Part 2

The orphan tsunami

A PACIFIC TSUNAMI flooded Japanese shores in January 1700. The waters drove villagers to high ground, damaged salt kilns and fishing shacks, drowned paddies and crops, ascended a castle moat, entered a government storehouse, washed away more than dozen buildings, and spread flames that consumed twenty more. Return flows contributed to a nautical accident that sank tons of rice and killed two sailors. Samurai magistrates issued rice to afflicted villagers and requested lumber for those left homeless. A village headman received no advance warning from an earthquake; he wondered what to call the waves (quote, opposite).

These glimpses of the 1700 tsunami in Japan survive in old documents written by samurai, merchants, and peasants. Several generations of Japanese researchers have combed such documents to learn about historical earthquakes and tsunamis. In 1943 an earthquake historian included two accounts of the flooding of 1700 in an anthology of old Japanese accounts of earthquakes and related phenomena. By the early 1990s the event had become Japan’s best-documented tsunami of unknown origin.

Part 2 of this book contains a chapter for each of six main Japanese villages or towns from which the 1700 tsunami is known. Each chapter begins with a summary of main points, a geographical and historical introduction, and the content of the tsunami account itself. Other parts of the chapters explore related human and natural history. Concluding estimates of tsunami height reappear in Part 3 as clues for defining hazards in North America.
European speculation on an enormous southern continent and on the shape of European maps. Those copies, and Ishikawa’s version as well, retain 16th-century Unno (1994, p. 404-409) traces its origins to 16th-century Chinese copies of reproduced courtesy of the East Asian Library, University of California, Berkeley.


ISHIKAWA TOMONOBU (or Ishikawa Ryüsen) is profiled in a Japanese literary book. As a further introduction to a bygone time and place, help introduce each of the six chapters in this part of the those samurai, merchants, and peasants wrote. Such maps from representatives of three social classes. The writers were by bustling cities. Peasants prepared documents for villages the hinterlands as vassals of regional land barons, the daimyo. National leader in Edo (now Tokyo). They also administered 123) reviews the origins of ukiyo-e, Samurai did paperwork for the Tokugawa shogun, the

17th century. By 1700, the country had known almost a century of peace for the first time in 500 years. Many in its first written records from northwestern North America, comes THE YEAR 1700, though almost a century earlier than the

reading and writing extended beyond this ruling elite to conventional conversion; Nelson and Haig, 1997, p. 1268). Earth’s circumference (40,074 km at the equator) if his
distance to Holland, listed also on the tourist map overleaf (p. 30), exceeds Earth’s

Ricci’s Asian geography and stylized other parts of the map. His 12,500-ri

Matteo Ricci (1552-1610), a Jesuit missionary. Examples soon reached Japan; by

A Japanese

1605, Jesuits in Kyoto were using Ricci maps to teach geography. A Japanese

the map served as an

and a travel map of Japan (overleaf).

1691, woodblock printed and hand colored. The version on

the overleaf dates from 1694.

Additional tables name the most important shrine in each

province. The lower left corner of the map gives distances by land; the other half, distances by sea. Half the domestic table

fitting his subject into a rectangular format and by filling

interior decoration hung lengthwise, east to the top. A

twelve compass directions (p. 43).

county of each province. The lower left corner of the map

on the travel map represents each daimyo domain. An

domain’s official valuation in terms of rice yield (p. 71)—and

adjoining label gives a measure of daimyo status—the

Frequent travelers in Ishikawa’s Japan included daimyo

Japan “sea to mountains.” Ishikawa issued its first edition in

Japan from distance Holland’s

12,500 ri

[50,000 km; listed as Holland’s distance from Japan]
In Japan, the 1700 tsunami reached a society ready to write about it.

THE YEAR 1700, though almost a century earlier than the first written records from northwestern North America, comes late in the written history of Japan. The year belongs, moreover, to an era of Japanese stability, bureaucracy, and literacy that promoted record-keeping.

That era began with national pacification early in the 17th century. By 1700, the country had known almost a century of peace for the first time in 500 years. Many in its military class were making their livings as bureaucrats. Samurai did paperwork for the Tokugawa shogun, the national leader in Edo (now Tokyo). They also administered the hinterlands as vassals of regional land barons, the daimyo.

Reading and writing extended beyond this ruling elite to commoners urban and rural. Booksellers offered poetry, short stories, cookbooks, farm manuals, and children's textbooks. Merchants tracked goods and services in an economy driven by bustling cities. Peasants prepared documents for villages they headed.

The accounts of the 1700 tsunami accordingly come from representatives of three social classes. The writers were military men employed by daimyo domains (p. 44, 70), merchants in business and local government (p. 53, 85), and peasants serving as village officials (p. 70, 77).

PERIOD MAPS open windows into the society in which those samurai, merchants, and peasants wrote. Such maps help introduce each of the six chapters in this part of the book. As a further introduction to a bygone time and place, consider the career of a commercial mapmaker and two of the products he sold: a decorative map of the world (opposite) and a travel map of Japan (overleaf).

Ishikawa Tomonobu wrote and drew in the decades around 1700. In addition to making maps, he illustrated calendars and novellas, composed linked-verse poetry and humorous fiction, and published travel guides and courtesan evaluations. Like many of his contemporaries, including the short-story writer Ihara Saikaku and the playwright Chikamatsu Monzaemon (p. 63), Ishikawa worked in a tradition, ukiyo, or floating world, that focused on daily life and its fleeting pleasures.

Ishikawa’s world map, descended from 16th-century European compilations, was modeled on 17th-century Japanese surveyors’ certificates. The map served as an interior decoration hung lengthwise, east to the top. A companion sheet contained portraits of the world’s peoples.

The map depicts an ocean between the Japanese islands from the Americas. Japanese phonetic symbols identify America and Peru. Chinese characters for “The Red Haired” denote Holland, Japan’s sole European trading partner between 1639 and 1854.


Ishikawa makes “Nihon kaisan” useful to the traveler by fitting his subject into a rectangular format and by filling margins with tourist information. Marginal tables give travel distances, domestic and international. Half the domestic table gives distances by land; the other half, distances by sea. Additional tables name the most important shrine in each county of each province. The lower left corner of the map provides an almanac on solstices, equinoxes, phases of the moon, and tides. Above it, signs of the Chinese zodiac denote twelve compass directions (p. 43).

Frequent travelers in Ishikawa’s Japan included daimyo and their entourages, who journeyed to Edo every year or two for required attendance upon the shogun. A square or circle on the travel map represents each daimyo domain. An adjoining label gives a measure of daimyo status—the domain’s official valuation in terms of rice yield (p. 71)—and the name of the daimyo himself.

The ukiyo artist further depicts cities, castles, highways, fishermen, merchant marines, and urban samurai. Roofs represent the urban sprawl of the shogun’s capital, Edo, its population soon to surpass one million. The Tōkaidō, or Eastern Sea Road, wends its way toward Kyoto, the imperial capital since A.D. 794. Fifty-three way stations await travelers seeking overnight accommodations.

Just off the Tōkaidō, the pines of Miho beckon from a floating-world island. On a peninsula rendered more accurately on page 26, in a village of 300 peasants, a farmer or fisherman will soon write the most vivid and inquisitive of Japan’s accounts of the orphan tsunami of 1700 (p. 78-79).
Ezo (now Hokkaido) was then held mostly by Ainu, a native people.

Land area distorted artfully at right

**International distances**
Holland, 12,500 n (see footnote, p. 29)

**Domestic distances** by major roads, such as the Tōkaidō (right), and by sea

**Compass**
(p. 43)

**Solstices**, equinoxes, zodiac, moons, tides

**Temples and shrines** listed by *kuni* (ancient province) and *gun* (county)
Mount Fuji

Province boundary (shown more exactly on official map, next page).

Suruga province contained seven gun, or counties.

Sumpu castle, site of earliest known writing of “tsunami” (p. 41)

Tōkaidō, the “Eastern Sea Road,” connected imperial Kyoto and shogunal Edo.

One of 53 way stations.

Miho, source of an account of the 1700 tsunami (p. 76-79)

Edo, the Tokugawa shoguns’ capital. Population approaching one million in 1700 (p. 61). Became Tokyo in 1868.

Wetted places 浸水した地域
The orphan tsunami flooded sites along nearly 1000 kilometers of Japan’s Pacific coast.

Part 2 of this book follows the January 1700 tsunami southwestward along Japan's Pacific coast from Kuwagasaki to Tanabe.
PLACES FLOODED by the 1700 tsunami in Japan include Kuwagasaki, Tsugaruishi, Ötsuchi, Miho, and Tanabe. Some of the accounts mention damage in additional villages. In one account, the tsunami takes the form of rough seas that initiate a nautical accident near Nakaminato. The writers represent three of their society’s four main classes: the 

bushi, or samurai; farmers and other peasants; and merchants (p. 53).

The main accounts grace the next two pages. We parse them, from north to south, in the six chapters that follow.
Primary sources 根本史料

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.
THE ORPHAN TSUNAMI

KUWAGASAKI
Morioka
“Zassho”
盛岡藩
『雑書』
p. 38-39

TSUGARUISHI
津軽石
Moriai-ke
“Nikki kakitome chô”
盛合家
『日記書留帳』
p. 52

NAKAMINATO
那珂湊
Ôuchi-ke
“Go-yôdome”
大内家
『御用留』
p. 68-69

ÖTSUCHI
大槌
Morioka-han
“Zassho”
盛岡藩
『雑書』
p. 60

THE ORPHAN TSUNAMI