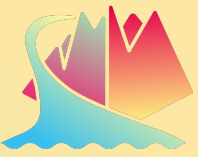


# Discover Sendai, Discover Tohoku

The 2nd International Association of Geochemistry (IAGC) Conference  
Water-Rock Interaction WRI-17  
Applied Isotope Geochemistry AIG-14  
in SENDAI 2023



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## A Field Guide to Geibikei gorge and Chūson-ji temple 20 August 2023



<http://www.geibikei.co.jp/en/index.html>



[https://www.chusonji.or.jp/language\\_en/index.html](https://www.chusonji.or.jp/language_en/index.html)

### General Overview

**1** **Geibikei** is a large gorge in Iwate Prefecture, Tohoku. Visitors are delighted with the scenery of the limestone cliff that is experienced through a traditional boat. The boatman uses a pole to cruise and maneuver along the river.

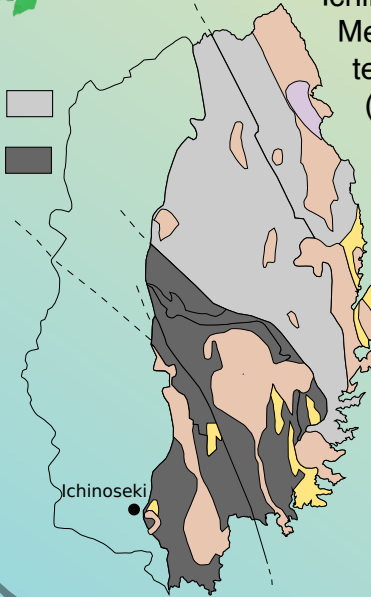
**2** **Chūson-ji temple** is an Ancient Buddhist temple in Tohoku, known as the Golden Temple because the interior and exterior of the Main Hall (Konjikidō) are plated with glittering gold. The gold probably originated from old gold mines around Iwate



## Regional Geology of Ichinoseki



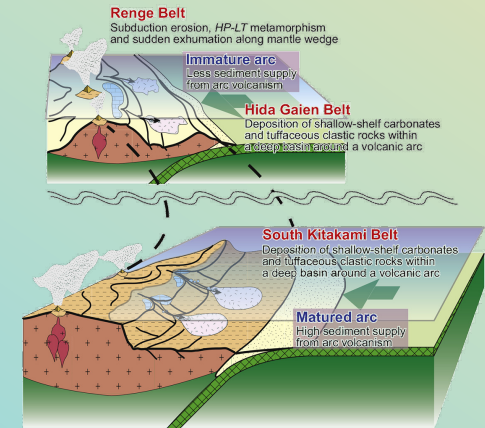
NKB  
SKB



Ichinoseki at Iwate prefecture comprise mainly Mesozoic and Paleozoic rocks, and are divided tectonically into the Northern Kitakami Belt (NKB) and the Southern Kitakami Belt (SKB).

NKB is composed of a Jurassic accretionary complex which includes Carboniferous to Permian limestone, Permian to Early Jurassic chert and Late Jurassic clastic rocks.

### Early Paleozoic arc-trench system in proto-Japan



Satish-Kumar, M., et al., 2021.

The SKB is composed of pre-Silurian rocks Ultramafic Rocks and Metamorphic Complex, These rocks are unconformably overlain by Silurian to Early Cretaceous shallow marine to non-marine sediments.

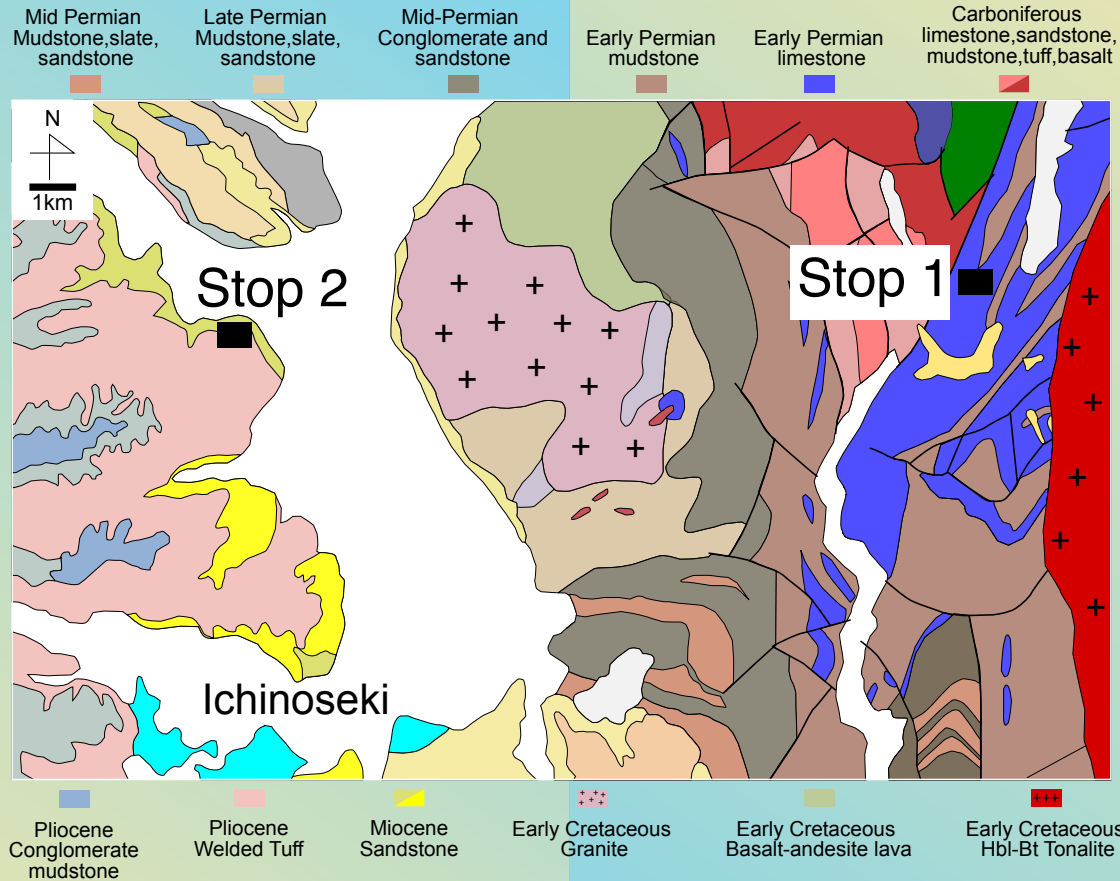
In both NBK and SKB strata are overlain by Early Cretaceous basic to acidic volcanic rocks.



# Field Excursion

Departing from Sendai city (8:00), the bus will go to the **Geibikei** passing through the Japan volcanic front where Tertiary volcanic successions are widely deposited. In the second half of the course, we begin to enter the accretion complex of the SKB before reaching the first stop point (9.30).

At **Geibikei** we will observe the Permian limestone of the Nishikori formation and its equivalent. The stunning scenery of the limestone cliffs that stand up to 120 meters tall will be observed by traditional boat as we will go along the Satetsu river accompanied by the local performance of the boatman's song.



We move to **Chūson-ji** temple our second stop point right after lunch (13.00), traveling cut-through Paleozoic and Mesozoic rocks toward young tertiary volcanic deposits. Chūson-ji is situated on the top of a hill named Kanzan composed of Miocene-Pliocene welded tuff/sandstone.

After light hiking (13:30), we arrive at the ancient buddhis temple established at ~850 by a Buddhism priest named Ennin (Jikaku Daishi) and in the early 12<sup>th</sup> century Fujiwara family constructed massive temple complex and hall in this site. The site well-known as "**The Golden Temple**". It is derived from The Konjikidō golden hall which preserves the gold statue of Amida Nyorai (The Buddha of Infinite Light). Finally, we will back to Sendai after exploring the **Chūson-ji** complex (16.00).



「**狢鼻溪**」

**Geibi Gorge (Geibikei)**



「**中尊寺**」

**Chūson-ji Temple**