

Look! Learn! Protect!

Oki Islands

UNESCO

Global Geopark



Minato




United Nations
Educational, Scientific and
Cultural Organization


Oki Islands
UNESCO
Global Geopark

Oki Islands UNESCO Global Geopark Promotion Committee

24 Shioguchi Minatomachi, Okinoshima-cho
Oki-gun, Shimane-ken, 685-8601, Japan
Tel 08512-3-1321 Fax 08512-3-1322 E-mail info@oki-geopark.jp
URL <http://www.oki-geopark.jp/en/>

THIS IS THE LAST PAGE. TURN OVER AND READ FROM RIGHT TO LEFT.



Lifestyles and traditions that stretch back to ancient times



Many different forms of ancient Japanese culture still exist in Oki. There is also unique culture and history that can only be found here.

Ecosystem of Oki



Geological changes over time have created the unique ecosystem of the Oki Islands. The plants and animals here also show us how living things evolve!

Oki Salamander



Oki Islands UNESCO Global Geopark

Lifestyles and Traditions

Unique Ecosystem

Geohistory

History of the land recorded in the landscapes

The rocks and rock layers that compose the Oki Islands tell us how the scenery we see today was created.



Okay!!

I know, how about we go and find out what you can learn in the Oki Islands UNESCO Global Geopark?

Yes, Minato. Good question!

Professor Bird, can you tell me what a geopark is?

To put it simply, a geopark is a place where we can learn all about the land that we live in. There are geoparks all over the world!

Well, that depends which geopark you are in, so...

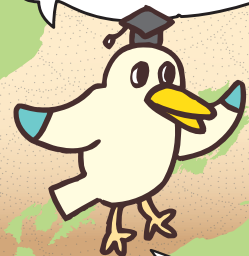
What can you learn there?

Around six million years ago, two big volcanoes erupted to form the base of the Oki Islands!

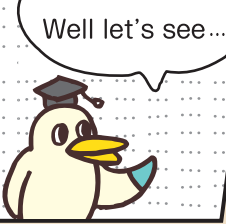
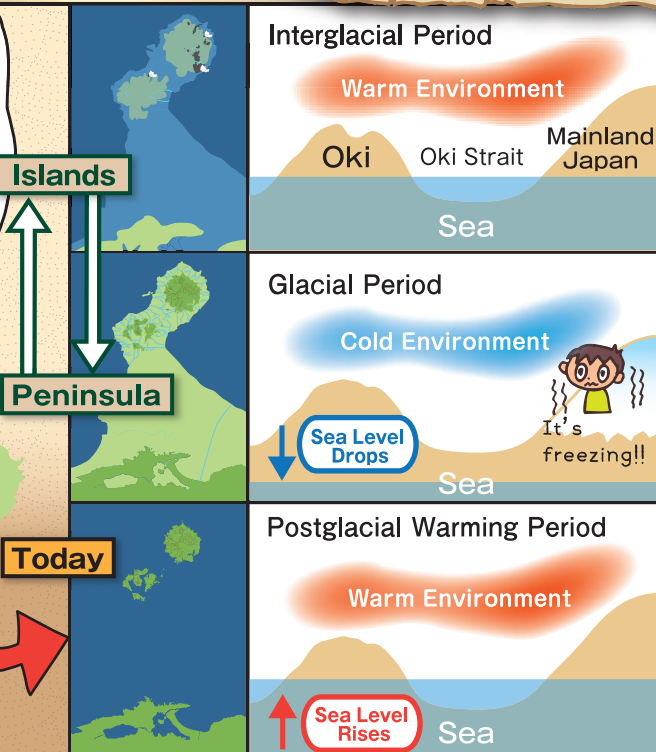


Whoa!!

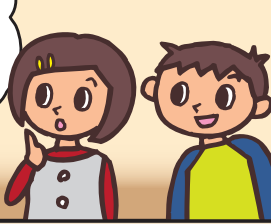
After this, the temperature and sea level around the world rose and fell over and over again. This caused Oki to alternate between being connected to the mainland, and becoming islands.



The four Oki Islands finally emerged again around ten thousand years ago.



Well let's see...



But how do you know that this happened?

Wow, Oki has experienced a lot of changes.

How the Oki Islands were born!

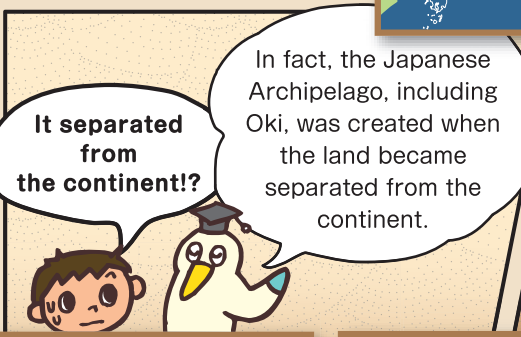


Where on earth is Oki?

There's no Japan!



First, let's find out how the Oki Islands were formed. This is a map of the land 50 million years ago.

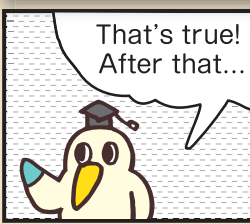
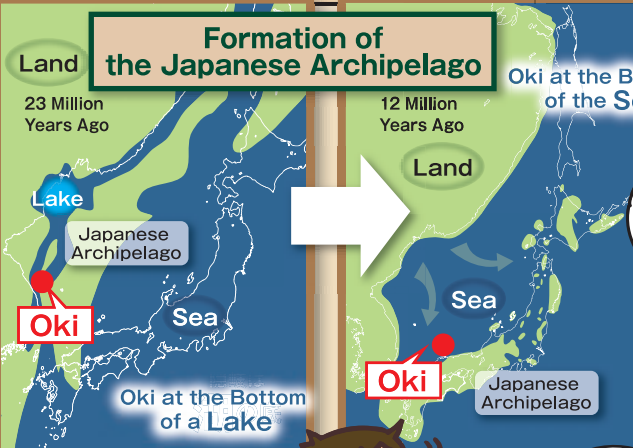


It separated from the continent!?

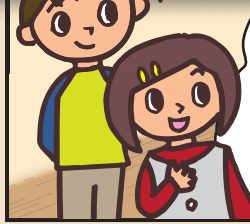
In fact, the Japanese Archipelago, including Oki, was created when the land became separated from the continent.



That's right. The red dot is where the land of Oki was located. At this time Japan was still part of the Eurasian Continent.



That's true! After that...



Wow, by learning about how Oki was created, I got to find out how the Japanese Archipelago and the Sea of Japan were created, too!



Yes, when the land of the Japanese Archipelago began to separate from the continent, a large lake formed. This lake became a sea.

I get it! There's a lot of information hidden inside of rocks, isn't there.

Sea Period

[12 Million Years Ago]

That's right. Scallops are sea creatures, so we know that by 12 million years ago the area had become a sea.

Oki

Is this a fossil of a scallop?

Oki Obsidian

Huh? About history and culture?

Yes, but there's more. Rocks tell us about more than just the formation of the land. Did you know that this black rock tells us about the history and culture of the Oki Islands?

This is obsidian. It was used to create objects like sharp-edged tools and arrow heads in the Old Stone Age. Obsidian can be linked to the history of these islands.

There are many more interesting things to learn. In Oki you can have fun just by looking at the many, many interesting shaped rocks and spectacular landscapes. Next let's have a look at some of Oki's natural 'works of art'.

I never knew rocks could be so interesting!

Rocks Tell The Story- Transformation of the Land

Yes! Geology records how the land was created.

What?!

You can tell all of this just by looking at rocks?

All of the changes in the land can be discovered by looking at the rocks in Oki.

What does this rock tell us?

Push!

Rocks

Huhh...

This rock was created by high temperature and high pressure underground on the continent.

Oki

We can say it is proof that Oki and Japan were once part of the continent.

Continental Period

[3 Billion- 350 Million Years Ago]

First, let's look at the oldest rock in Oki, Oki Gneiss.

Sand, Mud

Land on the Continent

Plate movement caused land to be carried deep underground.

It became solid rock due to high temperature and pressure.

This is a fossil of a crocodile backbone from twenty million years ago! Crocodiles live in warm climates where there is water, so this tells us about the environment of Oki at that time. The fossil was discovered in Oki in 2013. The crocodile was 7 meters long!

Oki

7 meters!!

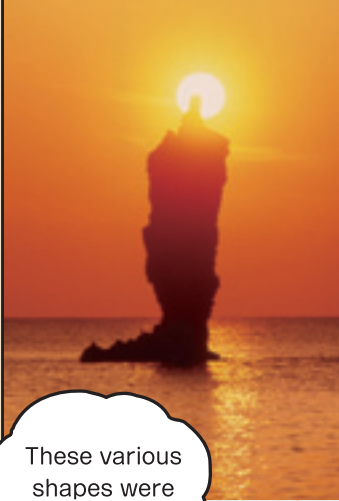
Lake Period

[20 Million Years Ago]

What's this strange looking rock?

Amazing Scenery of Oki!

Rôsoku-jima (Candle Island)



These various shapes were carved by the waves.



Saburô-iwa
(Three Brothers Rocks)



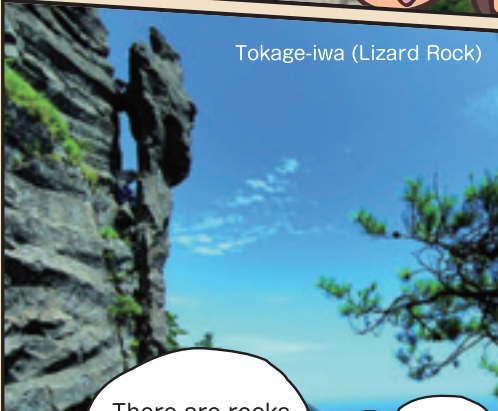
Zô-ga-bana
(Elephant's Trunk Rock)

Tsûtenkyô (Heavenly Arch)



There are so many rocks with interesting shapes.

Tokage-iwa (Lizard Rock)



Yoroi-iwa
(Armor Rock)



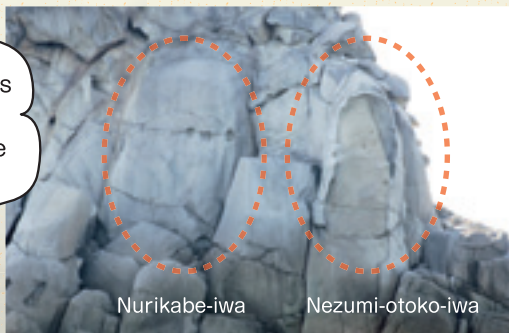
There are rocks of all sorts of shapes and sizes around here. Try to find them!

Wow! That looks like a lizard climbing up the cliff!



Nurikabe-iwa

Nezumi-otoko-iwa

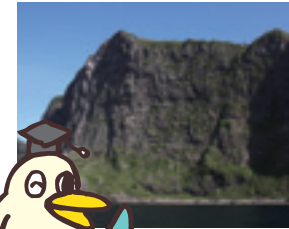


Kuniga Coast



The tallest point of this cliff is 257m. If it were a building, it would be 70 floors! It was formed by erosion from the Sea of Japan and is one of the most famous sea cliffs in Japan. Cows and horses graze in the farmland around the cliff.

What an incredible cliff! I wonder how tall it is...

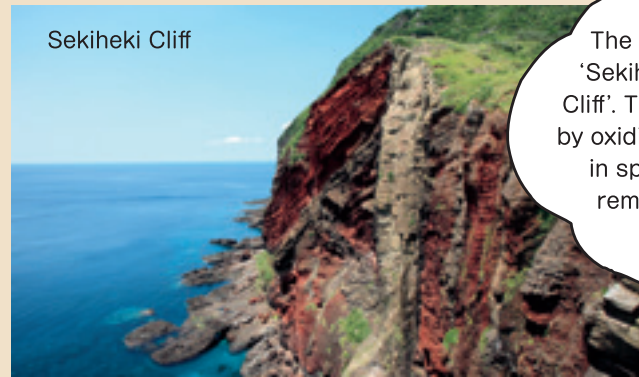


This coastline is made up of white rocks, so it is called 'Shirashima', which means 'white island'.

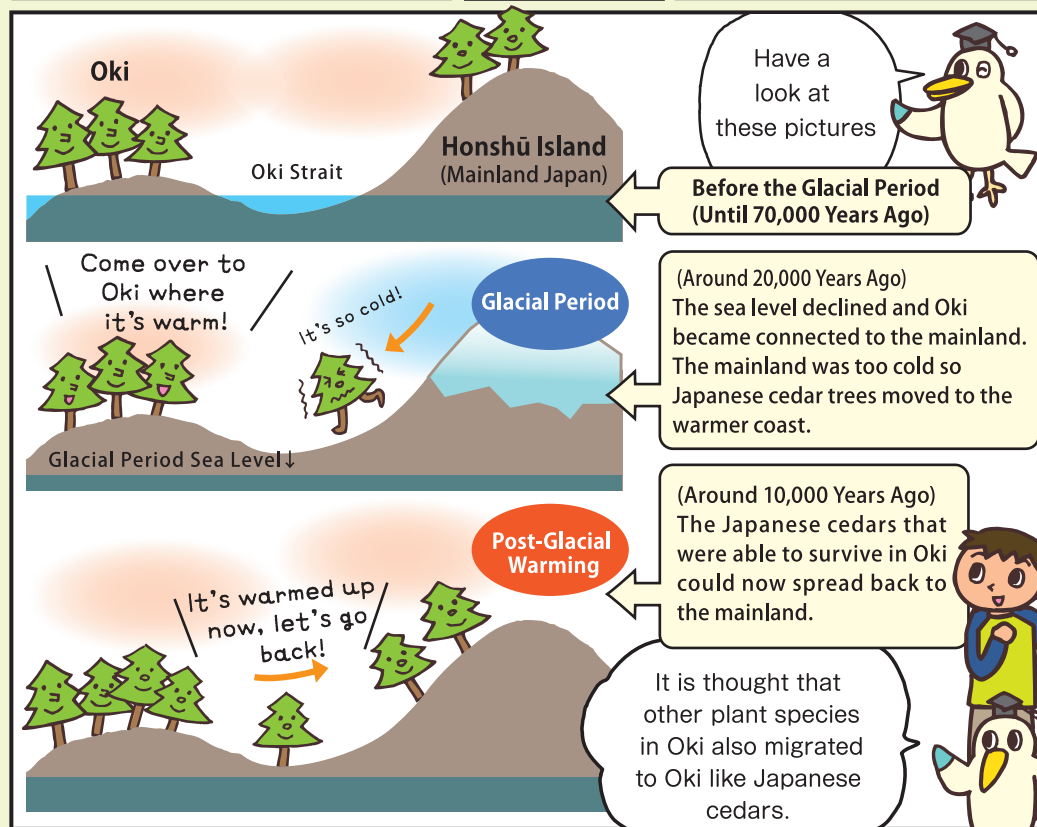
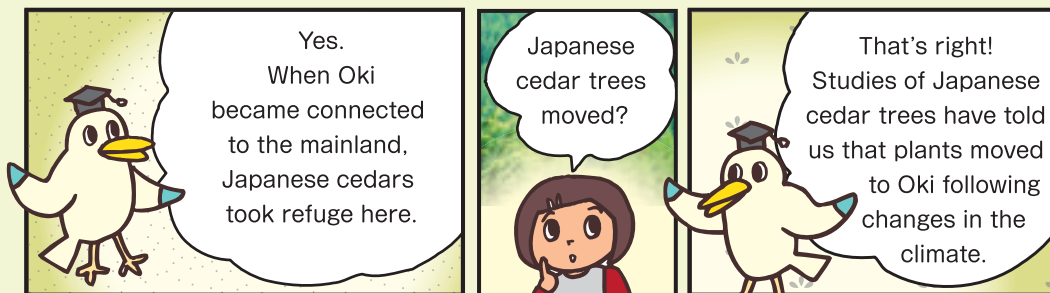
Shirashima Coast



Sekiheki Cliff



The cliff over here is called 'Sekiheki', which means 'Red Cliff'. The red color was created by oxidization of the iron content in splashes of lava. It is the remains of the mouth of a volcanic crater.

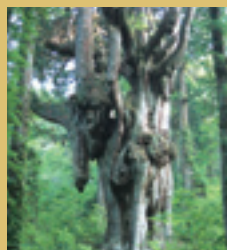


Three Giant Japanese Cedar Trees of Dōgo Island

These three strangely shaped trees are known as Kabura-sugi, Chichi-sugi and Yao-sugi.



Yao-sugi
(Around 2,000 Years Old)

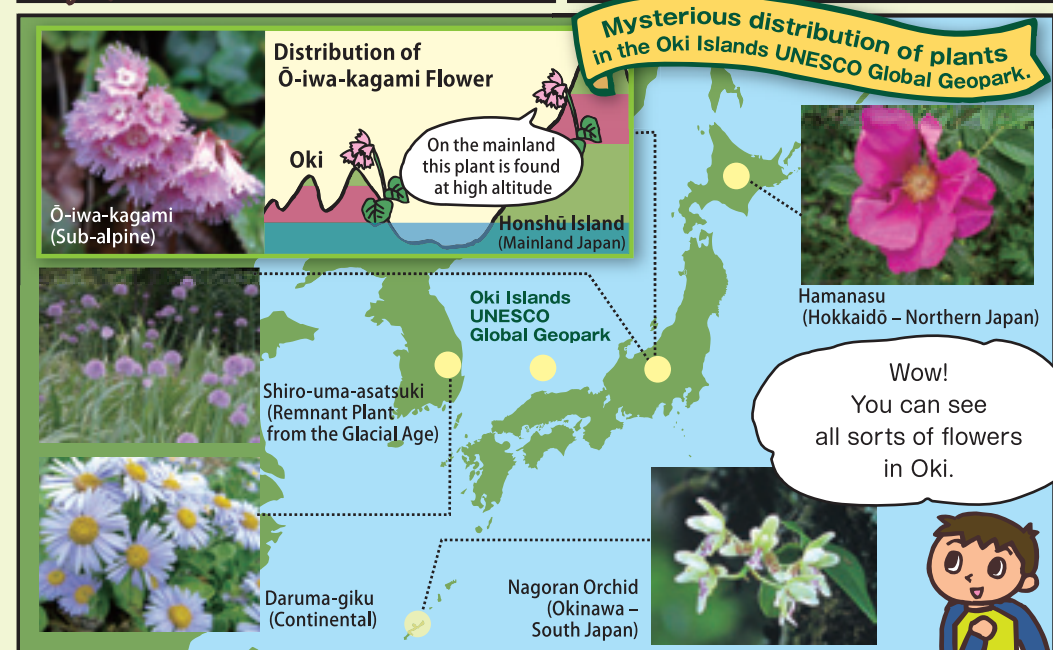
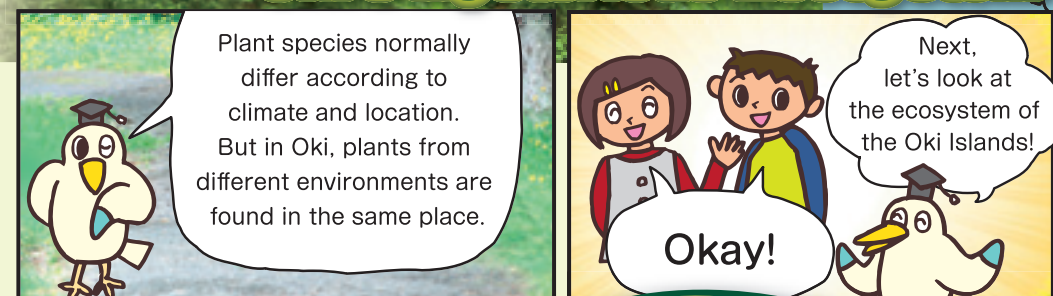


Chichi-sugi
(Around 800 Years Old)



Kabura-sugi
(Around 600 Years Old)

Subalpine Plants on the Coast?! Oki's Mysterious Ecosystem



Plants and Animals in Oki Are Different?!

Old Ancestor
Lotic Type

Lentic Type

Pond or Swamp

Lentic Type Features

- Rounded Tail
- Thin Limbs
- Webbing on Toes

Lentic Type
↓
Lotic Type

Oki Salamander

Lotic Type Features

- Rounded Body
- Clearly-marked Dorsum

Swamp or Ravine

Lotic Type

Now, let's look at how an animal in Oki has evolved. This is the Oki Salamander.

Around 10,000 Years Ago

When the islands became isolated, the salamander became enclosed in a very mountainous environment.

In Japan, salamanders can be separated into two groups. These are the 'Lotic Type' and the 'Lentic Type'. However, the Oki Salamander has features from both of these groups.

Does that mean the Oki Salamander went from being Lotic Type, to Lentic Type, only to change back to the Lotic Type again?

More specifically, it is an 'Oki Dandelion'. Did you know that it can only be found in Oki?

Correct!

It's a dandelion!

Minato, do you know the name of this flower?

...Um, Professor, they don't really look that different from the ones on the mainland...

Oki Tago's Brown Frog

Oki Hare

Oki Thistle

Oki Rhododendron

Aside from this flower, there are around 30 different species and subspecies that can only be found in Oki.

What does that mean?

A small difference is important?

That's true. But if you look very closely, they are different. This small difference is a very important point.

Oh I get it! That's the connection between the land and the ecosystem isn't it?

It looks like such a small difference, but I guess it's really important after all.

Yes, I see you have understood an important thing. Living things adapt to the characteristics of the environment they live in.

That's because when Oki became isolated islands, the Oki Salamander's habitat changed, right?

This tells us the ways plants and animals in Oki have evolved and how long evolution takes.

Around 10,000 Years Ago

From Peninsula to Islands

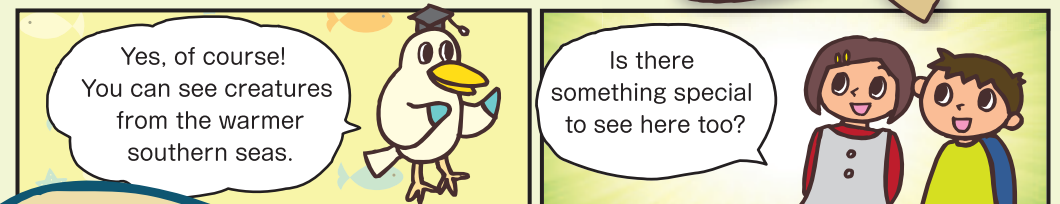
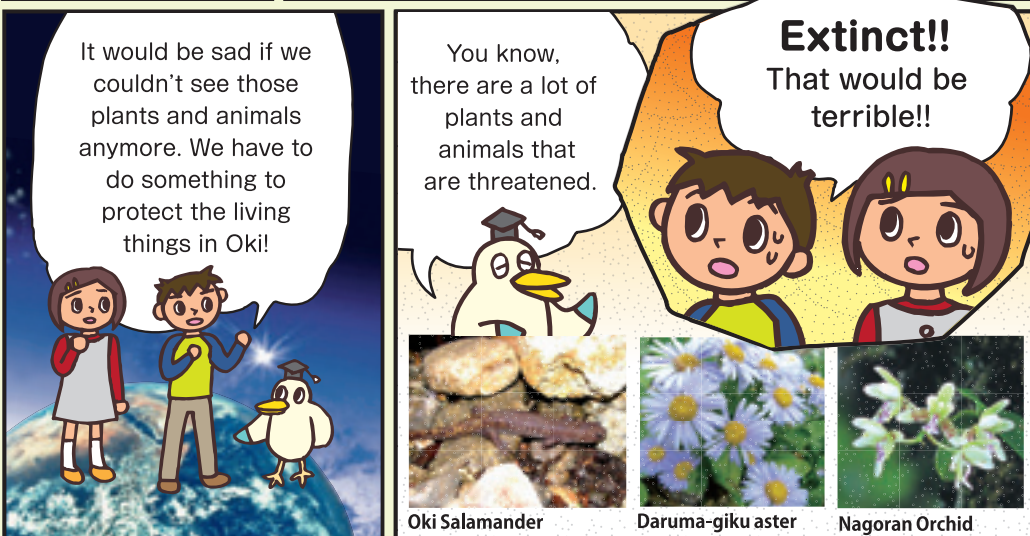
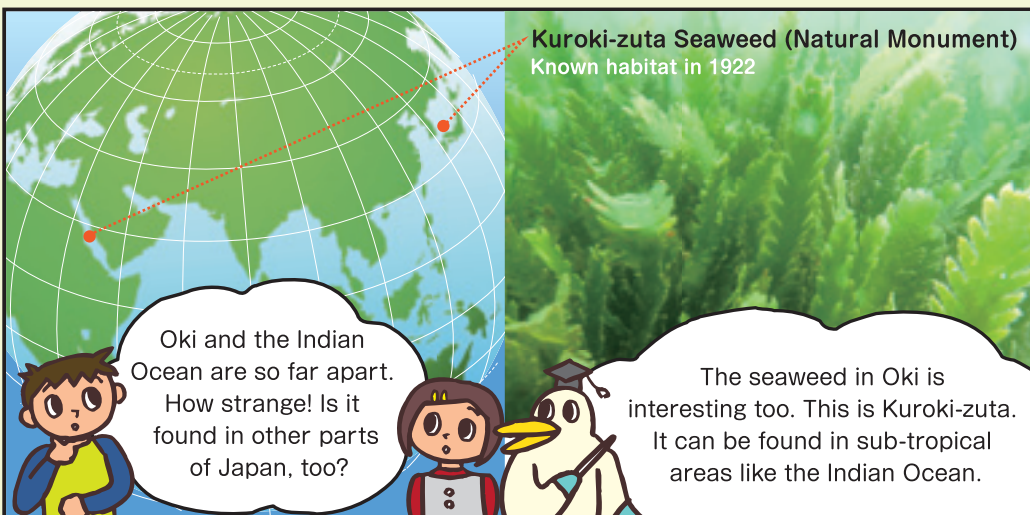
Let's think back to when Oki became islands again 10,000 years ago.

During the 10,000 years that Oki has been isolated, the plants and animals have evolved little-by-little. In fact, in terms of the evolution of species 10,000 years is a very short time.

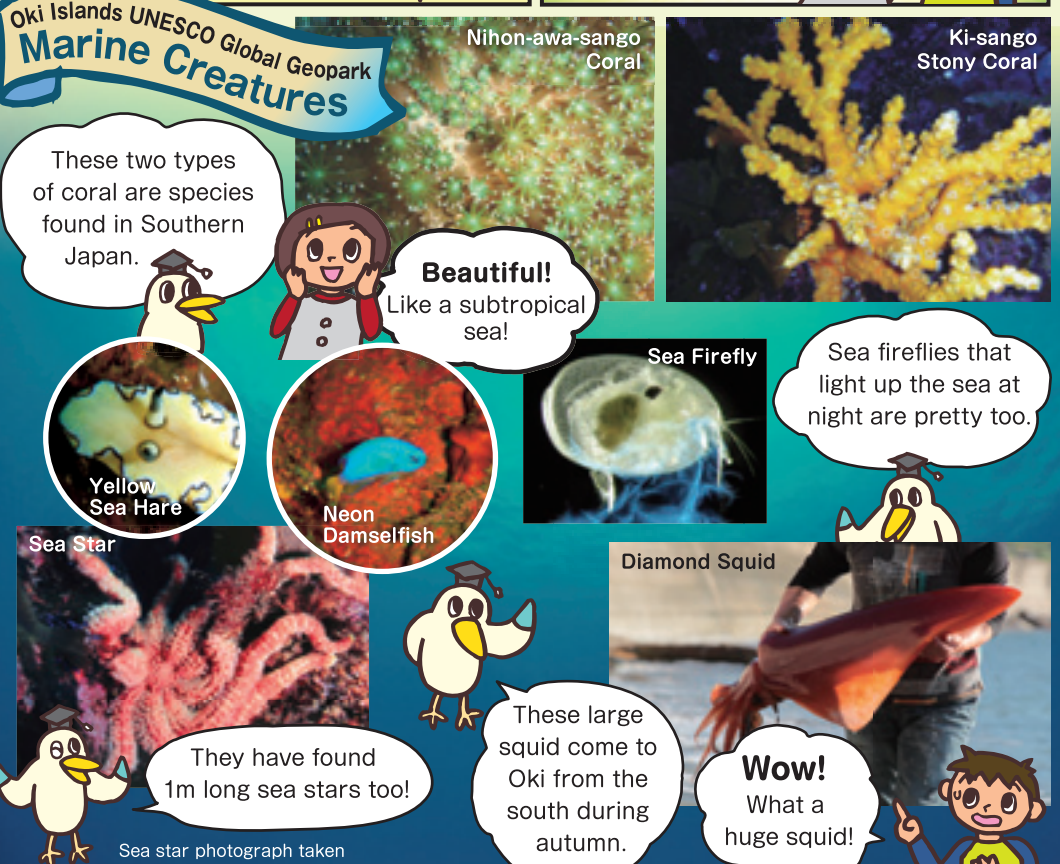
10,000 years is a short time?

I get it. So we can see what '10,000 years of evolution' is!

Unique Ecosystem of the Sea!



Oki Islands UNESCO Global Geopark Marine Creatures



Gorei-furyū



Mizuwakasu Shrine Festival



Mura-matsuri-furyū

**Hassaku Ushi-tsuki (Bull Sumō)**

Oki Bull Sumō has a 790 year-long history. Festivals take place throughout the year.

They look tough!

It's like a scene from a classical play!

**Shōraku-bune Spirit Boats****Oki Kagura Shintō Dances**

Yes! That's one reason. Let's discover some other reasons for the development of Oki culture!

Umm... Because Oki is a group of isolated islands?



Yes. But do you know why?



There are so many different festivals and rituals in Oki.

Traditional Culture from the Past

There is a special kind of sumō in Oki. They even made a movie about it.

**Oki Traditional Sumō**

Oki sumō is often called 'compassionate sumō' because the winner of a match must lose the next match, to show compassion. It is also called 'pillar sumō' because the winner gets to take home a pillar from the sumō ring as a prize.



Have you heard of sumō?

Yes!

Me too!

**Shūhaira Dance**

This rice-planting ceremony takes place at two different shrines and is performed in ten directions.

**Fuse Mountain Festival**

A festival where a long vine is wrapped around this tree shrine seven and a half times. It is held every second year in April.

In Oki there are many more interesting festivals and traditional activities.



This dance is thought to come from Southeast Asia.

**Oki Kokubun-ji Renge-e-mai**

This dance originates 1,200 years ago and was performed in the Imperial Court.

What a cool mask!



Noble People Exiled to Oki

Famous Oki Exiles

Emperor Gotoba

A famous classical Japanese poet, Emperor Gotoba wrote nearly 700 poems during the 20 or so years that he lived in the Oki Islands. The Emperor's poetry collection is still kept in Nakanoshima Island.



I read that in a book once!

Long ago, Oki was a place of exile.



Emperor Godaigo

It is said that Emperor Godaigo stayed at the Kurogi Imperial Residence in Nishinoshima Island and Oki Kokubun-ji Temple in Dōgo Island during his time in Oki.

Shintō priests, royalty and nobles were sent here. Oki was probably chosen because it was prosperous enough that the exiles could live without suffering.



Takamura Ono

A talented literary figure in Japanese history. It is said that he prayed at Kinkō-ji Temple in Nakanoshima Island.



During this time culture from the capital was brought to Oki too.



Cool!

Ushi-tsuki, or Bull Sumō, was started by the local people as a way to cheer up Emperor Gotoba.



Obsidian and the Spread of Culture

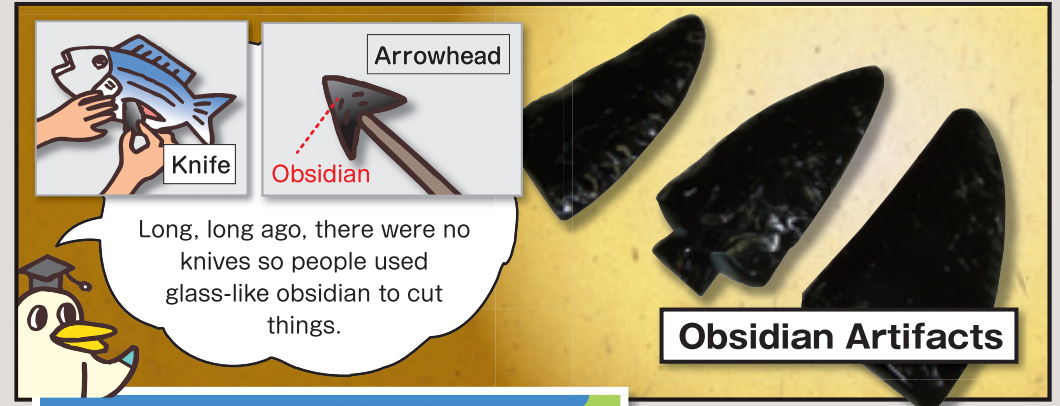
There are more than 150 Shintō shrines in Oki. Sixteen of these have been recorded in documents that date back more than 1,000 years. Four have been given a high rank alongside such important shrines as Izumo Taisha. In Oki you can also see primitive Shintō Shrines that date back to ancient times. These shrines do not have buildings. Instead, natural objects like a rock or a giant tree are worshipped. The presence of these shrines can be linked to the fact that

in ancient times people travelled to Oki to mine obsidian. Culture from this long ago has not even been recorded in Nara or Kyōto.

There are also shrines which have the same names as other famous shrines around Japan. This tells us that significant figures from these places came to Oki. We can imagine that these people developed the province and built shrines.

Origins of Oki Culture...

It all starts with obsidian...



Transportation of Oki Obsidian



It is believed Oki obsidian was traded as far back as 30,000 years ago in little wooden boats.

So, Oki obsidian can teach us about how ancient people interacted and moved about.

Wow, that looks hard.

Ancient people crossed the sea to Oki

Culture Preserved By Geography and Topography

Around 40km from the Mainland

Oki is a group of remote islands, so many ancient traditions have been protected here.

Yes! So, do you understand how the traditions and culture of Oki developed now?

These islands have been shaped by erosion and weathering, and have very mountainous terrain. This landscape has created lots of small isolated communities around each island.

Location of Main Settlements

Wow! There is so much more to know about the Oki Islands!

Even though Oki is not very accessible, lots of people have been coming here for years and sharing their traditions.

There are many different dialects in Oki too. Maybe because people from one isolated place didn't meet with other people often... That's why a lot of local culture is alive today.

Flourishing Trading Port

Lifestyle and Traditions

From the mid-Edo Period (1603 - 1868) to the Meiji Period (1868 - 1912) there were lots of trading ships at sea.

Have you ever heard of the Kita-mae-bune Trading Ships?

No idea...

Oki became a bustling place where ships waited for the right winds to continue their voyage.

Kita-mae-bune Route

Sado

Oki

That's far!

These boats sailed all the way from the Seto Inland Sea to Hokkaidō and back.

Yes. To welcome all of these visitors, there were huge banquet rooms prepared for gatherings, and fashionable black umbrellas from England were laid out in the shops. There are many tales from this prosperous time.

4,000! That's a lot of ships!

Some years as many as 4,000 ships visited and the sailors stayed in Oki.

Don't forget us, Saigō Port...

So these ships brought culture from near and far to Oki!

But it was not just goods that these ships brought to Oki. Songs and dances came too. For example, 'Oki Shigesu' folk dance is said to be from the Niigata area.

Makihata farming was a four-stage crop rotation process. They used stone walls to separate the animals and crops. The clever people of Oki carefully considered how best to use the sparse land. Makihata was carried out for several hundred years.

Wow!

These are the stone walls of Makihata farming, a unique Oki-style of crop rotation. These volcanic islands have little usable land for farming. But you can find lots of spring water, even at the top of mountains! In these places horses and cows were used to fertilize the barren land.

Regular Spring Water Mechanism

So, where does the spring water in Oki come from?

Is it unusual for springs to be on high ground?

Well, water normally flows from high places down to low places.

'Freshwater Lens'

A layer of water that exists because the permeable rock layer continues below the sea surface.

Wow. It's so strange that the water doesn't mix!

Oki Spring Water Mechanism

In Oki's case, spring water comes from a body of fresh water located under the ground. It rises through cracks in the rock layer. The weight of seawater and fresh water is different so they don't mix at all.

Freshwater is pushed up due to pressure from seawater

They have different weights so don't mix!

Discover Connections!

Perhaps you can say that the Oki Islands are a place where you can 'discover connections'.

Oki is just like a treasure chest!

Correct! The people were able to dig these tunnels because the rock here happens to be very soft.

Fukuura Tunnels

Tunnels?

Connections?

Yes. Do you know what these are?

| | Transportation | Technology |
|---------------------------------------|----------------|------------------------|
| 1 Early Meiji Period 1870's | On Foot | Dug by Hand and Hammer |
| 2 Meiji Period 1901 | Horse | Hammer and Dynamite |
| 3 Shōwa Period 1975 | Automobiles | Machinery |

If you look at them, you can discover three stages of development of methods of transport and technology over time.

I see. You can see connections between the land and lifestyle.

There are many connections to discover here!

This is the Oki Airport. It was built on a long plateau that was created by lava flow.

Lava →

What kind of place is Oki?

That's right. But if you look at the map down below which is turned sideways, from the continent's point of view, it looks a bit like an 'entrance' to Japan, doesn't it?

Kind of like the edge of Japan next to the Eurasian Continent?

Do you know where Oki is?

Oki

When you put the map sideways it looks totally different doesn't it...

Oki

Whoa... That map looks strange..

If you look at the map like this you can easily see that Oki is encircled by land.

Map of the Pacific Rim East Asian Nations

Sideways Map: Toyama Prefecture 2012

Wow! It's pretty big isn't it!

Among the 418* inhabited islands of Japan, Dōgo Island is number 15 in size.

Dōgo Island and the Dōzen Islands are each around about 100km all the way around.

How big is Oki?

* Data from 2012 National Census

The mountain in the middle is surrounded by sea and islands!

Central Pyroclastic Cone

Outer Rim

Dōzen Caldera

The western Oki Islands, the Dōzen Islands, are called a 'caldera'. This is a characteristic landscape created by volcanic activity.

Wow! It's built into the rock!

The tall mountain in the middle is a landmark. On it there is a shrine called 'Takuhi Shrine'.

Takuhi Shrine

There is a legend that a holy flame from this shrine guided boats lost at sea to safety.

It's kind of mysterious...

Hmm.. A landmark mountain that has a legend about a guiding light.

Let's go find some other 'connections'!

We've learnt that the landscape and geology, various plants and animals, legends and people's lifestyles are connected in many different ways.

That's right. You two who live on these islands are part of the Oki Islands UNESCO Global Geopark too, you know.

