

History & How to Eat Them, All in 1 Book!
Let's learn all about tasty scallops!

HOKKAIDO SCALLOPS





Inside this Shell Is Full of Scallop Secrets.

Hokkaido scallops.

How are they so delicious?

Because the sea of Hokkaido nourishes them.

Because we work hard to make sure they taste good.

And, because a lot of people are making an effort
to ensure we can eat them for many years to come.

Hokkaido scallops attract worldwide attention.

Full of flavor, nutrition and processing ingenuity.

Let's find out more!

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From the familiar to the unexpected eyes!

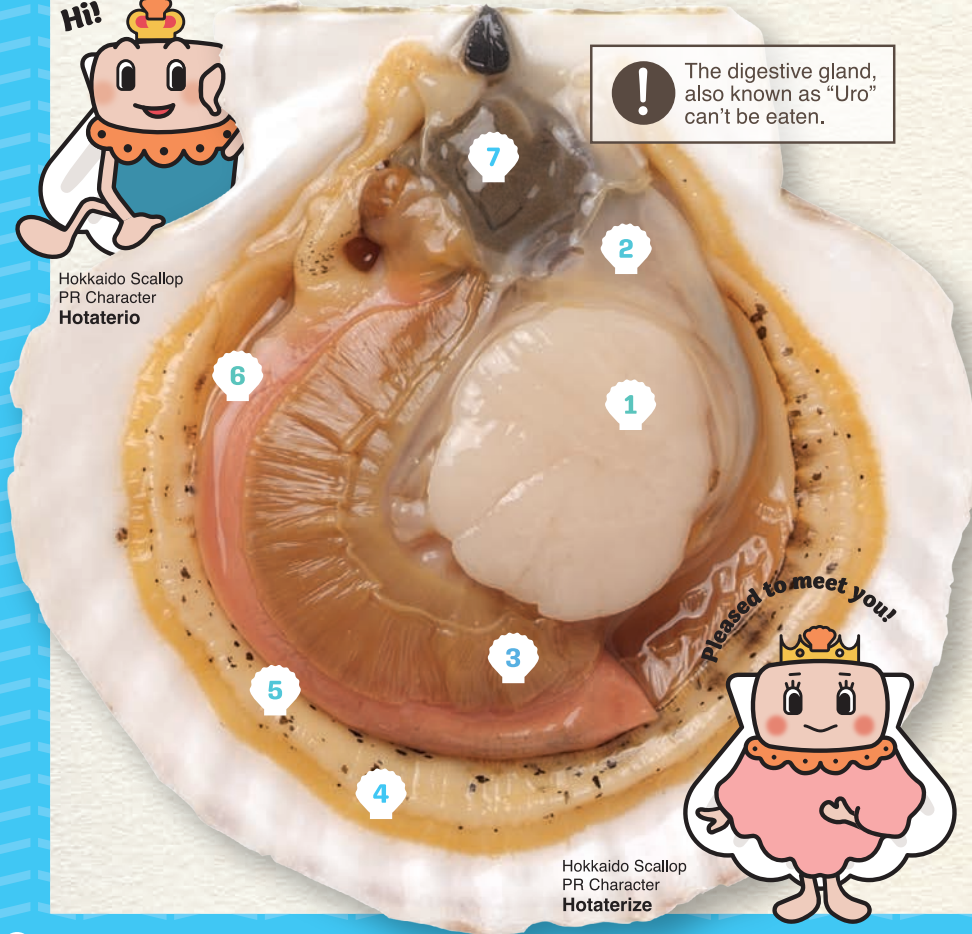
Get to Know the Scallop Anatomy!



Hi!



Hokkaido Scallop PR Character Hotaterio



! The digestive gland, also known as "Uro" can't be eaten.

pleased to meet you!



Hokkaido Scallop PR Character Hotaterize

How much do you know about scallops?

1 The Adductor Muscle

The most commonly eaten parts of scallops are two types of muscle. The larger muscles are used to open and close the shell and swim, while the smaller muscles are used to close the shell and protect itself.

2 The Heart

Did you know scallops have hearts? They're made up of two auricles and one ventricle, and their blood is transparent!

3 Gills

Scallops breathe through their gills. Gills also help collect and filter food from the sea.

4 Mantle

Also known as the "string" or "fringe" around the scallop. This is an important part that makes the shell and decides how to swim!

5 Eyes

The little dots on the mantle are actually eyes! Each scallop has 80-100 eyes. They detect light and watch out for enemies.

6 Reproductive Organs

The slightly different coloured part next to the scallop. The male gonad is milky white and the female is a darker reddish or peachy color. This can also be eaten.

7 Digestive Gland

It's called 'uro' in Japanese. Watch out, you can't eat this part! It digests and absorbs food, like the stomach, liver and pancreas in humans.

That many!



Can they survive in harsh environments!?

Scallop Life and Growth



Trivia 1 Scallops live in the cold northern seas!

Around 80% of the scallops caught in Japan come from Hokkaido. They grow in cold waters with temperatures of 5-22°C.

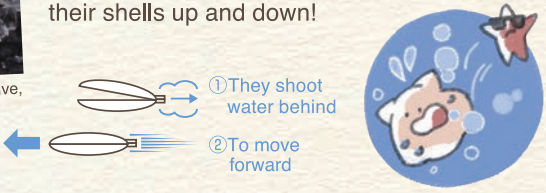


Trivia 2 Scallops are really good swimmers!



To hide from their enemies, they can lift up their brown shell, called the left valve. When attacked by predators like starfish, they swim away by opening and closing their shells up and down!

The white side is called the right valve, the brown is the left.

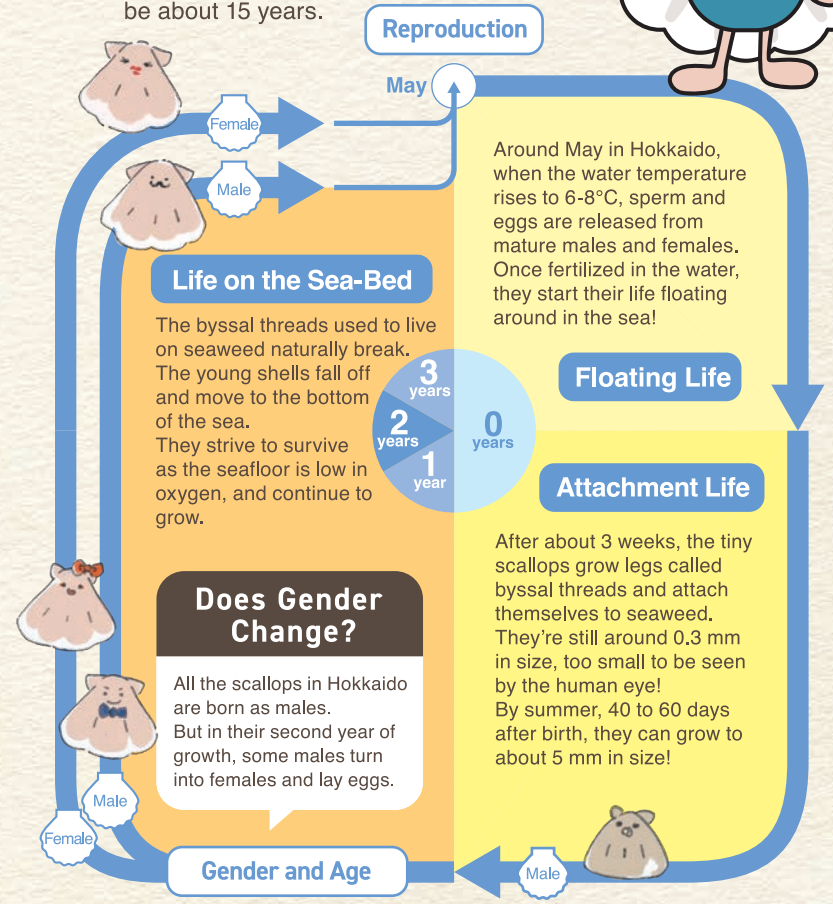


Trivia 3 Scallops have gills that are essential for their diet!

Scallops feed on phytoplankton in seawater! They filter seawater at the gills and absorb the phytoplankton to eat.

Trivia 4 Scallops grow floating in the sea, then eventually the seabed.

Scallops grow in three stages: floating, attaching and on the sea-bed. Fun fact, the lifespan of a scallop is said to be about 15 years.



Scallop Ecology

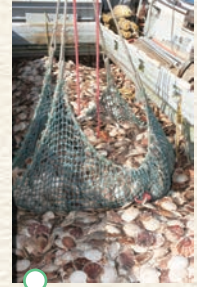
Scallops are a Part of Japanese Life!

Unravelled! The History of Scallops



The Taisho Era, when Ships Got Engines

Fishing was all done in small boats, but in the Taisho era, those boats began to be fitted with engines. But because fishing became efficient and caught in large quantities, some areas of the sea were overfished and scallops were lost.



The History of Scallops

The Jomon Period

Scallops were found in a shell mound!



Edo Period - Meiji Era

Scallops were abundant all around Hokkaido island. The fishing industry that developed and dried scallops became an important Japanese export product. Most of it was exported to China.

Taisho Era

While scallop fishing methods developed, there was a crisis of overfishing.



Showa Period

At last, a start towards farm fishing!

Heisei Period

Scallop fishing methods by the Hokkaido Federation of Fisheries Cooperative Associations are awarded 'MSC Fishery Certification'!



Scallops have been eaten since over 5000 years ago!?

Kitakogane Shell Mound in Date City, Hokkaido is one example that scallop shells have been traced as far back as the Jomon period! That means they've been eaten for some 5,000 years! It makes you wonder, how did scallops taste back then...



The "Dredge-Net Fishing Method" of the Edo Period

From the Edo period to the start of the Meiji era, scallops were caught using the keta-net fishing method: with a handline net used to scoop shellfish from the seabed. Fishing with small boats meant that only a few were caught at a time, so only very few people were able to eat fresh scallops.



The Start of Scallop "Fish Farming!"

In 1934, scallop farming started as an experiment at Lake Saroma in Hokkaido. The ecology of scallops and methods for increase in production gradually progressed, and by the middle of the Showa period, the technology had been perfected! This allowed fisheries to protect the resource, and land the scallops in a sustainable manner. That's what led to what we call modern 'fish farming'.

The History of Scallops

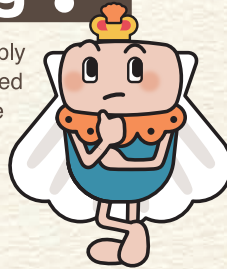
So we can eat scallops forever

Protect them! The Future of Scallops



What is "Fish Farming"?

The Hokkaido scallop fishing industry has evolved from simply catching scallops in large quantities to growing scallops called "fish farming." How can we protect both the scallops and the future of our ocean?



It comes down to this...

To keep collecting scallops in the future...

We need to get involved & plan for growth!!

A single scallop can lay about 100 million eggs. But in the ocean, natural predators are everywhere, so it's hard for scallops to survive on their own. We can use our effort and knowledge to grow fully matured scallops with "fish farming."

Scallops born from eggs take about a year to grow to 3-4 cm and are called 'young scallops' at this time. Once they reach the young scallop stage, they're either raised by hanging, or by scattering them on the seabed so that they can grow until they are ready for collecting. This relay of life is continued by the people involved in the fishing industry.



In 2013, the Hokkaido scallop fishery was awarded MSC Fishery Certification!



It was recognised as being eco-friendly to both scallops and the environment.

"MSC" stands for Marine Stewardship Council.

To obtain this certification, fisheries are scored against the three principles:

- 1) Sustainability of the stock, 2) Ecosystem impacts and 3) Effective management.

We Can Do This Together!

How "Eating" and "Protecting" are Connected!

Fishermen work hard for scallops and the sea. We can all support them by eating these scallops. Eating scallops would require more fishermen and more bustling fishing harbors. The more the merrier for better scallops and better protection of the marine environment. Let's all stay connected to the future of scallops, by eating them together!



Many Methods, Many Scallops!

Grow & Collect, Scallop Fishing

There are two main methods to scallop fishing!



Floating in the Ocean
Hanging Style Dredging

The dredging, hanging method uses either "ear-suspension," where scallops are attached to a line by making a hole in what's called an "ear" part of the shell, or "cage-farming," where the scallops are hung in a cage.



The scallops don't touch the ocean floor, so sand doesn't easily get in, but there's drifting debris, and natural enemies like the European Sea Squirt stick to them! Fishermen carefully wash the ropes and shells to protect them.



Wild on the Ocean Floor **Jimaki-Shiki**

The Jimaki-Shiki fishing method is to collect young scallops that grow on the ocean floor for four years, using a big net with claws called a "Hasshaku."



Scallops that are not fully grown are returned to the sea.

■ Jimaki-Shiki...
Sea of Okhotsk
Nemuro Strait



Can you tell a scallop's age by looking at the shell?

Scallops grow in spring and fall, and stop growing temporarily in summer and winter. You can see growth lines as a ring pattern on their shell, just like the rings in a tree trunk.



Scallop Fishing

Raw, Boiled, Dried, You Name It!

Any way you like it! Scallop Processing



Speaking of Scallops,
Check this Out!



“Tamarei”

“Tamarei” are scallops that have been caught, removed from the shell, and flash-frozen. It’s easy to store, and the taste is almost identical to fresh scallops.

A Key Point on “Tamarei”

The edible scallop is covered with water to create a thin film of ice. That prevents drying and oxidation, protecting the rich quality.



Changing shape, and a lot more



Hotate no Muki-mi



Boiled Kaibashira

“Hotate no Muki-mi” or ‘peeled scallops’ are with only the inedible “Uro” removed. “Boiled Kaibashira” are only the adductor muscles of the scallop boiled. There are many more processed products available to try.

Very easy to cook with!



Boiled Scallops

Scallops and their eggs are boiled on a local landing harbor, and shipped from there. The scallop strings taste very different to the main scallop meat and are full of nutrition!

A Key Point on Boiled Scallops

Scallops are boiled in a high-temperature steamer with the shells still on, then after peeling off the shells, are flash-frozen. That’s how you can always enjoy the delicious flavor of boiled scallops.



Try the Japanese Mixed Rice



Dried Scallops

Dried scallops are dried to reduce their water content to less than 16%. It has a long shelf life and a luxury ingredient used in Chinese cuisine! Soak them in water overnight, then try adding it to Japanese mixed rice for a great meal!

A Key Point on Dried Scallops

Most scallops are processed into dried scallops. It takes a great deal of passion and skill to turn natural scallops into dried scallops that meet high quality and unified product standards.



Scallop Processing

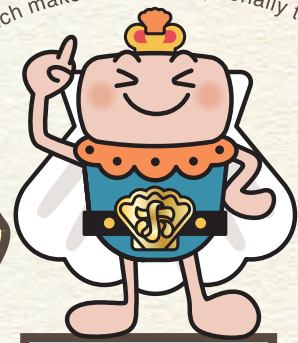
Delicious, Healthy, Nutritious... Full Points! ©

Now that's Cool! Scallop Nutrition



A TASTY SCALLOP, FULL OF NUTRITION!

Scallops are full of nutrients that are good for you!
They're also full of umami,
which makes them exceptionally tasty!



AMINO ACID
The source of all that taste!

TAURINE
Your body will feel less tired!

FULL OF BODY BUILDING NUTRIENTS!

GLYCINE
Sleep soundly!

VITAMIN B12
It creates your red blood cells

IRON
Carries oxygen in your body

Scallops for Any & Every Cuisine!




Scallops play a big part in all sorts of dishes!
Let's cook easy and tasty scallop dishes together!

Grilled



In Hokkaido, we grill the whole shell with butter, or add it to fried rice, & more!

Raw



Sashimi, of course! Or in Sushi "Gunkanmaki." Many variations to enjoy the flavor!

Boiled



Scallops are a standard ingredient for hot pot dishes. Kids love it in stews and curries!

It's fun cooking together! Yum!

Scallop Burger



Learn how to make it here!



Scallop Rice Pizza



Learn how to make it here!



The Nutrition of Scallops

For scallops, for the earth.

Forever with Our Precious Ocean



A Clean Ocean is the Key to Good Scallops!

If scallops or other waste is thrown into the sea, we will no longer be able to protect the marine environment. To avoid such a future, we are proactive in many environmental activities such as shell recycling and beach cleaning.

Our Activities to Protect the Ocean

Hokkaido-Wide "Namimaru" Cleanup Mission

Hokkaido Gyoren and local fishing cooperatives team up to clean up the beaches with this tagline:



Environmental and ecosystem conservation through improving seaweed beds and tidal flats.

Tree planting activities under the theme "Forests, Rivers and Oceans are One"



Promoting energy-saving fishing industries (fish-luring lights shifting to LED, & more)

Recycling Activities with Scallop Shells

For Secondary Use

Just as we process scallops, we also have a factory that processes scallop shells. After being washed, the shells are crushed into a fine powder or granules, depending on what they'll be used for.



Reused as a Resource

Finely crushed shells are blended with chicken feed to supplement calcium. Powdered shells are mixed into chalk! This makes the chalk smooth to write without much dust. The calcium carbonate, silicic acid, and phosphoric acid contained in the shells, when mixed with soil, create alkaline soil, which is great for crop growth!



Repurposed for Lifestyle

The main component of shellfish is calcium carbonate, which can produce Calcium hydroxide. That can break down protein stains, and has great sterilizing and deodorizing properties, which is perfect for laundry detergent!

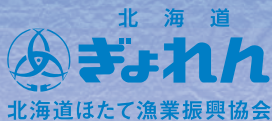
Also, when shells are processed, a component called 'hydroxyapatite' is produced. That can whiten teeth and prevent stains, so it can even be made into toothpaste!



See you!



If you want to know more about Hokkaido scallops



Book printed with environmentally friendly paper and ink.