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# On the Reception and Uses of Li Shizhen's *Classified Materia Medica* (*Bencao gangmu*) in 17th-century Japan: Text, Categories, Pictures[1]

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## Introduction

The *Bencao gangmu* 本草綱目 (Classified *Materia Medica*, Jp. *Honzō kōmoku*), a summa on pharmacology (*bencao* 本草, Jp. *honzō*) published in 1596 in Nanjing, has been praised as a truly epoch-making book. The richness of the work alone could justify its fame: it lists, describes, and discusses the medicinal properties of 1,895 different kinds of plants, herbs, minerals, and animals. Nor did its compiler, Li Shizhen 季時珍 (1518–1593), stop at merely collecting the more traditional sort of *bencao* material: fully endorsing the Neo-Confucian epistemological paradigm of "investigation of things" (*gewu zhizhi* 格物致知, Jp. *kakubutsu chichi*),[2] he extended the purview of his compilation to the basic components of the surrounding world, as well as to the realm of man. If, as Georges Métailié has meticulously shown, Li cannot really be considered a "precursor" to modern zoology, he nevertheless devised a system that, while retaining most of the subjective categories of "folk taxonomy," still strove after a renewed form of coherency.[3]

[1] This research would not have been possible without the digital resources made available by the National Institute of Japanese Literature, both through the renewed *Database of Pre-modern Japanese Works*, and through the *Center for Open Data in the Humanities* (CODH). I would also like to thank the anonymous reviewers for their useful remarks and advice, as well as Jeffrey Knott for his careful editing. For any remaining mistakes, the fault is mine alone.

[2] Elmann, Benjamin, *On Their Own Terms: Science in China 1550–1900* (Cambridge: Harvard University Press, 2005).

[3] See the following series of studies by George Métailié: (1) "Des mots et des plantes (dans le *Bencao gangmu* de Li Shizhen)", *Extrême-Orient/Extrême-Occident* 10 (1988), pp. 27–43; (2) "The *Bencao gangmu* (*Classified Materia Medica*) of Li Shizhen—An innovation in Natural History?", in *Innovation in Chinese Medicine*, ed. Elisabeth Hsu (Cambridge: Cambridge University Press, 2001); (3) "Le *Bencao gangmu* de Li Shizhen et l'histoire naturelle au Japon durant la période d'Edo (1600–1868)", *Études chinoises* 25 (2006), pp. 41–68 and pp. 221–261; and (4) "Some Reflections on the History of Botanical Knowledge in China", *Circumscribere* 3 (2007), pp. 66–84.

The broad scope of Li's work may explain why it enjoyed a wide reception not only in China but also in other parts of East Asia. In the Japanese case, the introduction of the *Bencao gangmu* in the first years of the 17th century has been defined as the key event that laid the foundations for further developments, not only in the pragmatic realm of pharmacology proper (*honzōgaku* 本草学 or *yakubutsugaku* 薬物学), but also in what might be called the "study of nature" in its broader sense (*hakubutsugaku* 博物学). According to Ueno Masuzō 上野益三 (1900–1989), one of the chief specialists on the history of the natural sciences in Japan, the broader, naturalistic scope of Li's book stimulated several successive generations of Japanese scholars, leading to the formation of a local tradition of natural history.[4] This tradition is seen as clearly distinct from the Chinese one, insofar as for these scholars, the main interest lay in listing and in reflecting upon local specimens, and additionally because, independently as a local tradition, it proved able to coexist with—and at some point even to converge with—those Western "scientific" views that were gradually being introduced to Japan through the so-called field of "Dutch studies" (*rangaku* 蘭学). Within this narrative, which had already become established by the time of Shirai Mitsutarō 白井光太郎 (1863–1932) and Watanabe Kōzō 渡辺幸三 (1905–1966)—Ueno's forerunners in the field of the history of *honzō* and *hakubutsugaku* in China and Japan—Li's *Bencao gangmu* played an ambiguous role. On the one hand, it was seen as having been a welcome catalyst for the development of a local scholarship. On the other, it was cast as a "limitation" partly responsible for preventing the earlier appearance of a properly scientific mode of thought, whether in spontaneous generation domestically or through the external stimulus of Western knowledge.[5] In the words of Watanabe and Ueno, the *Bencao* ended up "dominating" (*shihai* 支配)[6] the mind of Japanese naturalists, who tended to "blindly follow"[7] Li's system, and were consequently as stubbornly impervious to change as Aristotelians had been in the face of Copernicus, Galileo, and the Kepler findings. In these scholars' "progressivist" view—reminiscent of what Lucien Febvre called in European context the "old myth of the Renaissance"[8]—Kaibara Ekiken's 貝原益軒 (1630–1714) work *Yamato honzō* 大和本草 (Japanese *Materia Medica*, 1708) represents, at long last, a form of "critical emancipation" from the *Bencao gangmu*. Having thus been launched, moreover, this movement was in turn nourished and sustained, so the narrative goes, by an empiricist stance that emphasized

[4] Ueno Masuzō 上野益三, "Honzō kōmoku to Nihon no hakubutsugaku" 本草綱目と日本の博物学, *Kōnan joshi daigaku kenkyū kiyo* 甲南女子大学研究紀要 7 (1971), pp. 153–163.

[5] Watanabe Kōzō 渡辺幸三, "Tokugawa jidai ni okeru honzōgaku gairon" 徳川時代に於ける本草学概論, *Yakuyō shokubutsu to shōyaku* 薬用植物と生薬 3 (1950), pp. 33–39.

[6] Ibid., p. 36.

[7] Ueno (op. cit.), p. 154.

[8] Febvre, Lucien, *Le problème de l'incroyance au 16ème siècle: la religion de Rabelais* (Paris: Albin-Michel, 1942), p. 353.

working with actual samples as being more important than any search for overarching, arbitrary theories—an approach that would indeed be followed by later naturalists such as Ono Ranzan 小野蘭山 (1729–1810). Recent studies on this topic have helped bring both depth and nuance to this narrative,[9] in which one might even perceive an attempt to justify a form of "Japanese cultural exception" within the East Asian sphere, one that not only explains Japan's success in rapid modernization (Japanese early-modern scholarship ostensibly being already almost on par with Western science), but also accounts for its failures (hindered, ostensibly, from "reaching" the level of the West earlier by virtue of its age-old reliance on Chinese paradigms). In the end, however, the idea that the *Bencao* ruled the field from its "official" introduction in 1607 up until 1709 appears to remain unchallenged. One of the main reasons, as I see it, for the persistence of this view, is that the original observations leading to its formulation still stand on strong ground. The fact remains that Li's *Bencao* was reprinted 14 times in Japan over the course of the Edo period (1603–1868), and its influence was indeed very palpable, on subsequent publications treating *materia medica* and on encyclopedic works alike. Yet the question of the exact nature of this influence, especially beyond the boundaries of pharmacology proper, has so far gathered little attention, at least outside of studies dedicated to the particular textual landmarks of the aforementioned narrative. In this paper, I hope to give a closer look at how the *Bencao* was actually used, in a selection of works published before 1700. After first briefly reviewing the details of the *Bencao*'s own composition and the earliest traces of its introduction in Japan, I will move on to consider its direct influence on Japanese *materia medica* texts, as well as on *materia dietetica* texts, a genre closely related to the field of *honzō*. Finally, I will turn to the illustrated dictionaries and commentaries that made use of the *Bencao*.

The "details" of the *Bencao gangmu* can be narrowed down to two main aspects: (1) its formal structure, e.g., the general organization of the text, the structure of each entry, etc., and (2) the knowledge it contains—that is, the choices, selections, and quotations produced by Li himself, as well as all the pictures added in by the work's various publishers. My goal here is to shed light on which of these aspects has been influential, depending on the genre of publication. Contrary to what a situation of epistemic "domination" might lead one to expect, it seems to me that Li's theoretical framework, and the worldview he tried to construct in his *magnum opus*, were not necessarily received in their fullness before the time of the so-called "critical" scholars such as Inō Jakusui 稲生若水 (1655–1715) and Kaibara Ekiken. Rather, the work functioned mostly as a collection of textual and pictorial elements that were used to supplement a preexisting framework,

[9] Isono Naohide 磯野直秀, "Nihon hakubutsugaku-shi oboegaki 14" 日本博物学史覚書 XIV, *Keiō gijuku daigaku Hiyoshi kiyō* 慶應義塾大学日吉紀要 44 (2008), pp. 99–124. See also Métailié, op. cit. (2006), as well as Federico Marcon, *The Knowledge of Nature and the Nature of Knowledge in Early Modern Japan* (Chicago: University of Chicago Press, 2015).

one being rediscovered from local classics amidst the boom in commercial publishing. In other words, reception of the *Bencao* as a coherent whole, reception that could serve as a basis for further development along the same lines as Li's work and following a similar methodology, may have occurred much later than the traditional narrative would have us believe.

## 1. The *Bencao gangmu*: Publication History, Structure, and Contents

Li Shizhen finished his compilation in 52 *juan* 卷 (volumes), after 30 years of work, in 1578. It was printed eighteen years later, in 1596, in Jinling 金陵 (modern Nanjing), after Li's death. This "Jinling" edition, the first of three that were produced before the end of the 17th century, adds two separate fascicles containing illustrations for the sections on minerals, plants, and animals.[10] Li Shizhen probably had no part in these pictures, which were devised by his two sons, Li Jianzhong 李建中 and Li Jianyuan 李建元, and which are famous for their lack of both quality and naturalistic accuracy. A new edition, known as the Jiangxi 江西 edition, was made in Nanchang 南昌 in 1603, with again the same illustrations, printed either as a separate fascicle, or, in subsequent copies, placed as appropriate at the beginning of each volume. It was only in 1640—with the new printing by Qian Weiqi 錢蔚起 in Wulin 武林 (Hangzhou 杭州), known as the Wulin or Qianya 錢衛 edition—that the illustrations were redrawn and, in some cases, amended. This last edition became the basis for all later reprintings, until a wholly new edition was produced in 1885.

The 52 *juan* are organized by category as follows:

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| Water section | 1 |
| Fire section | 1 |
| Earth section | 1 |
| Metals and minerals section | 5 |
| Herbs section | 10 |
| Grains section | 4 |
| Vegetables section | 10 |
| Fruits section | 4 |
| Trees section | 6 |
| Clothes and utensils section | 6 |
| Insects and vermin section | 4 |
| Scaly creatures section | 4 |
| Shelled creatures section | 2 |
| Birds section | 4 |
| Beasts section | 4 |
| Man section | 1 |

[10] On the various editions of the *Bencao*, see Watanabe Kōzō, "Ri Jichin no *Honzō kōmoku* to sono hanpon" 李時珍の本草綱目とその版本, *Tōyō-shi kenkyū* 東洋史研究 12–4 (1953), pp. 333–357.

Through this general structure, we can see that Li tried to innovate in a number of ways.[11] Division of the *materia medica* into natural categories was not new in itself: this had been the standard model in the field since Tao Hongjing's 陶弘景 *Shennong bencao jing jizhu* 神農本草経集註 (Collected Commentaries on Shennong's *Materia Medica*), compiled at the end of the 6th century CE. However, the number of such sections did not show much change until the 15th century, and works published in Li Shizhen's own time did not have more than 10 categories.[12] Li had thus greatly augmented the number of categories, deriving some of them by division—he separated scaly and shelled things—while others, such as the initial ones dealing with natural elements, or the later one on clothes, he simply added, taking his inspiration from encyclopedic works (*leishu* 類書). What is more, he made notable changes to the order of the sections, which he justifies as follows in his *fanli* 凡例 (preliminary remarks):

> 旧本玉石水土混同、諸虫鱗介不別、或虫入木部、或木入草部。今各列為部、首以水火、次之以土、水火為万物之先、土為万物母也。次之以金石、従土也。次之以草穀菜果木、従微至巨也。次之以服器、従草木也。次之以虫鱗介禽獣、終之以人、従賤至貴也。[13]

> Old books mix up jades, minerals, waters, and earths, they do not distinguish between insects, scaly creatures, and shelled creatures; some "insects" have an entry in the tree section and some trees in the herb section… I have now ordered everything into sections (*bu*) beginning with waters and fires, followed by earths. [That is because] Water and Fire come before the myriad things, and Earth is their mother. Then [follow] the metals and minerals, [because] they come from the Earth; then the herbs, grains, vegetables, fruits, and trees, from the smallest to the biggest; then the clothes and utensils, [made] from herbs and trees; then the "insects," the scaly creatures, the shelled creatures, the birds, the beasts, to finish with man: from the vile to the precious.[14]

In other words, what Li had created was a wholly new "ladder of things," with a hierarchy more coherent and more clearly-formulated than anything found in previous encyclopedias.[15] He also abandoned the traditional ranking in order by

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[11] For an extensive presentation of the contents and structure of the *Bencao gangmu*, see Paul Unschuld, *Medicine in China: A History of Pharmaceutics* (Berkeley: University of California Press, 1986), pp. 145–163. See also Marcon (op. cit.), pp. 35–37.

[12] Métailié, op. cit. (2001), p. 225.

[13] Li Shizhen 李時珍, *Bencao gangmu* 本草綱目 (pub. 万暦 Wanli 18/1590), vol. 3. Available at: https://dl.ndl.go.jp/info:ndljp/pid/1287084/3

[14] Métailié, op. cit. (2001), p. 227.

[15] On the conceptual framework behind Li's design, see Carla Nappi, *The Monkey and the Inkpot: Natural History and its Transformations in Early Modern China* (Cambridge: Harvard University Press, 2010). On the role of order in encyclopedias, see Matthias Hayek, "Encyclopaedia and Dictionaries in Premodern and Early Modern Japan: Chinese Heritage and the Local Reordering of Knowledge," to be published in a forthcoming volume on cultural encyclopedias edited by Anna Boroffka.

the so-called "three grades" (Ch. *sanpin* 三品), which grouped drug materials according to their level of toxicity (superior = non-toxic, intermediate = moderately toxic, low = toxic), replacing this instead with a new hierarchy that reflected the relative subordination of each classificatory level to another. According to Li's *fanli*, "Sections" (*bu* 部), such as "herbs" or "fish," represent thus a higher tier of more encompassing *gang* 綱 (Jp. *kō*), while "Categories" (*lei* 類, Jp. *rui*) such as "fragrant tree" or "scaly fish" or "mountain birds" constitute, relative to the *gang*, a lower tier of more narrowly-drawn *mu* 目 (Jp. *moku*). And these "Categories" (*lei*), in their own turn, become themselves *gang* with respect to the yet narrower *mu* of more specific "kinds" (*zhong* 種, Jp. *shu*). This same hierarchy is also applied within the individual entries, where the first section, devoted to the principle of "rectification of names" (*zhengming* 正名), is a *gang* when compared to the alternative names given in following sections. Finally, although the preliminary remarks never state this explicitly, there are what Georges Métailié calls "covert categories" that delineate series of what might seem to be considered "families" of entries,[16] with their own hierarchies divided between one particular generic entry and others which, in a few cases, are explicitly introduced as its "subordinates" (*shu* 属, Jp. *zoku*).[17] For example, the *prunus mume* (*mei* 梅) is a sort of "subkind" of *prunus salicinia* (*li* 李). These families, as well as this notion of "*shu*" itself, Li Shizhen seems to have found in the *Erya* 爾雅, one of the oldest *leishu* (dating to the Han dynasty), as well as in that work's commentaries, such as those by Guo Pu 郭璞 (276–324) or Luo Yuan 羅願 (1136–1184). The criteria behind these ancient "families" are not always clear. However, in many cases, they proceed from similarities in forms and habits, affinities which are sometimes also underlined by a semantic proximity, e.g., the use of the same character in a compound name.[18]

As for the entries themselves, they follow a fixed pattern, with up to eleven sections, but in most cases usually only four: (1) the *shiming* 釈名 (explanation of names), that is, the determination of the "correct name," usually by looking at ancient sources such as the *Erya*, then (2) the *jijie* 集解 (collected commentaries), (3) the *qiwei* 気味 (quality and flavor), and (4) the *zhuzhi* 主治 (main therapeutic indications). And if these last two are indeed quite common in *bencao* literature, Li also devised new headings of his own, adding the *faming* 発明 (explication) section, where he gives details on how and why various drugs are effective, providing either his own interpretation or quoting those of other authors, and also adding the *fulu* 附録 (appendix) section, where one can find new additions of

[16] Métailié, op. cit.. (2007), p. 71.

[17] The term *shu* 属 is also used to specify the grouping under which a given material is "subordinated" within various larger organizational schemata, such as the five phases, the *yin* and *yang*, or, in the case of body parts, the set of governing organs, in order to indicate the particular broader category with which the "subordinate" shares correlative properties.

[18] For a detailed presentation of the general structure of the *Bencao gangmu*, see Nappi (op. cit.), pp. 50–68.

materials or kinds that are in some manner related to the main entry, without being singled out yet as sub-species in their own right, or whose therapeutic usages had yet to become widely recognized and known.[19]

All these innovations indicate a theoretical and systematic intent on Li's part. Even though his groupings, whose criteria alternate between philological, morphological, and ecological proximity, are quite different from those of modern "scientific" taxonomy, his work has a strong internal coherency, deeply rooted in Neo-Confucian natural philosophy and its *gewu* 格物 worldview. This novelty in its structure and in its aims, in other words, thus characterizes the *Bencao gangmu* no less than any of its extended pharmacological content.

The question is: to what extent was Li's intent actually received in 17th-century Japan?

## 2. Early Reception in Japan

Turning now to the introduction of the *Bencao gangmu* in Japan, we can see that it followed two main lines, which together would end up defining the subsequent development of its influence: (1) the medicinal and the dietetical line, and (2) the so-called "encyclopedic" line. The latter begins with Hayashi Dōshun 林道春 (1583–1657), better known as Razan 羅山, who recorded Li's work in his *Kiken shomoku* 既見書目 (Catalogue of Books Already Seen) as early as 1604. Three years later, in 1607, Razan obtained an exemplar of the Jianxi edition in Nagasaki, which he presented to Tokugawa Ieyasu 徳川家康 (1543–1616). Meanwhile, there is evidence attesting to the fact that the *Bencao* was also known within the Manase 曲直瀬 school of medicine. Manase Gensaku 曲直瀬玄朔 (1549–1632), adopted son of the school's founder, Manase Dōsan 曲直瀬道三 (1507–1594), and heir also to the school's headship, published in 1608 a pharmacology manual, *Yakushō nōdoku* 薬性能毒 (On the Potential Effects of Drugs), based largely on Dōsan's own *Nōdoku* 能毒 (Potential Effects) but also expanded with contents from the *Bencao*.[20]

Razan was the first to give an overview of the work's general content and structure, with his *Tashikihen* 多識編 (Book of Extensive Knowledge). This is

[19] On the structure of these entries, see Métailié, op. cit. (2001), and Nappi (op. cit.).

[20] Other students of the same school mention the *Bencao* in their writings as early as the early 1600's. See Marcon (op. cit.), pp. 57–58. On the Manase school, see Machi Senjurō 町泉寿郎, "The Evolution of 'Learning' in Early Modern Japanese Medicine," in *Listen, Copy, Read: Popular Learning in Early Modern Japan*, eds. Matthias Hayek and Annick Horiuchi (Leiden: Brill, 2014), pp. 163–204. On the relationship between Dōsan's original *Nōdoku*, which circulated among his disciples in manuscript form, and later printed manuals, see Noguchi Daisuke 野口大輔, Endō Jirō 遠藤次郎, Nakamurua Teruko 中村輝子, Aoyagi Makoto 青柳誠, "Manase Dōsan *Yakushō nōdoku* no kenkyū" 曲直瀬道三『薬性能毒』の研究, *Nihon ishigaku zasshi* 日本医史学雑誌 53:1 (2007), pp. 150–51.

not a pharmacology treatise, but rather a glossary covering the entries of both the *Bencao gangmu* and Wang Zhen's 王禎 (1271–1333) agronomical encyclopedia, the *Nongshu* 農書 (1313). Thus, although it follows the order and structure of Li's work throughout its first four *kan* 巻 and at the beginning of the fifth, it then continues with words from the *Nongshu*. Razan's book was completed in 1612, and circulated in manuscript form before being printed in 1630 in movable type, with a subsequent woodblock edition in 1631. Its 2,315 entries share the same, uniform organization: the excerpted Chinese name is given a possible equivalent in Japanese (with the phrase *ima an*[*zuru ni*] 今案, *lit.* "I now suggest"), most of which are taken from Minamoto no Shitagō's 源順 (911–983) *Wamyō ruijushō* 和名類聚抄 (Classified Compilation of Japanese Names [i.e. equivalents to Chinese characters]), or *Wamyōshō*, compiled between 931 and 938, and first printed in 1610 in moveable type. Razan, an early advocate of Neo-Confucianism and polymath scholar, was probably sensitive to Li's *gewu*-oriented project. His glossary, however, limited itself to a "study of the names" (*meibutsugaku* 名物学), and thus exploited only the first part of each entry, the *shiming*, working from a lexicographical perspective. In fact, *Tashikihen* was mostly used in the context of Chinese poetry composition, a field quite remote from Li's own encyclopedic project.[21]

Conversely, the Manase school did not necessarily embrace the *gewu* worldview, or indeed Li's personal innovations, in its usage of the *Bencao*. In *Shokushō nōdoku* 食性能毒 (On the Potential Effects of Foods), a section on the toxicity of ingredients included in the work *Nichiyō shokushō* 日用食性, a *materia dietetica* in Japanese published in 1631, Manase Gensaku, while indeed following the order of the entries of the *Bencao* in his selection of substances, nonetheless based his text almost exclusively on the *qiwei* and *zhuzhi* sections of the entries, or in other words on the most "classical" and least unique parts of Li's work, and with no explicit reference to it as source.[22] The "categories" (*lei*), too, are not made apparent, and as such, the *gang*/*mu* hierarchy is not clearly visible. As we will see, *materia dietetica* (*shokumotsu honzō* 食物本草) constituted an important category of *honzō*-related books. In their prefaces, the authors and compilers of such works position these as practical guides for "people's day-to-day lives" (*tami no nichiyō* 民の日用), leaving little place for medical theory.

Subsequently, Li's book was itself printed in Japan for the first time in 1637 by Noda Yajiemon 野田弥次右衛門. This first edition is based on the Jiangxi version. The text has glossing points (*kunten* 訓点) to help Japanese readers understand the text, as well as Japanese names for the entries, which are taken from Razan's *Tashikihen*. A new version, based on the same Jiangxi version but with

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[21] Marcon (op. cit.), pp. 67 and 71, quoting from Nishimura Saburō 西村三郎 and Kameda Jirō 亀田次郎.

[22] Katō Itsuko 加藤伊都子 and Mayanagi Makoto 真柳誠, "Manase Gensaku *Shokushō nōdoku* ni okeru *Honzō kōmoku* no shusha" 曲直瀬玄朔『食性能毒』における『本草綱目』の取捨, *Nihon ishigaku zasshi* 日本医史学雑誌 38:2 (1992), pp. 213–215.

pictures from the 1640 Qianya edition, was printed in 1653. Finally, two editions based completely on the Qianya version were produced, one in 1659 (with a revised reprint in 1669 and many later undated editions), and one in 1672.[23]

Thus, by 1640, Li's work had been made more easily available to a scholarly audience, with its updated picture set and with Razan's Japanese readings. How did this new situation influence the reception of the work, and the intellectual project underlying it as a whole?

The period between the Kan'ei 寛永 (1624–1645) and Kanbun 寛文 (1661–1673) eras represents a turning point in the history of publishing in Japan. The 1630's saw the rise of commercial publishers in Kyoto, such as the aforementioned Noda, who gradually shifted from moveable-type to woodblock printing, a technique that allowed the inclusion of illustrations with relative ease. And even though their numbers paled in comparison to those of Buddhist texts, which still accounted for the majority of publications, various practical manuals, too—on medicine, divination, or poetry, together with commentaries or illustrated versions of classical texts—began to occupy a significant part of the market. According to Mayanagi Makoto 真柳誠, some 58 books related to *honzō* were published between 1608 and 1699, almost 77% (45) of them after 1630.[24]

The *Bencao* comes to figure more and more prominently in a greater share of these publications, at least from the 1650's onwards. In *Honzō kanben* 本草簡便 (A Simplified *Materia Medica*), published in 1652, Jūansai Gen'yū 就安斎玄幽, supposedly a disciple of the Manase school, lists 204 substances in all. Each of these entries starts with Gen'yū's own commentary, followed by a section discussing the name of the given material and a further section on its therapeutic properties. In both of these latter sections, Li is quoted first. The order of the entries, however, does not follow the *Bencao* at all.

We can also see quotations from Li making a new appearance in re-editions of older manuals on *materia dietetica*. For instance, Yamaoka Genrin's 山岡元隣 (1631–1672) *Shokumotsu waka honzō zōho* 食物和歌本草増補 (Augmented *Materia Dietetica* in Poetic Form), published in 1667, is for the most part merely a reissue of the contents of the *Waka shokumotsu honzō* 和歌食物本草 (A Poetic *Materia Dietetica*)—an anonymous work published in 1630—but its additional material is commentary derived from the *Bencao*. The original work, in two or three *kan*, introduced its

[23] This last one, titled *Kōsei honzō kōmoku* 校正本草綱目 (Classified *Materia Medica,* Edited and Corrected), is known as the "Ekiken version," in reference to Kaibara Ekiken. This edition contains an additional table listing the entries with their Japanese names, which for the most part are identical with those given by Ekiken in his *Yamato honzō* (1708). However, the entries in the main text still follow *Tashikihen*, and the *kunten* glossing is of a level considered by some specialists to be incongruent with Ekiken's other scholarship. See Isono (op. cit.).

[24] Source: http://square.umin.ac.jp/mayanagi/materials/EdoBencaobook.html (accessed 1/1/2021). Note: working from the list provided on this page, in my calculation of the figures given above I have excluded encyclopedias and dictionaries (texts such as the *Wamyō ruijushō* 和名類聚抄).

*honzō*-related knowledge on each of some 240 materials in the form of a dedicated sequence of Japanese *waka* 和歌 (31-syllable poems of a 5/7/5/7/7-syllable line structure). For example, the first verse of the sequence for the "boar" (*inoshishi* 猪) entry reads:

> 猪はひえにて手おひ百びやうのどくとしるべし血をうかす也[25]
>
> The boar, being cold, should be known to be toxic for a hundred diseases and wounds. It makes the blood float.

Such use of *waka* as a means for transmitting medical knowledge was already visible in Manase Dōsan's writings. Chinese poems were used by Dōsan for his students as mnemonic devices—a technique known as *gejue* 哥訣 in Chinese medical primers of the Ming period[26]—but he also used *waka*. The Manase school, which had been using the *Bencao* since the beginning of the 17th century, has been offered as one possible origin for the *waka honzō* genre.[27] Yet it should be noted that, unlike the aforementioned *Shokushō nōdoku*, the original *Waka shokumotsu honzō* did not make any reference to the *Bencao*.

In Yamaoka's work, before each poem sequence we find the name of the entry in Chinese as given in the *Bencao*, and a short extract from the *Bencao*'s *qiwei* section. In the case of the boar entry, this extract simply previews the contents of the poem quoted above, stating that [the fierce boar's flesh] is "sweet, extremely cold, and has toxicity" (甘大寒有毒). Yamaoka then gives his own commentary on the *Bencao*'s entry, explaining that Li distinguished between two kinds of boar, the "wild boar" 猪 and the "mountain boar" 山猪 (or rather "fierce boar" 豪猪, the "correct name" of the entry), but that the original *Waka honzō*'s entry for "boar" had only referred to the mountain variety. At this point he accordingly added an entry on "wild boar," with two additional verses translating this new entry's *Bencao* extract into Japanese (*waka*) (**Figure 1**).

While integrating the contents of the *Bencao*, Yamaoka, who was a disciple of the poet and specialist in Japanese classics Kitamura Kigin 北村季吟 (1625–1705),

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[25] *Waka shokumotsu honzō* 和歌食物本草 (pub. 寛永 Kan'ei 7/1630), vol. 1. Available at: https://dl.ndl.go.jp/info:ndljp/pid/1287084/3

[26] For more on this topic, see Angela Ki Che Leung, "Medical Instruction and Popularization in Ming-Qing China," *Late Imperial China* 24:1 (2003), pp. 130–152. See also Marta Hanson, "From under the Elbow to Pointing to the Palm: Chinese Metaphors for Learning Medicine by the Book (Fourth–Fourteenth Centuries)," *The British Journal for the History of Science* (*BJHS*) *Themes* 5 (2020), pp. 75–92.

[27] Regarding *materia dietetica* texts with explanations in the form of poems, see Hata Yuki 畑有紀, "Waka-keishiki de shirusareta shokumotsu honzō-sho no seiritsu ni tsuite" 和歌形式で記された食物本草書の成立について, *Kotoba to bunka* 言葉と文化 14 (2013), pp. 37–56. Hata based her study on papers published by Ehara Ayako 江原絢子 and Sakurai Miyoko 桜井美代子 in *Tokyō kasei gakuin daigaku kiyō* 東京家政学院大学紀要 32–34 (1992–1994), to which at time of publication I was unable to obtain access. Most of the texts discussed here have been collected as (annotated) facsimile editions in the series *Shokumotsu honzō-bon taisei* 食物本草本大成, 12 vols., gen. ed. Ueno Masuzō, ed. Yoshii Motoko 吉井始子 (Kyoto: Rinsen Shoten, 1980).

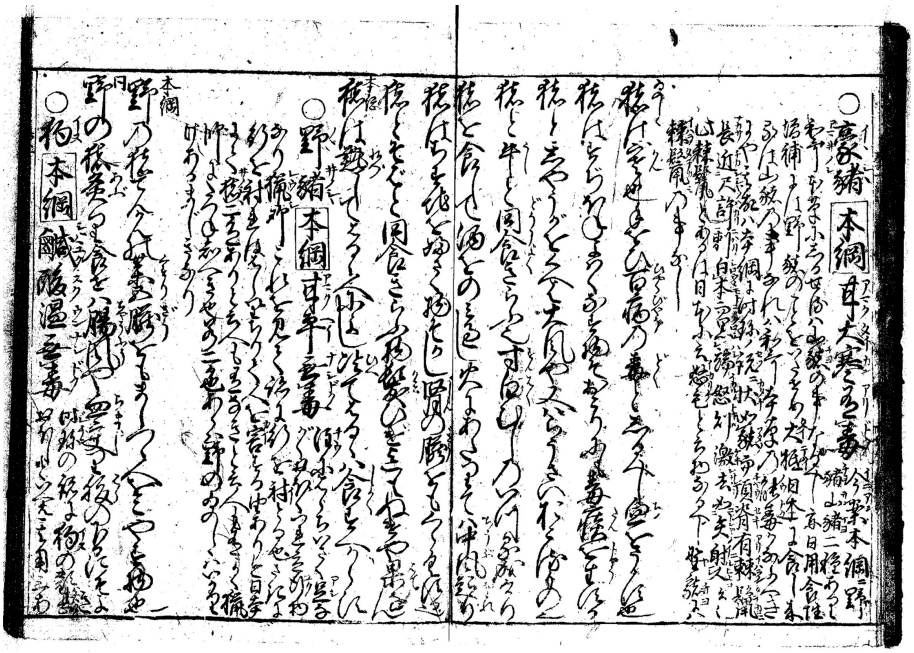

**Figure 1.** *Shokumotsu waka honzō zōho* 食物和歌本草増補. (NIJL). https://doi.org/10.20730/200005521 (image no. 7)

gave priority to the original order of the *Waka honzō*, which had been organized in a fashion reminiscent of Japanese dictionary genres like the *setsuyōshū* 節用集, in that its poems were first indexed by initial syllable following the order of the *iroha* syllabary, then divided up among thematic categories: grains, plants, trees, fruits, beasts, birds, fish, insects. Thus, he deliberately ignored Li's organizational principles and the hierarchies Li had established between the entries of a group of species, allowing as a result the above inversion in the ordering of the two types of boars—in deference to a preexisting Japanese framework.

Similarly, Nagoya Gen'i 名古屋玄医 (1628–1696), founder of the "ancient recipes" (*kohō* 古方) school, in his *Etsuho shokumotsu honzō* 閲甫食物本草 (Etsuho's *Materia Dietetica*, 1669, printed in 1671),[28] quotes heavily from the *Bencao*. This book in two volumes is written in Sino-Japanese (*kanbun* 漢文), and presents information on the properties of plants and animals. The *Bencao* and Li are regularly quoted on the topic of *qiwei* (quality and flavor) and on the applications and effects of various materials, but excerpts from Li's work do not always come first. The ten categories chosen by Gen'i are: grains (*koku* 穀), vegetables (*sai* 菜),

[28] Etsuho being one of Gen'i's names. The work was published in Kyoto by Murakami Kanbei 村上勘兵衛, along with the aforementioned Noda one of the main publishers of the time.

fungi (*take* 茸 and *kin* 菌, two categories), water herbs (*suisō* 水草, e.g. seaweeds), fruits (*ka* 菓), herbs (*sō* 草), fish (*gyo* 魚), shells (*kai* 介), and birds (*kin* 禽). The order of the entries does not follow Li's general plan, though there are groupings of entries that share similarities with the *Bencao*'s implicit "families," such as for "beans" (*tō* or *mame* 豆) and for "chives and onions" (*nira* 韮 and *negi* 葱, respectively). This, however, may merely hearken back to other *honzō* works, or even to the *Wamyōshō*, a source Gen'i has a marked tendency to cite, along with Razan's *Tashikihen*. Gen'i's commentaries deal mostly with the properties of the ingredients, and if he shows no hesitation in raising questions about what he reads in the *Bencao*, the critiques he voices are not trenchant. For example, in the work's first entry, which deals with *uruchi* 粳, or non-glutinous rice—as opposed to the glutinous variety, *mochi* 糯—Gen'i first quotes Li in stating that this rice is both sweet and bitter (*kanku* 甘苦), then goes on to make a brief note where he remarks that other texts speak only of its sweetness, adding that the rice one can taste today in Japan is not bitter. Rather than rejecting Li's statement, he wonders if the difference may "come from the quality of the soil" (是因二地気一然乎).

The *Hōchū biyō wamyō honzō* 庖厨備用和名本草 (*Materia Medica* with Japanese Names to be Used in the Kitchen, 1684) of Mukai Genshō 向井元升 (or 玄松, 1609–1677) adopts quite a different stance. Mukai, a famous Confucian scholar and physician from Nagasaki, is well-known for his *Kenkon bensetsu* 乾坤弁説 (Explanation of the Universe), a Japanese presentation with commentary of Sawano Chūan's 沢野忠庵 (i.e. Christóvão Ferreira's, 1580–1650) European astronomical and cosmological knowledge.[29] He is also known as an early receiver and transmitter of Western medicine and pharmacopeia, through his contacts with Dutch doctors in Nagasaki.[30] In later life, Mukai established himself in Kyoto and interacted with other scholars, such as Kinoshita Jun'an 木下順庵 (1621–1699), a renowned master who penned one of the prefaces to this work, and Kaibara Ekiken. This *Wamyō honzō*, written entirely in Japanese with *katakana*, was probably completed around 1671 (the date of Mukai's own preface), but was printed only in 1684. In his preliminary remarks, Mukai clearly positions the *Bencao gangmu* as the most up-to-date of *Bencao* works, and then announces that he will use it to discuss and correct (*ben* 弁) the names of the entries. In the first section out of thirteen,

[29] Hiraoka Ryūji 平岡隆二, "*Kenkon bensetsu* shoshahon no kenkyū" 『乾坤弁説』諸写本の研究, *Nagasaki rekishi bunka hakubutsukan kenkyū kiyō* 長崎歴史文化博物館研究紀要 1 (2006), pp. 51–63; Idem, *Nanban-kei uchūron no gententeki kenkyū* 南蛮系宇宙論の原典的研究 (Fukuoka: Hana Shoin, 2013).

[30] On Mukai Genshō and his reception of Western knowledge, see Wolfgang Michel, "Shoki kōmō-ryū geka to jui Mukai Genshō ni tsuite" 初期紅毛流外科と儒医向井元升について, *Nihon ishigaku zasshi* 56:3 (2010), pp. 367–385; Idem, "On the emancipation of *materia medica* studies (*honzōgaku*) in early modern Japan", *Proceedings of the 5th International Symposium on the History of Indigenous Knowledge* (2015), pp. 93–106.

titled "investigating doubts" (*shitsugi* 質疑), Mukai reflects upon the degree of correspondence between the Japanese names given by Razan's *Tashikihen* or Shitagō's *Wamyōshō* and their paired Chinese characters. In doing so, he acknowledges the *Bencao*'s innovations, noting for instance that, contrary to what had been current in the "old/former *materia medica*" (*moto no honzō* 旧本草) Li had moved the *ki* 葵 (Ch. *kui*) plant from the "vegetable" section to that of "damp herbs."[31] In the 490 entries of his work, Mukai first gives the Japanese names from *Wamyōshō* and *Tashikihen*, when they exist, after which he introduces a "consideration of the *Bencao*" (*honzō wo kangauru ni* 考本草), a section whose "*Bencao*" may refer to the *honzō* literature in general, but which fairly frequently displays important similarities with Li's *Bencao gangmu* in particular. What is more, in other sections of the entries, Mukai sometimes quotes more explicitly from "Li Shizhen's *Bencao gangmu*," giving extensive translations into Japanese. He then adds his own observations, as well as additional advice (and warnings) about the consumption of the given ingredient. Regarding his selection and ordering of entries, despite his claim to use mainly "Dongyuan's *Shiwu bencao*" (東垣食物本草)—a work attributed to the Song-dynasty physician Li Gao 李杲 (Li Dongyuan 李東垣, 1180–1251)—what Mukai actually did was follow the structure of the *Bencao gangmu*, even keeping its narrower "Categories" (*lei*), such as "plains birds" (*genkin* 原禽), "water birds" (*suikin* 水禽), and "forest birds" (*rinkin* 林禽). In the specific case of birds, he had made changes to the order of the categories, moving the plains birds thus to the front, and omitting the group of "mountain birds" (*sankin* 山禽). For the remaining categories, however, he included all birds from the *Bencao* that he deemed edible, referring only to their Chinese names without trying to find Japanese equivalents, all while reintroducing entries from the *Shiwu bencao* among these. On a few occasions, such as with the "snake and insect" section, Mukai did prefer the division used in Dongyuan's work, but in the particular case, this amounts only to a list of entries without any content. Mukai explains that, if these materials are included in *Bencao* books, it is because "of all that grows between Heaven and Earth, there is nothing foreigners do not eat, making no distinction between the toxic and the safe" (外国の人は天地の間に生ずるもの良毒をわかたず一つとして食せざるはなし), which may, he says, make them ill and eventually lead them to their death. Japanese people, however, never eat insects or snakes, being blessed with "a naturally noble character" (天生の自然貴品にして) and an unrivalled diversity of products.

In other words, Mukai shows a rather clear understanding of Li's innovations in terms of structure and categories, and chose not only to follow them (or not), but to make them explicitly apparent. This may not come as a much of a surprise, given his systematic references to *Tashikihen*, but it is still a striking

[31] In fact, Mukai is here criticizing the identification of this plant with the *aoi* (*afuhi* in traditional orthography), a Japanese plant written with the same 葵 character. He judges that the *ki* 葵 should rather be identified with a wholly different plant, the *fuki* 蕗.

difference compared to many of the previous *shokumotsu honzō* works introduced here above. At the least, it was certainly not a systematic feature in works published around the same time. Shimotsu Genchi's 下津元知 (dates unknown) *Zukai honzō* 図解本草 (Illustrated Explications of the *Materia Medica*, in 10 *kan*, completed in 1681, published in 1685), for example, opens with a portrait of Li Shizhen, which indicates the deference shown by the author to his predecessor. Yet the book itself follows the *iroha* order, and collates Li Shizhen's own findings with two other Chinese sources: Li Zhongli's 李中立 *Bencao yuanshi* 本草原始 (1612),[32] and the fairly recent *Bencao dongquan* 本草洞詮 by Shen Mu 沈穆 (1661).[33] One of Shimotsu's goals was to distinguish between Chinese and Japanese plants, surmising that their therapeutic properties should be different. He makes clear reference to the *Bencao gangmu*, giving even the pages where one can find the corresponding entry, but he also relies on Japanese sources. He moreover makes important changes to the pictures, choosing not to use even the "new" Qianya version. Meanwhile, Arai Genkei's 新井玄圭 *Shokumotsu tekiyō* 食物摘要 (Chosen Extracts on *Materia Dietetica*, 1678, republished many times up to the end of the century with minor changes in title, e.g. *Shokumotsu tekiyō taizen* 大全, *taisei* 大成, etc.) shares as a work many traits in common with the *Bencao gangmu*. Written in *kanbun* with glossing points, it begins with a section on "waters," although with a slightly different order of entries, before moving on to grains, plants, and animals. In some sections, Arai chose to follow the order and subsections of the *Bencao*, but he did not do so systematically. He does distinguish between "scaly" and "scaleless" fish, for example. But in the bird section, plains birds and forest birds appear to be mixed up, and mountain birds are omitted, as they had been in Mukai's book. This new organization does not, however, seem to be arbitrary, but follows rather the lines of "covert families," which in this case are groupings based on the proximity of the birds' Japanese names. For instance, three different kinds of *shigi*, or sandpiper, are grouped together—the *shigi* 鷸, the *botoshigi* 秧鶏, and the *ubashigi* 竹雞—as are the *tsuchigurebato* 斑鳩 (oriental turtle dove), the *aobato* 青鶴 (green pigeon), and the *iebato* 鴿 (domestic pigeon). Moreover, Arai made an interesting choice regarding the identification of species: in the case of birds, after discussing 35 entries taken from the *Bencao*, he created a whole appendix where he listed in *katakana* the Japanese names of 32 species for

[32] On the reception of this work in Japan, see Mayanagi Makoto, "Chūgoku honzō to Nihon no juyō" 中国本草と日本の受容, in *Nihonban Chūgoku honzō zuroku* 日本版中国本草図録 9 (Chūō Kōronsha, 1993), pp. 218–229.

[33] On the Japanese reception of this work, see Mayanagi Makoto, "*Honzō igen* to tabako" 『本草彙言』と烟草, *Tabako-shi kenkyū* たばこ史研究 36 (1991), pp. 1480–1488. Mayanagi, in reflecting upon the manner in which the Chinese name for the tobacco plant was introduced, estimates the arrival of this Qing-period work in Japan at no earlier than 1680. According to Métailié, op. cit. (2006), pp. 47–48, its illustrations complement nicely those of the *Bencao* because of the former's focus on the various parts of the plants.

which he considered there existed as yet no "correct name." Among these, notably, we find entries such as *hibari* or *mozu*, to which previous works had, in fact, assigned various Chinese characters, some of them even taken from the *Bencao*. In other words, rather than supplying a wrong identification for any of these Japanese entries, and thereby assigning it to the wrong place, Arai preferred instead to set these entries aside as matters for later elucidation. Although he may have used the term "appendix" (*furoku* 附録), reminiscent of Li's own *fulu*, Arai did not attempt to redistribute these entries under those of other species with certain identifiable traits in common. In other words, while Arai did integrate Li's method in part, the *Bencao gangmu* was not used here as an absolute model. Regarding the content of Arai's entries, it is subdivided into different parts, each clearly identified by a boxed header: *kimi* 気味 (quality and flavor), *shokkin* 食禁 (restrictions), *shuji* 主治 (main applications and effects), and, in some cases also *sogi* 疏義 (commentary) and *hōhō* 方法 (recipes). Here also Arai departs from Li's model, as he favored the tradition already established by previous *shokumotsu honzō* texts.

A work that goes further in its integration of Li's categories is Hitomi Hitsudai's 人見必大 *Honchō shokkan* 本朝食鑑 (Catalogue of the Food of Our Country, 1697). Hitsudai followed in the steps of Mukai and Arai, and reused a great part of the structure of Li's book. He included not only a section on waters, as Arai had, but also sections on fires and "earths," albeit with only a handful of entries each, though he did eventually expand them in order to incorporate further Japanese materials. After these sections, he followed Li's plan rather closely, keeping all the categories for the vegetables, three out of six for the fruits, and all the categories for the birds. He did also make some changes. For the grains, he placed the rices first and preferred, like Mukai, to group snakes and insects together in one volume-end category. He also merged the beasts and cattle into a single group, while leaving out the "wanderers and strange bipeds" (*yuguai* 寓怪, Jp. *gūkai*). Finally, he doubled the number of categories for fish, by making a clearer distinction between freshwater and seawater fish, while also maintaining the presence or "absence" of scales as a discriminating criterion.[34] Given that his aim was to compile a *materia dietetica*, Hitsudai logically left out sections on clothes, man, and even medicinal herbs. Nonetheless, by including fires and earths, and by expanding the fish categories—particularly in a way that capitalizes

[34] For a comparison between the *Honchō shokkan* and the *Bencao gangmu* in terms of contents and structure, see Li Li 李利 and Ehara Junko 江原絢子, "*Honzō kōmoku* to *Honchō shokkan* no bunrui ni miru shokubunka-teki na tokuchō" 『本草綱目』と『本朝食鑑』の分類にみる食文化的な特徴, *Nihon chōri kagakukai-shi* 日本調理科学会誌 40:3 (2007), pp. 193–201. See also Une Satsuki 畦五月, "*Shokumotsu honzō* to *Honchō shokkan* no hikaku wo tōshita shokubunka no sōi to sore-zore no tokuchō ni tsuite shokuhin no seishitsu (kimi, kōnō) no chigai ni shiten wo atete" 『食物本草』と『本朝食鑑』の比較を通した食文化の相違とそれぞれの特徴について食品の性質（気味、効能）の違いに視点をあてて, *Nihon chōri kagakukai-shi* 44:3 (2011), pp. 238–245.

on Li's own design—he clearly demonstrates his intent to use the *Bencao* as a general model, and not merely as a source of information.

Thus, we can see that, although the *Bencao* came to be effectively the main source used by Japanese scholars for naming and describing plants and animals in the context of *materia medica* and *dietetica*, it was not until the late 17th century that there appeared works explicitly embracing Li's categorization of the entries, along with his hierarchical scheme.

## 3. The *Bencao gangmu* as an Inspiration for Illustrated Books

Let us now turn to the other "line of reception" of the *Bencao gangmu*, i.e. the so-called "encyclopedic" works. Starting with the *Tashikihen*, these are works concerned for the most part with lexical issues—finding the correct names for things—and not with the pragmatic effects of medical or alimentary substances. The first and most well-known of such works that one reliably finds in lists of publications related to *honzō* and natural history is probably the *Kinmō zui* 訓蒙図彙 (Illustrated Vocabulary for Educating Children) complied by Nakamura Tekisai 中村惕斎 (1629–1702) and published in 1666.[35] Tekisai, a Neo-Confucian moralist who helped vulgarize Chinese classics into Japanese, wanted to give "children" new material for learning Chinese characters and their Japanese meanings, while also helping them associate each character with a single picture. Although the preface explains that he had in fact designed this vocabulary for one of his young relatives, actual "children" were not necessarily the only expected readers of the work. Indeed, lists of *leishu* 類書 (Jp. *ruisho*, books arranged by categories) as far back as the Heian period, such as Shitagō's *Wamyōshō*, or his pupil Minamoto no Tamenori's 源為憲 (?–1011) *Kuchizusami* 口遊, had often presented themselves as guides for noble children. Tekisai can be said to have followed this *topos*, with a new twist: the "children" he had in mind, like many other contemporary authors of "educational" works in the vernacular, were those people not skilled enough in classical Chinese (or even in classical Japanese) to have direct access to sources of "higher" status.

In his preliminary remarks, Tekisai states that, for the Chinese characters, he used mainly Wang Qi's 王圻 *Sancai tuhui* 三才図会 (Illustrated Collection of the Three Powers, 1607–9) and Xu Guangqi's 徐光啓 *Nongzheng quanshu* 農政全集 (Complete Treatise on Agriculture, 1639), as well as "the illustrated explanations

[35] This work had many different editions over the years—in 1668, 1693, 1695, and in 1789. Each quite different from the others in terms of the contents, layouts, and illustrations it featured, these editions proved nonetheless able to coexist without replacing one another. See Christophe Marquet, "Instruire par l'image: encyclopédies et manuels illustrés pour enfants à l'époque d'Edo," in *La pédagogie par l'image en France et au Japon*, eds. M. Simon-Oikawa and A. Renonciat (Rennes: Presses universitaires de Rennes, 2009), pp. 84–90. See also Sugimoto Tsutomu 杉本つとむ, *Jisho/jiten no kenkyū* 辞書・事典の研究 II, *Sugimoto Tsutomu chosaku-shū* 杉本つとむ著作集 7 (Tokyo: Yasaka Shoten, 1999), pp. 233–276.

of the specialists in *materia medica*" (*shoke honzō no zusetsu* 諸家本草の図説). He also tells the reader that for the names of each of the entries, he had used the "correct name" (*seimei* 正名), and that, as sources for the Japanese names, among Japanese books he had used the *Wamyōshō* and the *Tashikihen*, as well as many dictionaries such as the *Kagakushū* 下学集 and the *Setsuyōshū* 節用集 (both of the 15th century).[36] Given the time of publication, there is no doubt that Tekisai had access to the latest version of the *Bencao gangmu*, although Li's work is not cited *per se*. And indeed, many of Tekisai's illustrations for metals, minerals, plants, and animals had been taken directly from the Qianya edition of the *Bencao*. In some cases, such as for the "crocodile" (*wani* 鰐) or, even more strikingly, for the "horseshoe crab" (*kabutogani* 鱟), the "realistic" quality of his illustrations greatly exceeds that of the original. This may be partly explained by the shift in focus this "illustrated vocabulary" represents when compared to traditional *honzō* books. As stressed by Roel Sterckx, *bencao* illustrations had mostly been conventional tools—"a commentarial extension of the text, or as yet another type of 'nomenclature' that serves to circumscribe its properties"—rather than a means of clearly identifying the described materials as they were actually encountered in the field.[37]

In the case of Tekisai's illustrated vocabulary, the images are indeed "another type of nomenclature," except that the only texts associated with them are the Chinese characters and their Japanese names. In contrast to *honzō* texts, where pictures might have been seen as secondary for readers with experience in the field—that is, for readers like the target audience of most of the works I have reviewed so far—the pictures in Tekisai's primers were no less important than the text itself, since they were required to create an equivalence between a vernacular word, a Chinese glyph, and an element of the surrounding world that, in many cases, already had its own standardized representation in visual materials such as paintings and picture books.

The illustrations in Tekisai's "Vocabulary" can thus be said to expand upon those in the *Bencao*, but as far as its organizational principles are concerned, the relationship between the *Kinmō zui* and the *Bencao gangmu* is not always clear. In the general structure of his work, Tekisai clearly follows the *leishu* tradition, which also influenced Li Shizhen himself. The *Kinmō zui* thus distinguishes a first section on "heaven," followed by another on "Earth" (including geography and topography, as well as habitations), with the biggest part of the book being devoted to living things, starting with Man and his culture, before moving on to cattle and to beasts, to birds, to dragons and fish, to insects and shells, to rices

[36] On *setsuyōshū* in general, see Satō Takahiro 佐藤貴裕, *Setsuyōshū to kinsei shuppan* 節用集と近世出版 (Osaka: Izumi Shoin, 2017).

[37] Sterckx, Roel, "The Limits of Illustration: Animalia and Pharmacopeia from Guo Pu to *Bencao gangmu*," *Asian Medicine* 4 (2008), pp. 357–394. On illustrations in *bencao* texts, see also by André-Georges Haudricourt and Georges Métailié, "De l'illustration botanique en Chine," *Études chinoises* 13:1–2 (1994), pp. 381–416.

and grains, to vegetables, fruits, trees, and finally to flowers and herbs. In this regard, the *Kinmō zui* appears to be closer to Shitagō's *Wamyōshō* than to any other Chinese or Japanese *leishu*. This also accords well with the fact that Tekisai chose to "focus on Japanese names" (*wamyō wo shu to su* 和名を主とす), which made him favor a local tradition in terms of organization, e.g., by placing rice, and not hemp, at the beginning of the "grains" section.

Regarding the order of the entries within each section, we can detect competing logics at work, the "families" of the *Bencao* being only one among them. To take, for example, the case of birds, the *Kinmō zui* lists 77 separate entries, compared to the *Bencao gangmu*'s 72. But in fact, 6 of the 77 deal with various "parts" of birds and other "secondary" generic items, such as eggs, wings, or hatchlings, so there is not really much of a difference in number. Among the remaining 71 entries of the *Kinmō zui*, only 8 were absent from the *Bencao*, and Tekisai had found these in the *Wamyōshō*, e.g. the *mozu* 鵐 (bull-headed shrike). For their illustrations, he could turn to the *Sancai tuhui*, but in many cases the "famous artists" he employed made their own drawings. This leaves 63 entries in common with the *Bencao*. The general order does not follow the four categories of birds devised by Li. Rather, it seems that Tekisai first listed birds with names in two characters, starting with the numinous and rare ones such as the *hōō* 鳳凰 (phoenix) and the *kōsui* 孔翠 (or *kujaku* 孔雀, peacock), followed by *ōmu/inko* 鸚鵡 (parrot), *token/hototogisu* 杜鵑 (cuckoo), *sekirei/ishitataki* 鶺鴒 (wagtail), *takuboku/teratsutsuki* 啄木 (woodpecker), *shōryō/sazaki* 鷦鷯 (wren), and *henfuku/kawabori* 蝙蝠 (bat), as well as *roji/u* 鸕鷀 (cormorant), *sōkatsu/manazuru* 鶤鵆 (white-naped crane), *en'ō/oshidori* 鴛鴦 (mandarin duck), and *hekitei/nio* 鸊鷉 (little grebe). If, however, we consider this group as a single section, we can say that, among its members, the four groups stipulated by Li are more or less preserved, albeit in reverse order: mountain, forest, plains, water.

Following this, we find birds named by one unique character, beginning with *kaku/tsuru* 鶴 (crane) and *kan/ōtori* 鸛 (stork), which were the first pair of "water birds" in the *Bencao*. Then comes a cohesive group of birds of prey (hawks and eagles, etc.), in an order very close to the *Bencao*'s. Tekisai has even given entries of their own to birds that in the *Bencao* had only been "appended" under the entries of others, such as *en/tobi* 鳶 (kite) and *shun/hayabusa* 隼 (falcon). These birds of prey are then followed in turn by what Li had categorized as "water birds" (ducks, etc.), "forest birds" (crows, etc.), and "plains birds." As before, in most cases the order preserves the *Bencao*'s "families." Even when—as in the cases of *kyō/fukurō* 梟 (owl) or *ro/sagi* 鷺 (egret)—an "intruder" seems to break the line, it is usually a matter of visual presentation on the page, in order to, e.g., put *hu/kamo* 凫 (wild duck) together with *gaku/ahiro* 鴈 (house duck), allowing the two ducks to face each other. The birds section as a whole ends with a *furoku* 附録 (appendix), in which the *Bencao*'s order is not really preserved, with groupings there that seem to rely more on the characters themselves (it begins, for instance, with a whole series of roosters whose names contain the character *kei* 鶏). Thus,

although Li's work clearly influenced Tekisai, and while the general idea of a "family" of species is, if anything, made here even more visible through the use of pictures, the systematic preservation of Li's design *per se* was not one of the compiler's priorities.

Tekisai's *Kinmō zui* was published amidst a first, timid growth in the publication of such illustrated texts, probably stimulated by the same group of Ming works, as well as by other commentaries of classical texts with pictures. For instance, in 1667, the publisher Ōwada Kyūzaemon 大和田九左衛門 produced a new, annotated version of the *Sangoku sōden on'yō kankatsu Hoki naiden kin'u gyokuto shū* 三国相伝陰陽輨轄簠簋内伝金烏玉兎集 (Book of the Golden Crow and the Jade Hare, Secret and Exposed, of the Round Vessel and the Square Vessel, the Wheel and the Wedge, the Yin and the Yang, Transmitted Through the Three Countries).[38] Often simply abbreviated as the *Hoki*, this was an apocryphal treatise on hemerology and calendar divination attributed to Abe no Seimei 安倍晴明 (921–1005), to which Ōwada had added a further volume containing pictures and explanations. Considered at the time to be one of the founding classics in the field of divination, the work itself had been in print already from the very beginning of the 17th century, with editions published both in moveable type (1612, 1627) and in woodblock (1628). This new text by Ōwada, however, was the first annotated and illustrated edition of the work. The publisher was very much conscious of this uniqueness, stating, in an afterword, that he had "added a separate volume at the end with pictures," this being "a direct means of making [the text] clearer" (附巻尾於図説。釈其事、解其義。夫能直而明之。). And indeed, in this additional volume, Ōwada included pictures and tables corresponding to many of the text's keywords. More than this, for most of the hundred illustrations the book contains, he clearly specifies even the original sources of the pictures. Among them, 17 had been taken from the Qianya edition of the *Bencao gangmu*, 13 from the *Sancai tuhui*, 12 from the *Wujingtu* 五経図 (Pictures of the Five Classics, 1614)—another Ming work, 32 from Mao Yuanyi's 茅元儀 *Wubeizhi* 武備志 (Treatise on Military Preparations, 1621),[39] 10 from "a certain book" (*aru sho* 或書), and the remaining 16 from various other Chinese texts. Illustrations from the *Bencao* are concentrated in two main entries, both of which deal with a particular series of items that appears in the main text: the "five grains" (*gokoku* 五穀) and the "seven rarities" or "seven treasures" (*shitchin* 七珍/*shippō* 七宝). The first group is a ubiquitous series, with many variants differing in both contents and ordering. In this specific case, the "grains" are: *kibi* 黍 (proso millet), *mame* 菽 (soy), *asa* 麻 (hemp),

[38] On divination texts in Edo Japan, see Matthias Hayek, "From Esoteric Tools to Handbooks 'For Beginners': Printed Divination Manuals from the Seventeenth Century to the Beginning of the Eighteenth Century," in *Listen, Copy, Read* (op. cit.), pp. 46, 288–318; Idem, "Edo jidai no 'ura' wo kaimamiru" 江戸時代の『占(うら)』を垣間見る, *Shomotsugaku* 書物学 12 (2018), pp. 2–8.

[39] A domestic edition, with glossing points by the Confucian scholar Ukai Sekisai 鵜飼石斎 (1615–1664), was published in 1664.

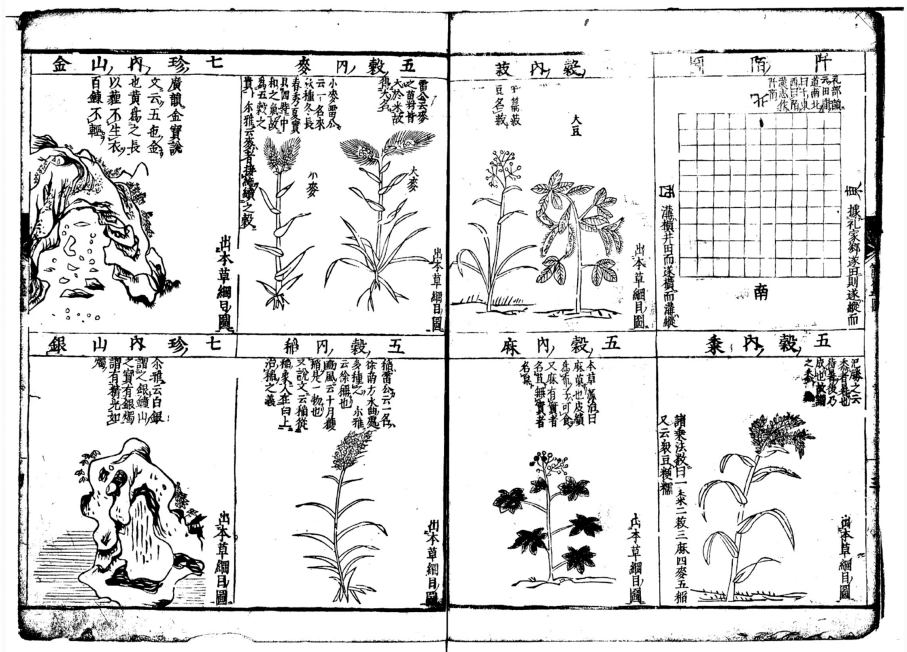

**Figure 2.** The five grains (*gokoku* 五穀). *Sangoku sōden on'yō kankatsu Hoki naiden kin'u gyokuto shū zukai* 三国相伝陰陽輨轄簠簋内伝金烏玉兔集図解. (NIJL). https://doi.org/10.20730/200005702 (image no. 6)

*mugi* 麦 (wheat), and *ine* 稲 (rice). For each of these, the text gives a picture and a short quotation (**Figure 2**).

Although the pictures all come from the *Bencao gangmu*, the quotations themselves do not. In most cases, they were taken from Li Zhongli's *Bencao yuanshi*. What is more, the order of the five grains here is different from that put forth by Li Shizhen who, quoting the *Suwen* 素問 (ancient medical text of the Qin-Han period), put hemp first, followed by wheat, then two sorts of millet (*ji* 稷 and *shu* 黍), and finally soy. In fact, the order in Ōwada's work comes from a particular Buddhist treatise, one actually quoted in one of the pictures: the *Zhucheng fashu* 諸乗法数 (Ritual Numbers of the Different Vehicles), compiled by the monk Xingshen 行深.[40] The seven treasures, too, form a Buddhist group—the *saptarana*—composed of *kin* 金 (gold), *gin* 銀 (silver), *ruri* 瑠璃 ("lapis lazuli"), *hari* 玻璃 (quartz or crystal), *shako* 硨磲 (giant clam), *menō* 瑪瑙 (agate), and *shinju* 真珠 (pearl). All of these are included in the *Bencao*, but not as group, since they belong to a number of different categories, ranging from "shells" (*shako*) to "minerals" (gold). In this case, the quotations given in the pictures are from the *Fanyi mingyi ji* 翻訳名義集 (Collection of Translated Names), a Song-period Buddhist text

[40] A domestic re-edition of this early Ming work was published in 1500.

**Figure 3.** The seven treasures (*shichin* 七珍). *Sangoku sōden on'yō kankatsu Hoki naiden kin'u gyokuto shū zukai* 三国相伝陰陽輨轄簠簋内伝金烏玉兔集図解. (NIJL). https://doi.org/10.20730/200005702 (image no. 7)

reprinted in Japan in 1628. In other words, the editor of this new version of the *Hoki* used the 1640 edition of Li's *Bencao* above all as a practical source for pictures needed to represent Buddhist notions, an approach that can clearly be linked to both the "lexicographic" and the "encyclopedic" perspectives we see in the *Kinmō zui*, though Ōwada's work itself displays no similar regard for Li's design or his findings (**Figure 3**).[41]

From 1684 onwards, this trend of illustrated commentaries accelerated, with the last part of the 17th century seeing the publication of ever greater numbers of illustrated catalogues specializing in different topics, from clothes, to people, to weapons and armor, etc., many of them bearing the phrase *kinmō zui* in their titles.[42] Being "topic-oriented," however, most of them lack the broader, "encyclopedic" view of the original.

One notable exception would be the *Nanji kunmō zui* 難字訓蒙図彙 (Illustrated Vocabulary for the Education of Children, with Characters Difficult [to Read]).

[41] Incidentally, a similar text, with the new title *Hoki genkai taizen* 簠簋諺解大全 (Complete Compilation of the *Hoki*, Explained in the Vernacular), was published in 1682 by Nakano Sōzaemon 中野宗左衛門, but uses the same pictures without even mentioning their origin.

[42] Most of these have been collected in the series *Kinmō zui shusei* 訓蒙図彙集成, 8 vols., ed. Asakura Haruhiko 朝倉治彦 (Tokyo: Ōzora-sha, 1998).

This book, in five *kan*, published in 1687, is based on an earlier dictionary by Nagai Johei 永井如瓶 (1661–1731), a poet from Osaka. This source text, *Jigen benmōshō* 邇言便蒙抄 (Collection with Easy Words to Help Children), published in 1682, had three volumes: one for the "head" 首, one for the "navel" 臍, and one for the "feet" 足. Entries in the *Jigen benmōshō* were distributed over 12 categories: *kenkon* 乾坤 (Heaven and Earth), *jikō* 時候 (time and weather), *jingi* 神祇 (spirits and gods), *jinrin* 人倫 (people), *kikei* 気形 ("forms of the *qi*" = animals), *shitai* 支体 (body parts), *sōmoku* 草木 (herbs and trees), *ishoku* 衣食 (clothes and food), *kizai* 器財 (vessels and tools), *kyotaku* 居宅 (habitations), *saishiki* 彩色 (colors), and *gengo* 言語 (language). As the author Nagai himself explains in his preliminary note, this is a variation on the "three powers" system, projected on a human body, with these thematic categories representing the twelve months of the year. The categories are not original, and closely resemble those of the *Setsuyōshū*. what makes Nagai's work unique is the way he supplies different contents for the same topics across the different volumes. The first volume "gathers characters and words commonly used in the world," while the second focuses on explaining the meaning and origins of "difficult characters" (*nanji* 難字). The last volume then deals with "alternative names" (*imyō* 異名) and reflects on "precedents" (*koji* 故事). Such, at least, is the theory behind the organization, though it is not applied equally to all the various sections.

The 1687 reedition as the *Nanji kunmō zui*, however, while keeping this general structure, transformed Nagai's opening remarks into a full preface, and added a line indicating that new pictures had been introduced throughout. Nor are these pictures—by the famous artist Hishikawa Moronobu 菱川師宣 (d. 1694)—the only changes made to the contents of the original. The editor has indeed moved whole sections of text around between the volumes, making the original differences between the "head," "navel," and "feet" volumes almost indistinguishable. He has also added numerous entries in the animal sections, with 34 new entries for birds alone. Many of these new entries, moreover, are absent from the *Kinmō zui*, but can be found in either the *Bencao gangmu* or the *Sancai tuhui*. More than half of them correspond to what Li called mountain birds, though they are not listed in the same order, and among them, several "fabulous" birds which had lacked independent entries in the *Bencao*, such as the *ran* 鸞 (Ch. *luan*), or entirely new ones, such as the *ishikuidori* 石食鳥 (cassowary), are featured prominently—though without any explicative text (**Figure 4**).

These "new" entries were then finally themselves included in the *Zōho tōsho Kinmō zui* 増補頭書訓蒙図彙 (Augmented Version, with Head-notes, of the *Kinmō zui*) published in 1695, as a sort of extension of the work's earlier "appendix" to the birds section—although by this time, mention of the "appendix" itself had disappeared.

**Figure 4.** *Nanji kinmō zui* 難字訓蒙圖彙. (NIJL, Ukai Bunko 鵜飼文庫). https://doi.org/10.20730/200019308 (image no. 57)

## Conclusion

Through this brief and partial survey of 17th-century *honzō* and encyclopedic literature, my goal was to reflect upon the idea, still frequently put forth when presenting the developments of naturalistic knowledge in Japan, that Li Shizhen's *Bencao gangmu* was widely perceived already at the time as an authoritative work, one from which only 18th-century scholars such as Kaibara Ekiken finally "broke free." At the end of our journey here, the situation appears more nuanced. Li's *Classified Materia Medica* was indeed a ubiquitous reference in Japanese *honzō* works published after its introduction in the country. It was regularly quoted in books in Chinese, and translated or paraphrased in books in Japanese. However, for almost seventy years, these quotations and references were limited in their purpose to mere identification of the names of materials and their effects. This is not in itself surprising, for at least two reasons. Firstly, Razan's *Tashikihen*, which provided a point of connection between Li's work and the oldest available local authority, the *Wamyōshō*, was, as Marcon puts it, a "book of names,"[43] and

[43] Marcon (op. cit.), p. 67.

it may have led to an emphasis on the *zhengming* aspect of the *Bencao*. Secondly, both *materia medica* and *materia dietetica* were mainly concerned with the toxicity and potency of the various materials, and in this regard, proper identification was of course especially crucial. Yet the originality of Li's work resides not only in its lexicographical aspects, but also in its broad rethinking of the categories themselves—and of the hierarchy between entries—as an expression of the Neo-Confucian "investigation of things." As far as can be gleaned from printed books, this aspect seems to have eluded Japanese *honzō* specialists, and "encyclopedists," for the major part of a century, Razan being an early exception. Instead, they tended to keep to older classifications, whether from other, older *bencao* books or from older local encyclopedias and dictionaries. Again, there are reasons for such a situation, as above all books in the vernacular were designed precisely not to be exhaustive summa, but to serve rather as pragmatic tools for learning, or for quickly looking up the properties of a given ingredient. What is more, at the time of its introduction, the relative novelty of the *Bencao* may have been itself a disadvantage, in a context where older texts were generally regarded as having the greater authority. Even authors like Mukai, who showed a deeper interest in the classificatory innovations of the *Bencao gangmu*, did not follow them "blindly," and indeed preferred to put forth a (supposedly) older work, the *Shiwu bencao*. Mukai often relied on the knowledge he gathered from foreigners in Nagasaki to offer different points of view, and in some cases, he did not hesitate to do so even thirty years before Ekiken's *Yamato honzō*. Meanwhile, though illustrated books did make use of Li's work, this was mostly for its pictures, and not for its text or for its general structure, although we can sometimes see Li's logic nonetheless partially piercing through in Tekisai's *Kinmō zui*. All in all, it seems to me that the 17th century was a period rather of the *Bencao* being "digested bit by bit," leading eventually to a more general integration of Li's worldview at the very end of the 1690's with works like the *Honchō shokkan*. These works, which finally established the *Bencao gangmu* as a "classic" to be followed, paved the way for what may have been the true juncture point of the "medicinal" (naturalistic) and "encyclopedic" lines of Japanese scholarship: Terajima Ryōan's 寺島良安 *Wakan sansai zue* 和漢三才図会 (Illustrated Compendium of the Three Powers of China and Japan), published around 1715. Further research should thus focus on the reception of the *Bencao gangmu* in the first part of the 18th century, seeing the period not so much as one of emancipation from the *Bencao* model, but rather as one in which the work's more theoretical and organizational aspects were discussed, reused, or discarded—and to what ends.

## Comparison between the Bird Sections of the *Bencao gangmu*, the *Kinmō zui*, and the *Nanji kinmō zui*

(1) **Background Colors**: blue = water birds, pink = plains birds, green = forest birds, gray = mountain birds, white = birds not found in the *Bencao gangmu*. (2) **Script**: red type = changes in the order of entries. (3) **Signs**: # = entries annexed to the *fulu* section in the *Bencao gangmu*, $ = names mentioned in the *shiming* or *jijie* sections as alternative names or related kinds. Note: English translations of the *Bencao gangmu* follow Paul U. Unschuld, trans., *Ben Cao Gang Mu*, *Volume IX*: *Fowls*, *Domestic and Wild Animals*, *Human Substances* (Oakland: University of California Press, 2021).

| *Bencao ganmu* | *Kinmō zui* | *Nanji kinmō zui* |
|---|---|---|
| 本草綱目 | 訓蒙図彙 | 難字訓蒙図彙 |
| **Water Birds** | 鳳凰 *hōō*, phoenix | **First volume (*jōkan* 上巻)** |
| 鶴 *he*, red crowned crane | 孔翠 *kōsui* (*kujaku* 孔雀), peacock | 鶴 *tsuru* |
| 鸛 *guan*, white stork | 鸚鵡 *ōmu/eibu*, parrot | 鳫・陽鳥 *kan*, *yōchō* |
| 鶺鴒 *cang ji*, gray crane | 杜鵑 *token* (*hototogisu*), cuckoo | 鶯 *uguisu* |
| 陽烏 *yang niao*, yang bird | 鶺鴒 *sekirei* (*ishitataki*), wagtail | 鶏 *niwatori* |
| 鵁鶄 *tu qiu*, lesser adjudant | 啄木 *takuboku* (*teratsutsuki*), woodpecker | 燕 *tsubame* |
| 鸏鶫 *meng tong*, *meng tong* | 鷦鷯 *shōryō* (*sazaki*), wren | 鵺 *hototogisu* |
| 鵜鶘 *ti hu*, pelican | $蝙蝠 *henfuku* (*kawabori*), bat | **Third volume (*maki no san* 巻之三)** |
| 鵞 *e*, oriental swan goose | 鸕鷀 *roji* (*u/shimatsudori*), cormorant | 比翼鳥 *hiyokudori*, single-winged bird |
| 鴈 *yan*, wild goose | 鶺鴒 *sōkatsu* (*manazuru*), white-napped crane | 鳳凰 *hōō* |
| 鵠 *hu*, whooper swan | 鴛鴦 *en'ō* (*oshidori*), mandarin duck | $鸞 *ran* |
| 鴇 *bao*, great bustard | 鸊鷉 *hekitei* (*nio*), little grebe | 孔雀 *kujaku* |
| 鶩 *mu*, domestic duck | 鶴 *kaku* (*tsuru*), crane | 鸚鵡 *omu* |
| 鳧 *fu*, wild duck | 鸛 *kan* (*ōtori*), stork | 鸛鴣 *shako* |
| 鸊鷉 *pi ti*, grebe | 鷹 *yō/ō* (*taka*), hawk | 鶺鴒 *sekirei* |
| 鴛鴦 *yuan yang*, mandarin duck | 鷲 *shū* (*washi*), eagle | 鷲 *washi* |
| 鸂鶒 *xi chi*, *xi chi* | $鳶 *en* (*tobi*), *kite* | 鴛鴦 *en'ō* (*oshidori*) |
| 鵁鶄 *jiao jing*, Chinese squacco heron | $梟 *kyō* (*fukurō*), owl | 鵰 *kumataka* |
| 鷺 *lu*, little egret | $鷂 *yō* (*hashitaka*), sparrowhawk | 鷂 *hashitaka* 隼 *hayabusa* |
| 鷗 *ou*, common gull | $隼 *shun* (*hayabusa*), falcon | 鵠 *kugui* 鵜 *u* |
| 鸚鵡 *zhu yu*, *zhu yu* | 鴻 *kō* (*hishikui*), bean goose | 鴎 *kamome* 鵆 *chidori* |
| 鸕鷀 *lu ci*, common cormorant | 鵠 *kō* (*kugui*), swan | 白鸛 *hakkan* |

魚狗 *yu gou*, common kingfisher

＃翡翠 *fei cui*, halcyon

蚊母鳥 *wen mu niao*, mosquito-mother bird

**Plains Birds**

雞 *ji*, chicken

雉 *zhi*, common pheasant

鷓雉 *di zhi*, Reeve's pheasant or mountain chicken

鷩雉 *bi zhi*, golden pheasant or brocade chicken

＃吐綬鶏 *tu shou ji*, turkey

鶸鶏 *he ji*, brown-bird chicken

白鷳 *bai xian*, silver pheasant

鷓鴣 *zhe gu*, Chinese francolin

竹雞 *zhu ji*, Chinese bamboo partridge

＃杉鶏 *shan ji*, fir chicken

英雞 *ying ji*, water rail

秧雞 *yang ji*, sprout chicken

鶉 *chun*, common quail

鶸 *yan*, yellow-legged button quail

鷸 *yu*, redshank

鴿 *ge*, rock pigeon

突厥雀 *tu jue que*, Pallas' sand grouse

雀 *que*, house sparrow

蒿雀 *hao que*, wormwood sparrow

鵞 *ga* (*togan*), domestic goose

鴈 *gan* (*kari*), goose

鷗 *ō* (*kamome*), seagull

鳧 *bu* (*kamo*), duck

鷺 *ro* (*sagi*), egret

鵞 *boku/bu* (*ahiru*), domestic duck

鶯 *ō* (*uguisu*), Japanese bush warbler

燕 *en* (*tsubakurame*), swallow

鵯 *hi/ga* (*hiedori*), brown bulbul

鵲 *shaku* (*kasasagi*), magpie

鴉 *a* (*karasu*), large-billed crow

烏 *u* (*karasu*), crow

鳩 *kyū/ku* (*hato*), pigeon

鴿 *kō* (*iebato*), domestic pigeon

鷸 *itsu* (*shigi*), sandpiper or snipe

鶉 *jun* (*uzura*), quail

鶫 *tō* (*tsugumi*), thrush

鵙 *keki* (*mozu*), butcher bird

雀 *jaku* (*suzume*), sparrow

鵯 *fu* (*shitoku*), bunting

翡 *ryū* (*soi*), kingfisher

鳰鳩 *toshiyorikoi*

鴆 *chin*

梟 *fukurō*

鶲 *karuga*, Japanese grosbeak

矮鶏 *chabo*

黄雞 *Kashiwa*

雀鶏 *tsu*

兄鶏 *konori*, Eurasian sparrowhawk

雀鷂 *essai*, male Japanese sparrowhawk 鸇 *sashiba*, grey-faced buzzard

木菟 *mimizuku*

鵺 *nue*

姑獲鳥 *ubume*

水札 *keri*, grey-headed lapwing 鶫 *tsugumi*, thrush

鸐鴣 *hiyodori*

鶺 *hibari*

鴝 *keratsutsuki*

鶸 *hiwa*, siskin

鷽 *uso*, bullfinch

山雀 *yamakara*, varied tit; 鵙 *mozu*, bull-headed shrike, 百舌鳥 *mozu*

鵐 *kuina* 杜鵑 *hototogisu*

四十柄 *shijūkara*, Japanese tit; 喚子鳥 *yobukodori*

剥啄鳥 *teratsutsuki* 鵯 *hojiro* meadow bunting

翠雀 *ruri* 鴲 *higara*, coal tit

卵 *tamago* 孵 *sueri*

石食鳥 *ishikuidori* (cassowary )

巧婦鳥 *qiao fu niao*, Eurasian wren, or 鷦鷯 *jiao liao*, *jiao liao*
燕 *yan*, swallow
石燕 *shiyan*, stone swallow
伏翼 *fu yi*, bat
鼯鼠 *lei shu*, complex-toothed flying squirrel
寒號蟲 *han hao chong*, complex-toothed flying squirrel

**Forest Birds**

斑鳩 *banjiu*, pigeon
青鶻 *qing zhui*, greenish pigeon
鳲鳩 *shi jiu*, common cuckoo
桑鳱 *sang hu*, Chinese grosbeak
伯勞 *bo lao*, shrike

鸜鵒 *qu yu*, crested mynah
百舌 *bai she*, one hundred tongues
練鵲 *lian que*, paradise fly-catcher
鶯 *ying*, oriole
啄木鳥 *zhou mu niao*, great spotted woodpecker
慈烏*ci wu*, jackdaw

烏鴉 *wu ya*, large-beaked crow

鵲 *que*, Eurasian magpie
山鵲 *shan que*, red-beaked blue magpie
鸛鶇 *hu chao*, hoopoe

杜鵑 *du juan*, lesser cuckoo

鸚鵡 *ying wu*, parrot

＃秦吉子 *qin ji liao*
＃鳥鳳 *niao feng*

鶚 *kaku* (*misago*), osprey

雞 *kei* (*niwatori*), chicken
雉 *chi* (*kiji*), pheasant
卵 *ran* (*tamago*), egg
雛 *su* (*hina*), chick

羽 *u* (*ha*), feather

翼 *yoku* (*tsubasa*), wing
嘴 *shi* (*kuchibashi*), beak
尾 *bi* (*o*), tail

**Appendix (*furoku* 附録)**

$鶴雞 *konkei* (*tōmaru*), gamecock
矮雞 *waikei* (*chabo*), Japanese bantam
錦雞 *kinkei*, golden pheasant
綬雞 *jukei*, tragopan; horned pheasant
$山雞 (鶴雉) *sankei* (*yamadori*), long-tailed pheasant
$火雞 (駝鳥) *kakei*, cassowary
竹雞 *chikukei* (*yamashigi*), woodcock
秧雞 *ōkei*/*yōkei* (*kuina*), water rail
青鳩 *seikyū* (*yamabato*), green pigeon

鳲鳩 *shikyū* (*kakkōdori*), common cuckoo
$角鴟 *kakushi* (*tsuku*), eagle owl
$怪鳥 *kaishi* (*yotaka*), grey nightjar

$皂鵰 *sōshū* (*kumataka*), black butcherbird

**Mountain Birds**

鳳凰 *feng huang*, phoenix

孔雀 *kong que*, green peafowl

駝鳥 *tuo niao*, ostrich

鷹 *ying*, goshawk

雕 *diao*, golden eagle

鶚 *e*, osprey or fish hawk

鴟 *chi*, black kite

鴟鴞 *chi xiu*, Eurasian scops-owl

鴞 *xiao*, Asian barred owlet

鴆 *chen*, *chen* bird

姑獲鳥 *gu huo niao*, wench bird

治鳥 *zhi niao*, *zhi* bird

＃木客鳥 *mu ke niao*, tree visitor bird

＃獨足鳥 *du zu niao*, single leg bird

鬼車鳥 *gui che niao*, demon chariot bird

諸鳥有毒 *zhu niao you du*, all poisonous birds

$紅鶴 *kōkaku* (*tsuki*), flamingo

白鷴 *hakkan*, silver pheasant

烏鳳 *uhō* (*onagatori*), Japanese paradise flycatcher

雲雀 *unjaku* (*hibari*), skylark

翠雀 *suishaku* (*ruri*), bluebird

画眉 *gabi* (*hohojiro*), Chinese huamei

$蝋嘴 *rōshi* (*mamedori*), hawfinch

山鵲 *sanshaku*, red-billed blue magpie

練鵲 *renjaku*, Japanese waxwing (*not to be mistaken with the 連鵲 *renjaku*)

鵁鶄 *kōsei* (*goisagi*), black-crowned night heron

鸜鵒 *kuyoku*, mynah bird