Migratory Birds Connect

Benefits of Wetlands

BirdLife International Tokyo publishes this pamphlet with the cooperation of Saga City, Saga Prefecture; Shunan City, Yamaguchi Prefecture; Osaki City, Miyagi Prefecture. It is also supported by the Taisei Nature, Historical and Environmental Fund.

Design & Illustration: Ikimono Palette
Photos: Saga City, Saga Prefecture; Shunan City, Yamaguchi Prefecture; Osaki City, Miyagi Prefecture; BirdLife International Tokyo

BirdLife INTERNATIONAL

Many Types of Wetlands and Their Benefits

A wetland is a 'wet place', a place that contains water or is covered with water.

As displayed in the illustrations, there are many types of wetlands. Rivers, ponds and rice paddies, which are familiar to us, are also wetlands.

An Essential Place for Wildlife and Humans

Many wildlife species depend on wetlands. Naturally, we humans also receive their benefits in our daily lives.

Wetlands provide us with food and water, keep the global environment comfortable for us to live in, and sometimes reduce the damage caused by natural disasters. Wetlands also fascinate and delight us with their beauty and diversity.

To continue to receive their benefits in the future, we need to keep them in a healthy state. However, wetlands are rapidly decreasing all over the world.

- There are many more types of wetlands than those introduced here.

Marshes and Swamps
- Store CO_2
- Store water

Rivers
- Supply water and food
- Bring nutrients from forests to plains and oceans

Ponds and Lakes
- Store water during floods
- Supply water and food

Flood Plains
- Moderate temperature
- Store water during floods
- Supply food

Rice Paddies
- Store water during floods
- Fertile land

Mangrove Forests
- Reduce the force of waves
- Prevent coastal erosion
- Store CO_2

Coral Reefs
- Reduce the force of waves
- Store CO_2
- Harbour one-quarter of all marine species

Reed Fields

Tidal Flats
- Purify water
- Supply water and food

Deltas


Tidal Flats


Ponds


Rice Paddies

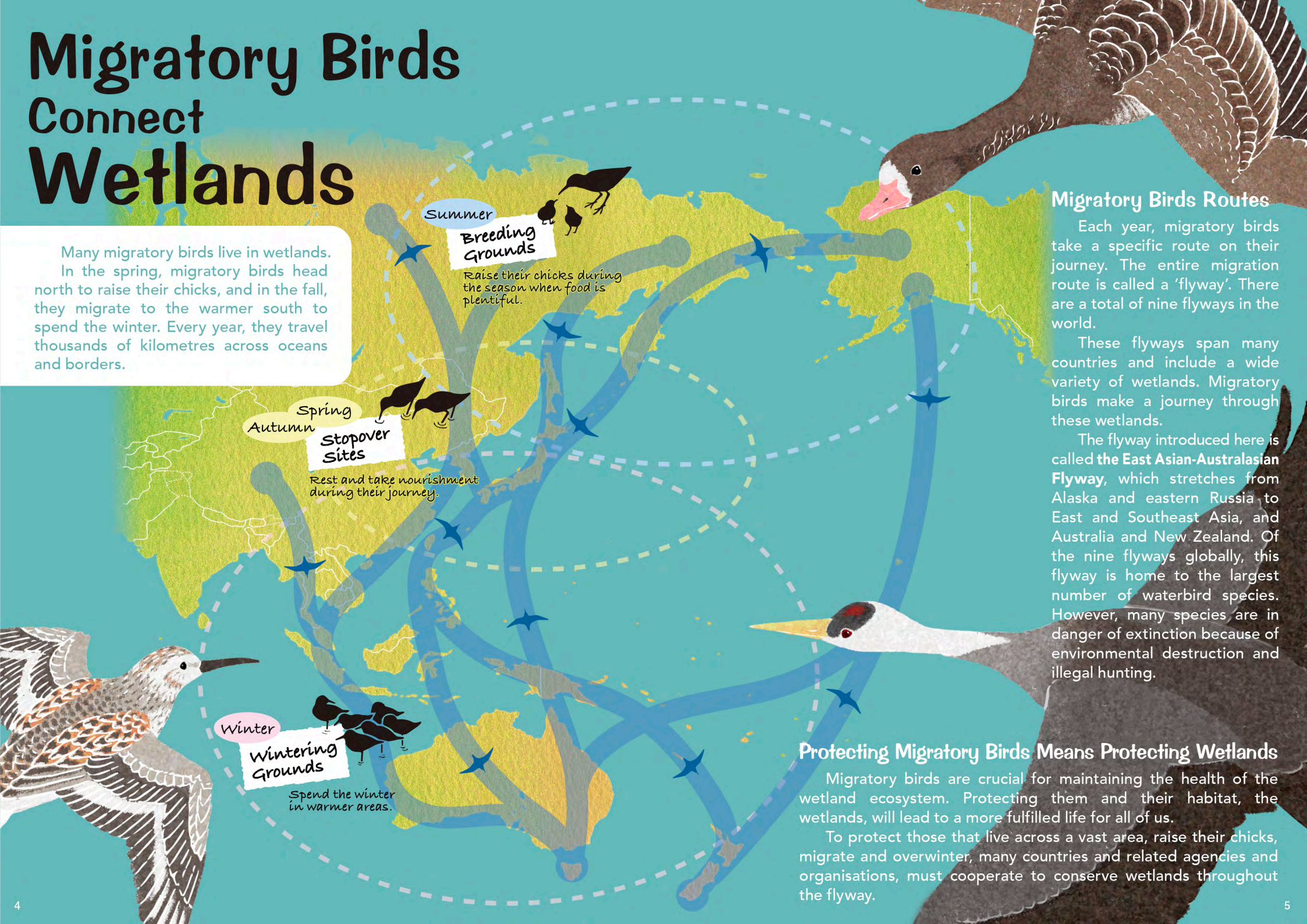

Coral Reefs

What Are the Monetary Benefits of Wetlands?

Wetlands provide us with numerous benefits making it difficult to convert them to a monetary value but calculating them is one way to demonstrate the value and importance of wetlands. According to an estimate by the Japanese Ministry of the Environment in 2014, the economic value of marshes and swamps in Japan is said to be approximately 7.6-9.2 billion US$ per year, and approximately 5.7 billion US$ for tidal flats.

Migratory Birds Connect Wetlands

Many migratory birds live in wetlands. In the spring, migratory birds head north to raise their chicks, and in the fall, they migrate to the warmer south to spend the winter. Every year, they travel thousands of kilometres across oceans and borders.



Migratory Birds Routes

Each year, migratory birds take a specific route on their journey. The entire migration route is called a 'flyway'. There are a total of nine flyways in the world.

These flyways span many countries and include a wide variety of wetlands. Migratory birds make a journey through these wetlands.

The flyway introduced here is called **the East Asian-Australasian Flyway**, which stretches from Alaska and eastern Russia to East and Southeast Asia, and Australia and New Zealand. Of the nine flyways globally, this flyway is home to the largest number of waterbird species. However, many species are in danger of extinction because of environmental destruction and illegal hunting.

Protecting Migratory Birds Means Protecting Wetlands

Migratory birds are crucial for maintaining the health of the wetland ecosystem. Protecting them and their habitat, the wetlands, will lead to a more fulfilled life for all of us.

To protect those that live across a vast area, raise their chicks, migrate and overwinter, many countries and related agencies and organisations, must cooperate to conserve wetlands throughout the flyway.

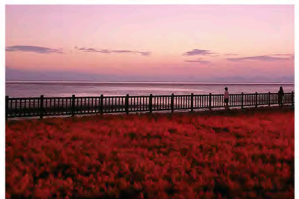
Three Wetlands in Japan Where Migratory Birds and People Live Together

Japan is abounded with water, and there used to be many wetlands. Many of these wetlands have been lost in recent years due to development, but the remaining wetlands provide a habitat for migratory birds and various wetland species.

Here are three sites in Japan where efforts are being made to make the most of the benefits of wetlands.

① Higashiyoka-higata

The Higashiyoka-higata is a muddy tidal flat located in the southern part of Saga City, part of the Ariake Sea tidal flat. Migratory waterbirds, such as **shorebirds**, visit the tidal flat every year, and there are colonies of the rare plant *Suaeda japonica* along the shoreline, alongside many unique species, such as mudskippers *Odontamblyopus lacepedii* and fiddler crabs, also inhabit the tidal mudflat.



Colony of *Suaeda japonica* in fall foliage.

Dunlins, which form large flocks.

Mudskippers and fiddler crabs, which are favorites in the tidal flat.

Most shorebirds breed in Siberia and Alaska and overwinter in Southeast Asia and Australia. During their journey, they stop in Japan to rest their wings.

The number of migratory shorebirds that visit Higashiyoka-higata is the largest in Japan. The rich nature of the tidal flat supports their migration.

Tidal flat where various migratory birds visit.

Efforts to Utilise the Benefits of the Wetland

Shigi no Ongaeshi Rice (Rice in Reward from Shorebirds)

This rice is grown in the rice paddies near the Higashiyoka-higata and is produced to ensure that nature, wildlife and people can continue to coexist. The rice is grown using a special cultivation method that reduces the use of pesticides and chemical fertilisers and uses fertilisers derived from sewage and the soil at the bottom of the dam, making it nature-friendly and delicious.

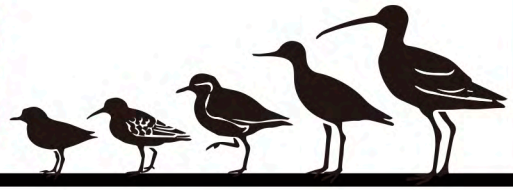
Shigi no Ongaeshi Rice (Rice in Reward from Shorebirds)

You can get more information regarding Shigi no Ongaesi Rice by scanning this QR code.

Saga Nori (seaweed)

This is a well-known specialty of the Ariake Sea. The Ariake Sea is a rich fishing ground due to the mineral-rich nutrients flowing in from many rivers. Saga Nori (seaweed), produced near such tidal flats, is a superb product with a rich aroma and fascinated sweetness and melting in your mouth.

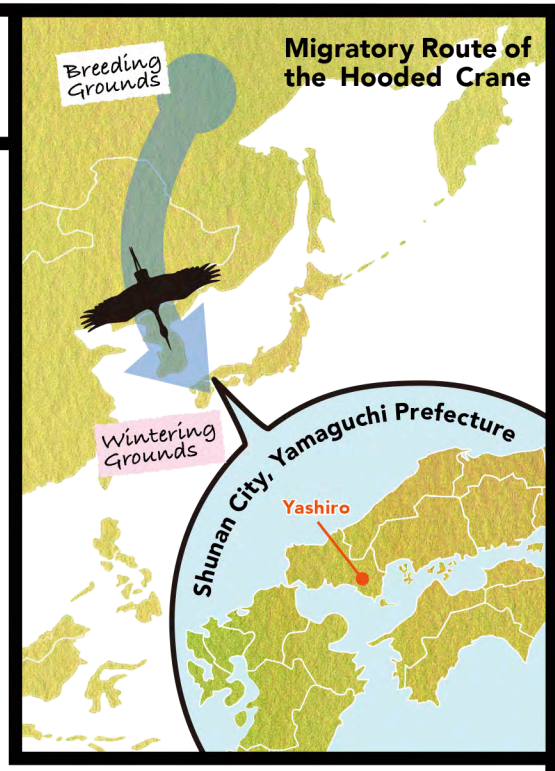
Image of nori (seaweed) production



② Yashiro

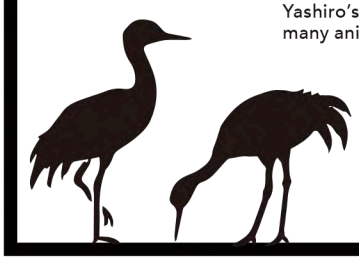
In Shunan City, Yamaguchi Prefecture, Yashiro is the only area in Honshu where **the Hooded Crane** spends winter every year. It also can be called the birthplace of nature conservation in Japan.

People in this area have cherished the crane that flies every winter since the Edo period. In modern times, in 1887, a decree of Yamaguchi Prefecture prohibited hunting of the crane in the area. In 1921, the area was designated as the first natural monument, and in 1955, the entire area was designated as a special natural monument. Moreover, the entire region has been engaged in nature conservation activities for over 130 years.



Yashiro's rural landscape supports many animals and plants.

The crane's name comes from its body being black like soot on the bottom of a pot.



Efforts to Utilise the Benefits of the Wetland

The wetlands of Yashiro harbour much wildlife, including the crane. People protect the environment where many aquatic species like giant water bugs and fireflies can live by maintaining the rice paddies in a way that considers the habitat of the cranes, such as by incorporating nature-friendly waterways and reducing the amount of pesticides used.

In winter, many migratory birds, including the crane, stay in the wetland.

(Left) Fireflies dancing in abundance, which grow up in the waterways of rice paddies.

(Bottom) Giant Water Bug, which is now an endangered species.

Northern Lapwing, a migratory bird that uses rice paddies like the crane.

Nature-friendly waterways

Wetlands provide us with a place to relax and learn about nature. The Yashiro Elementary School in Shunan City, located in the Yashiro area, takes advantage of the environment where the Hooded Crane spends the winter and conducts environmental education programmes and conservation activities in cooperation with the local community. As residents of the 'birthplace of nature conservation', each of them takes pride in their efforts to protect cranes and the natural environment.

(Upper left) Observing cranes to keep a 'Crane Diary'.

(Upper right) Setting up decoys to attract the crane.

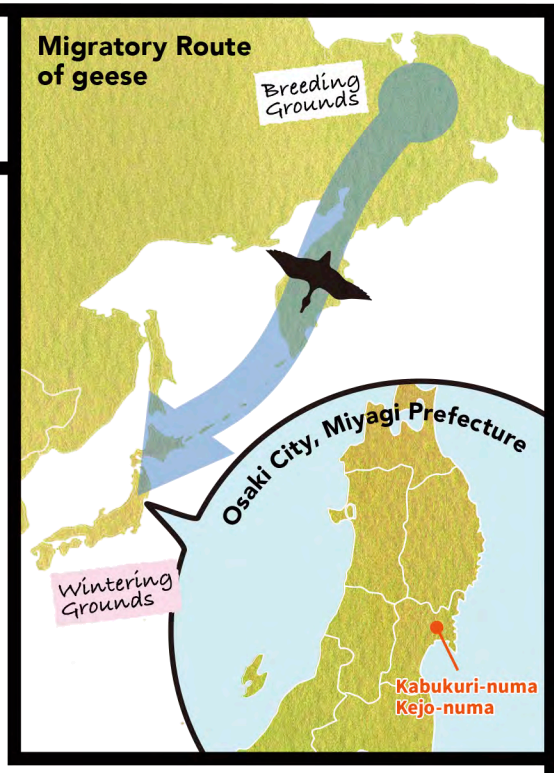
(Lower left) Observing aquatic species.

③ Kabukuri-numa and Kejo-numa

Kabukuri-numa and Kejo-numa are in Osaki City, the northern part of Miyagi Prefecture. Both wetlands are used as a 'dam' or 'water-retarding basin' to store water when the water level rises, and the water is used for agriculture in surrounding paddy fields. Simultaneously, these wetlands are a habitat for many waterbirds.

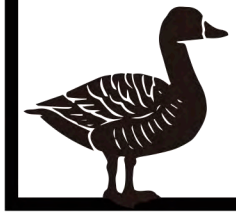
The two wetlands and the surrounding vast paddy fields are important wintering grounds for **geese**. During the winter, geese mainly use the lake for roosting and feeding in the surrounding rice paddies during the day.

Ninety percent of the White-fronted Geese that overwinter in Japan use northern Miyagi Prefecture and it is also the largest wintering ground for Cackling Geese in Japan.



Flock of geese flying away from Kabukuri-numa.

Lotus spreading in Kejo-numa.



You can watch the introduction movies of the wetlands by scanning these QR codes.

Kabukuri-numa and geese

Kejyo-numa and geese

Rice paddies and geese

The same website also has a variety of videos introducing other wildlife and agriculture.

Efforts to Utilise the Benefits of the Wetland

The Osaki area, where Kabukuri-numa and Kejo-numa are located, is one of the leading rice-growing regions in Japan. The areas water management system to cope with cold damage and flooding, its coexistence with wildlife, its culture and its characteristic landscape have been highly evaluated, causing it to be recognised as a Globally Important Agricultural Heritage System under the name of 'Osaki Kodo'. Additionally, the rice is certified as a brand, and as a requirement of the certification system, the farmers conduct surveys on living creatures and promote efforts to coexist with nature.

'Sasamusubi', Osaki Kodo's brand of rice.

One example of the efforts is the 'winter-flooded rice paddies'. This is a farmer's effort to make a shallow wetland by filling the paddy fields with water in winter to increase roosting and resting places for geese. It also increases the number of fungi, tubificid worms and other beneficial organisms and is good for rice paddies as it suppresses weeds and prevents pests. The rice can be grown without pesticides and chemical fertilisers, making it safe and secure for both people and migratory birds.

(Top) White-fronted Geese.

(Bottom) 'Fuyu-mizu-tambo rice', which is grown in a winter-flooded rice field.

Winter-flooded rice paddies and migratory birds

For more information and to purchase the rice, scan this QR code.