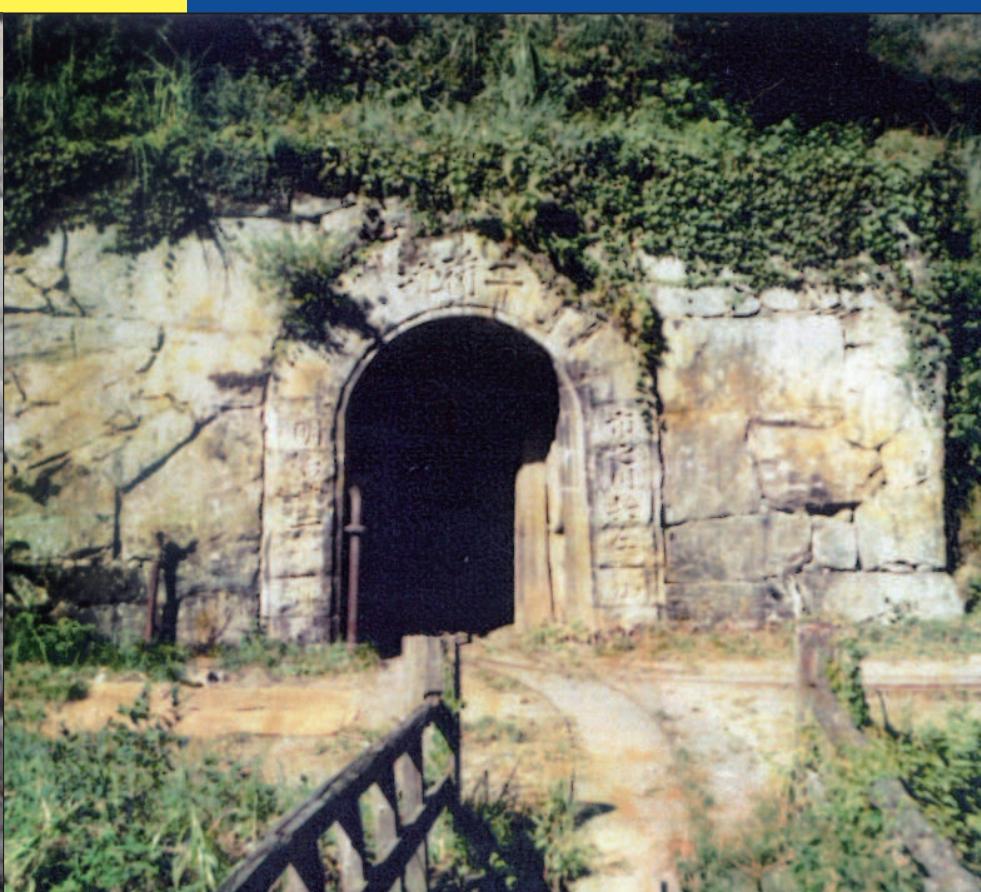




The History of Ichinokawa Mine

Ichinokawa Community Center

Saijo City, Ehime Prefecture, Japan



Cover photos:

(top) The Senga-ko adit entrance in 2014. Ichinokawa Community Center archives.
(bottom right) around 1960. Ichinokawa Community Center archives.
(bottom left) year unknown. Saijo City Local History Museum archives.

Acknowledgements

“Researching the History of Ichinokawa Mine”

Ichinokawa Community Center

It is the responsibility of local residents to uncover the history of the world-renowned Ichinokawa Mine and leave a record for future generations. Considering that the number of people directly connected to the mine is shrinking every year, members of our community decided not to waste any time in researching the history of the mine.

This booklet is the result of research, interviews with persons related to the mine, and field investigations.

The following booklet originated as a script that accompanied a presentation about Ichinokawa Mine.

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Introduction

“Ichinokawa Mine? Where’s that? What does it produce?”

When you mention Ichinokawa Mine to young people here in Saijo, that is generally how they respond.

“While the ruins of Ichinokawa Mine are not designated as a historical asset, you can see a beautiful crystal from the mine at Saijo City Local History Museum. The photo collection Saijo has a lot of pictures of the mine.” These statements seem to fall on deaf ears, and there is very little interest in the mine.

Happily, this year (1982) Ichinokawa Mine was designated as a Regional Cultural Promotion Project. This designation spurred research by Saijo residents and history enthusiasts and led to the creation of a presentation introducing the mine. The following booklet was originally prepared as a script for that presentation.

While I believe our research into the mine is still incomplete, it is my hope that this booklet will promote knowledge about the mine and offer a clear picture of its scale and importance. Furthermore, I sincerely hope that Saijo’s residents will develop an interest in and affection for this precious cultural property.

A note about this Translation

Japanese names are rendered in the contemporary Western style: given name followed by family name.

Chapter 01 Shirome Settlement, the Stone Wall, and the Adit Portal

The Shirome settlement sits about 6 km from Iyo-Saijo Station, Ehime Prefecture. It can be reached by passing through Bujo Park along the Kamogawa River and following the narrow mountain road. Today, all that remains of this village, once at the heart of the Ichinokawa Mine complex, are the building and grounds of the Ichinokawa Elementary School, the untended and overgrown Shiromeyama Shrine, and a few private homes. Apart from these buildings, there is a stream and a few fields, some now covered in weeds. It is a lonely mountain community.

This village was once home to the largest antimony mine in the world, at its peak boasting some 2000 buildings and 4000 residents. Many people passed through the settlement during the day and brilliant electric lamps lit up the night, leading visitors from out of town to remark “This place is livelier than Kobe.” Now few traces remain of that bustling past.

A narrow path from the Ichinokawa Community Center, passing by Shiromeyama Shrine, leads to a splendid granite arch—the entrance to an adit. The portal is approximately 2.6 meters high and 1.9 meters wide. It is sealed off with concrete. Still visible on the top of this arch is the inscription “Senga-ko,” the name of the adit. “January, Meiji 23 (1890)” and “Ichinokawa Cooperative Mine” are inscribed on the left and right pillars of the arch, respectively. This adit was opened approximately 300 years ago following the discovery of a rich vein approximately 30-50 meters from the entrance. The amount of ore produced from this vein was the source of the adit’s name: Senga-ko, “the deposit with 1000 loads of ore.” (see cover photos)

This great granite portal and stone wall are all that remain of a once-great mine.

Chapter 02

The Beginnings of Ichinokawa Mine

In the first volume of the *Shoku Nihongi* (one of the *Rikkokushi*--six national histories of Japan), which records the history of the nine emperors from the reign of Emperor Mommu (697 AD) to Emperor Kammu (791), the chapter “The Second Autumn of Emperor Mommu” (7th month of the lunar calendar) contains the following sentence.

“In the year of *kinoto-i* (615), Shimotsuke-no-kuni (present day Tochigi Prefecture) and Bizen-no-kuni (Okayama Prefecture) contributed *shaku-e* (copper); Iyo-no-kuni (Ehime Prefecture) contributed *shirome* (stibnite)…

In the year of *kinoto-tori* (625), Iyo-no-kuni contributed *suzukane* (stibnite)”

The words *shirome* and *suzukane* both refer to stibnite, and as there are no known sources of this metal in Ehime Prefecture other than Ichinokawa, it is plausible that this recorded contribution came from Ichinokawa. The details of this record—just who was mining antimony 1300 years ago and how they discovered it—are a complete mystery. Also, if this antimony was indeed from Ichinokawa, that would make Ichinokawa one of Japan’s oldest known mines.

In 797 AD, just 50 years after the compilation of the *Shoku Nihongi*, the Great Buddha statue at Todai-ji Temple in Nara was constructed. During the construction, it is said that 7,571 kg (12,618 *kin*) of antimony were used instead of tin, which was in short supply. It can be posited that this antimony was produced at Ichinokawa, but there is no clear historical record.

Chapter 03 Stibnite and Antimony

What kind of mineral is antimony? Antimonite ore is known as stibnite, and it is the size and beauty of Ichinokawa stibnite crystals that made the mine famous worldwide. The specimen shown in the photo is in the collection of the Saijo City Local History Museum. It is 45.5 cm long and weighs 13.3 kg. It was mined in 1891 by Daisuke Tanaka. As stibnite will oxidize and change color with exposure to air, it is kept in a sealed case.

However, the largest stibnite specimen from Ichinokawa (approx. 90 cm in length) is believed to be held by the Natural History Museum in London.

Regardless of size, stibnite crystals are characterized by numerous needle-like protrusions jutting out in multiple directions, as well as by the mysterious beauty of their metallic ashen color. During the occupation of Japan, it is said that soldiers from the Allied Occupation Forces visited Ichinokawa numerous times to see the breathtaking glimmer of the stibnite, which they compared to diamonds. The size and otherworldly luster of Ichinokawa stibnite crystals are their calling-card for experts and enthusiasts around the world.

In the *Unkonshi*, an encyclopedia of minerals, fossils, stone tools and other geological subjects compiled in 1773 by Sekitei Kiuchi, stibnite is referred to as *shakurinji*. He praised the mineral as “worthy of admiration, having a white-silver luster with the appearance of several pieces of timber clustered together.”



Stibnite. Length: 45.5 cm. Weight: 13.3 kg. From the collection of the Saijo City Local History Museum.

According to the *Pocket Encyclopedia of Chemical Elements* (pub. Iwanami Shinsho Junior, 1982), the name stibnite (Sb_2S_3) comes from the Latin name for antimony “stibium,” which originated from the Greek word “stibi.” It was used in Ancient Egypt in pottery decoration from as early as 4000 BC. It is said that the mineral was first used to repel flies from Queen Cleopatra’s eyes, but this seems unlikely. Antimony is in the same chemical family as arsenic, and its poisonous and antibiotic properties may have had an unintended effect on more than just insects.

The *Japan Data Book 1982* (*Nihon kokusei-zue*) lists the total world production of antimony in 1978 as 654,000 tons, with China and Bolivia producing 19.4% each, South Africa producing 13.9%, the Soviet Union 12.1%, Canada 4.6% and other countries 30.6%.

Furthermore, according to the “Current Condition of World Mineral Resources” (illustration in Economics Education Reference No. 59), in 1980 Japan supplied 2,420 tons of antimony, just 1.9% of its demand. Japan relies heavily on other countries for antimony, which is a major issue.

Antimony is used in the production of alloy metals rather than as a material by itself. A certain amount is used to harden the lead in polar plates on lead-acid batteries, and 10-20% of the total composition is added to strengthen lead or tin alloy bearings. These are the two main uses of antimony, but it was also common in typesetting metal. More recently it has been used in the production of semiconductors.

Chapter 04 The Rediscovery of Ichinokawa Mine

The history of Ichinokawa Mine that began with the reference to suzukane in the *Shoku Nihongi* recommences almost 1000 years later in 1679 at the beginning of the Edo period.

There is a detailed record of the rediscovery of antimony written in *The History of Ichinokawa Mine* (Ichinokawa Kozan Enkakushi). Chikanobu of the Sogabe family discovered exposed ore while overseeing repairs to a mountain road at Hotokegatoge Ridge.

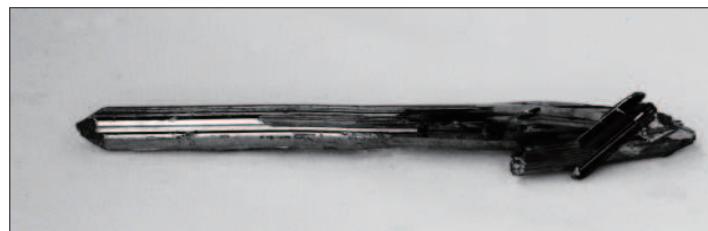
Hotokegatoge is now known as “Kamatoko” (literally: “the kiln”) because it was once the site of a simple refinery. Elderly residents say they once could find slag left over from the kiln.



Stibnite with crystal. Length: 11 cm. Ichinokawa Community Center archives.



Stibnite. 24 x 13 x 7 cm. Ichinokawa Community Center archives.



Stibnite. Length: 11 cm. Ichinokawa Community Center archives.