

Geological feature series of biographies Lyman

He performed a geological survey in Hokkaido at the Meiji beginning and he made a geologic map of the first Japanese color printing and published it.

American geologist Lyman (1835–1920) arrived Japan in 1872 and stayed in Japan for nine years.

He performed a geological survey of Hokkaido and an oil investigation of the all over Japan.

He made first colored geologic map “Ezo (Hokkaido) area geologic map in scale of 1: 2million” and brought up many young geologists in the meantime.

- Lyman learned in a mining school in Paris in 1859 and studied in the Freiberg mining school (current Freiberg college of engineering) in Freiberg of Germany more in 1861 and learned mining engineering.

Freiberg mining school

The main building at the time of 1866



In September, 1862, he returned to hometown Northampton because of the Civil War. He helped his uncle who was in the Pennsylvania geological survey place. He engaged in the geological feature surveying investigation. In these days, the oil field in the world were developing.

In 1870, he received commission of the British Government and engaged in oil investigation in the Punjab district in northwestern India.

2 Arrival at in Japan.

Geological survey in the whole Hokkaido

- Departure San Francisco, on December 17, 1872 (Meiji 5)
- Arrival at Japan on January 17, 1873 (Meiji 6).
- On January 18, he wrote a letter on the arrival to the Secretary of Kiyotaka Kuroda, Bureau of Development.



Bureau of Development
Government building

2.1 Survey in Hokkaido, Meiji 6 (1873)

- Arrival Hakodate on 21, April
- Until November 10, he investigated Ishikari, Shiribeshi and Iburi area for checking local coal, oil, sulfur, gold placer. He and students walked in the mountains in the daytime. They camped on the river bank in the evening.
- He taught mathematics assistants (students) in a tent on rainy days.

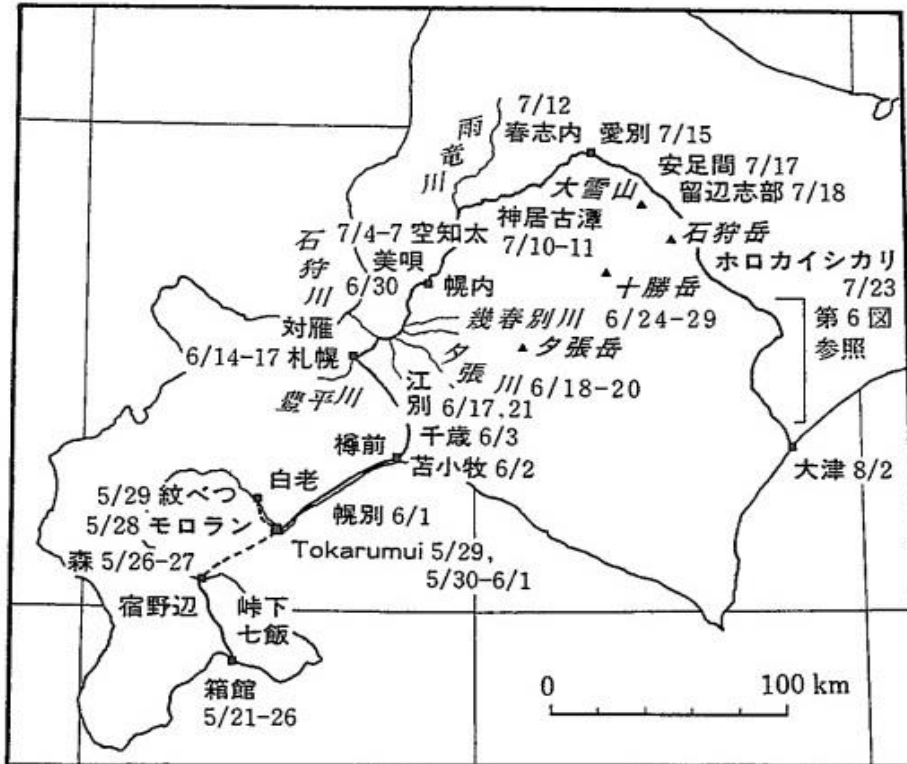
2.2 Geological survey, Meiji 7 (1874)

- Departure Yokohama, May 19, and Arrival Hakodate, May 20.
- He departed Hakodate on May 26 and arrived Sapporo on June 4, through Mori, Muroran, Tomakomai, Chitose.

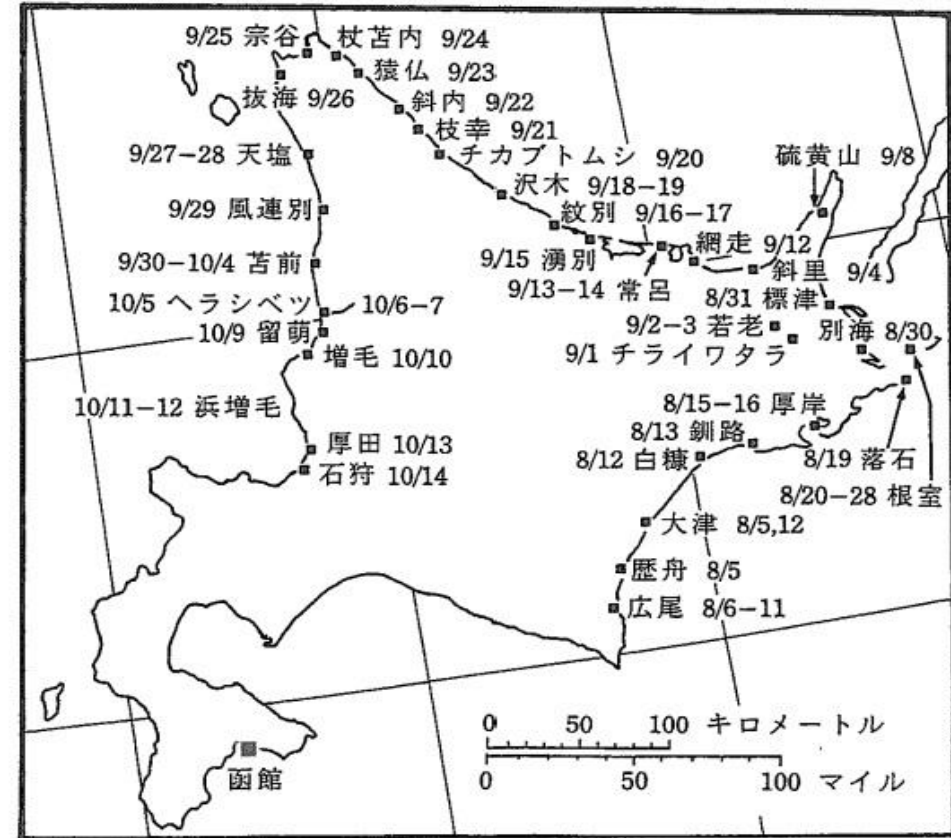


Survey route, 1874

From Fukumi (1994, 1995)



第2図 ライマン一行の1874年調査路—函館から大津まで



第1図 ライマン調査路 (大津—広尾—大津—函館)

Kushiro Coal Field



- They checked coal mining activities at Kushiro and Shiranuka in Doto (Eastern Hokkaido) area.
- Sulfur Mine in Mt. Iou was also their interest.
- Left photo is Kushiro coal field in early Showa.

Mt. Iozan, Atusa-Nupuri

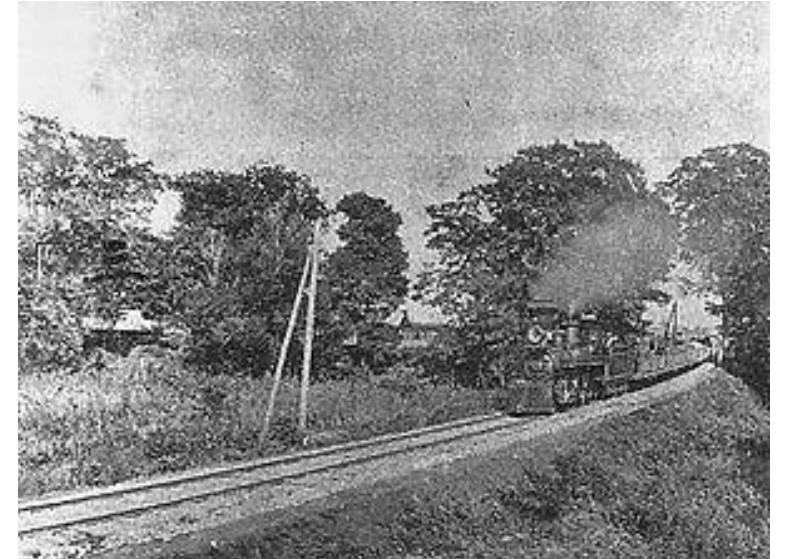
- Atusa-Nupuri) is a Quaternary volcano in Teshikaga, Hokkaido. Altitude is 512m. It is also called Mt. Iozan .
- Atusa means nude and Nupuri means mountain) in Ainu language. In other words, it mean "a naked mountain".
- Text is cited from Wikipedia. Photo is from Teshikaga Navi.



2.3 Geological Survey, Meiji 8 (1875)

- The investigation of about 100 days from June through October.
- He mainly investigated Kayanuma and Sorachi Coal Fields.
- The students discovered many excellent coal beds in Bibai and Naie Coal Fields. These works resulted in the Ishikari Coalfield development.
- In addition to a geological survey, he engaged in the railroad surveying as work of the Bureau of Development.

Photo is the Horonai Railway managed by the Bureau of Development. Cited from Wikipedia.



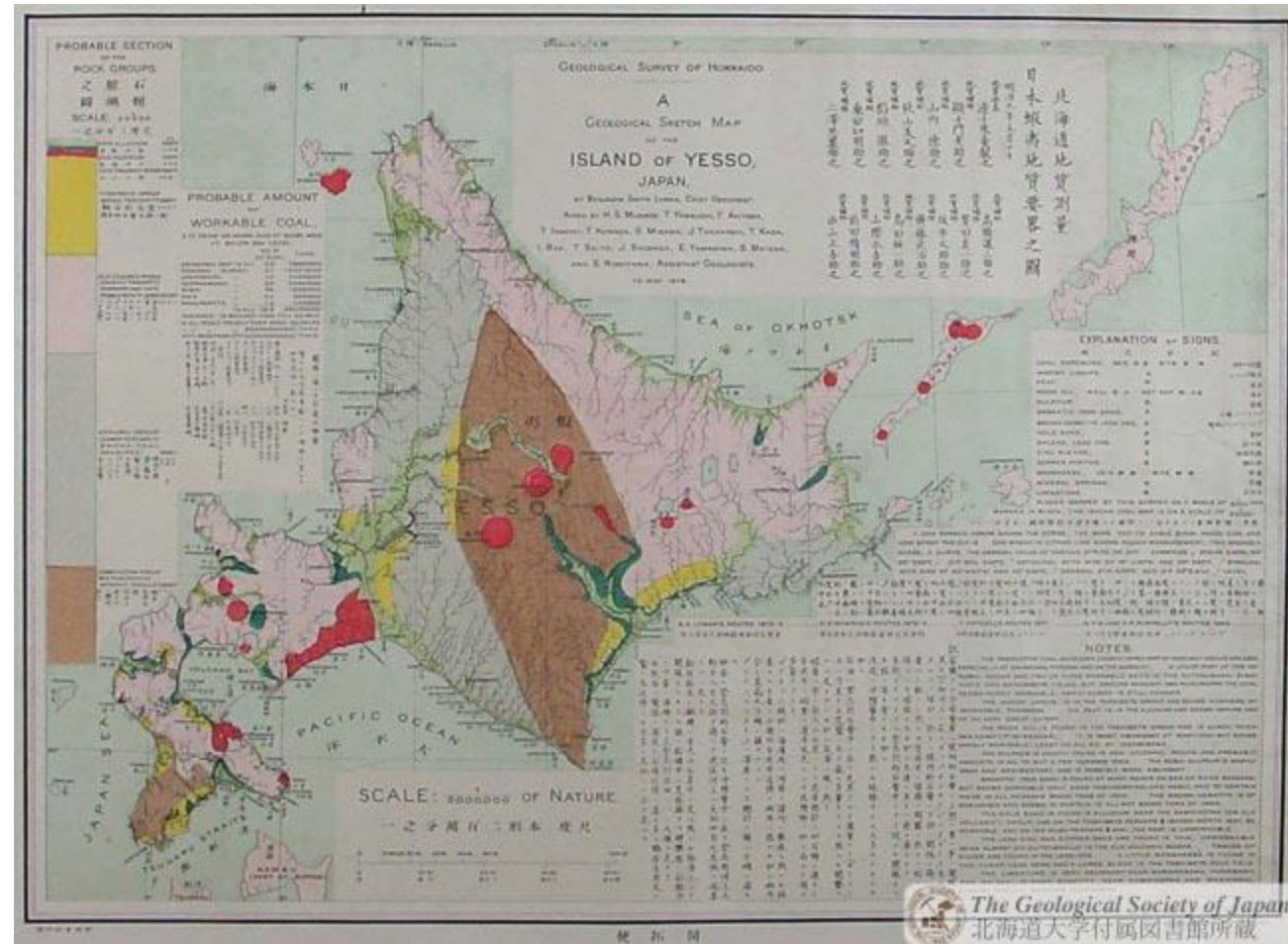
2.4 Geological Map of Hokkaido

- Lyman express “Geological Map of Hokkaido (Yesso) in scale of 1:2 million as a total summary of geological survey in 1876. Explanation texts were published as follows.

Meiji 10 (1877) A General Report on the Geology of Yesso. In English

Meiji 11 (1878) Bureau of Development, A General Report on the Geology of Hokkaido. In Japanese

Lyman, Benjamin Smith, A General Report of the Geology of Yesso, at 1:2million scale



2.5 The whole country oil field geological survey

- Lyman that burst of the contract with the Bureau of Development began the oil field investigation business in the Department of the Interior in November.
- He organized assistants in some groups for oil field investigation around and he performed the preliminary survey in the wide area.

Figure is oil field investigation course of Lyman (cited from Imai, 1963).

Lyman left the Ministry of Engineering in July, 1879 (Meiji 12).

(1880), He completed the report documents and the oil field geological map of Niigata in 1880.

Lyman left Japan in spring, 1881.



ライマンの油田調査経路