Selections from NDL collections

Shibukawa Shunkai's letters: A life dedicated to the Jokyo calendar

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Image 1: From 24 letters included in "Shibukawa Shunkai jihitsu shokan" Addressed to TSUCHIMIKADO Yasutomi, dated February 13, 1704 [NDL Call No. WA25-84]

*Held at the Rare Books and Old Materials Room

2015 marked 300 years since the death of Shibukawa Shunkai ¹ (1639-1715). Recently, there was a novel ² introducing him entitled *Tenchi meisatsu* which also was adapted into a film. ³ He was the first Japanese to make a domestic calendar, named *Jokyoreki* (貞享曆, lit. *Jokyo* calendar), and was appointed the Edo shogunate's first official astronomer (*Tenmonkata*, 天文方).

Shown in image 1 is a letter written by Shunkai during his later years, but first we will take a look at his earlier career, before the formation of the *Jokyoreki*.

Shunkai was born in 1639, in the early years of the Edo period. Although born to the Yasui family, a leading family of the game of *go* (碁), he was strongly attracted to astronomy from youth. At that time in Japan, a calendar called *Senmyoreki* (宣明曆), which was invented during the Tang dynasty in China, had been used for more than 800 years. Thus, problems had arisen—for instance, the summer and winter solstices differed as much as two days from the expected dates. This was why Shunkai started working on the reformation of this calendar.

^{*}Available in the National Diet Library Digital Collections

¹ His surname was first Yasui (安井) and later changed to Yasui (保井). His true name was Tsutsuji (都翁), courtesy names were Nobumasa (順正) and Shunkai (春海), and the common name was Santetsu II (算哲 (2世)) and Sukezaemon (助左衛門). It was after 1702 that he changed his surname to SHIBUKAWA, but throughout this article, we will call him Shibukawa Shunkai. Harumi is another way of reading the name Shunkai (春海).

² Ubukata To, *Tenchi meisatsu*, Kadokawa shoten, 2009

³ Tenchi: The Samurai Astronomer, Dir. Takita Yojiro, Kadokawa eiga and Shochiku, 2012

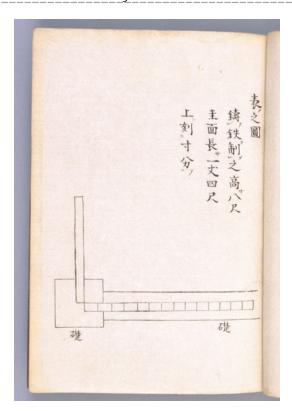


Image 2: A *hasshaku no hyo* (八尺表)⁴ which was used to measure the length of shadows to see the highest point reached by the light of the sun.

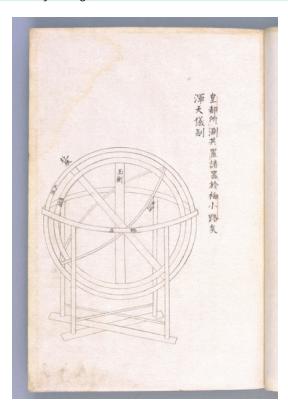


Image 3: A *kontengi* (渾天儀, lit. armillary sphere)⁵ used to find out the positions of celestial bodies.

Shunkai revised the Chinese traditional *kontengi* and reduced the number of loops compared to common ones. When the second petition was rejected, Shunkai and Tsuchimikado Yasutomi observed stars at Yasutomi's mansion in Ume-koji, Kyoto, to demonstrate the correctness of the *Jokyoreki*.

It was not easy to achieve the calendar reformation. First, Shunkai examined the Jujireki (授時曆) calendar used in the Yuan dynasty China. At age 35 in 1673, he presented a petition to the shogunate suggesting the use of the Jujireki calendar. However, he failed to predict a solar eclipse, and the reformation plan met with a hitch. Nevertheless, this is where Shunkai starts to prove his talent. He intensifies his research, and finds out that China and Japan differ in longitude. He refines the Jujireki into Japan's own calendar. Even when the petition he filed at age 45 in 1683 was once again rejected and the Daitoreki (大統暦) calendar of Ming dynasty China was adopted, Shunkai did not lose his spirit. He presented his third petition in 1684. At last, Shunkai fulfilled his longawaited desire of reforming the calendar to his own calendar, named Jokyoreki.



Image 4: *Isegoyomi*⁶ (伊勢暦, the first calendar based on the *Jokyoreki*) for year 1685

The National Diet Library (NDL) holds Shunkai's letters addressed to TSUCHIMIKADO Yasutomi (1655-1717)

⁴ From the copy of "Jokyoreki" written by Yasui Santetsu, revised by Abe Yasutomi. [NDL Call No. 206-11]

⁵ From the copy of "Tenmonkeito" edited by Shibukawa Shunkai. [NDL Call No. 139-41]

⁶ From "Korekijo" [NDL Call No. 本別 15-21] *Available in the National Diet Library Digital Collections

during his 60-70s. ⁷ Yasutomi, descendant of Abe no Seimei, was the head of the *On'yoryo*. (陰陽寮, lit. Bureau of *On'yo*, a government bureau which was in charge of affairs related to the Way of *Yin* and *Yang*, the principle of the universe in Chinese philosophy. Its functions included astronomical observations, divination, and calendar making.) It appears that he had been a cooperator of Shunkai.

In these letters, Shunkai tells that he changed his surname from Yasui back to Shibukawa, the surname of his ancestors who were well versed in rituals and events in the Imperial Court. He also writes that he wished assistance for his son to acquire an official rank, had a kind of stroke while at the Edo Castle, that his nephew succeeded the family estate after his son's death, and many other interesting topics.

There was one more dispute concerning the *Jokyoreki*, in Shunkai's later years. In 1703, a group of Confucianists argued that the poor harvest in Japan, in contrary to China, where there was rich harvest, may be due to the bad calendar. They also insisted that the Jokyorekimight be wrong because while the Chinese calendar had been the work of 15 people, the *Jokvoreki* is only made by one person. This quarrel was settled because many astronomical almanac scholars in Kyoto and Nagasaki unanimously supported the *Jokyoreki*. Shunkai told his pupil of his displeasure regarding this matter.8 Meanwhile, in a letter addressed to Yasutomi the following year (image 1), he writes "If the Jokyoreki is asserted to be wrong, what would become of me, Shunkai?" From this passage, we can assume Shunkai's insecure position as the first official astronomer based on the Jokyoreki. However, at the same time, it seems as if it denotes his strong will to fight against anyone in order to prove the correctness of the Jokyoreki.

Related content on the NDL website:

• Online Gallery: The Japanese Calendar

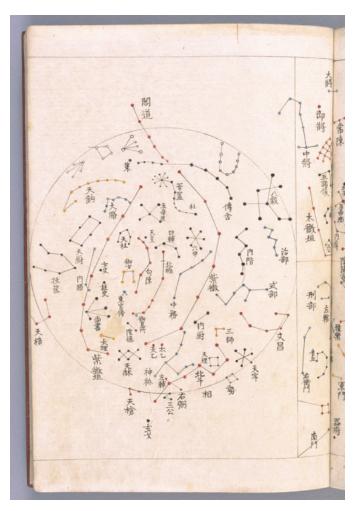


Image 5 *Tenmonseisho no zu* (天文成象之図 ⁹)
Shunkai was also the first Japanese to create a celestial map. The above image is a map imported from China to which Shunkai added 61 new constellations and 308 stars discovered by himself. The added stars are indicated in blue.

Tshibukawa Shunkai jihitsu shokan" 24 letters [NDL Call No. WA25-84] 24 letters dated from the end of Genroku era (1688-1704) to 1715. 22 of them are addressed to Tsuchimikado Yasutomi, one is addressed to Otani Chikara, and one is unsigned. It is reproduced with an explanation in "Kokuritsu kokkai toshokan shozo kichosho kaidai" volume 10 (shokan no bu 1), 1980. [NDL Call No. UP72-2]
 Tani Shigeto, "Jinzanshu" Volume 35, Tani Tateki, 1910

⁹ From the copy of "Tenmonkeito" edited by Shibukawa Shunkai. [NDL Call No. 139-41]