1. Singing Frogs: Approaches to Registering Animals in *The Nihon Sankai Meisan zue*

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Abstract: This chapter considers how printed reference works in early modern Japan, with a focus on the *Nihon sankai meisan zue* (*Illustrated Guide to Famous Products of Land and Sea in Japan*, first published in 1799), represented nature as an assemblage of objects while also highlighting its close connection with local customs and practices of manufacturing goods. It discusses how the diverse modes of representing nature in image and text in this illustrated guide indexed a multitude of ways of expanding knowledge and of making it reliable and useful. Its eclectic style shows the intersection of manifold interests: the empirical study of nature as well as historical and literati pursuits.

Keywords: nature studies, *meisho zue* 名所図会, materia medica, encyclopaedia

Knowledge is shaped by the practices that produce it: one might study animals and plants as phenomena to be observed out there, as sets of objects to be isolated, collected, and recorded for close-up study, or one might emphasise their cultural and economic meanings as resources for human industry. In addition, these approaches need not be mutually exclusive. Printed reference works in early modern Japan, such as the *Illustrated Guide to Famous Products of Land and Sea in Japan* (Nihon sankai meisan zue, first published 1799, hereafter referred to as the *Illustrated Guide*), represented selected animals and plants as assemblages of objects while also highlighting their close connection with local practices of manufacturing goods.[1] This chapter discusses how eclectic modes of representing animals in image and text in this illustrated guide indexed a multitude of ways of expanding knowledge

1 The eclectic nature of materia medica studies (*honzōgaku*) in early modern Japan is pointed out in Federico Marcon, *The Knowledge of Nature and the Nature of Knowledge in Early Modern Japan*. Chicago, IL, and London: Chicago University Press, 2015, p. 255.

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and of making it reliable and useful.[2] The *Illustrated Guide* has a preface by Kimura Kenkadō (1736–1802), a successful brewer, rice wine merchant, and industrious amateur scholar who was active in the Kyoto–Osaka region. It is no coincidence that the first volume of five is devoted to the topic of rice wine production. The guide in its entirety was probably put together by several members of Kenkadō's amateur scholar circle in and around Osaka.[3] Its eclectic style shows the intersection of their manifold interests: the empirical study of animals and plants as well as historical and literati pursuits.

The Delicate Matter of Registering Animals in Reference Works

The modalities of representing selected animals in the *Illustrated Guide* advocate certain methods for producing knowledge, and they also demonstrate the importance of adopting a critical attitude towards practices of producing knowledge. The *Illustrated Guide* drew on conventional sources, such as Chinese and Japanese encyclopaedias and manuals of *materia medica*, and it combined them with insights derived from scholarly empirical observation and from local practices. Learned people increasingly valued empirical engagement with the nonhuman environment. They kept animals and plants for systematic observation, and they also dissected and viewed them using scientific tools such as microscopes. By contrast, less educated people, while also engaging directly with the nonhuman environment, did so based on practical knowledge and embodied experience developed in accordance with the requirements of their professional practices. This practical knowledge was, to some extent, empirical, too, and scholars started to take notice of its merits. That said, the key was to be critical in bringing together information derived from diverse sources.

By considering both knowledge derived from canonical sources and from local customs and practices, the *Illustrated Guide* foregrounded the malleability of knowledge: local names for natural phenomena were manifold and often vague, their meanings obscure to those not proficient in the local dialect. How could one be sure whether different local names addressed the same phenomenon in nature? How was one to register local varieties of animals or plants without falling prey

2 The *Nihon sankai meisan zue* has been translated into French by Annick Horiuchi and Daniel Struve, *Guide Illustré des Produits Renommés des Monts et Mers du Japon*. Paris: Collège de France, 2020.

3 Horiuchi and Struve have done extensive research on the authorship of the *Nihon sankai meisan zue*, and they have concluded that it was the product of several authors: Hirase Tessai, the author of the *Nihon Sankai Meibutsu zue* (1754), on which the *Nihon sankai meisan zue* was partially based, Kimura Kenkadō, and the illustrator Shitomi Kangetsu and his successor Nakai Rankō: Horiuchi and Struve, *Guide illustré des produits renommés des monts et mers du Japon*, p. 15.

to the inaccuracies inherent in local names? The *Illustrated Guide* pointed out clashes as well as any overlap between seemingly incompatible sources – reference works such as encyclopaedias and *materia medica*, ancient court poetry (*waka*), and popular verse (*haikai*).

Modes of engaging with animals in reference works, court poetry, and comic verse could not have been more divergent. Court poets of the past were moved deeply by the sights and sounds produced by insects such as bell crickets (*suzumushi*) or waterfowl like the plover (*chidori*).[4] Focusing on a limited number of affecting attributes of animals such as a wistful cry, poets of the past were able to explore their emotional responses to nature. By contrast, popular verse poets thrived on conflating a multitude of seemingly incompatible things to create a titillating and multilayered web of associations. Their attention span was shorter and their view wider as they freely paired the past with the present.[5] They also broke more boundaries, such as the one between the elegant and the vulgar.[6]

Popular reference works like encyclopaedias put animals and plants back into their proper categories, neatly compartmentalising a multitude of objects that one needed to know about.[7] In doing so, encyclopaedias suggested that everything could be objectified into reliable archives of information. At the same time, animals and plants did not simply exist as pieces of visual and textual information. They also generated their own historical and ontological realities as part of the nonhuman environment. The complex entanglements of people and of the nonhuman environment necessitated a constant updating of printed knowledge. For example, extreme weather that contributed to crop failures in the late eighteenth century inspired the compilation of special herbals providing information on how to find, identify, and prepare alternative edible plants in times of famine.[8] Such plants

4 Haruo Shirane, *Japan and the Culture of the Four Seasons: Nature, Literature, and the Arts*. New York: Columbia University Press, 2012, p. 117.

5 Techniques for bringing together things belonging to different categories in image and in text are discussed in Alfred Haft, *Aesthetic Strategies of The Floating World: Mitate, Yatsushi, and Fūryū in Early Modern Japanese Popular Culture*. Leiden and Boston, MA: Brill, 2013.

6 Shirane, *Japan and the Culture of the Four Seasons: Nature, Literature, and the Arts*, pp. 116–119 describes the differences between 'classical' and 'common' birds, for example.

7 Marcon, *The Knowledge of Nature and the Nature of Knowledge in Early Modern Japan*, pp. 77–86 discusses how encyclopaedias tried to present a wealth of information coherently. For more detail on categorising things in encyclopaedias, see Michael Kinski, "Boxes, Fabrics, and Mirrors: On the Contents and the Classification of Popular Encyclopaedias from Early Modern Japan," in Matthias Hayek and Annick Horiuchi eds., *Listen, Copy, Read: Popular Learning in Early Modern Japan*. Leiden and Boston, MA: Brill, 2014, pp. 70–88.

8 For example, Takebe Seian (1712–1782), physician-in-service to Ichinoseki Domain in northeast Japan, wrote the *Minkan Bikōroku* (*Provision of the People in Times of Famine*), first published in 1755. For more information, see Kikuchi Isao, "Ryūminzu ni miru Tōhoku Daikikin," in *Shiroi Kuni no Uta* 10 (2004): 5.

tended to be harder to find and more difficult to prepare and to digest than the staple 'five grains' (*gokoku*) which included rice and millet.

And it was not just the nonhuman environment that was changeable. Language was not a completely reliable repository of knowledge either. In printed reference works, words often had to be supplemented with visual and material evidence to clarify their meanings.[9] The authors of the *Illustrated Guide* were aware of the pitfalls of text and image as they combined excerpts from well-respected sources of knowledge such as the *materia medica* manual *Medicinal Herbs of Japan* (Yamato Honzō, 1709)[10] with observations of local practices and ancient court poetry. The fourth volume focuses on creatures living in the water, especially river fish and frogs. This was a complex field of knowledge. The author of *Medicinal Herbs of Japan*, the scholar Kaibara Ekiken (1630–1714), lamented the lack of information about fish:

> There are many kinds of fish, especially river fish. Every province has different kinds. One cannot possibly cover them all. Some fish exist in some places and not in others. There are also local differences in shape and taste. [...] Few kinds of river and sea fish are mentioned in books on *materia medica*, and not much is explained about them.[11]

Although water creatures were elusive, one could study how local people caught and processed them. This might also yield insights into the creatures themselves. A large part of the *Illustrated Guide* is devoted to descriptions of methods for catching and processing river and sea fish.[12] In doing so, it continued where other reference works stopped: the messy and fragmented realm of local practices. In the spirit of practical learning, Kaibara Ekiken had already pointed out the potential of local practices as sources of knowledge about natural phenomena.[13] The *Illustrated Guide* went beyond this and added further interest by evoking the habitual ways of looking associated with leisurely travellers in Akisato Ritō's *Illustrated Guide to the Capital* (*Miyako Meisho zue*), first published in 1780. Ritō compiled several such guides in the late eighteenth century, all of which were more than simple illustrated travel guides. Providing extensive information pertaining to the history and the

9 The growing importance of detailed illustrations in *honzōgaku* studies to describe things in nature more accurately is noted in Marcon, "All Creatures Great and Small: Tokugawa Japan and Its Animals," p. 32.

10 The *Yamato Honzō* is discussed in detail in Marcon, *The Knowledge of Nature and the Nature of Knowledge in Early Modern Japan*, pp. 87–110.

11 Kaibara Ekiken, *Yamato Honzō*. Kyoto: Nagata Chōbei, 1709, vol. 13, p. 1, preface.

12 Particularly volumes three and four.

13 The entry on *gori* (rockfish) in Kaibara Ekiken, *Yamato Honzō*, vol. 13, p. 6 states that fishermen had various ways of maximising their catch.

cultural significances of local places, they resembled more closely geographic encyclopaedias.[14]

Gaining Knowledge through Leisurely Looking and Encyclopaedic Sampling

In the eighteenth and nineteenth centuries, anything could be studied, even fleeting fashions in the city. Some people collected theatre ephemera and pasted them into scrapbooks.[15] As a result of various people's personal interest, intricate knowledge of popular culture was obtained and processed. Those interested in cursory knowledge could peruse the ready-made compilations of notable things and places in guides compiled by Ritō and others. In the past, specific sites had been notable mainly for their literary associations, but by the eighteenth century, reading about them and viewing illustrations of them entailed the possibility of first-hand experience.[16] As the readers of guides to local places assumed the role of real or would-be travellers delighting in the manifold possibilities of new encounters and insights through leisurely looking and encyclopaedic sampling, they also formed a community of people who shared knowledge about these places.

Gaining knowledge about local places through leisurely looking demanded diverse viewpoints and illustrated travel guides were eager to please as Robert Goree has demonstrated.[17] To satisfy the diverse curiosities of readers, illustrations in guides to local places provided variety by zooming in and out, as we will see.[18] In doing so, they also made readers aware of a wider field of knowledge produced by readers consuming printed guides, encyclopaedias, and other reference works. In this sense, depicting travellers or bystanders looking at local people going about their daily lives became indexical of a larger community of readers and their modes of knowing about local places.

14 For a detailed discussion see Robert Goree. *Printing Landmarks: Popular Geography and Meisho Zue in Late Tokugawa Japan*. Cambridge, MA: Harvard University Asia Center, 2020 and Robert Goree, "*Meisho Zue* and the Mapping of Prosperity in Late Tokugawa Japan," in *Cross-Currents: East Asian History and Culture Review* 23 (June 2017): 73–107.

15 Jonathan Zwicker, "Playbills, Ephemera, and the Historical Imagination in Nineteenth-Century Japan," *The Journal of Japanese Studies* 35/1 (2009): 37.

16 Oka Midori "Nanga: Chinese-Style Landscapes and Literary Poetics," in John Carpenter, *The Poetry of Nature: Edo Paintings from the Fishbein-Bender Collection*. New Haven, CT, and London: Yale University Press, 2019, p. 88.

17 Goree, "*Meisho Zue* and the Mapping of Prosperity in Late Tokugawa Japan," pp. 73–107. Goree, *Printing Landmarks: Popular Geography and Meisho Zue in Late Tokugawa Japan*. Cambridge, MA: Harvard University Asia Center, 2020.

18 Goree, "*Meisho Zue* and the Mapping of Prosperity in Late Tokugawa Japan," p. 83.

Curiosity went beyond merely taking in the local landscape from afar. The space evoked in the illustrations of guides to local places could be wide and expansive, but it also held the promise of sampling things up close for travellers so inclined. A double-page illustration from the *Famous Places of Settsu Province* (Settsu Meisho zue), published between 1796 and 1798, depicts two onlookers spying through a field glass next to an excited group of young people who are gathering *matsutake* mushrooms.[19] The accompanying poem, quoted from the female poet Kaga no Chiyo (1703–1775), hints at the joys of sampling things while travelling:

Takegari ya	Ah, the mushroom hunt!
Aru michi oite	On the road,
Mono no naka	in the thick of things.[20]

The delight taken by these young people in collecting a bumper crop of the elusive *matsutake* mushrooms was also an entertaining visual spectacle for the readers of the *Famous Places of Settsu Province*. Viewing fruitful activities in local places could be as stimulating as acquiring actual local products. The pleasure of swift gratification applied to both. A print in the series titled *Auspicious Pictures of Land and Sea* (*Sankai medetai zue*) by Utagawa Kuniyoshi (1798–1861), which was a humorous take on the titles of printed reference works like the *Illustrated Guide* and the *Illustrated Famous Products of the Mountains and Seas of Japan* (*Nihon Sankai Meibutsu zue*, first published in 1754), compares the burning desire of a fashionable townswoman to see a play in Edo with the enormous efforts of local men pulling a whale ashore with ropes in Hirado Domain in southwest Japan (Figure 1.1).[21] The title of the print, "Can't Wait to See" (*Hayaku mitai*), is a pun on the word "auspicious" (*medetai*) in the series title. Whales were auspicious as they generated prosperity for the local communities who caught and processed them, but they were not easily obtained. Catching a whale was a strenuous and time-consuming undertaking that required the collaboration of many people. By contrast, watching a performance provided swifter and probably more fleeting gratification. Yet, in both cases, auspiciousness was tied to the desire to see or to obtain certain things.

Within the community of real and imaginary travellers, townspeople were keen observers of local things, probably because they were somewhat alienated from

19 Illustrated in Goree, "*Meisho Zue* and the Mapping of Prosperity in Late Tokugawa Japan," p. 90, Figure 6.11.

20 The poem is quoted in Hirase Tessai and Hasegawa Mitsunobu. *Nihon Sankai Meibutsu zue*. Osaka: Shioya Uhei, 1797, vol. 5, p. 58. Poem transcribed and translated by this author.

21 The *Nihon Sankai Meibutsu zue* describes the entire process of the whale hunt, from sighting the whale to bringing it ashore with illustrations: Hirase Tessai and Hasegawa Mitsunobu, *Nihon Sankai Meibutsu zue*, vol. 5 pp. 23–27.

Figure 1.1: Utagawa Kuniyoshi, *Can't Wait To See.* (*Hayaku mitai*), Series: *All the Famous Products of Land and Sea* (Sankai Meisan zukushi), 1852, woodblock print, British Museum Collection.

them. People living in cities were familiar with processed goods, but less so with the sources of these products. Whale products, for instance, circulated throughout the land, but it was near impossible to see a whole whale on land. As Jakobina Arch has demonstrated, whales had to be brought ashore and by then they were usually dead.[22] The rare opportunity to see a whale turned the rotting corpse of one into a spectacle in Osaka in 1823.[23] In this sense, looking at local places for city dwellers also meant connecting in one's mind with the origins of familiar products.

Looking Seriously at the *Illustrated Guide*

The serious and the leisurely were not diametric opposites in the field of popular practice. Both produced knowledge and the illustrations in the *Illustrated Guide* made readers conscious of this. As in illustrated travel guides to famous places, the images in the *Illustrated Guide* tend to depict local practices from some distance,

22 Jakobina K. Arch, *Bringing Whales Ashore: Oceans and the Environment of Early Modern Japan*. Seattle, WA: University of Washington Press, 2018.

23 Arch, *Bringing Whales Ashore: Oceans and the Environment of Early Modern Japan*, pp. 132–139.

Figure 1.2: Shitomi Kangetsu, Processes for preparing steamed flounder in Wakasa Province, in Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, Nakai Rankō. *Illustrated Guide to Famous Products of Land and Sea in Japan* (*Nihon sankai meisan zue*). (Osaka: Yanagiwara Kihei, 1800), Vol. 3, National Diet Library, Tokyo.

situating them in the context of the wider environment. By employing a sweeping view, they evoke the leisurely gaze of the curious traveller. Local people are shown from afar, absorbed in the microcosm of their daily lives, and seemingly unaware of the presence of outsiders (Figure 1.2). This emphasises the gap between the observer and the locals.

At the same time, other kinds of looking are likewise at work in the *Illustrated Guide*. Local women and children, for instance, are depicted looking at fishermen working far out at sea (Figure 1.2). The sea was a precarious place to make a living and depicting locals watching fishermen at work in this way allowed for a more empathetic kind of looking on the part of the readers. Illustrations of this kind also created a sense of a shared community of onlookers. In Figure 1.3, for example, uninvolved bystanders are pointing at fishing boats in the distance, probably discussing what they are seeing. The children of local fishermen also look and point, but their focus is on the men and women processing bonito close-by on the shore. The two different viewpoints co-exist in this scene, demonstrating that looking had become a serious matter as its modalities indexed different levels of engagement with local practices.

Figure 1.3: Shitomi Kangetsu, Processes for processing bonito by the shore, in Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, Nakai Rankō. *Illustrated Guide to Famous Products of Land and Sea in Japan* (*Nihon sankai meisan zue)*. (Osaka: Yanagiwara Kihei, 1800), Vol. 4, National Diet Library, Tokyo.

This was a departure from the illustrations in the *Illustrated Famous Products of the Mountains and Seas of Japan* of roughly thirty years earlier. Here, looking at something in the distance was mainly done by parties directly involved in obtaining desirable objects, such as whales. Without distractions in the form of the gazes of curious bystanders, the illustrations focus the reader's attention directly on the local fishermen, who, although dwarfed by the menacing presence of a giant whale endowed with huge eyes and emitting a fountain of water, manage to catch it and successfully bring it ashore.[24] This depiction furnishes the spectacle of the whale hunt with a sense of danger and self-congratulatory achievement. Presenting this spectacle through the eyes of uninvolved bystanders would have detracted from the enormous efforts made by local fishermen. In this way, the *Illustrated Famous Products of the Mountains and Seas of Japan* foregrounded how whales were obtained and processed by the locals.

By contrast, scholars of materia medica (*honzōgaku*) sought visual accuracy in representing animals and plants as this allowed them to train their observational skills and to differentiate between similar specimens.[25]They required such specialised skills as they often enjoyed privileged access to collections of specimens. This was probably not the case for most readers of the *Illustrated Famous Products*

24 Illustration in Hirase Tessai and Hasegawa Mitsunobu, *Nihon Sankai Meibutsu zue*, vol. 5, p. 24.

25 Federico Marcon, "All Creatures Great and Small: Tokugawa Japan and Its Animals," in Robert T. Singer and Kawai Masatomo eds., *The Life of Animals in Japanese Art*, Princeton, NJ: Princeton University Press, 2019, p. 32.

of the Mountains and Seas of Japan. Although its illustrations were not intended to train readers in close observational skills, the book still raised awareness of the combined power of looking and of consulting existing sources to produce knowledge about animals and plants. For example, an illustration depicting mischievous water spirits called 'river boys' (*kawatarō*) wrestling at a river's edge highlights their furry bodies, playful nature, and the fact that they could be encountered near water.[26] The depicted place could have been anywhere. The text is more informative and tells us that there were many river boys in the Kantō region, where they were called river children (*kawa warawa*).[27] In addition, Kaibara Ekiken's *Medicinal Herbs of Japan* is quoted, warning that these water spirits may drag people into the water, causing a madness that could be cured with star anise.[28]

The images in the *Illustrated Guide* further developed the awareness of the importance of careful observation and accurate visual representation. In this book, natural phenomena were no longer merely curiosities for the casual onlooker seeking novelty in illustrated travel guides to famous places, or sources of prosperity for local people as depicted in the *Illustrated Famous Products of the Mountains and Seas of Japan*. Both viewpoints could be combined, stimulating a contemplation of different levels of engagement with things in nature, and the knowledge that could be derived from these. An image depicting a young samurai observing local fishermen illustrates looking for the purpose of learning (Figure 1.4). He stands beside his elderly mentor who is pointing at fishermen catching small and slippery rockfish in the Kamo River. The young samurai represents an elite that valued observing local practices in the spirit of practical learning.

Some illustrations are reminiscent of the scientific gaze of natural studies, drawing readers' attention to animals and plants in isolation and in close-up detail.[29] In the top left corner of the scene depicting local fishermen and women processing bonito by the seashore, various hooks for catching fish are assembled in a rectangular cartouche (Figure 1.3). A cloud-shaped cartouche shows bees in different stages of development above a scene depicting honey-making in Kumano.[30] Just below the cartouche, a playful dog pursues a swarm of bees on

26 Illustration in Hirase Tessai and Hasegawa Mitsunobu, *Nihon Sankai Meibutsu zue*, vol. 3, p. 25. For a discussion of the diverse cultural significances of *kappa*, see Michal Dylon Foster "The Metamorphosis of the Kappa: Transformation of Folklore to Folklorism in Japan." *Asian Folklore Studies*, 57/1 (1998): 1–24.

27 Hirase Tessai and Hasegawa Mitsunobu, *Nihon Sankai Meibutsu zue*, vol. 3, p. 25.

28 Hirase Tessai and Hasegawa Mitsunobu, *Nihon Sankai Meibutsu zue*, vol. 3, p. 25.; Kaibara Ekiken, *Yamato Honzō*, vol. 16, p. 21.

29 The role of faithful reproductions of naturalia through techniques such as ink rubbing in *honzōgaku* studies is discussed in Maki Fukuoka, *The Premise of Fidelity: Science, Visuality, and Representing the Real in Nineteenth-Century Japan*. Stanford, CA: Stanford University Press, 2013.

30 Illustration in Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō. *Nihon sankai meisan zue*, Osaka: Yanagiwara Kihei, 1800, vol. 2, p. 17.

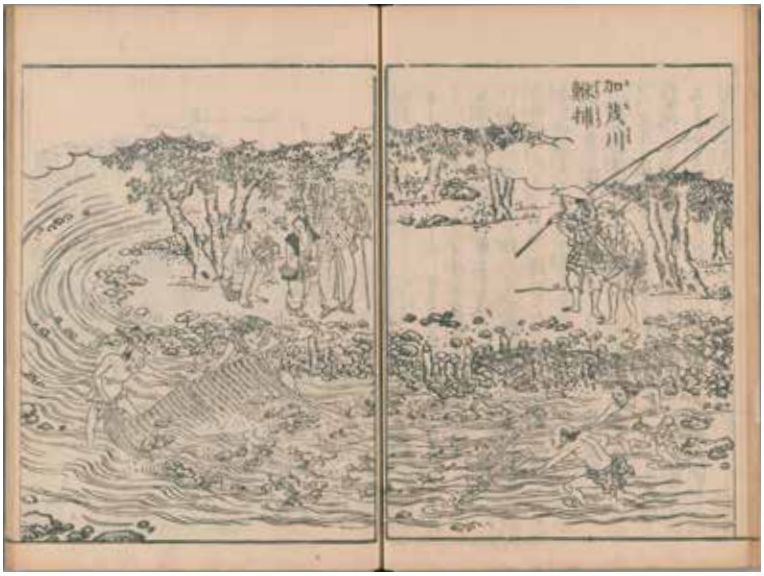

Figure 1.4: Shitomi Kangetsu, Catching gori in Kamo River, in Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, Nakai Rankō. *Illustrated Guide to Famous Products of Land and Sea in Japan* (*Nihon sankai meisan zue).* (Osaka: Yanagiwara Kihei, 1800), Vol. 4, National Diet Library, Tokyo.

the roof of a beekeeper's house. Readers of illustrated books, including illustrated travel guides to famous places, were familiar with cartouches providing further information, but cartouches highlighting things and assembling them for the purpose of comparing their forms were new. This type of illustration unites two seemingly clashing registers of knowledge: comparing the forms of things in the cartouche and contextualising these things as part of local practices in the scene below.

Examining Critically: Singing Fish versus Singing Frogs

There was value in an eclectic approach to looking at animals and plants. It afforded a glance at matters from different perspectives, making readers aware of the artifice inherent in representing things for the purpose of studying them. Even deeper insights could be produced by collecting actual specimens. Collections allowed their owners to directly compare things and go beyond their visual appearance. However, introducing a specimen into a collection meant taking it out of its original context. In addition, items often had to be preserved to be made collectible. Kimura Kenkadō's collection of seashells drew attention to the manifold forms of shells, but they were no longer alive nor in their natural surroundings.[31] The shell collection

31 The shell collection is illustrated in Osaka Museum of History ed., *Kimura Kenkadō: Naniwa chi no kyojin Tokubetsuten botsugo 200-nen* (Kyoto: Shibunkaku shuppan, 2003).

possibly inspired Itō Jakuchū's painting of shells by the seashore.[32] Jakuchū carefully captured the forms of the shells, but their assemblage on the painted seashore was artificial. Preserving the integrity of natural objects required placing them back into their original context.

All methods for studying things were fallible. Just like objects assembled in collections, things reproduced in print could be manipulated, albeit through image and text. Considering these seemingly endless possibilities, the *Illustrated Guide* advocated the need for a critical attitude towards examining evidence. This is especially the case in a section of the fourth volume, which discusses rockfish, a local delicacy in various regions of Japan. Rockfish were tricky to capture, in several respects. Their forms and local names were manifold. Being small and slippery, they eluded the human eye even in clear water. Local fishermen found ways to catch them by exploiting their natural behaviour. When in danger, the fish attach themselves to rocks with a sticky fin on their belly, in which case they can be scooped up with special tools, which varied from region to region.

Kaibara Ekiken had already noted in the *Medicinal Herbs of Japan* that local fishermen had various ways of catching rockfish.[33] In the spirit of practical learning, he also pointed out that rockfish were colloquially called *gori* or *kajika*, the latter literally meaning 'river deer', a vague name that could denote frogs as well as fish.[34] The *Illustrated Guide* describes local differences in naming and catching the fish in detail. The first such description coincides with the image of the young samurai observing local fishermen catching rockfish in Kamo River (Figure 1.4):

> Two straw mats are combined and submerged. Rocks are piled onto the mat. Two people lift one side while another person dredges the bottom of the river [...]. The fish come up and are caught as they try to hide by attaching themselves to the rocks on the mat. Fish and rocks are then scooped up together. This is called 'shoving gori' (*gorioshi*).[35]

The *Illustrated Guide* did not content itself with merely adding to observations already made in the *Medicinal Herbs of Japan*. It had bigger problems to address. Local people tended to confuse different things that dwelled in the same places under the

32 Jakuchū painted this between 1761 and 1765 as part of a Buddhist devotional project of a series of silk hanging scrolls depicting the realm of sentient beings. Illustrated and discussed in Yukio Lippit. *Colorful Realm: Japanese Bird-and-flower Paintings by Itō Jakuchū* (Chicago, IL: University of Chicago Press. 2012), p. 118.

33 Kaibara Ekiken, *Yamato Honzō*, vol. 13, p. 6.

34 Kaibara, *Yamato Honzō*, vol. 13, p. 6.

35 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 19.

same name. According to the *Illustrated Guide*, local people called anything that made a noise in the water *kajika*.[36] This even included frogs singing with melodious voices. In ancient poetry they had a special name, *kawazu*, but this had largely been forgotten. The dwelling places of singing frogs, clear mountain streams, also happened to be the habitat of rockfish. The voices of rockfish, it was said, resembled a crunching noise or the high-pitched ping that came from the bottom of a porcelain bowl when struck. Kaibara Ekiken found this ping charming.[37]

The popular practice of subsuming different creatures that shared the same habitat under one name was not conducive to the careful documentation of one's observations. In addition, the word *kajika* itself proved a real bone of contention. It was as thoroughly colloquial as other local names such as *gori*, but some people pretended otherwise. The people in question, according to the *Illustrated Guide*, were popular verse (*haikai*) poets.[38] Ever since the Kan'ei Era (1624–1644), they had sacrificed accuracy for the sake of creating witty poetry.[39]

Poets of the recent past were fond of the word *kajika* to denote various things that made noises in the water. The revered *haikai* poet Matsuo Bashō (1644–1694) had used the proper poetic word for singing frogs, *kawazu*, but in his oft-cited *Old Pond* (*Furu ike*) poem the frog is notable simply for plopping into the water, not for its beautiful voice, which had been celebrated in ancient court poetry.[40] The pursuit of peripheral and spectacular effects, such as plops, had turned poets' attention away from carefully registering the actual creature. Their disingenuity went even further than this. Various poems using the word *kajika* were attributed to the monk-poet Saigyō (1118–1190), celebrated for displaying some measure of eccentricity and a love of cherry blossoms. According to the *Illustrated Guide*, Saigyō was probably not the author of these poems because they could not be traced back to historical poetry collections.[41]

In sum, the *Illustrated Guide* contended that moulding the past as a mirror image of the present was not helpful for carefully distinguishing things. Erasing the gap between the past and the present, the high and the low, and playing with words and their meanings was an excusable offence for popular verse poets. The spectacular

36 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 19.

37 Kaibara Ekiken, *Yamato Honzō*, vol. 13, p. 6.

38 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 32.

39 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 32.

40 "The Old Pond/A Frog Jumps in/The Sound of Water," translated in Peter France (ed.), *The Oxford Guide to Literature in English Translation*. Oxford: Oxford University Press, 2000, p. 239.

41 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, pp. 32–33.

effects of word play allowed them to show off their literary skills, but this was not acceptable for scholars seeking to order things in nature with precision. Here, the *Illustrated Guide* even caught out the venerable Master Kaibara, who had argued in his *Medicinal Herbs of Japan* that the name *kajika* appeared in ancient poems.[42] This, the *Illustrated Guide* stated, was a mistake.[43] The indiscriminate use of the name *kajika* to denote things that made noises in the water symbolised the failure of the present to register things properly, and the *Illustrated Guide* sought to prove this by carefully tracing the history of the word.

In contrast to poets of the present, it stated, poets of the past had listened carefully, singling out singing frogs by their proper name, *kawazu*, which left no doubt as to what it denoted. The *Illustrated Guide* quotes various poems from historical poetry anthologies, such as the *Collection of Ten Thousand Leaves* (Manyōshū, c. 759 CE), to demonstrate how poets of the past had registered the voice of singing frogs, including the times when the frogs sang, in summer and in autumn, twice a day, at noon and in the deep of night. Although these poets had been mainly interested in singing frogs for poetic reasons, they had nevertheless closely observed their distinguishing attributes.

One of the reasons why singing frogs were given their proper name in ancient poems was the fact that court poets were only concerned with attractive creatures singing in pleasant environments like clean mountain streams. They did not bother with common frogs squawking in muddy rice paddies and filthy swamps. Over time, poets became less discerning, and they started to situate their poetry in lesser places, using colloquial names for things. It was during the lifetime of Kamo no Chōmei (1155–1216) that the waters got muddied even in court poetry.[44] Poets started to mix up *kawazu* and the colloquial *kajika*, and by the time the *Illustrated Guide* was published, most people had forgotten the old name *kawazu*, which had always specifically denoted singing frogs endowed with a beautiful voice dwelling in clear mountain streams.[45]

Popular verse poets argued that using colloquial names made their poems modern, enabling everyone to understand what they were saying.[46] However, in the case of *kajika*, they sacrificed accuracy for popularity. People's memories were

42 Kaibara Ekiken, *Yamato Honzō*, vol. 13, p. 7.

43 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 32.

44 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 34.

45 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 37.

46 Haft, *Aesthetic Strategies of The Floating World: Mitate, Yatsushi, and Fūryū in Early Modern Japanese Popular Culture*, p. 70.

fickle, and the ability of words to capture things in nature was unreliable. Misuse of terms for the sake of effect had a long history and had become entrenched in local practices for registering things in nature. Kaibara Ekiken had argued as much in the *Medicinal Herbs of Japan*, noting that many colloquial fish names had been passed down wrongly, and people had accepted the erroneous names without question.[47] Accepting something as the truth purely based on custom was an error of judgment.

Although Kaibara Ekiken had indicated this, he had ultimately not acted upon it. The *Illustrated Guide* did. It remarks that Kamo no Chōmei had described singing frogs in his *Nameless Notes* (Mumyosho, ca. 1211–1216), pointing out that these frogs lived in the mountain streams of Ide, their colour was dark, and they were small.[48] They also lived mostly in the water, unlike common frogs, which only spend their early life in the water. In addition, the croaking of these frogs in the nighttime moved people's hearts. The *Illustrated Guide* added more information about the local varieties of singing frogs. *Kashima* frogs have a mottled pattern; they are very fast and hard to catch. At night, their voices resemble the robin's call, and in the summer months they sing once every hour. At noon, their call sounds like that of a shrike.[49]

The *Illustrated Guide* admits that, without due care, it was easy to confuse singing frogs and singing fish. They shared certain characteristics: they were small, fast, and not easily caught, and dwelled in mountain streams from where their high-pitched voices rose at night. Nevertheless, they were different things. Recognising them as such required exposing the name *kajika* as colloquial and vague. And when words failed to be precise, they needed to be backed up with images. Consequently, the *kajika* section closes with an illustration highlighting the outstanding physical features of singing frogs, particularly their unwebbed fingers with rounded fingertips (Figure 1.5). The fingers of the frogs jump out at the viewer, being shown both front and back. The caption clears up the confusion about the name *kajika*: "As already explained, [singing frogs] have a beautiful appearance and voice. *Kajika* is a colloquial name. In court poems, the name is not pronounced *kajika* but *kawazu*. This is proven in *The Collection of Ten Thousand Leaves*."[50]

In highlighting the unwebbed fingers of singing frogs, the illustration brought home to readers the importance of carefully observing small details to correctly

47 Kaibara Ekiken, *Yamato Honzō*, vol. 13, p. 1.

48 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 34.

49 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 33.

50 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 37.

Figure 1.5: Shitomi Kangetsu, Singing frogs and fish called kajika in various regions in Japan, in Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, Nakai Rankō. *Illustrated Guide to Famous Products of Land and Sea in Japan* (*Nihon sankai meisan zue*). (Osaka: Yanagiwara Kihei, 1800), Vol. 4, National Diet Library, Tokyo.

identify an object. Although the illustration is not carefully detailed otherwise, it provided an emphatic statement in favour of the value of careful observation, thereby feeding into the wider discourse about visual accuracy in the field of natural studies in eighteenth-century Japan. Furthermore, within this field, the dissecting gaze of the naturalist closely observing and registering the appearance of things in nature did not necessarily exclude the historical meanings of this thing in the cultural imagination. Court poetry had long produced a historical trajectory of secondary nature that impacted on how animals and plants were perceived and registered.[51]

At the same time, this cultural history of animals and plants was considered with a novel critical fervour. While the *Illustrated Guide* claimed that ancient poets had registered things in nature with some care, it also indicated that they had prioritised aesthetic concerns in doing so. They only registered beautiful things that drew attention to meaningful times or places, giving rise to a multitude of poetic associations. If one was to observe nature more comprehensively, one needed to look at the common creatures dwelling in less savoury places, too. Capturing the diversity of things meant overcoming the cultural preference for beautiful things. In addition, popular verse poets did have a point in arguing in favour of colloquial names, but their pursuit of the spectacular led to carelessness.

51 Shirane, *Japan and the Culture of the Four Seasons*. The futility of the separation of nature and culture is discussed in Bruno Latour, *Politics of Nature: How to Bring the Sciences into Democracy* (Cambridge, MA: Harvard University Press, 2004).

The Value of Assembling Critically

Scholars of practical learning, such as Kaibara Ekiken, also took note of local practices for registering things in nature. In addition, they were eclectic in combining elite and common sources of knowledge. Unlike popular verse poets, however, they pointed out the origins of these sources. In *Medicinal Herbs of Japan*, Kaibara referenced Chinese and Japanese works such as the *Compendium of Materia Medica* (Bencao Gangmu, first completed in 1578) and *Enlightening Illustrations* (Kinmō zui, first published in 1666), and combined these with local knowledge. This enabled him to link the Chinese name for rockfish, *tofugyo* (Chinese: *dufu yu*), taken from the *Compendium of Materia Medica*, to the colloquial *gori* and *kajika*.[52] However, Kaibara did go too far in arguing that the name *kajika* went back to ancient court poetry. The *Illustrated Guide* proved otherwise by tracing the history of the term.

The *Illustrated Guide* applied a critical historical consciousness, and it expanded on the local names listed in the *Medicinal Herbs of Japan* by delving more deeply into their origins and local meanings.[53] This revealed that local names sometimes hinted at the conspicuous behaviour of certain creatures. Some rockfish bury themselves in the mud to hunt for prey. Locals therefore called them *chichikaburi* – *chichi* meaning 'earth' and *kaburi* 'to cover.'[54] Singing frogs displayed similar behaviour in the summer months, making this the only time when they could be caught more easily. Other rockfish only existed in certain places. *Arare-uo*, literally 'hail fish,' were only found in Echizen Province, and were called so because they had the curious habit of floating belly-up in inclement weather.[55]

Local varieties of rockfish and their names were seemingly endless. Delving into the hodgepodge of local lore revealed an apparently inextricable tangle of diversity, which could only be made comprehensible by deconstructing it into its constituent parts and organising it through observation and representation. To this effect, the *Illustrated Guide* presents an assemblage of illustrations of various rockfish, all of which were called *kajika* locally (Figures 1.5, 1.6). The illustrations have added explanations, and, as a whole, the assemblage demonstrates a correct order for things in nature. Place came first, as it determined variations in the forms and the names of things. Next came comparisons with similar creatures, and secondary information derived from reference works.

52 Kaibara Ekiken, *Yamato Honzō*, vol. 13 p. 7.

53 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 32.

54 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 32.

55 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 32.

Figure 1.6: Shitomi Kangetsu, Singing frogs and fish called kajika in various regions in Japan, in Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, Nakai Rankō. *Illustrated Guide to Famous Products of Land and Sea in Japan* (*Nihon sankai meisan zue).* (Osaka: Yanagiwara Kihei, 1800), Vol. 4, National Diet Library, Tokyo.

Rockfish look alike at first glance, but close examination reveals differences in the size and shape of heads and fins, markings on the body, and the absence or presence of spikes. As has been mentioned earlier, rockfish have a fin on their belly with which they attach themselves to rocks. There is a marked difference between the texture of the belly fins of sea-dwelling and river-dwelling types – the belly fins of rockfish in rivers have sharp spikes, whereas the spikes of sea-dwelling types are soft.[56] The illustrations (Figure 1.6) highlight this difference by displaying the dorsal and the ventral views of both types. In addition, some of the fish that were called *kajika* by the locals were not rockfish at all. A catfish called *gigi* is the odd-one-out in the assemblage (Figure 1.6). Among the stocky and mottled bodies of rockfish, its slender form and monochrome colour stand out. In fact, the text notes that its body is red. In the absence of colour, the illustrations highlight this difference by leaving its body blank.

The illustrations thus emphasise small differences in the appearance of rockfish, impressing on readers the importance of careful observation and comparison. The added explanations helped readers create a mental map by connecting the varying forms to local places. Rockfish in Echigo Province have a large head and a black mottled pattern whereas the backs of rockfish in the domain of Kaga are completely black (Figure 1.5). Rockfish in Iyo Province resemble loaches in the

56 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 37.

sand (Figure 1.5).[57] The *Illustrated Guide* also did away with superfluous details. In the *Enlightening Illustrations* encyclopaedia that had been published roughly a century earlier, rockfish appear in the water and surrounded by rocks, expressing their rightful place as water creatures in the traditional East Asian cosmology of heaven, earth, and the human world.[58]

However, this manner of representation detracted from the visual appearance of the fish. The text that accompanied the illustrations in the *Illustrated Guide* provided information as to where exactly different kinds of rockfish dwelled. Certain types of information, for instance on habitat, were expressed more accurately through words, and illustrations worked better for highlighting differences in patterns, body shapes, and size. In addition, pinning down the place of things in nature required more information, and transcending the limits of local lore and direct observation. This information relied on secondary channels of information such as the encyclopaedia *Categorical Miscellany of Yamato Names* (Wamyō ruijushō, circa 934), compiled by Minamoto no Shitagō (911–983).[59]

Based on an entry in this encyclopaedia, Kaibara Ekiken noted that the *Food Classic* (*Shijing*) by Cui Hao (active 408–452) recorded that *ishibushi* rockfish hide among rocks at the bottom of rivers, hence the literal meaning of their name – 'rock-dweller.'[60] The *Illustrated Guide* added that the *Categorical Miscellany of Yamato Names* did not mention *gori*, only *ishibushi*.[61] *Gori* was too recent and too colloquial a name to have made it into this classic encyclopaedia. As a result of his study of local names for rockfish, Kaibara Ekiken was able to note that the colloquial term *gori* and the more dignified word *ishibushi* denoted the same thing. Bringing together information from diverse sources enabled the making of new connections, but this required a critical mind and the ability to judge the reliability of sources.

The *Illustrated Guide* impressed this on its readers by pointing out routes of knowledge to illustrations of rockfish. Local lore had it that rockfish called in the night, but their voices were not always the same. In Iyo Province, rockfish sounded like earthworms, whereas in Kaga Domain their calls resembled the squeaking of rats.[62] In Echigo Province, their calls evoked the melodious ping emitted from the

57 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 37.

58 Illustration in Nakamura Tekisai ed., *Kinmō Zui* (Place unknown: Yamagataya, 1666), vol. 11, p. 16.

59 The Wamyō ruijushō is discussed in Steininger, Brian. *Chinese Literary Forms in Heian Japan: Poetics and Practice*. Boston, MA: Harvard University Asia Center, 2017.

60 Kaibara Ekiken, *Yamato Honzō*, vol. 13, p. 6.

61 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 32.

62 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 37.

bottom of a porcelain bowl when struck.[63] The explanations note that nothing was mentioned about such voices in the *Medicinal Herbs of Japan.*[64] Kaibara Ekiken had mentioned in the *Medicinal Herbs of Japan* that the clear and high-pitched cry of *gori* rockfish was adorable when heard at night.[65]

Collecting information from various sources showed up knowledge gaps and discrepancies. Resolving these required a discerning mind. The widespread availability of printed reference works created the possibility of producing informed readers.[66] Readers of the *Illustrated Guide* could be expected to have recourse to the same Chinese and Japanese reference works that informed manuals of *materia medica* like the *Medicinal Herbs of Japan* and reference works like the *Illustrated Guide*. They may not have had the education of scholars like Kaibara Ekiken, but they did have access to the same sources. With this in mind, the *Illustrated Guide* presented information in such a way that it made readers aware of the possibility of cross-referencing particulars from various sources and in this way increase their knowledge.

Conclusion

In combining the modalities of leisurely and empirical looking with modes of encyclopaedic sampling, the *Illustrated Guide* followed epistemic practices that were current in printed reference works, such as illustrated travel guides to famous places. Like illustrated travel guides to famous places, its illustrations hinted at a rising level of self-consciousness regarding the relative place of readers who tapped into knowledge conveyed through printed media. This place was a matter of constant negotiation vis-a-vis local places and practices as well as the imagined community of readers of reference works. The growing number and variety of reference works, which included both printed media and manuscripts, heightened a sense of urgency to advocate critical scrutiny, especially as information derived from increasingly diverse sources showed up incongruities that had to be resolved or at least thematised. The eclectic combination of leisurely, empirical, and encyclopaedic modes of knowing thus caused some measure of anxiety about the authenticity of knowledge and the usefulness of practices of producing knowledge.

It can be argued that, in response to these developments, the *Illustrated Guide* acted as an intervention by highlighting the value of cultivating self-consciousness

63 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 37.

64 Hirase Tessai, Kimura Kenkadō, Shitomi Kangetsu, and Nakai Rankō, *Nihon sankai meisan zue*, vol. 4, p. 37.

65 Kaibara Ekiken, *Yamato Honzō*, vol. 13, p. 6.

66 For more information, see Yokota Fukuhiko, *Dokusho to Dokusha* (Tokyo: Heibonsha, 2015).

about the position of readers relative to empirical realities and to the growing body of knowledge. Merely assembling knowledge no longer sufficed; to hold true, it had to be cross-referenced from a position of historical scrutiny. As the discussion of the naming of rockfish and frogs has demonstrated, this also came from the awareness that the eye and the mind could be fooled into morphing one thing into another, and that things could be reshaped and repurposed through physical manipulation. Cultural practices of naming and representing things changed over time, too. In response, the *Illustrated Guide* advocated vigilance. Knowledge needed to be updated constantly. In showing different ways to register things in nature, the *Illustrated Guide* highlighted the power of image and text to shape knowledge. The *kajika* section of the *Illustrated Guide* reads like an admonishment, reminding readers of their duty to examine evidence critically. Bringing in the field of popular practice could reveal unknown connections, such as between local rockfish and Chinese *tofugyo* (*dufu yu*), but the production of useful insights required weeding out inconsistencies and make-believe. It was always best to pin down the thing to its source – both in nature and in available sources.

Glossary

Akisato Ritō	秋里籬嶋
Arare-uo	霰魚
Chichikaburi	鯆
Bencao Gangmu (J: *Honzō Kōmoku*)	本草綱目
Chidori	千鳥
Cui Hao	崔浩
Echigo	越後
Furu ike	古池
Gigi	鱨
Gokoku	五穀
Gori	鮴
Gorioshi	ごり押し
Haikai	俳諧
Hasegawa Mitsunobu	長谷川光信
Hirase Tessai	平瀬徹斎
Honzōgaku	本草学
Ishibushi	石伏
Itō Jakuchū	伊藤若冲
Iyo Province	伊予国
Kaga Domain	加賀国

Kaga no Chiyo	加賀の千代
Kaibara Ekiken	貝原益軒
Kajika	河鹿
Kamo no Chōmei	鴨長明
Kamo River	鴨川
Kantō	関東
Kawatarō	川太郎
Kawa warawa	河童
Kawazu	蛙
Kimura Kenkadō	木村蒹葭堂
Kinmō zui	訓蒙圖彙
Kumano	熊野
Manyōshū	万葉集
Matsuo Bashō	松尾芭蕉
Matsutake	松茸
Miyako Meisho zue	都名所図会
Minamoto no Shitagō	源順
Mumyosho	無名抄
Nakamura Tekisai	中村惕斎
Nihon sankai meibutsu zue	日本山海名物図会
Nihon sankai meisan zue	日本山海名産図絵
Saigyō	西行
Settsu meisho zue	摂津名所図会
Shijing	食經
Shitomi Kangetsu	蔀関月
Suzumushi	鈴虫
Tofugyo (C. Dufu yu)	杜父魚
Waka	和歌
Wamyō ruijushō	和名類聚抄
Yamato honzō	大和本草

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