, including intermediate moor, crater lake, pond, swamp and river, laid out on a terrace like slope from the top of Mt. Kusatsu-Shirane (2,160m) to an area approximately 1200m high on the north eastern side. Several marshes, ponds and swamps have developed on low-permeable soil layers and/or depressions formed by volcanic activities of Mt. Kusatsu-Shirane, and the highly acid volcanic water and volcanic gas have created a unique environment. It is a wetland site with a beautiful landscape in Joshin'etsukogen National Park that has two-thousand mountains.

### Intermediate Moors in Yoshigadaira Moor and Odaira Moor:

Yoshigadaira moor (1832m) and Odaira moor (1600m) are the representative intermediate moors in the temperate coniferous forest biogeographic region, and have a unique vegetation such as Cranberry (*Vaccinium oxycoccos*), Mud sedge (*Carex limosa*), and Sasa (bamboo grass) that grow best with the acid water, geothermal heat, hot water and abundant underground water flow. The pond cluster and the community of Hare's-tail cottongrass (*Eriophorum vaginatum*) in Yoshigadaira moor and the Asian skunk cabbage (*Lysichiton camtschatcense*) in Odaira moor highlight the wetland site. Hidden in the forest, skirting under the wetlands, there are some natural ponds named Heibee-ike, O-ike and Mizu-ike, dominated

by the emergent plants such as *Potamogeton fryeri* and *Isoetes asiatica*.

### Yugama and Anajigoku:

Yugama (2050m) is a crater lake of Mt. Kusatsu-Shirane, with highly acid (pH1.-1.2) emerald green water. Anajigoku (1300m) is the headstream area of the Motoyama River which has highly acid (pH2.6-2.8) water containing abundant iron and sulfur. Anajigoku has a large community of representative species of acidophilic moss, *Jungermannia volcanicola*, which is called Chatsubomigoke in Japanese. The moss covers the area like a green carpet and people love the area known as Chatsubomigoke Park.

### Rich Repository of Endangered Species:

442 species of plants, 20 species of animals, 62 species of birds and 14 species of dragonflies/damselflies are found in Yoshigadaira Wetlands including several endangered species such as Osprey, Japanese black salamander and a species of algae (*Batrachospermum turfosum*). Forest Green Tree Frogs, an endangered species of Japan, usually spawn on tree branches hanging over the water surface, but here spawn on the ground such as grasses on the lakeshore because there are no predatory fish in the highly acid water. Those frogs are considered to be a unique example of local adaptive evolution induced by volcanic geothermal heat, hot underground water flow and the history of the formation of various local conditions. This area is the frog's highest

(2150m) breeding ground in Japan.

### A Landscape View from an Overlooking Mountainous National Road :

The panoramic view of Yoshigadaira Wetlands can be enjoyed from the highest point (2172m) of Route 292. The highest point commands a bird eye view of Yoshigadaira Wetlands within a beautiful contrast to the ragged terrain of Mt. Kusatsu-Shirane. As the access to the wetland site is about a 1 hour downhill walk from Shibu Pass located on the border of Gunma and Nagano Prefectures, many people visit here to enjoy sightseeing and nature watching. Well maintained mountain trails connect Yoshigadaira and Chatsubomigoke Park by way of Ohdaira moor, Heibee-ike pond, O-ike pond and Mizu-ike pond.

### Contact Information:

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