

#### Fourth Exhibition Room: List of Collections

##### Ishikko Kensan and the Imperial College of Agriculture and Forestry, Morioka [Panel]

Ishikko Kensan (written by the late Prof. Katsuhiko Inoue, Pedology Lab)

Kenji related mementos from the lab

Kenji's entrance to the Imperial College and encounter with Toyotaro Seki

School trip to Kansai (1916)

Kenji and geological surveys: his major involvement

Geological survey around Morioka - Geological research trip to Chichibu - Geological

survey in Esashi-gun - Graduation thesis on volcanic ash soil survey - Survey on

geological conditions and soil texture in Hienuki-gun

"The Biography of Gusko Budori" and Prof. Toyotaro Seki

Kenji and the mountains surrounding Morioka

Thin sections of rock made by Kenji and his classmates

##### Tools for soil texture surveys and teaching materials during Kenji's college years

Iron hammers for collecting rocks (purchased after 1910)

Clinometer (1906-1917)

Soil boring sticks used by Kenji

Mineral analysis tools for making thin sections of rock (1906)

Hardness meter [talc-diamond] (1906)

Immersion bottles for measuring the refractive index of minerals (manufactured by Krantz, around 1910)

Kipp's gas generating apparatus

Sieves for soil testing (Five layers, brass, Wolf method, one set) (1917)

Polarization microscope (manufactured by a German company, Füss) (1909)

Medium-size spectrometer by Erma (1910's)

Granite and a display stand at the Japan-British Exhibition of 1910.

Contact goniometer (1910)

Gravimeters (1906)

Thin sections of minerals for observing interference figures (12 types, 5 sets) (1916)

Thin sections of rock made by Krantz and instruction manual (1913)

Magnifying glass (during the time of the Imperial College)

Apparatus for chemical analysis (used since the time of the Imperial College)

Abbe imaging system (1913)

Weight for chemical balance (around the 1920's)  
Measuring tools (Vernier, beam balance)  
Tourmaline tongs (polariscope)  
Planimeter  
Soil sieve (around the 1920's)  
Evaporating dish made of nickel (1914, 1916)  
Pieces of glass made by Krantz for measuring specific gravity (1918)  
KH eyepiece (1917)  
Bunsen burner (during the time of the Imperial College)  
Explanation on flame reaction  
Mineral crystal models, wooden twin crystal models (1917)

#### Rocks collected by Kenji during soil texture surveys

Yonai-mura, Iwate-gun: Serpentinite  
Futami, Ise (March 1916, school trip): Greenschist  
Mt. Kanisawa in Shiwa: Andesite (July 1916, soil texture survey around Morioka)

Rocks collected during a research trip to Chichibu for a geological survey (September 1916)

Archaean Mikabu strata: Pyroxene

Sueno: Sericite schist

Hagure: Talc schist

Hagure: Greenschist

Honnogami: Graphite schist

Kunikami: Ophicalcite

Hikagemori: Ophicalcite

Rocks collected during the geological and soil texture survey in Hienuki-gun (April to September 1918)

Around Hayachine: Serpentinite

Gabbro

Serpentinite

Diorite

Peridotite

Rocks that Kenji used as teaching materials: Galena and sphalerite

“English Coast” in Hanamaki: Walnut fossil (gift by the first dean, Yonezo Hasegawa)

Kitakami River: Takashi Kozo (limonitic nodule in Quaternary sediments)

#### Thin sections of rock made by Kenji and his classmates

How to make thin sections of rock (descriptions)

Rocks in the order that the thin sections were made (photo)

Thin sections of rock made by Kenji and his classmates

Peridotite from Chogamori by Yoshiro Shioi

Pyroxene/amphibole from Iwanebashi by Kenji Miyazawa

\*\*\* from Sannokai, Shiwa-gun made by Kenji Miyazawa

Andesite from Mt. Iioka for the soil texture survey around Morioka by Team D

Polarization microscopic image of a thin section made by Kenji

Thin sections of mineral made by Prof. Toyotaro Seki (-1910)

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Descriptions of the above

25 rock sections (1921, Shimadzu Corporation)

25 thin sections of minerals (1916, Shimadzu Corporation)

#### The rocks Kenji studied (they appear in his poems)

Red rocks (corundum, garnet, rose quartz, amethyst, rhodonite, agate)

Black rocks (amphibole, specularite, magnetite, biotite, black tourmaline, obsidian, vermiculite, graphite, pyroxene)

Blue rocks (sapphire, amazonite, celestite, kyanite, glaucophane, azurite, turquoise, opal)

Green rocks (actinolite, emerald, malachite, chrysocolla, nephrite, jade, fluorite, chlorite, epidote)

White rocks (kaolin, talc, muscovite, orthoclase, asbestos, opal, rock salt, alabaster, hyalite, aragonite, crystal, calcite)

Yellow rocks (chalcopryite, sulfur, topaz, citrine, cat's eye, tiger's eye)

Geological map around Morioka (field study by a sophomore of the Department of Agronomy,

Second Section of the Imperial College of Agriculture and Forestry, Morioka)

Various rocks observed in the geological map around Morioka

#### Kenji and his friends

Kenji Miyazawa at the Imperial College of Agriculture and Forestry, Morioka (panel)  
A photo with roommates of Jikeiryō (student dormitory) room #9 with Kenji being a leader  
taken at a botanical garden [copy]  
Alumni association newsletters #31, 32, 34, 35 (poems submitted by Kenji)  
Poschel & Hodgson, *An Introduction to The Chemistry of Colloids*  
Textbook written in English that Kenji and his classmates used in a seminar and a postcard  
addressed to Kenji's friend  
A photo of four major contributors to *Azalea* [copy]  
*Azalea* (front covers, copy)  
Kenji Miyazawa, *A Restaurant of Many Orders* (original edition)  
Kenji Miyazawa, *Spring and Asura*, Front cover and a part of the book (copy)  
"Be not Defeated by the Rain," replica from Kenji's journal, "Ame ni mo Makezu" (Be Not  
Defeated by the Rain)

#### Graduation thesis by Kenji

His instructors, Prof. Nakauemon Furukawa and Prof. Toyotaro Seki

Graduation thesis by Kenji and his classmates  
Graduation theses by 11 graduates from the 1918 Department of Agronomy, Second Section  
(copy)  
Kenji's graduation thesis, "Beneficial Effects of Inorganic Substances in Humus on Plants"  
=Alkali treatment activates phosphorus in acidic soil=  
<Professors Furukawa and Seki were the primary and secondary instructors for their  
graduation theses>  
Profiles of Prof. Furukawa and Prof. Seki  
Relationship with Prof. Umetaro Suzuki  
Analytical chemistry experiment and Prof. Furukawa

#### Prof. Isenosuke Onodera and Kenji

<Isenosuke Onodera was one of Kenji's mentors and a teacher at his alma mater>  
Photo of Prof. Isenosuke Onodera  
Isenosuke Onodera, *Textbook on Fertilizer Studies*. Kogensya  
A photo of Kenji at the Tohoku Quarry Facility found in a textbook.  
"Could limestone be useful as fertilizer?" (collaborative research with Kenji)  
Graduation thesis under the instruction of Prof. Onodera  
Mamoru Nishimura and Eiji Ozaki, "Limestone Powder as Fertilizer"  
Lotus Sutra in Japanese (donated in Kenji's will)

Isenosuke Onodera, *Fertilizer Studies General Discussion, Detailed Discussion, Overview, and New Edition*. Yokendo

Volcanic landscape model used by Prof. Toyotaro Seki for his lecture

Model of the Hakone volcano (with a cross section) (1916, purchased by Prof. Seki)

Model of the Aso volcano (with a cross section) (1916)

Model of the Fuji volcano (1916)

Kenji Miyazawa, *Biography of Gusko Budori*

Prof. Toyotaro Seki and Kenji at the Imperial College (photo)

Letter from Kenji Miyazawa to Seki (copy: in an aluminum frame)

Materials related to the Department of Agronomy, Second Section and Agricultural Chemistry (Geology and Pedology Course)

<Materials related to Kenji's teacher, Prof. Toyotaro Seki are also preserved>

Arrhenius, *Kalkfrage, Bodenreaktion und Pflanzenwachstum* (in German)

"Survey of Geological and Soil Characteristics in Hienuki-gun, Iwate Prefecture" (copy)

Kenji Fujita, *Geological Travelogue*

Graduation thesis, Akihiro Sugio, "Elimination Method for Crude Clay in the Soil"

Toyotaro Seki, *Newly Compiled Summary of Pedology* (1992)

Toyotaro Seki, *Soil* (1944)

Toyotaro Seki's curriculum vitae

Directory of graduates from the Department of Agronomy, Second Section of the Imperial College of Agriculture and Forestry, Morioka and the Department of Agricultural Chemistry (11th to 19th year graduates from the Imperial College)

Account book of items - Geology and Pedology Course (Meiji and Taisho eras: 1868-1926)

Account book of items - Chemistry lab (1937)

Seal and seal box of the Geology and Pedology Course

## Panels and on the wall

Water color painting by Kenji Miyazawa, "Nichirin to Yama" (Sun and Mountain) Wood print (framed)

Ame ni mo Makezu (Be not Defeated by the Rain) (winter, 1955, calligraphy by Hakumei Uyama: Gift from Takeo Ishikawa) framed

Stipple portrait of Kenji Miyazawa (by Keiichi Mita, framed)

"Not wanting pleasure" Kenji Miyazawa ("Ame ni mo Makezu" journal: framed)

Kenji's name card and its origin

A photo of Toyotaro Seki in later life (framed)

Toyotaro Seiki, "Memoir of Kenji" (March 1934)