

# Primary sources 根本史料

**MIHO**  
三保  
“Miho-mura  
yōji oboe”  
『三保村  
用事覚』  
p. 78-79

EACH ACCOUNT BEGINS at its upper right. The columns read from top to bottom and from right to left (headnote, p. 39). The account reappears with transliteration and translation on the pages identified in italics below the document title.

Each title is enclosed by quotation marks (『 』 in Japanese). Most are names shared by other documents; “Zassho,” for instance, means “Miscellaneous records.” To make such titles unique we add, outside quotation marks, the name of the family (-ke) or daimyo domain (-han) that produced or preserved the document.

**TANABE**  
田辺  
“Tanabe-machi  
daichō”  
『田辺町  
大帳』  
p. 86

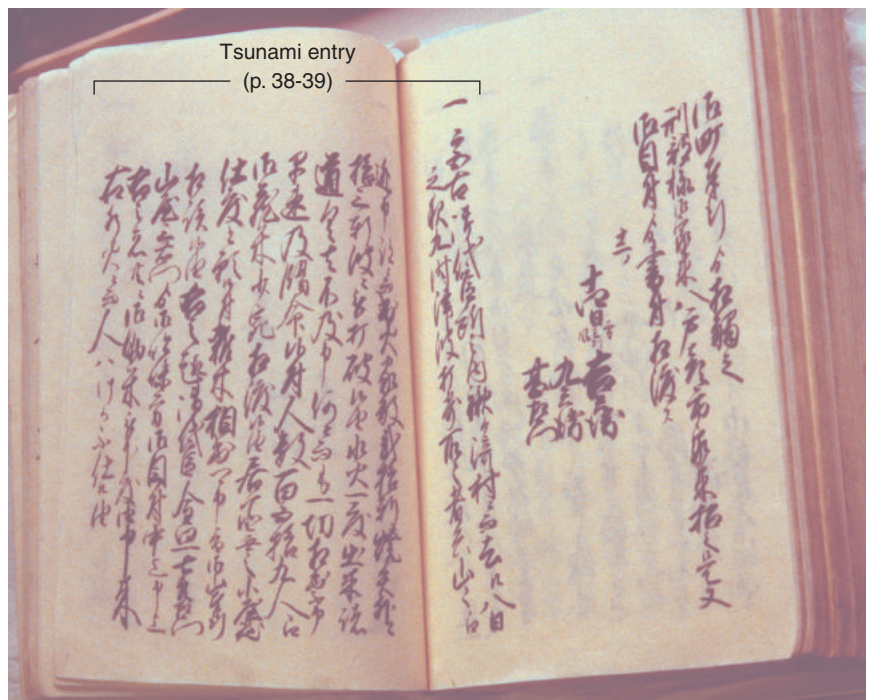




# Kuwagasaki 鋤ヶ崎



The port of **Kuwagasaki** was administered from Miyako by district magistrates of a feudal domain, Morioka-han. Administrative records in a volume of Morioka-han "Zassho," compiled by samurai in the domain's castle, mention the 1700 tsunami in Kuwagasaki.



KUWAGASAKI had 281 houses a decade or two before 1700 (Takeuchi, 1985a, p. 321, citing Morioka-han "Zassho" for the years 1681-1691). It was then a major port for Morioka-han, as recounted by Iwamoto (1970, p. 116, 119) and implied by a shipping route on the shogunal map from 1702 (dull red line, p. 33).

THE ABOVE VIEW of the village and its surroundings comes from a 1739 map of the Miyako district (p. 44). The tax office arose beside the port in 1701. Its map label reads *jūbun no ichi o-yakuya* ("ten-percent office") because Morioka-han levied a ten-percent tax on non-agricultural goods (Hanley and Yamamura, 1977, p. 129; Iwamoto, 1970, p. 49).

## Main points

A nighttime flood and ensuing fires destroyed one tenth of the houses in Kuwagasaki. In response, officials issued food and sought wood for emergency shelters (p. 38-39).

An account of these events, probably written in 1700, calls the flood a “tsunami”—a term used in no other account of the 1700 tsunami in Japan (p. 40-41).

The reported hour of the tsunami in Kuwagasaki, identical to that reported from Ōtsuchi, 30 km to the south, pinpoints the 1700 Cascadia earthquake to the North American evening of January 26, 1700 (p. 42-43).

A regional government run by samurai produced the main account of the 1700 tsunami in Kuwagasaki (p. 44-45).

People went to high ground during the 1700 tsunami, as they did centuries later during the tsunami from Chile in 1960 (p. 46-47).

Waves of the 1700 tsunami directly destroyed 13 houses in Kuwagasaki. The damage in Japan helps define the size of the 1700 earthquake (p. 48-49).

## Setting

From the nation’s capital in Edo, later renamed Tokyo, the Tokugawa shoguns and their retainers ruled Japan between 1603 and 1867, the Edo period. Under their authority, the Nambu clan controlled much of the northeast part of the nation’s main island, Honshu.

The Nambu domain, Morioka-han, included several coastal districts. One of these districts was administered from Miyako. The village of Kuwagasaki, 1 km east of Miyako, adjoined the district’s main harbor. The village contained close to 300 houses in 1700.

## Other tsunamis

Tsunamis of nearby origin caused deaths in Kuwagasaki in 1611, 1896, and 1933. A lesser near-source tsunami, in 1677, swept away five houses, flooded rice paddies, and damaged salt-evaporation kilns.

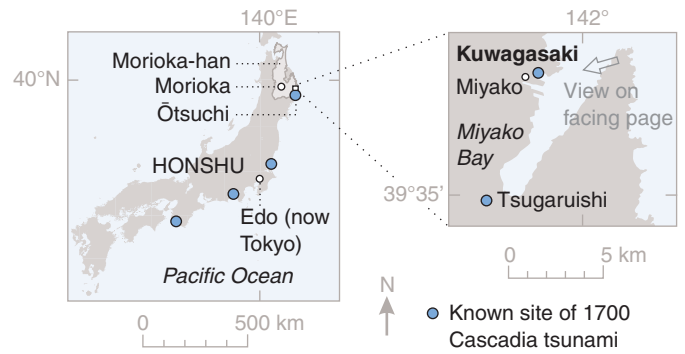
Aside from the 1700 event, no tsunami of remote origin is known to have damaged Edo-period Kuwagasaki. The 1960 Chile tsunami entered 14 houses but destroyed none (p. 49).

## Documents

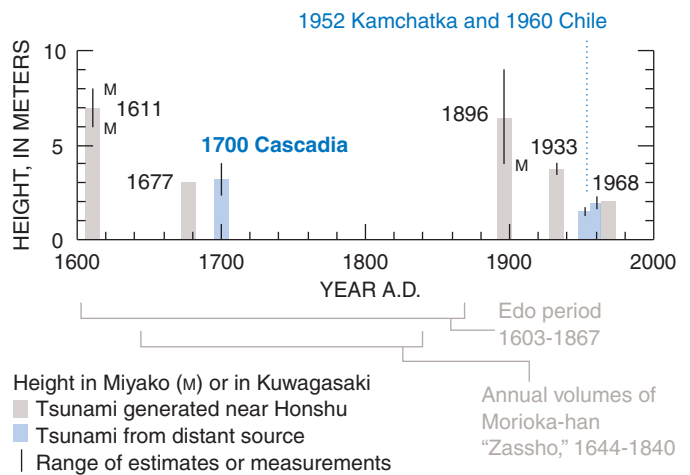
Morioka-han “Zassho,” an administrative diary compiled in Morioka castle, contains the main account of the 1700 tsunami in Kuwagasaki. The news originated with district magistrates in Miyako. Their report reached Morioka six days after the tsunami (p. 44).

An independent report of the tsunami, dispatched from Ōtsuchi, reached Morioka a day later (p. 60). A merchant’s account of the 1700 tsunami in Tsugaruishi mentions, as hearsay, the house fires in Kuwagasaki (p. 52, columns 3-5).

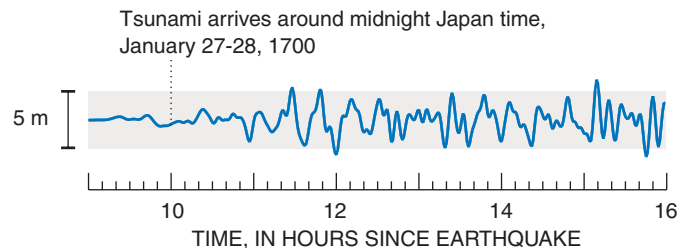
MORIOKA-HAN “ZASSHO,” in the volume at left, contains records from the 12th year of the Genroku era (defined p. 42). Each page is 30 cm (12 inches) long; the book weighs 1.26 kg (2.7 lb).



## NOTABLE TSUNAMIS IN KUWAGASAKI AND MIYAKO SINCE 1600



## SIMULATED WAVES OF THE 1700 TSUNAMI IN KUWAGASAKI



MEASURED HEIGHTS of the 1952 and later tsunamis are from The Central Meteorological Observatory (1953, p. 20-22, 46), The Committee for Field Investigation of the Chilean Tsunami of 1960 (1961, p. 178), Unoki and Tsuchiya (1961, p. 258), and Kajiura and others (1968, p. 1370). The 1964 Alaska tsunami, not shown, crested 0.14 m above tide (map, p. 95). The graphed heights of most of the earlier tsunamis were inferred from descriptions of flooding and damage (Hatori, 1995, p. 60; Tsuji and Ueda, 1995, p. 96-97; Usami, 1996, p. 189; pages 48-49 of this report). The 1611 tsunami caused about 100 deaths in Miyako and Kuwagasaki (Hatori, 1995, p. 64; Tsuji and Ueda, 1995, p. 96). In Kuwagasaki alone, the 1896 tsunami killed 125 (Yamashita, 1997, p. 113) and the 1933 tsunami, 24 (Usami, 1996, p. 189).

THE SIMULATED WAVES are those from sea-floor deformation during a magnitude-9 earthquake at the Cascadia subduction zone (p. 98). The wave train lasts more than a day (p. 74-75), like the gauged Chilean tsunami of 1960 (p. 19). The modeled earthquake occurs about 9 p.m. local time on January 26, 1700 (p. 43). Diagram from Satake and others (2003).

# Account in Morioka-han “Zassho” 盛岡藩『雑書』の記述

TWELVE CURSIVE COLUMNS in Morioka-han “Zassho” provide an official description of the 1700 tsunami and its aftermath in Kuwagasaki. The tsunami arrived at night (column 2). Villagers fled to high ground (2-3). The water destroyed 13 houses outright (4) and set off a fire that burned 20 more (3). In response, magistrates in nearby Miyako

issued rice to 159 persons (6-7) and sought wood for shelters (8-9). They kept others in the han government informed of these emergency efforts (9-12).

The columns contain symbols of Chinese origin (*kanji*) and a few, simpler symbols from Japanese syllabaries (*kana*). The writer applied these symbols with a brush. In gray we

12 (last)	11	10	9	8	7
					
<i>migi</i> At right	<i>migi no</i> At right	Yamaya Yamaya	<i>sōdan sōrō</i> consulted,	<i>tsukamatsuri</i> <i>tashi to</i> want to build,	<i>o-kuramai</i> stipend rice
<i>suiika</i> flood and fire	<i>monodomo</i> villagers	San'emon San'emon	<i>yoshi</i> it was reported.	<i>negai sōrō</i> request	<i>sukoshi</i> a little
<i>nite</i> because of,	<i>ni</i> to,	<i>yori</i> from,	<i>migi no</i> At right	<i>ni tsuki</i> for this reason	<i>zutsu</i> to
<i>hito</i> people	<i>o-tasukemai</i> relief rice	<i>go-ginmigata</i> inspecting section	<i>omomuki</i> matter,	<i>zōki</i> low-grade wood	<i>ai watashi</i> <i>sōrō</i> supplied,
<i>wa</i> as for, <i>kega</i> injury	<i>kudasaretaki</i> want to be provided,	<i>o-metsuke</i> <i>chū</i> officials	<i>o-daikan</i> the magistrates	<i>ai dashi</i> release	<i>yoshi</i> it was reported.
<i>tsukamatsura-</i> <i>zu sōrō</i> did not receive,	<i>yoshi mōshi</i> <i>kitari</i> request was made.	<i>made</i> to, <i>mōshiageru</i> petitioned.	Kindaichi Kindaichi	<i>mōsu beki</i> request	<i>kyosho</i> Housing
<i>yoshi</i> it was reported.			Shichirō- zaemon Shichirō- zaemon	<i>mune</i> in summary <i>o-yamabugyō</i> forest magistrate	<i>kore naku</i> lost, <i>koyagake</i> temporary shelter

12, *kega tsukamatsura-zu sōrō*—Language reflects the villagers' status below that of the writer.

Formal language—*mōsu* (3, 5, 8), *sōrō* (4, 6-8, 12), *mōsa-zu* (5), *mōshi* (11).

Sound change at word juncture—*doki* for *toki* (2), *domo* for *tomo* in *monodomo* (2), *nijikken* for *nijūken* (3), *gen* for *ken* in *jūsan-gen* (4), *issai* for *ichisai* (5), *gata* for *kata* in *go-ginmigata* (10).

NOTES, LIKE THE COLUMNS, BEGIN AT RIGHT ON THE FACING PAGE.

*yamabugyō* commonly worked in the finance office (*kanjōsho*) and reported directly to deputy governors (*karō*) (Totman, 1989, p. 91).

9-10, *Kindaichi*...*San'emon*—During Genroku 12, the year of the 1700 tsunami (p. 42), four magistrates served in Miyako. Among them were Kindaichi Shichirōzaemon and Yamaya San'emon (Miyako-shi Kyōiku Iinkai, 1991, p. 554).

10, *go-ginmigata*—*go-*, honorific like *o-* in column 1.

8, *tsukamatsuri*—Humble language for addressing a person of higher status. Such deference is shown also by *mōshiageru* (10).

8, *zōki*—*zō*, miscellaneous; *ki*, tree or timber. Probably the writer would have used *mokuza* had the wood been suitable for fine buildings and furniture.

8, *o-yamabugyō*—Literally, person in charge (*bugyō*) of hills (*yama* as in column 2). In Edo-period domains, senior forest officials called

add Roman letters as a guide to the spoken Japanese (rules, p. v). Literal translations follow in blue.

The columns proceed from right to left. Matter already mentioned therefore appears “at right” (9, 11, 12). Verbs end sentences, some of which are punctuated further by “ink breaths,” where bold lines of a newly inked brush start the

next sentence (clear example: 右 *migi*, column 9). Nouns follow all their modifiers; prepositions follow their objects.

COLUMN 1 (first)

						一 [start of entry]
						Miyako Miyako
6	5	4	3	2		
						
<i>sassoku</i> Soon after,	<i>dōgu</i> belongings	<i>jūsan-gen</i> 13 houses	<i>nige mōsu</i> escaped.	<i>no</i> of	<i>o-daikansho</i> district magistrate's office	
<i>katsumei</i> <i>ni oyobi</i> <i>sōrō</i> became famished	<i>wa</i> as for,	<i>nami</i> waves	<i>ato nite</i> Afterwards	<i>yoru</i> night	<i>kokonotsu-</i> <i>doki</i> hour of nine,	
<i>ni tsuki</i> thereby	<i>mōsu ni</i> <i>oyoba zu</i> needless to say	<i>ni</i> by	<i>shukka</i> started fire	<i>tsunami</i> tsunami	<i>uchiyose</i> came.	<i>no uchi</i> within,
<i>hitokazu</i> number of people,	<i>nani nitemo</i> everything	<i>uchiyaburare</i> <i>sōrō</i> were destroyed,	<i>iekazu</i> number of houses	<i>shosho no</i> Here and there,	<i>monodomo</i> villagers	<i>Kuwagasaki-</i> <i>mura</i> Kuwagasaki village
<i>hyaku-</i> <i>gojūkyū-</i> <i>nin</i> 159 people	<i>issai</i> at all	<i>yoshi</i> it was reported.	<i>niji-kken</i> 20 houses	<i>yamayama</i> hills	<i>nite</i> in,	
	<i>ai-dashi</i> save	<i>suika</i> Flood and fire	<i>shōshitsu</i> burned.	<i>sho</i> Various	<i>saru</i> past	
	<i>mōsa-zu</i> could not.	<i>ichi-do</i> at the same time	<i>hoka ni</i> In addition,	<i>e</i> to,	<i>yōka</i> eighth day	

6, *katsumei ni oyobi*—*katsu*, thirst; *mei*, life; *ni oyobi*, approach.

7, *o-kuramai*—Rice (*mai*) collected as tax, kept in government storehouses (*o-kura*), and distributed as stipends for samurai. An *o-kura* adjoined the Miyako magistrates' office in 1692 (Hanasaka, 1974, p. 26-27); the rice in 1700 may have come from this building. The 1700 tsunami entered another *o-kura*, near Tanabe (p. 86, 88).

2 and 6, *e*—Pronounced and written *e*, means “to.”

3, *kken*—The house counter *ken* (like “sheets” in “seven sheets of paper”) here follows a slight pause transcribed as a doubled Roman consonant. This same counter changes sound to *gen* in column 4.

5, *ai-dashi*—*ai* adds only emphasis or cadence.

5 and 12, *wa*—Topic marker, written *ha*.

6, *nin*—Counter for people.

← NOTES. Column 1, *Miyako o-daikansho no uchi*—In the district administered from the Miyako magistrates' office (p. 44; office location, p. 36, 49).

1, *o-daikansho*—Honorific *o-* here and in 7-11.

2, *kokonotsu-doki*—Around midnight (p. 43).

2, *monodomo*—Commoners.

2, *yamayama*—More than one hill (*yama*).

Second *yama* denoted by “repeat” symbol, ㄹ