

Fossil collection of Philipp Franz von Siebold: General characteristics and remarks on molluscan specimens

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Introduction

Philip Franz von Siebold is the most distinguished naturalist as a pioneer of European studies on Japan in the 19th century. He collected everything related to nature and culture in Japan, building enormous collection of high academic value. In the past, detailed scrutiny has been repeatedly conducted in ethnology, zoology and botany, but the outline of the geological specimens has little been examined. Only recently, the significance of mineral specimens were came to light by Tagai & Mikouchi (2008). Unfortunately Siebold's fossil specimens in mineralogical and paleontological collections remained poorly known up to now.

Historically the presence of Siebold's fossil collection was already noticed as early as the 1900s. The first Japanese person who observed the Siebold's fossils in Leiden is probably Dr. Hisakatsu Yabe. He visited the museum of geology and mineralogy in Leiden from March 4 to 7, 1909 (Yabe, 1970: 27). This fact is corroborated by a sheet of note attached to the collection (in a drawer "059/30 Japan" on the 13th floor of Naturalis). However, the fossil collection has taken any attention until the 1980s. In 1982 Dr. Masumi Osawa recognized Siebold's fossil specimens in a mineralogical collection, and Dr. Togo Tsukahara also observed them from September 1987 to July, 1988. However, neither are paleontologists, and thus did not make any specific publication on taxonomic identification. During 1990, Prof. Junji Itoigawa and Dr. Takami Nobuhara visited the Museum of Geology and Mineralogy, Leiden to investigate the Martin Fossil Collection from Java in connection with their paleontological research in Southeast Asia, and found a set of Siebold specimens from "Mino". After that the whole mineral and fossil collections were moved to the

National Museum of Natural History (Naturalis).

During December 15-17, 2004 and October 24-26, 2005, the first author (T. S.) accompanied by Prof. Tagai and investigated the fossil specimens both in mineralogy and paleontology sections at the Naturalis. An illustrated list of mineral collection, as well as some of the fossils were already published by Tagai & Mikouchi (2008). In this report, we attempted to document previously unknown specimens of fossils, describe general characteristics of the collection, and give more detailed accounts on each molluscan specimen.

General characteristics of the Siebold fossil collection

The fossil collection of Siebold is the largest and oldest set of fossils from Japan collected for scientific interest. Unfortunately, there are limited descriptions on the source of each specimen, but obviously specimens were collected from many different localities and show varying geologic ages (Cretaceous to Pleistocene). Taxonomically molluscs, especially bivalves, constitute a large part of the collection as described below.

Depository: Compiling a complete list of fossil collection is difficult if not impossible, because the specimens are scattered into different places. There are possibilities that additional specimens are found in the future. At present Siebold specimens exist in at least the following four places: (1) When being examined in the mineralogy collection during 2004, the collections were contained in three large dark green boxes (Box 18 AA/?/LU//1/ Fossils Quando? Asia; Box 418 AA/?/NW/1 Fossils Quando? Japan; Box 419 AA/?/NW/2 Fossils Quando? Japan) and a smaller cardboard box (without number) also in mineral collection. These specimens are mostly fossils except for a few Recent bivalve and coral specimens. The specimens were registered in part, but most are not yet given registration number; (2) Fossil specimens are found sporadically in other boxes of the Siebold mineral collection. These were illustrated by Tagai and Mikouchi (2008); (3) In paleontological collection, there is a single steel drawer (“059/30 Japan”) containing fossils from Japan. The specimens are a mixture of fossils by Siebold, by Dr. Hisakatsu Yabe (molluscs from the Pleistocene Tokyo Formation), and from other sources. These specimens were preliminarily examined by Prof. Itoigawa and Dr. Nobuhara during September, 1990 (Itoigawa and Nobuhara, 1991), and later moved to the 13th floor of Naturalis. All specimens in the drawer are given registration numbers; (4)