

Thunberg and Japanese Amateur Botany

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Traditionally, we Japanese respect their teacher or master as the absolute being. A proverb says "Keep three feet off your teacher so as to not stepping on his shadow".

When Dr. Thunberg arrived Nagasaki in 1775, many Japanese scholars wished to see him to be shared his knowledge, because he was known by name as a man of ability. The names of Japanese persons who had met him were not well known. According to Dr. Iwao, six names were detected in the letters left by Thunberg. All of them were interpreter as competence and medical man as profession. There was no botanist in strict sense in Japan at that time. Medical men were naturalist in broad sense because they had to cure their patients with any kind of natural product using any kind of modern tool. Their basic knowledge was on Chinese medicine but they knew there is a limit. They were eager to introduce European modern science to get over the barrier. The Netherlands was only European country at that time to be contacted because of the isolation policy of Japanese Government. This was why they were good in Dutch language.

Dr. Thunberg generously shared his knowledge to them providing his tools sometimes. In return, he requested them to help his collection of Japanese products, natural or artificial. His residence, Deshima, was surrounded by water except one gate which was strictly guarded. European people were ordered to not come out of this gate. So, his outdoor activity was

quite restricted. After establishing friendly communication with those interpreters, Dr. Thunberg could have permission of several field collections around Nagasaki.

In 1776, he had a good chance to have a long trip to Yedo, present Tokyo. Field collection was difficult because his escorts did not like to make him free. Nevertheless, he collected plants on the way.

During his 25 days' stay in Yedo, many learned men proposed him interview to enrich their knowledge. Two medical men, Katsuragawa and Nakagawa, were the most keen. Thunberg wrote 'They came to me nearly every day'. They brought many Japanese plants to present him and learned their scientific names together with their medical usage. Thus, Dr. Thunberg contributed to the recent development of Japanese botany and other fields of sciences.

Well, I had a question, how Japanese scholars described what Thunberg said? He must had a sample of plant in question which was ready to present to Dr. Thunberg. Did he retain a duplicate sample with him? If he described what Dr. Thunberg said only literally, there must have happened confusion afterward. When Chinese medicine was introduced to Japan old time, it was a form of literature. Japanese medical men must have met with difficulty to apply Chinese medicinal plants described in literature to Japanese indigenous ones. Dr. Thunberg must have recommended Japanese scholars to retain sample with him because Thunberg was a man of science. Japanese men de-

scribed what Dr. Thunberg said by the side of their retaining sample together with note that "This is what Dr. Thunberg said" to make their property more valuable. Or, they requested Dr. Thunberg's handwriting on their retaining samples which became their bible. As I said in the beginning, what master said was absolute. This way of criticism is still vivid in our life especially in the fields of arts and antiques.

This is my imagination. There was nothing to proof it. Recently, I found an old herbarium album when I was searching articles left by Dr. Tokutaro Ito. On the cover, there described "Criticismed by Mr. Siebold". On the inner cover there seen "Herbaria criticismed by Mr. Siebold, a German. Manuscript of

'Honzo Meiso' (Japanese plant register) corrected by Mr. Siebold by himself. To be treasured." (Fig. 1) As everybody knows, Siebold came to Japan after 50 years of Thunberg's visit. This album was prepared by Keiske Ito, grandfather of Tokutaro and one of the first modern botanists in Japan, to make inquiry to Dr. Siebold. I do not think that our life style was changed during 50 years. So I am going to guess the manner of learning from this album.

This album is 16 by 22 cm in size and consists of 19 folders made of thick Japanese paper each of them contains one specimen. Scientific name of the plant is mentioned on each folder by the handwriting of Siebold himself. He wrote "Onbekend" on 9 samples. (Fig. 2)

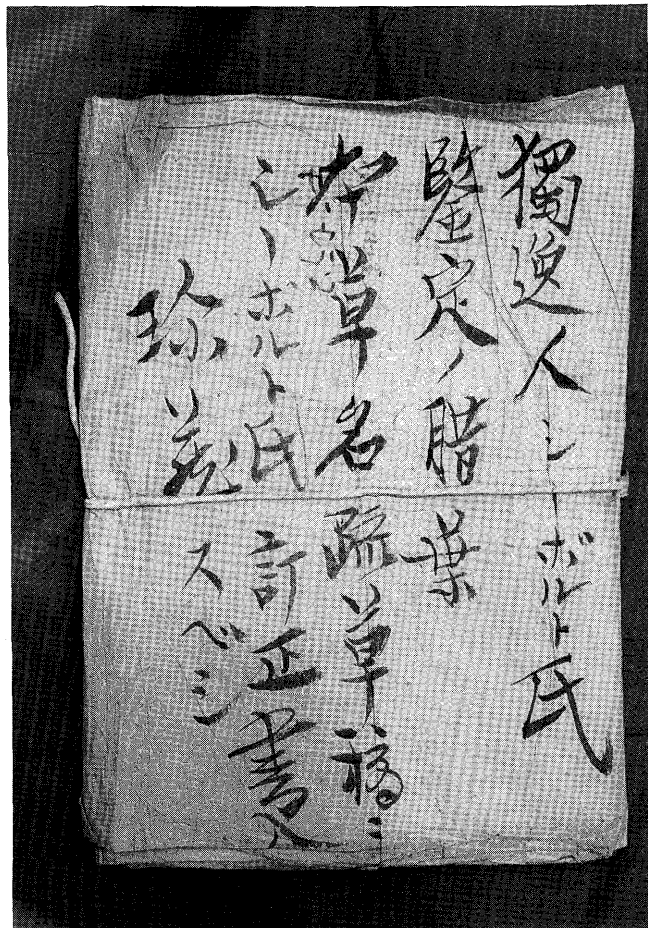


Fig. 1. Inner cover of K. Ito's reference specimens.

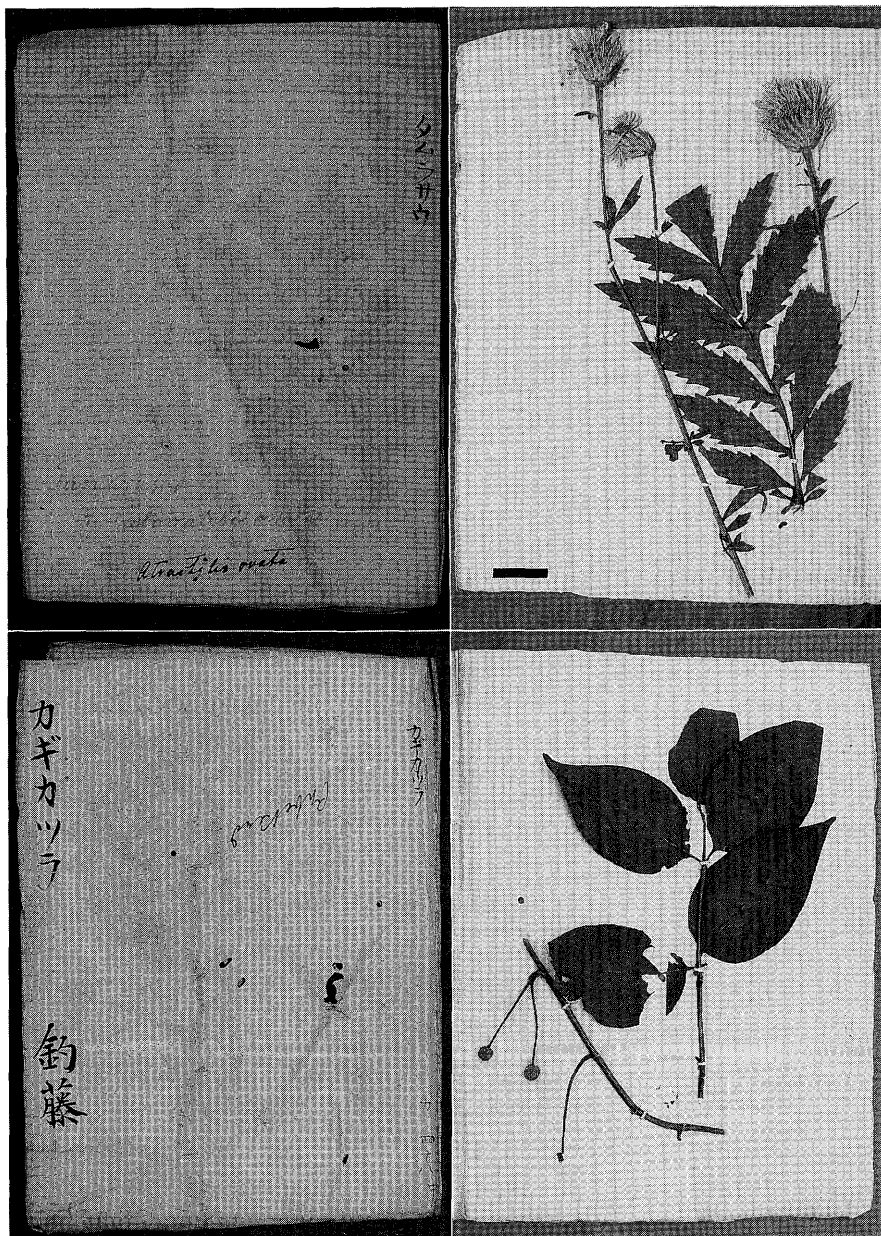


Fig. 2. Reference specimens (right) and their folder cover (left). *Serratula coronata* var. *insularis* (upper) and *Uncaria rhynchophylla* (lower). Bar indicates 2 cm.

I do not care of the correctness of Dr. Siebold. My question is the size of sample. Why they are so small from the standard of present-day herbarium specimens? Naturally, specimens are fragmental. Plant body was stiched to base paper very carefully with

paper string. This means that the sample is not temporarily prepared to show to Siebold but prepared for permanent preservation. In the articles of T. Ito, there is another herbarium album critisized by Maximowicz. It contains various smaller sized samples and totally

wrapped by Japanese paper as much size as the previous. The size is nearly equivalent to B5 standard sized book which is most popular in our country. So, the size of specimen is convenient to file them together with books. Another reason I guess is that, when anybody wished to see foreigner, he had to pass the gate after due inspection. The size must have been convenient to keep his materials in his bosom or sleeve pocket of Japanese Kimono to slip up such unusual things from uneducated guardmen. They are why the size of plant sample is so small.

Actually, pupils of Thunberg in Yedo were Japanese top class leaders in each specialized field. Each of them had his own school in his home where many scholars gathered from all over Japan. Each scholar was a local leader in charge of education when he is in his hometown. As Dr. Thunberg recognized, Japanese people enjoyed stable and peaceful life with good communication over the country. Thus, what Thunberg thought must have dispersed very soon. This must have been good stimulation to develop local plant lovers into amateur botanists. In all cases, style of learning was conservatively kept. Pupils make question and teacher replies. In most cases, what teacher says is absolute. This manner continues still now. Pupils of Thunberg made inquiry about the name of plant according to traditional custom developed in the study of Chinese medicine. When he had the name of plant, he was satisfied. It is not likely that they studied from Thunberg how to research plant life.

In the articles of Keiske Ito, catalogue of an exhibition held in 1878 was found. As the accumulation of knowledge of natural history proceeds, naturalists grouped to exchange their knowledge. They held regular meeting and exhibition open to public. The purpose of exhibition was to enrich their collection by public education and to establish the prestige of the

owner of good articles. Object of exhibition was of rare, beautiful, curious or famous articles. In the catalogue, newly introduced garden plants, less-known herbal medicines and colored illustrations of rarely found bird and plant were seen. Such kind of meeting and exhibition were held before the Thunberg's visit to Japan by various groups of large towns such as Yedo, Osaka or Nagoya. Publication of *Kaitai Shinsho* (Taffelen Anatomia) in 1774 initiated from one of these groups. Thunberg's knowledge must have dispersed into public on the basis of such background.

After the establishment of university education system in Japan in 1876, modern sciences were introduced directly from Europe and America. Natural history was differentiated into two ways, science and hobby. Today, more than 250 amateur botanical societies and nature observation clubs are operated in our country. They are not officially recognized ones unlike those described in your 'Outlines of Plant Science Activities in Japan'. There are grate many private publications and club journals by amateur botanists. Some of them are displayed here. In their field activity, interests are concentrated to know plant names, to see rare and curious plants as many as possible under the guidance of expert. Pair of "What is this?" "This is so and so" is shuttled all day. Participants are satisfied when he heard many plant names new to him. It is no doubt that to know name is the first step to know plant. But it is quite rare those who try to research life and behavior of plants. Names of Japanese plants are nearly all known. But their life history is not well known compared with those of Japanese insects. In case of nature conservation, presence of rare plant makes high importance and the presence of common plants is not evaluated. It is required to turn view point of nature recognition beyond traditional measure of value.