



~ Museum of Geomorphology and Geology ~



# San'in Kaigan Global Geopark - Japan -

**Geological features, the natural environment,  
people's lives, and the formation of the Sea of Japan**





# What is a Geopark?

- A Geopark is a kind of nature park which has scientifically important or beautiful geological assets.
- Geoparks are intended to revitalize the local area by utilizing valuable geological heritages for education, tourism and in the local industry.

## San'in Kaigan Geopark

The underlying themes of the Geopark:

**Geological features, the natural environment, people's lives, and the formation of the Sea of Japan**

At the San'in Kaigan Geopark, you will find lots of valuable geological assets which relate to the process from when Japan was a part of the Asian Continent to its present-day formation of the Sea of Japan.



*"Kaigan" means coast in Japanese.*


### Facilities

**A Tenki Tenki Tango Roadside Rest Area**



Located in the vicinity of Nochigahama Beach with an information center on the Tango Peninsula.

**B Genbudo Park Information Center**



Material exhibits of the history of Genbudo Cave and basalt.

**C The Kami Town Marine Cultural Center**



Exhibits of stuffed fishes and crustaceans, and information about the geosites in Kami Town.

**D The Shin'onsen Town San'in Kaigan Geopark Center**




Exhibits about the general information of the San'in Kaigan Geopark, and the main facility of on site training for children.

**E The San'in Kaigan Nature Museum**



A hands-on learning facility for experiencing nature through beach observation tours, etc.

**F The Nagisa Community Center**



A hands-on learning facility for nature activities such as sea-kayaking, snorkeling, and geo-tourism.

**G The Tottori Sand Dunes Geopark Center**



Exhibits on the history of coastal sand dunes as well as sand and wind phenomena such as ripple marks.

You can get information about the San'in Kaigan Geopark at each facility. Community groups based in each facility conduct Geopark activities.

# A Museum of Geomorphology and Geology

The San'in Kaigan Geopark possesses valuable and beautiful geological and topographical formations such as various rocks and strata, coastal landforms, inland waterfalls and gorges. The San'in Kaigan Geopark can be considered a "Museum of Geomorphology and Geology".

## ○ Sand Dunes and Sandbars

Tottori Sand Dunes, Shoutenkyo Sandbar, Kotohikihama Beach, etc.



Tottori Sand Dunes

## ○ Abrasion Platforms

Kasumi Kaigan, Tajimamihonoura, Uradome Kaigan, etc.



Kasumi Kaigan

## ○ Sea Caves

Yodo Sea Cave, Nihon Sea Cave, etc.



Yodo Sea Cave

## ○ Coastal terraces

Sodeshi, Fudeshi, Tango Matsushima, Kyogamisaki Cape, etc.



Fudeshi

## ○ Volcanos

Kannabe Volcano, etc.



Kannabe Volcano

## ○ Strata

Nekozaki Peninsula, Matsugasaki-Hyakusougai (Cliff eroded by waves), etc.



Matsugasaki Hyakusougai

## ○ Columnar Joints

Tateiwa Rock, Genbudo Cave, Yoroi no Sode, etc.



Tateiwa Rock

## ○ Faults

Gomura Fault, Shikano Fault, etc.



Gomura Fault

## ○ Waterfalls

Saruodaki Waterfalls, Amedaki Waterfalls, Yoshitaki Waterfalls, etc.



Saruodaki Waterfalls

## International Importance



Overseas travelers visit Genbudo Cave.

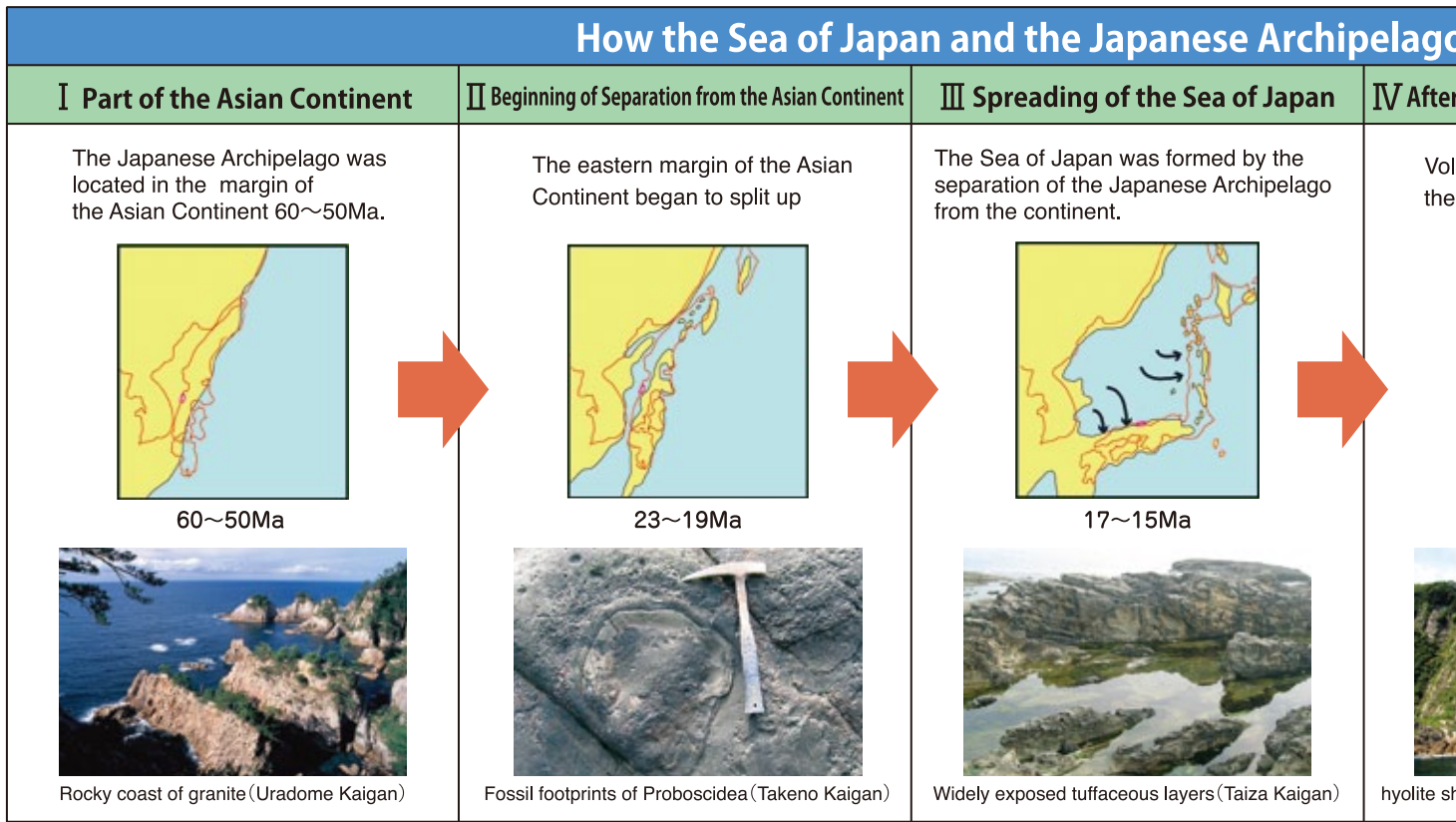
Genbudo Cave, located in the Maruyamagawa River Area, is where Quaternary geomagnetic reversal polarity term was first proposed. In 1926, Professor Motonori Matuyama of Kyoto University found that the basalt at Genbudo Cave, formed from volcanic activities approximately 1.6 million years ago, had remnants of reverse magnetization. The terrestrial reverse magnetic polarity was one of the bases for the seafloor expansion hypothesis and contributed to the plate tectonics theory. Many internationally valuable landforms and geological heritage sites like Genbudo Cave in the San'in Kaigan Geopark still remain today. On June 30th 2009, IUGS defined the beginning of early Quaternary Period (2.59 million years ago) as the beginning of the Matuyama Reversed Polarity Epoch.



Professor Motonori Matuyama



# Separation of the Japanese Archipelago



## Formation of the Sea of Japan

## Biodiversity

Geodiversity has fostered the affluent ecosystem in this region.



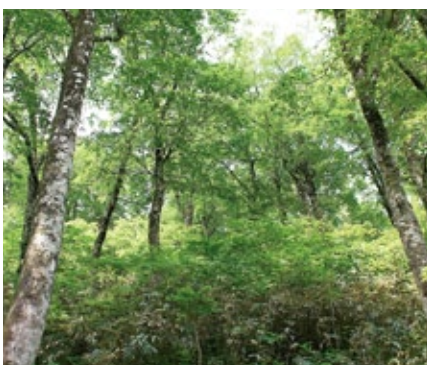
Sea Bells



Oriental White Storks



Golden Eagle (*Aquila chrysaetos*)



Japanese Beech Trees







Baikamo (*Ranunculus nipponicus*)



Japanese Giant Salamander (*Andrias japonicus*)



# ipelago from the Asian Continent

How they were formed	
Formation of the Sea of Japan	Formation of Present Landscapes
<p>Volcanic activities following formation of the Sea of Japan</p>  <p>3Ma</p>  <p>Columnar joints meet with columnar joints (Yoroi no Sode)</p>	<p>Formation of the present Japanese Archipelago</p>  <p>San'in Kaigan Geopark</p> <p>Modernday Japan</p>  <p>Sand Dunes (Tottori Sand Dunes)</p>

## Outcrops that show overlapping strata at a glance



Yoroi no Sode (Kasumi Kaigan)

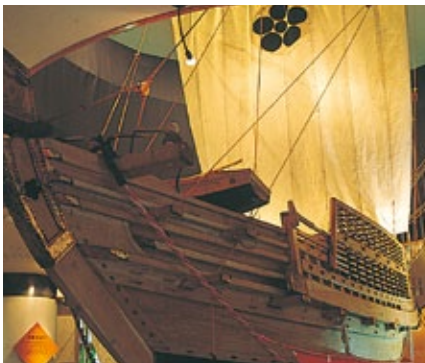
The Japanese Archipelago began to separate from the Asian Continent about 20 million years ago and formed the Sea of Japan.

At the San'in Kaigan Geopark, you can find lots of geological assets from the period of the formation of the Sea of Japan.



## Gifts of Culture and Life

The various cultures and industries unique to the environment of the San'in Kaigan region are being utilized as tourism resources.



The Kitamaebune Ships



Rice Terraces



Hot Springs



The Fishing Industry



Ski Resorts



Food

# Coexistence between Nature and People

## Environmental Conservation

~ Protection and Conservation of Natural Diversity ~

### ~ Nature Conservation ~

- Protection and raising awareness of geological heritages
- Protection and raising awareness of rare animals and plants
- Breeding and conservation of oriental white storks

### ~ Environmental Conservation ~

- Promotion of local waste removal volunteer services
- Volunteer weeding at sand dunes



Breeding and conservation of Oriental White Storks



Promotion of local waste removal volunteer services



Volunteer weeding at the Tottori Sand Dunes

To The Su  
Local Dev

## Education

~ Hands-on Learning with Local Natural Resources ~

### ~ School education ~

- Delivery of lectures to elementary schools and Geotours
- Research and education activities in cooperation with universities

### ~ Lifelong learning ~

- Geologic and Geographic excursions and Geotours
- Seminars and forums
- Hands-on learning



San'in Kaigan Geopark Forum



Fossil discovery experience



Hands-on learning



Local residents, private groups, companies, and the government cooperate to **conserve** and utilize the assets on Geodiversity and Biodiversity in the San'in Kaigan Geopark, They aim for **sustainable local development** through **education**, **tourism** and **the local industry**.

## Local Industry

~ Relation between people's lives and Geodiversity ~



Agricultural development of sand dune areas (Shallot fields)



Harvesting seaweed on wave-cut platform



Utilizing rias coasts as ports for waiting out storms



Using coastal terraces for rice paddies



Auction of crabs off the San'in Coast

## Sustainable Development

## Geotours

## Sightseeing

~ Development of Tours Utilizing Geodiversity ~

## Food



Snow Crab Dishes



Yuhigaura (one of Japan's best 100 sunsets)



Sea Cave • Coastal boat tour

## Activity



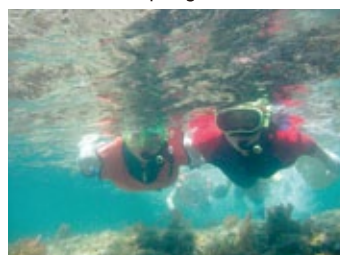
Kinosaki Hot Springs Resort



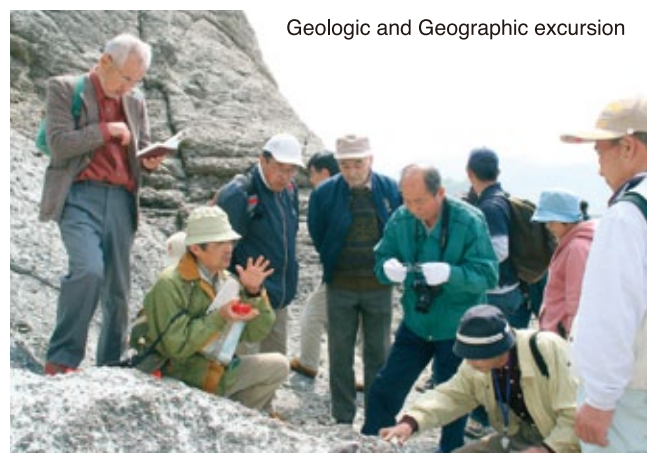
Guide tour at the Genbudo Park



San'in Kaigan Geopark Festival



Snorkeling



Geologic and Geographic excursion

# Access

## ○To JR Tottori station

[By train (Limited Exp)]

From JR Kyoto station : 2h 40m  
From JR Osaka station : 2h 30m  
From JR Sannomiya (Kobe) station : 2h 10m

[By highway bus]

From Kyoto terminal : 3h 30m  
From Umeda (Osaka) terminal : 2h 50m  
From Sannomiya (Kobe) terminal : 2h 40m

## [By Airplane]

### ○To Tottori Airport

From Haneda (Tokyo) Airport : 1h 10m

### ○To Tajima Airport

From Itami (Osaka) Airport : 35m

## ○To JR Toyooka station

[By train (Limited Exp)]

From JR Kyoto station : 2h 20m  
From JR Osaka station : 2h 30m  
From JR Sannomiya (Kobe) station : 2h 20m

[By highway bus]

From Sannomiya (Kobe) terminal : 3h 40m  
From Osaka terminal : 3h 10m  
(To Genbudo Park)

## ○To Mineyama station (Kitakinki Tango Railway)

[By train (Limited Exp)]

From JR Kyoto station : 2h 30m  
From JR Osaka station : 3h  
From JR Sannomiya (Kobe) station : 3h

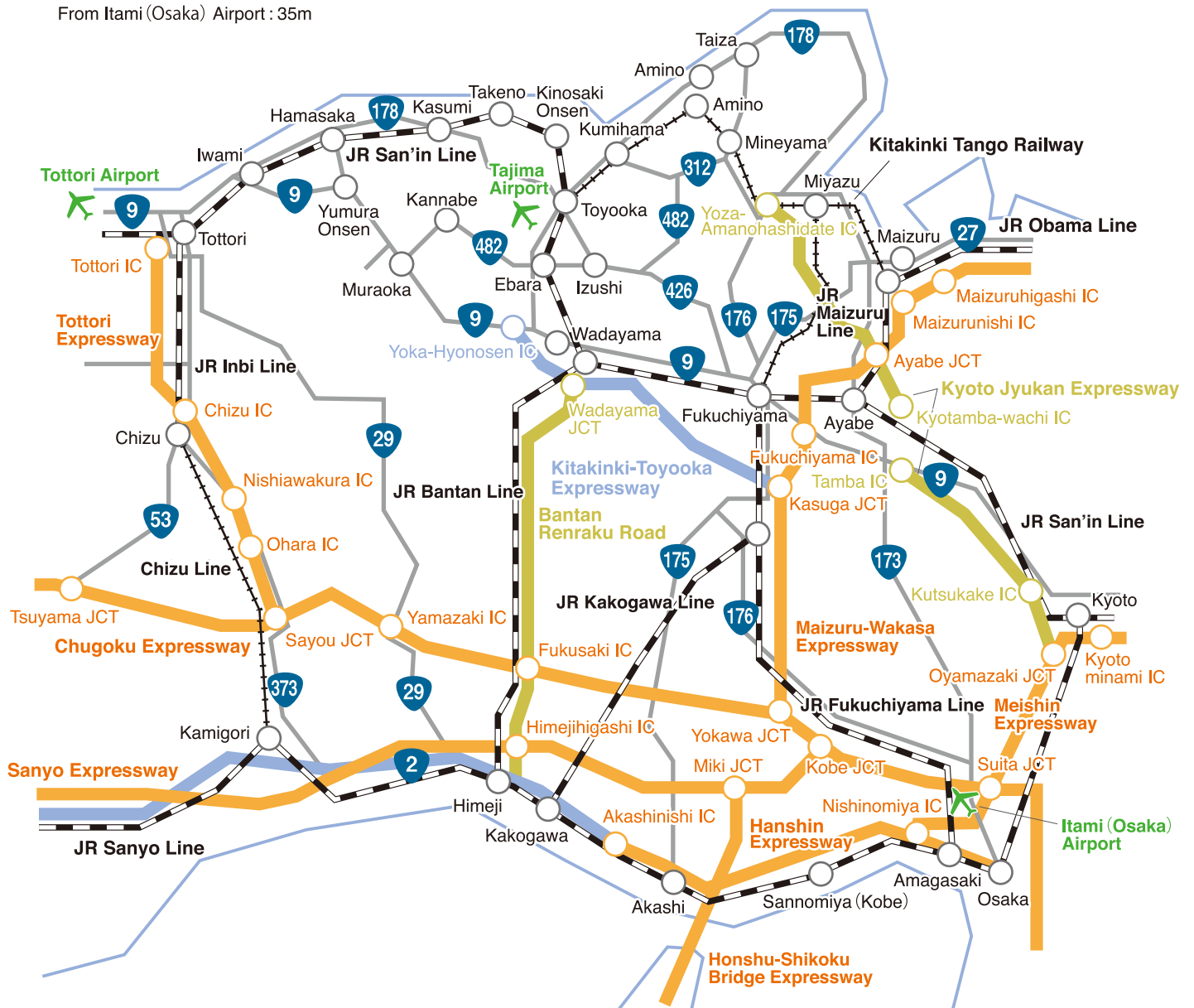
[By highway bus]

From Kyoto terminal to Taiza : 3h  
From Osaka terminal to Miyazu : 3h

## ○To Yumura Onsen

[By highway bus]

From Osaka terminal : 3h 5m  
From Sannomiya (Kobe) terminal : 3h 10m



## [Contact]

**San'in Kaigan Geopark Promotion Council**

7-11 Saiwai-cho, Toyooka City, Hyogo Prefecture, Japan

TEL: +81-796-26-3783 FAX: +81-796-26-3785

URL: [http://sanin-geo.jp/en/index\\_english.html](http://sanin-geo.jp/en/index_english.html)

E-mail: [geopark@pref.hyogo.lg.jp](mailto:geopark@pref.hyogo.lg.jp)

