

A Classification of the Paper of Ancient and Medieval Japanese Documents

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1. Introduction

It has proven difficult for scholars of Japanese history to link the names of the types of paper which are mentioned in written sources with the actual paper used for these documents. For today, I intend to analyze the raw materials (原料) used for the manufacture of Japanese paper and will complement my analysis by explaining how such paper was created. I will explain three representative types of Japanese paper that are used in medieval Japanese documents: *danshi* (檀紙), *suibara* (杉原), and *kowa-suibara* (強杉原) or durable *suibara* paper. I will describe the process of creation and key diagnostic features of each of these types of paper.

Paper analysis entails the microscopic observation of both paper fibers and substances used as filler to create the paper. These fillers mostly consist of rice powder, but also contains as other particles, which are the remnants of the cellular tissue of plants which were pulped during the paper production process.

(1) The Raw Materials for Paper Production

- ① Mulberry bark fiber (*kōzo* 楮)
- ② *Gampi* (雁皮) fibers of a flowering plant (*diplomorpha sikokiana*)
- ③ *Mitsumata*(三桠) fibers of a shrub that has branches that grow in three sections (Oriental paper bush (*Edgeworthia chrysantha*))

Of the three types of fiber, mulberry is the most common. *Gampi* cannot be cultivated and is accordingly the rarest of the fibers, as *ganpi* plants exist in the wild only in western Japan. Finally, *mitsumata* shrubs may have begun to be used for paper in the eighth century, with the oldest surviving examples dating from the fourteenth century (a 1391 (Meitoku 2) Kaba no mikuriya kumon hyakushō petition). The differences in each of these fibers is readily evident through microscopic analysis.

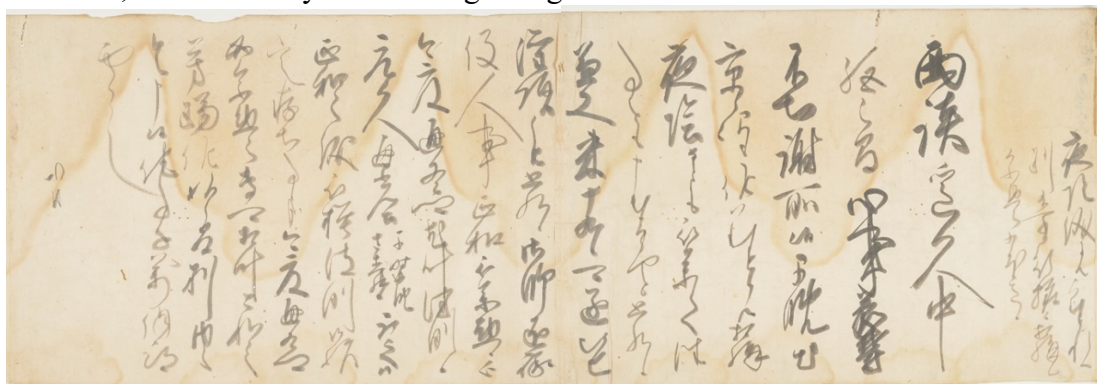
2. Types of Documentary Paper

Well over 90% of all documents are made from mulberry fibers (*kōzo*). This paper was made from mulberry fibers, with rice flour and residual non-fibrous cells from the mulberry pulp. This *kōzo* paper, depending on the relative ratio of ingredients, can be classified according to the following four categories: *hikiawase* (引合), *danshi* (檀紙), *suibara* (杉原), and *kowa-suibara* or durable *suibara* (強杉原). Let me explain each style in turn.

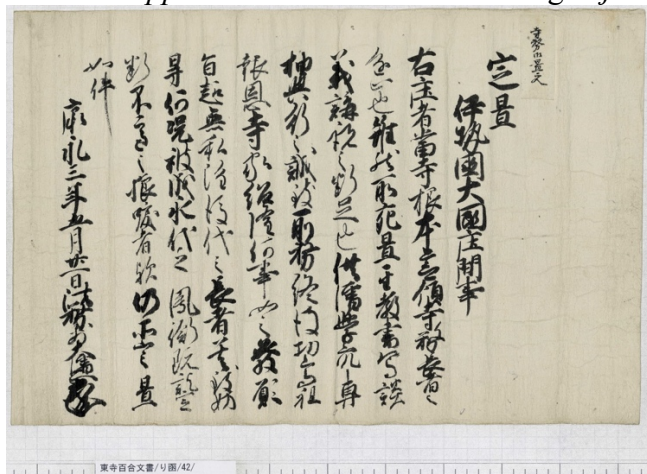
- ① *Hikiawase* (引合)

Hikiawase paper is made through the carefully layering of thin mulberry (*kōzo*) fibers. Mulberry fibers are cut into pieces, 5-10 mm long, and dissolved in water, and the fibers are gradually collected through a screen. This screen is woven out of thin bamboo sticks, or consists of a bamboo screen with silk mesh. The paper maker inserts this screen into the mulberry infused water, and slowly removes, letting the excess water drain away, and leaving the fibers behind. The action of the papermaker somewhat resembles that of a prospector panning for gold, and the repeated collection of these fibers results in the creation of a white, deep, glossy, finely textured and uniform paper. In this process, all mulberry bark has been removed, meaning that there are no clumps of fibers. Likewise, no rice flour is used as a filler. Finally, because the mulberry has only been cut into 5-10 mm pieces, and not smashed or pulped, few non-fibrous cells are found. Finally, because this paper is so cut, the paper becomes soft, and when rubbed, becomes fuzzy. Microscopic analysis also reveals that the fibers are difficult to see distinctly.

This kind of paper is excellent for writing with a brush, as it absorbs the ink readily, and the ink does not smear. It was the favored medium for letters written by Japanese emperors, known as *shinkan* (宸翰) documents, as well letters of court nobles and shoguns, otherwise known as *gonaisho* (御内書), as well as paper used for Japanese poems (*waka-kaishi* 和歌懷紙). Here is a letter by the Dharma Emperor Kōgon, written in 1339. It is followed by a letter by the monk Kenshun, and a letter by the Ashikaga shogun Yoshimochi.

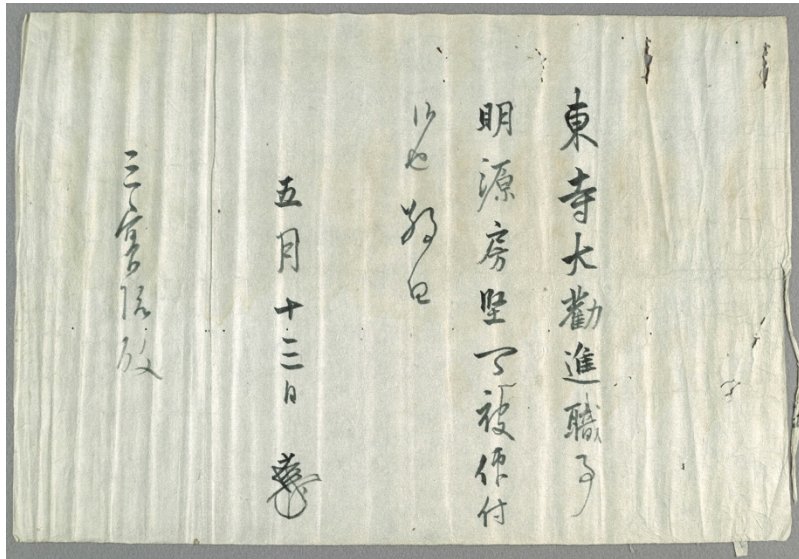


『中院一品記』貼継文書 光嚴上皇宸翰 (曆応4年・1339)
Nakanoin ipponki Attached document. Kōgon *jōkō shinki* 1339



東寺百合文書 り函42号 東寺長者賢俊置文 (康永3年・1344)

Tōji hyakugō monjo box 42 Tōji no chōja Kenshun okibumi 1344
Image downloaded from the Kyoto Institute Library and Archives webpage
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東寺百合文書 函 76 足利義持御内書 (応永 20 年・1413)

Tōji hyakugō monjo box 76 Ashikaga Yoshimochi gonaisho 1413
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3. The Process of Creating *Hikiawase* Paper

a.) Mulberry is harvested → b.) steamed → c.) The bark is scraped off, leaving the primary fiber, which is rinsed in water → d.) boiled → e.) washed and bleached. → f.) Thereupon impurities are cleaned from the fibers → g.) which are cut → h.) pounded → i.) washed again → j.) and prepared for making paper. The material → k.) is then collected in a screen → l.) stacked in damp sheets → m.) pressed → n.) and finally dried.

② *Danshi* (檀紙) paper

Danshi paper is a thick, white paper that was called *kokushi* (穀紙) in the Nara period (710-84), but became known as *danshi* from the 794 onward (the Heian era). *Danshi* must be at least 33 cm high and 0.2 mm thick.

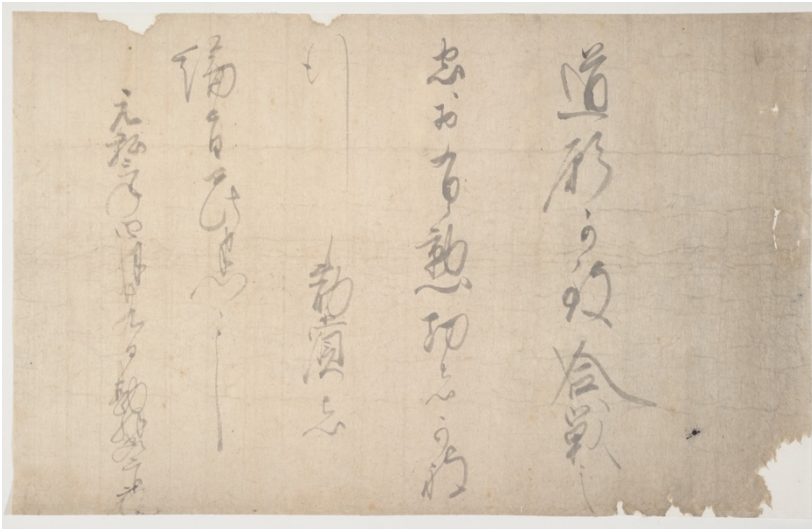
Danshi paper was used for official court documents, as well as edicts of Japan's warrior government, the Kamakura shogunate (1185-1333). It was also used to record donations to monasteries.

This paper was pounded and pulped to make a thick and strong paper. Because it was pulped, bundles of fibers remain, and the paper was not washed well. But like *hikiawase* paper, the fibers were cut in 10 mm sections, and rice flour was not used as a filler.

4. The Process of Creating *Danshi* Paper

a.) Mulberry is harvested → b.) steamed → c.) the black bark is scraped off, leaving the primary fiber, which is rinsed in water → d.) boiled → e.) washed and bleached → f.) impurities are removed → g.) the fibers are cut → h.) pounded and pulped → i.) and preparing for making paper. The material → j.) is collected via screen → k.) the damp sheets are stacked → l.) pressed → m.) and dried.

The following documents use *danshi*. First an edict by Emperor Go-Daigo written in 1333. Then, a 1360 donation by Kazan'in Kaku-en.



三澤家文書(個人) 後醍醐天皇綸旨 (元弘3年・1333)

Mizawa family collection. Go-Daigo *tennō rinji* 1333

③ *Suibara* (杉原)

Suibara paper has been used since the Kamakura era (1185-1333) for secondary edicts, documents which accompanied prestigious orders. People also copied sutras on this paper, and warriors used it for general use. The paper has not been cleaned, nor stripped of bark as carefully as *hikiawase* and *danshi* paper. Likewise, the fiber remains in bundles and cellular residue is present. Reflective of the less care involved in the production of the paper, it is commonly yellow in color. Furthermore, the fibers are not carefully cut, as in the other types of paper, but was merely pulped and pounded, so the fibers are long and not closely intertwined and thus the surface of this paper looks rougher.

5. The Process of Creating *Suibara* Paper

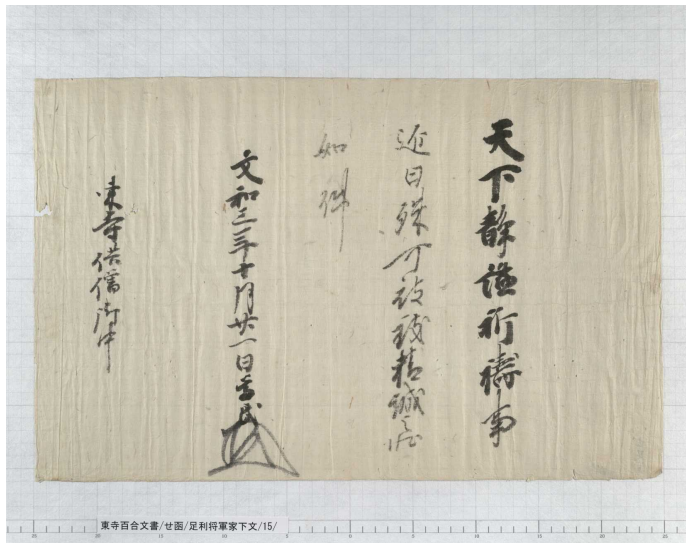
Mulberry is harvested → b.)steamed → c.) the black bark is scraped off, leaving the primary fiber, which is → d.)boiled → e.)washed and bleached → f.)impurities are removed → g.)the fibers are pounded and pulped → h.) and preparing for making paper. Rice flour is added. → i.)The paper is collected via screen → j.) the damp sheets are stacked → k.) pressed → l.)and dried.

During the Muromachi period (1338-1573), *suibara* paper was used for documents of administrators of the Muromachi shogunate, Japan's second warrior government. This paper is thinner and smaller than *danshi* paper.

6. The Process of Recycling *Suibara* Paper

a.)Paper fiber is boiled → b) pulped and pounded → c.)washed → d.) and prepared for paper production. Rice flour is added to the mix as filler, which is → e.) collected via a screen → f.) The damp sheets are stacked → g.) pressed → h.)and dried.

Often *suibara* paper was made from the recycled fibers of older paper. Little cellular residue remains in these cases because the fibers were boiled, pulped and washed in water. Likewise, this recycled paper uses much rice flour as filler. When finished, the paper is white and flexible. Nevertheless, because the paper was pulped, many fiber bundles and lumps are evident. The following edict from Ashikaga Takauji (1354) is made of typical *suibara* paper. By contrast, the 1510 document by an administrator of the Muromachi shogunate, is written on recycled *suibara* paper.

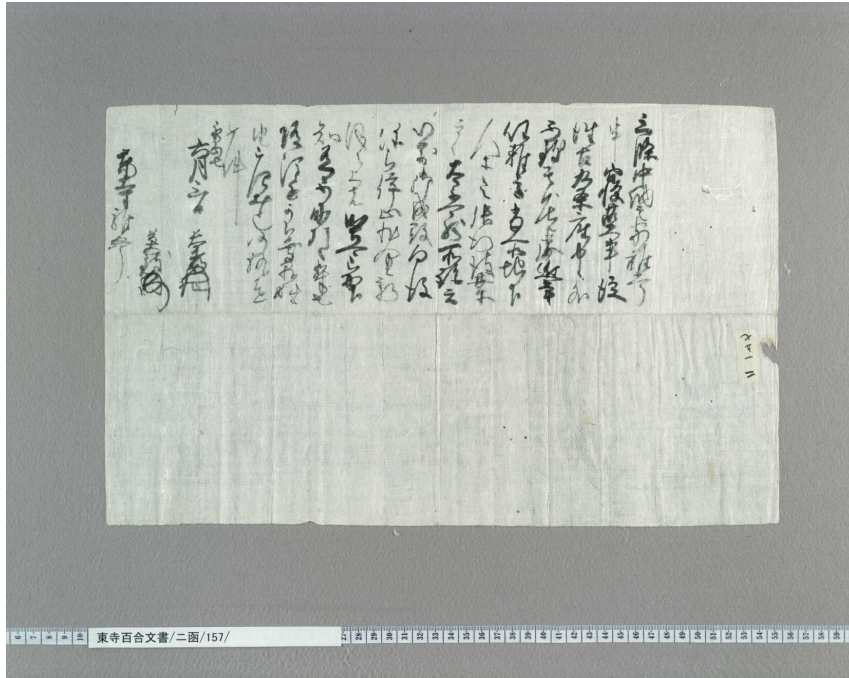


東寺百合文書 せ函足利-15 足利尊氏御判御教書(文和3年・1354)

Tōji hyakugō monjo box 15 Ashikaga Takauji *migyōsho* 1354

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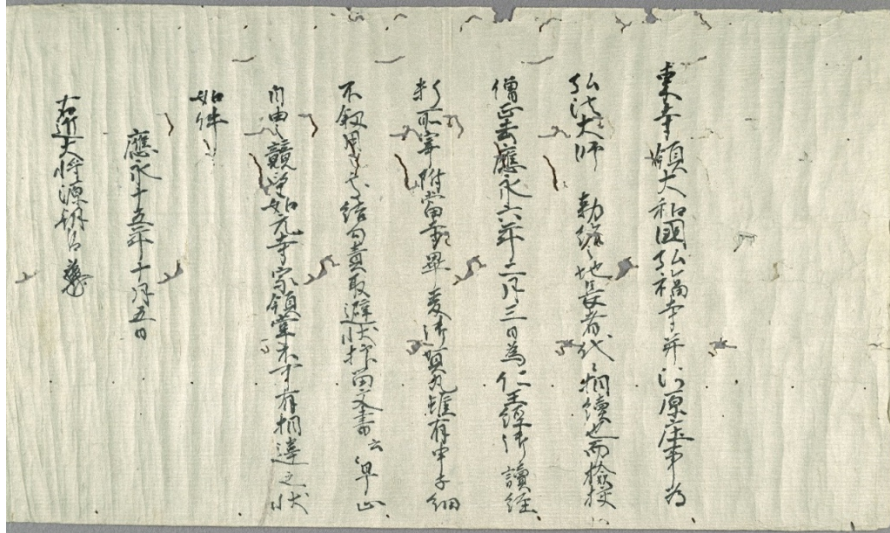


東寺百合文書 二函 157 室町幕府奉行人連署奉書(永正7年・1510)
Tōji hyakugō monjo box 157 Muromachi bakufu bugyōnin hōsho 1510
 Image downloaded from the Kyoto Institute Library and Archives webpage
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④ Durable *suibara* (*Kowa suibara* 強杉原)

Kowa suibara was favored by warriors for official documents during the fourteenth through sixteenth centuries. The noted leader Ashikaga Yoshimitsu (1358-1408) particularly favored this style for his confirmations (*gohan migyōsho*) and one of his documents, dating from 1408, will be shown below.

Kowa suibara is a thick and heavy paper, which is, however, not particularly dense. In contrast to standard mulberry (*kōzo*) paper, which has a density of 0.25 to 0.35 grams per cubic centimeter (g/cm³), and *hikiawase paper*, which has a density of 0.42 to 0.46 g/cm³, *kowa* has a density of 0.25 g / cm³. This is because when making this type of paper, the fibers were not cut. This means that they are long and dispersed. The process of making this paper resembles that of making paper from cedar wood, but it the pulp, after pounded, is not thoroughly washed. Hence much cellular residue remains. Likewise, no rice flour is added to this paper. This paper is stiff, and firm to the touch, and has a yellowish or brownish hue.



東寺百合文書 函 41-2 足利義持御判御教書(応永 15 年・1408)
Tōji hyakugō monjo box 41-2 Ashikaga Yoshimochi gohan migyōsho 1408
Image downloaded from the Kyoto Institute Library and Archives webpage
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To conclude, I have described four types of paper mulberry paper—*hikiawase*, *danshi*, *suibara* and *kowa-suibara*—and identified them through empirical analysis, rather than textual references. These types of paper were used for the vast majority of Japanese medieval documents.

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