

135 South Fifth Street, Philadelphia; 5 April, 1868.

Prof. C. C. Marsh.

My dear Sir: It was very kind of you to send the Catalogue of Geological Reports and your papers on Ledererite and Palaeotroch. They are all very acceptable. The papers are very interesting; and the interleaved catalogue will be a great convenience. Might not Holmes and Hitchcock's Maine Reports to be dated 1861 and 1862 instead of "1862" and "1863"?

The Academy here did pass a special vote of thanks to Mr. Wright the next meeting after you were here, when he sent a letter containing the receipted bills for the bones. He wrote at the same time that he had always intended to present the skeleton at the Museum to the Academy.

Hoping that your bones all arrived safely, I remain

Very truly yours.

Benj. Smith Lyman.

135 South Fifth Street, Philadelphia; 8 April 1888.

Prof. O. C. Marsh.

My dear Sir:

The woman who told about the fossil bones in the New Jersey marl says that the marl was used on the farm of Mr. William Perrine, at Cranberry Neck, four miles from Cranberry village, six miles from Cranberry Station on the Camden and Amby rail road, and four miles from Hightstown station on the same road. Hightstown is forty one miles from here and Cranberry forty five. His post office address is probably at Cranberry. The marl was not dug on his farm, but hauled by him some distance in the winter, most likely, she thinks from Hightstown, where it is probably brought on the cars. So that this does not after all give any clue perhaps to any new locality. According to her the bones in the marl are very abundant, jaws and other bones. The marl seems to be blue. Mr. Perrine would probably be able and willing to write you where it comes from, and any body in passing through Hightstown in the cars could probably get that information from the folks about the station. If Mr. Perrine's address should not be at Cranberry, then it would be at Hightstown, for there is no post office at Cranberry Neck.

Hoping that you will have had good luck in your present excursion in New Jersey.

Yours very truly,

Benj. Smith Lyman.

135 South Fifth Street, Philadelphia; 17 Apr. 1886

Prof. C. C. Marsh.

My dear Sir:

Here are a few titles of official reports on, or in regard to, Geological surveys or the like, not down in your catalogue:

"A preliminary Report of the Texas Geological Survey. 8vo. 287 pp. Austin, 1866, J. Walker." (By S. B. Buckley?)

"Message from the President of the United States communicating discoveries made in exploring the Missouri, Red River, and Washita, by Captains Lewis and Clark, Doctor Sibley and Mr. Sembar, with a statistical account of the countries adjacent. Read in Congress, February 19, 1806. New York, printed by Hopkins & Seymour, and sold by G. F. Hopkins, No. 118 Pearl Street, 1806." 128 pp. 8vo.

"Message of the President of the United States" with Report of Dr. D. D. Owen to Treasury Department on the Survey of the mineral lands of Iowa, Wisconsin and Northern Illinois. 8vo. 161 pp. with maps and sections. 6 June, 1840.

"Report of the select committee appointed in so much of the governor's message as relates to a mineralogical and geological survey of the state of Ohio. Columbus: [1834?] 8vo. 18 pp. (with an essay on geology by J. A. Lapham Esq.)

The first of these titles was found in the Bulletin of the French Geological Society in the lists of gifts. The others are among old pamphlets in the library of the American Philosophical Society here. The one dated 1806 mentions living plants in hot springs, of 130° F. or more.

Very truly yours,

Benj. Smith Lyman

708 Locust Street, Philadelphia; 24th, 1898

My dear Professor Marsh:

In answer to your inquiries of the 25th, I can only give very imperfect information. Using your own numbers: -

(1) The oldest rocks in Japan are supposed to be gneiss, and the next oldest crystalline schists, called in their upper part at least the Sambagawa Series; but nothing appears to be known yet of their age, and no clear proof published of their greater age than the Paleozoic.

(2) The Paleozoic rocks are divided into older (or, to be consistent, older) and "younger" (that is, not yet arrived at years of discretion, or not yet fully grown) Paleozoic. In 1888, the older Paleozoic was called the Kobotoke system; the newer was called the Chichibu system. The Chichibu system was divided into Lower (or the Mikabu Series, in 1892) and Upper. The Mikabu Series has in Yesso been found to contain traces of Radiolaria. The Upper Chichibu system conformably overlies the Mikabu Series, and likewise contains Radiolaria. Some of the Upper Chichibu beds are limestone, and in the northern part of the main island (Nippon) contain crinoids and Musulina, Schwagerinia, Musulinella, Lingulina, Tetradia, Endothyra, Clinacanthus.

2  
Bellerophon, Euomphalus, Pterioocrinus. Schwager viewed  
the Fusulina limestone as the upper part of the Carboniferous  
Limestone; but Gottsche suggested that it represented the whole  
Carboniferous system, including the Coal Measures. Apparently  
above the Schicht system there are Radiolarian strata; but  
whether Paleozoic or not is not said.

(3) Schwager and Gottsche are in a general way re-  
ferred to by E. Neumann as discussing these fossils.  
I cannot conveniently ascertain the more precise reference,  
but no doubt you can easily do so. E. Neumann  
is the young German who directed a geological survey  
of Japan for half a dozen years after I came home  
towards the end of 1880. In 1885, he published a pam-  
phlet "Ueber die Baue und die Entstehung der  
Japanischen Inseln; Begleitworte zu den von der  
geologischen Aufnahme von Japan für den inter-  
nationalen Geologen-Congress in Berlin bearbeiteten topo-  
graphischen und geologischen Karten;" published separately  
by Friedländer, Berlin. K. Jimbo in 1892 published a  
"General Geological Sketch of Hokkaido [Yesso], with  
special reference to the Petrography," a pamphlet of 79  
pages. From its introductory parts I take part of the  
foregoing subdivision of the Paleozoic and underlying  
rocks. The rest is from the margin of map sheets published  
by that same geological survey, namely: in 1886 and  
1887, twelve sheets of a colored geological and topographical

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map of the northern part of the main island (Nippon) on a scale of  $\frac{1}{40000}$ ; and in 1884-88, twelve sheets of a colored geological and topographical map of the northern part of the main island on a scale of  $\frac{1}{20000}$ . It was intended to issue similar sheets for all Japan, but only those have come into my hands or to my knowledge. There are some small pamphlets in Japanese to explain these sheets, and there are a few other Japanese pamphlets on Japanese geology; but I have not read them, and my knowledge of the recent literature of the subject does not go further. Possibly something was published for the Chicago World's Fair. After that fair, Maj. Gen. Botkin, of Staunton, Va., took steps towards getting special information from Japan up to that date for a report he was to write; but whether he has ever published it or not I do not know.

- (4) I do not know the local name of the *Beccia*.
- (5) I have not visited the quarries where it is found.
- (6) I do not know whether the light gray *Puzosia* marble is found near the *Beccia*; nor what the Carboniferous rocks are found there.
- (7) I do not know any other places in Japan where that *Beccia* occurs, nor in fact anything about it. I was at Akasaka, in the province Mino, where *Puzosia* limestone is quarried and cut into paper weights, but do not remember seeing any *Beccia* there, and have

no knowledge of any other publications in regards to  
the use of the rock.

Fossils, especially those of chronological value,  
are in general very scarce in the Japanese paleo-  
zoic rocks. My knowledge of any works on the  
subject in any European language, even in  
Japanese, is very limited, and I regret extremely  
my inability to give you better information; for  
it would give me great pleasure to be of the least  
service to you.

Very truly yours,

Benj: Smith Lyman