

## Toki and Nature Learning Center (“Toki Mite”)

The crested ibis (*toki*) once flourished across Japan and neighboring countries, including China, Korea, and Russia. Today, these birds are a protected species on Sado Island and in the nearby coastal area of Teradomari in the city of Nagaoka.

The Toki and Nature Learning Center in Teradomari is a hub for crested ibis conservation efforts. The center operates a breeding and education program, designed to help restore the crested ibis population in the wild and inform the general public about these endangered birds. Although the center welcomes visitors every day, its primary aim is conservation. There are a number of younger birds on-site, but only full-grown ibises are on display to the public. This ensures the birds can mature in a safe, stress-free environment.

Interactive displays in the Toki and Nature Learning Center show the many changes crested ibises undergo before reaching maturity. When they are born, the birds have brown feathers. Around two months later, these become yellow, then progress to orange after five months. Finally, around the two-year mark, the birds achieve their unique color, known as *toki iro* (“ibis color”), something of an orange-tinted red.

The displays in the center guide visitors through the maturation process, using a mixture of preserved samples, skeletal models, and computer-generated images. Conservation rules do not allow direct viewing of ibis chicks, but visitors can see their progress through a live TV feed that streams from their nest on a continuous basis.

When the chicks are fully mature, they are released back into the wild on Sado Island. The center tags all released ibises to monitor them and learn more about their natural migration patterns and behavioral habits. Over time, conservationists have undertaken numerous studies related to the birds and their life cycle.

The island’s marshlands, forests, and rice fields provide the crested ibis with an ideal living environment. Crested ibises typically make their home in chestnut or pine trees close to the water. Small freshwater crabs form the basis of their diet. The birds mate in February each year, and lay up to five eggs in April. Chicks usually hatch in mid-May.

Sometimes, the birds need a helping hand in the mating process. This is where the Toki and Nature Learning Center steps in. Five full-grown ibises are kept in an enclosure at the center where visitors can observe them. How they interact—they sometimes squabble—demonstrates their different personalities. Each ibis has a name and its own colored tag to help visitors identify it: Hotaru (yellow), Nozomi (blue), Hikari (red), Shinano (light blue), and Keyaki (green).

Feeding time, at 1 p.m., allows visitors to watch the ibises hunt for food just as they do in the wild. Staff members release small loaches into the enclosure’s ponds, and the ibises use their long beaks to trap and then eat them. The birds are also fed meat and vegetables at 9 a.m. and pellets at 3 p.m. This mix ensures they receive a healthy and balanced diet every day.

Since 1981, Nagaoka and Sado have operated a controlled breeding program to revive the local crested ibis population. As the program has expanded, it has spread out over five different areas of Japan to ensure the population remains safe. If all the birds were kept in one area, a single disaster or avian viral outbreak could be devastating to their numbers.

In addition to Nagaoka and Sado, there are further sanctuaries in Tokyo, Ishikawa Prefecture, and Shimane Prefecture. Conservation efforts were further boosted in 1999

with the donation of two ibises from China. These birds bred successfully, and today there are 458 ibises living on Sado Island, of which 163 have come directly from the breeding program and 295 have been born in the wild. It is not unusual to see ibises flying from Sado Island over to Teradomari and back again. Although the trip by ferry from the island to the mainland takes around one hour, an adult ibis can cover the same distance in just 40 minutes.

Conservation is a community effort, and both Teradomari and Sado run education programs in conjunction with local elementary schools. These programs encourage schoolchildren to play their part in protecting the crested ibis population. The Toki and Nature Learning Center remains instrumental in that process.