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Potency by Name? ‘Medicine Buddha Plant’ and Other Herbs in the Japanese *Scroll of Equine Medicine* (*Ba’i sōshi emaki*, 1267)

Katja Triplett

Buddhist ritual healing and medical therapies included care for domestic animals, such as the horse. In pre-modern Japan, equine medicine (ba’i 馬医) was not restricted to the treatment of military horses; it was also practiced in a religious context. *The Scroll of Equine Medicine* (*Ba’i sōshi emaki* 馬医草紙絵巻, 1267) is an enigmatic picture scroll held by the Tokyo National Museum. It extends to more than six meters and contains images of ten divine figures related to the healing of horses, followed by seventeen pictures of plants, and a postscript emphasizing that the content of the scroll should be kept secret. Many of the plants listed in the scroll are either associated with the world of Buddhism, e.g. Yakushi-sō 薬師草, ‘Medicine Buddha plant’, or with horses, e.g. metsu-sō 馬頭草, ‘horsehead plant’. Previous analyses of the scroll largely focused on the botanical identification of the sketches of the plants. This article reviews current interpretations of the scroll and explores the

question of whether the plant names were thought to empower the plants to be used as potent materia medica for veterinary purposes. Based on earlier analyses, I suggest a new interpretation of the scroll from a study of religions perspective taking into consideration that some of the plant names in the scroll indicate both health-related and salvific potency. I also address the possible use of the scroll. The scarcity of textual information and the choice of textual detail and imagery in this ‘secret’ scroll suggests that it was used in the context of an oral transmission and empowerment ritual. The scroll itself seems to have been an object of ritual empowerment, rather than a compendium of materia medica for practical daily use when caring for horses.

Keywords: Japan, China, equine medicine, botany, plants.

Introduction

The naming of a plant is a complex issue. Naming plants might aid in their identification in terms of their application in healing, food, or for other purposes. However, this simplified truth glosses over how multifaceted the act of naming and identification is when it comes to the spread of knowledge about plants and their potency across regions, cultures, and time periods. In this article, I review current interpretations of the *Scroll of Equine Medicine* (*Ba'i sōshi emaki* 馬医草紙絵巻, 1267), an enigmatic and unique Japanese source of botanical drawings labeled with the names of each plant. Previous analyses of the scroll largely focused on the botanical identification of the sketches. I suggest a new interpretation of the scroll taking into consideration that some of the plant names in the scroll indicate both health-related and salvific potency. Salvation here relates to the Buddhist belief in the possibility of an ultimate liberation from suffering and sickness.

While the close relationship between Tibetan Buddhism and medicine has received much scholarly attention,¹ the relationship between Buddhism and medicine in China and Japan has only incited increased interest in recent years.² In Asia, medical and religious knowledge spread throughout vast regions along the known trade routes via land and sea. From antiquity well into the early modern period, these extensive networks facilitated the exchange of ideas and objects ranging from trade goods such as silk and cotton to Buddhist paraphernalia and *materia medica* used in Asian medical systems. The trade networks of the Buddhist world, which from the second century CE connected India, Southeast Asia, the Himalayas, and Central Asia, China, Korea, and Japan fragmented into several smaller circuits that fostered the transfer of knowledge and the sharing of ideas and objects along linguistic or doctrinal lines. By the twelfth century, three sub-regions had emerged in the Buddhist world: 1) the East Asian circuit, which linked monasteries in East Asia, as well as those in the Khitan and Tangut territories in Northeast Asia; 2) the Southeast Asia and Sri Lanka circuit and; 3) the Tibet and South Asian circuit (Sen 2018: 10-11). The striking resemblance between the esoteric Buddhist practices in Tibet and Japan, including their complex relationship with medicine, was less due to direct contact between the two regions and more to a shared esoteric Buddhist culture. Tibet and Japan show cultural similarities because esoteric Buddhism, with its emphasis on incantations (*dhāraṇī*) practice and healing rituals, was the prevalent cultural paradigm for centuries in both regions. Buddhist monasteries established themselves as independent institutions in both Tibet and Japan with their own health facilities, although their histories differed

considerably. There may have been direct contact between Tibet and Japan in the period of Mongol domination on the continent in the thirteenth and fourteenth centuries. The rulers of the Mongol Yuan Dynasty favored Tibetan Buddhism and thus officially supported the practice of esoteric Buddhism in Tibet. Following the Mongols' failed attempts to conquer the Japanese empire in 1274 and 1281, Japan briefly interrupted official contact with the continent. To date, there is little evidence of direct contact between Tibetan and Japanese monastics. This is an area that requires further research.

In line with the Mahāyāna teaching that medical care is the duty of each member of the monastic community (*sangha*), the production and circulation of medical knowledge in both Tibet and Japan was primarily in the hands of monks and nuns. The situation was, however, more pluralistic than that. In Japan, non-monastic physicians, who were organized into family clans, cared for members of the ruling elite—often in fierce competition with the monastic physicians. In addition, practitioners of Japanese mountain asceticism and members of other, usually itinerant, miracle-working groups were known to have offered healing services and provided medicines to those afflicted with illnesses.³ Buddhist medical practice in both Japan and Tibet also extended to animals, especially horses, which were considered the most precious and desirable domestic animal. On the Tibetan Plateau and across the Himalayas, the yak played a key role in human society due to the region's geography and climate. Yak, sheep, and goats are more economical than horses because the ruminant animals provide wool, milk, and meat in addition to draught labor and transport. However, Tibetans always admired and cherished the horse for its celerity, prowess, and beauty (Craig 2006: 341-342).

After the establishment of a textual tradition in both Tibet and Japan in the seventh and the sixth centuries respectively, written compendia on the care of domestic animals added to the orally transmitted knowledge of both animal husbandry and trade in living animals and animal products. Veterinary knowledge in Tibet was transmitted orally for many centuries, but the *Life Knowledge of the Horse* (*Aśvāyurveda*), an Indian Sanskrit classic (ca. third century BCE), on equine medicine and horse management, was translated into Tibetan by Rinchen Zangpo (Rin chen bzang po, 958–1055 CE). Śālihotra, the legendary founder of hippiatry in India, is accredited with the authorship of this Sanskrit classic. The books in Tibetan on horse care from the Dunhuang caves in Central Asia are older than Rinchen Zangpo's translation, which demonstrates that veterinarians and horse keepers had written compendia available already at an earlier time.⁴ With regard to modern times,

Tibetologist Petra Maurer points out that early twentieth century Tibetan hippiatric healers used treatments, for example, with fumigation, bloodletting, cauterization, various ointments, and compressions alongside “rituals or magical performances” (1995: 154; Maurer and von den Driesch 2006). These healers were clearly continuing a century-old trend in the treatment of horses in Tibet with both medical and religious means.

The first treatises on hippiatry and hippology in Japan came from the Chinese tradition. While the tradition of human medicine in Japan also derived mainly from Chinese-style medicine and was practiced by members of medical clans close to the court as well as in Buddhist circles, veterinary medicine was mainly practiced in the military and on farms. The books on hippiatry and hippology were introduced as part of agricultural knowledge as the *Catalogue of Extant Texts in the Country of Japan* (*Nihonkoku genzai shomokuroku*, 891 CE) shows. The Japanese had, however, cared for horses much earlier than they cared for books. A Central Asian horse breed, introduced via Korea at the end of the fourth century CE, became the focus of veterinary care in Japan.⁵ Of particular importance for the history of horse medicine and care in Japan were compendia written in Chinese on the six domesticated animals (*liu chu* 六畜)—horse, ox, sheep, pig, chicken, and dog—and only books with a direct bearing on local animal usage went into wide circulation. Classics on the pig and the chicken did not play a central role in Japan because the Japanese did not breed these animals that were commonly eaten in China. As pork and chicken were not eaten in most of Japan, it was only manuals on the care of larger mammals that became popular. Oxen and horses provided civilians and military with transportation and were used in agricultural labor.⁶ Hunting for game remained legal and popular, although Japanese emperors decreed hunting and fishing prohibitions from time to time. In regions with extensive horse-breeding, horsemeat, referred to as ‘cherry blossom’ (*sakura* 桜), was rather common but rare in most other regions, where it was even regarded as poisonous.⁷

The *Scroll of Equine Medicine* (*Ba’i sōshi emaki* 馬医草紙絵巻), a thirteenth century picture scroll of six meters in length, shows that care for the valuable horse involved esoteric knowledge of plants, further outlined in this article. The picture scroll itself is not titled, but because of its content it is commonly called the *Scroll of Equine Medicine* (*Ba’i sōshi emaki* 馬医草紙絵巻). It is dated to the fourth year of the Bun’ei era (corresponding to 1267 CE) and is held at the Tokyo National Museum.⁸ The entire scroll can be browsed via the Japanese e-museum database.⁹ The illustrated scroll was described and contextualized by zoologist and

veterinarian Mitsui Takaosa (1915–1980) in 1968¹⁰ and incited some interest among botanists. It has only marginally excited art historians due to the scroll’s execution and style. A full interpretation from a Buddhologist or historian of religion’s point of view has not been done so far, and the current article aims at improving this situation.

The scroll contains images of ten divine figures related to the healing of horses, followed by seventeen exquisite pictures of plants and a short postscript. In the following, I will introduce this source in detail in order to explore possible meanings of the pictorial and textual content of the scroll and will voice some ideas about the scroll as a material object in Buddhist ritual. This, in turn, will facilitate a discussion on the potency of plants in the context of healing and medicine.

1. The Botanical Drawings in the *Scroll of Equine Medicine*

The botanical drawings are detailed and drawn true to life (see Fig. 1), so they could have functioned as a guide to identifying plants in the wild. The fact that these drawings are the oldest extant botanical drawings in Japan¹¹—not counting the depiction of the lotus flower in Buddhist devotional images—attracted attention from Japanese botanists in the first half of the twentieth century. At least one plant name written in the upper left-hand corner above the image accompanies each plant image, as was customary for such compendia in the Chinese tradition.¹² Many images from the *Scroll of Equine Medicine* have secondary and even tertiary plant names written below the picture. Those who created the scroll also added the Japanese reading in the syllabic alphabet (*katakana*) next to the Chinese characters that make up the plant names. This was, and still is, the common way in Japan to ‘read’ Chinese or make texts which are thought to be obscure more comprehensible.

Table 1 (at the end of the article) lists the plant names in the order that they appear in the scroll. Shirai (1934) was the first modern botanist to identify the plants in the scroll. Several botanists have since examined the drawings, investigating the plants’ historical names and attempting to establish their current names.¹³ In Table 2 below, I have listed the modern botanical names of the plants as identified by Maekawa (1975). Strictly speaking, the list contains sixteen plants and one fungus (no. 4). Table 2 also includes the plants’ common names in English, where available.

Some of these plants, including the fungus, were, and are, widely used in Chinese-style human medicine. The best known by far is no. 13: *Artemisia* (mugwort). The dried and powdered leaves of the species *Artemisia princeps*—*mogusa*

No.	Botanical Name	Common Name
1	<i>Vincetoxicum atratum</i>	swallowwort
2	<i>Isodon japonicus</i> , syn. <i>Rabdosia japonica</i>	isodon
3	<i>Plantago asiatica</i>	Chinese plantain
4	<i>Wolfiporia extensa</i> , syn. <i>Poria cocos</i>	Indian bread, tuckahoe
5	<i>Viscum album</i> subsp. <i>coloratum</i>	mistletoe
6	<i>Agrimonia pilosa</i> var. <i>japonica</i>	–
7	<i>Boehmeria nivea</i> var. <i>nipponnivea</i>	ramie
8	<i>Inula helenium</i>	horse-heal, ¹⁴ elfdock, elecampane
9	<i>Lysimachia japonica</i> Thunb. or <i>Lysimachia tanakae</i>	Japanese yellow loosestrife
10	<i>Musa basjoo</i> Sieb.: <i>Musa japonica</i> Thiéb. et Ketel. and <i>Musa basjoo</i> var. <i>formosana</i> (Warb.) S.S.Ying	Japanese fiber banana
11	<i>Carpesium abrotanoides</i> L.?	carpesium
12	<i>Achyranthes bidentata</i> var. <i>japonica</i>	ox knee
13	<i>Artemisia annua</i> or <i>Artemisia absinthium</i> ?	mugwort, wormwood, sagewort
14	<i>Potamogeton distinctus</i>	roundleaf pondweed, bog pondweed
15	<i>Persicaria lapathifolia</i>	pale smartweed, curlytop knotweed, willow weed
16	<i>Arisaema serratum</i>	cobra lily
17	<i>Ajuga decumbens</i>	bugleweed, ground pine

Table 2. Modern Botanical Names according to Maekawa (1975) of the Plants in the Scroll of Equine Medicine.

in Japanese—are burned in moxibustion therapy, a hallmark of Chinese-style medicine. *Artemisia* was apparently a pillar of both human and equine medicine. Chinese horse classics found in Japan¹⁵ not only recommend treatment with acupuncture, bloodletting, and cupping, but also moxa. The plant may also have been used as horse fodder in Japan. Maekawa is not sure about the exact species depicted (1975: 26). Given that both *Artemisia* and *Persicaria lapathifolia* (pale smartweed, no. 15) are used in horse medicine in Europe today,¹⁶ it is possible that their

beneficial effect on the animals may have been observed in pre-modern Japan.

The wood-decay fungus *Wolfiporia extensa* (Indian bread, no. 4) was another important ingredient in human medicines in regions where Chinese-style medicine was practiced. *Isodon japonicus* (no. 2) is equally known as a medicinal herb in the Chinese tradition in Japan, but under another name. It is now called the ‘prolonging life herb’ (*enmeisō* 延命草). Interestingly, the picture of *Viscum album*



Figure 1. *Scroll of Equine Medicine*, (detail, the first three plants), ink and color on paper, 29.6 x 610.2 cm, Tokyo National Museum (sign. A-10479), ©Tokyo National Museum

(mistletoe, no. 5) growing on a flowering plum branch differs from the other pictures in style, as if another artist painted it. While all other plants are depicted in what we would today call a naturalistic style and are thus in correct proportion, in the image of the mistletoe, the parasitic plant is disproportionately smaller than the plum blossoms. However, the mistletoe is immediately recognizable. The use of mistletoe in pre-modern equine medicine and horse care along with most of the plants depicted in the scroll remains largely unclear. But what if these images and their names were not intended to represent medicinal herbs at all? Finding explanations that appear plausible and rational to us today, when the intentions of the thirteenth century creators of this source probably differed from our own interests, is like providing the right answer to the wrong question.¹⁷

1.1 Approaches to Plants and Their Potent Properties

Since the first section of the scroll comprises images of divine figures, we can surmise that the plants are also connected to religion. A second avenue of interpretation, therefore, is to examine whether the plants were thought to be ‘magical.’ Modern scholars coined the term magical to make a distinction from practices within ‘religion,’ where religion is deemed to be a practice accepted by an orthodoxy. While ‘magical’ has broader meanings in everyday speech, in this context, it is used emically to refer to something that is consecrated, blessed, or empowered.

The role of ‘magical plants’ in myths and legends is an important topic in the study of the history of European folk culture and religion.¹⁸ While the ideas of ‘magical’

properties of plants or fungi in Europe may be quite different from those found in East Asia, a comparative study of ‘magical plants’ in the widest sense will reveal the different sets of ideas of potency in various regions of the world. *Lingzhi* 靈芝, the ‘numinous mushroom’ or ‘spirit mushroom’ that bestows immortality according to Chinese legend is a good example for such an exploration with regard to East Asia. In Daoism, the term *zhi* 芝 refers to a variety of substances that spontaneously sprout and grow in nature. They can be fungi, plants, stones, wood, or even flesh. One important feature these substances share is that they radiate a shining light and can only be found by accomplished practitioners of Daoism. The *zhi* can also be cultivated by planting them in the mountains. The Sinologist Fabrizio Pregadio states that over time, Daoist ideas about the properties of the *zhi* were lost, making way for a more secular view of the *zhi* when they appeared in pharmacopoeia. This resulted in the *zhi* being identified as certain mushrooms used in medicine (2008: 1274).¹⁹

The potency of plants is the subject of studies in various academic fields. The power of plants also holds a place in the popular imagination. Plants not only have the capacity to nourish, to satisfy a sense of beauty, and to provide material for building and tools, they can also restore health (even grant immortality), create hallucinations interpreted as religious or spiritual visions, and they can also kill. In the following, I will briefly introduce the work of botanists and historians who collect plant names and analyze and criticize naming regimes. I will then develop my own interpretation of the plant section of the Japanese *Scroll of Equine Medicine*.

Biologist and historian of botany Stephen Harris (et al.) emphasize that “plant taxonomy and the insights it provides about the plant’s qualities” is not only essential for biology but also for social and cultural anthropology (Harris et al. 2010: 51) in a volume that Harris and social anthropologist Elisabeth Hsu have edited. The volume presents studies at the interface between ethnobotany and medical anthropology. For example, the authors show how humans, plants, and medicine relate from an emic perspective. They demonstrate how plants are used in medical practice and how herbal remedies become cultural artifacts. Exploring this interface is a broad approach that highlights both contemporary and historical life-worlds. In such a comprehensive view, religious practices such as spells and incantations are areas of research interest just as much as the cultivation of plants or literary knowledge production.²⁰

From an essentialist and evolutionist perspective, it could be argued that the extraordinary nature of some plants simply reflects a universal human need to see supernatural powers in the vegetable kingdom when their properties cannot as yet be explained scientifically. Authors such as Trilok Chandra Majupuria, a scholar of Indian and Nepalese religions, and medical anthropologist Damodar Prasad Joshi (Majupuria and Joshi 1988) take a different stance. Their work on medicinal plants from Indian and Nepalese religious myths and culture takes a biocultural view. According to Majupuria and Joshi, “[s]cience and religion have been inter-related [sic!] since ancient times and, therefore, some plants and animals have continued to be worshiped or have been associated with religion in several climes” (1988: 44). As an example, they mention that the ancient Indians venerated potent, and thus divine, plants, such as *soma* and *tulasi* (basil).

Authors such as anthropologist Christian Räscht (1988) urge the modern reader to reconnect with the plant world, shunning views that try to demystify ‘ancient wisdom’ as pre-scientific knowledge and engage in a disenchantment of the human-plant relationship. Recent studies such as the books by anthropologists Eduardo Kohn (2013) and Anna Lowenhaupt Tsing (2015), biologist Daniel Chamovitz (2012), and the forester Peter Wohlleben (2016) attempt to rethink this relationship in various different and compelling ways using new data from natural scientific and anthropological research. In many of these works, the authors adopt the view that plants possess an intrinsic potency. The scientific study of plant life might give additional insights into the cultural exploration of plants, which is the focus of this article.

1.2 The Naming of Plants as a Cultural Practice

The cultural study of plants that are viewed as endowed with particularly potent properties involves the study of common or vernacular plant names. Names often indicate certain properties that reflect the plant’s potency. This does not mean that a name such as “the Buddha’s seat” (the name of the last plant in the *Scroll of Equine Medicine*), must necessarily mean that the plant serves as a seat for an omniscient and powerful being and thus obtains supernatural powers. The plant may simply resemble the thrones that serve as seats of the Buddhas in the East Asian *imaginaire*. In order to consider plant naming practices as part of a new interpretation of the botanical section of the scroll, a number of cross-disciplinary analytical approaches to historical as well as more contemporary plant naming in Europe and Asia will be introduced first.

Early twentieth century authors who collected vernacular plant names had an eye to preserving the knowledge of local culture and customs. One example is the botanist Heinrich Marzell (1885–1970), who edited a multi-volume dictionary of German vernacular plant names. The historian of science Londa Schiebinger (2004) provides a critical assessment of Linnaean nomenclature. Her study reveals that Linnaean botanical naming and the disregard for vernacular plant names in the Americas and India conformed to European colonization strategies and male chauvinistic tendencies. The botanist Sabine Aboling (2006) proposed yet another approach to looking at plant names, in this case, vernacular names. She combined knowledge of vernacular plant names and scientific botany when she took the epithet *Jude* (Jew) in German vernacular plant names and used a synonym-homonym test on a selected sample to see whether any patterns occurred. She found that “the frequency of contemptuously biased terms [...], both coined at a syntagmatic level (in the single name) and at a paradigmatic one (similar effect with different names for various species) clearly points to an anti-Semitic tendency” (Aboling 2006: 596). Other studies in this direction, i.e. examining names with particular epithets using botanical morphological testing, may yield further results. Attributes denoting supernatural beings and Christian life such as plants with the epithets ‘witch,’ ‘devil,’ ‘priest,’ ‘nun,’ ‘angel,’ or ‘elves’ in their popular folk names found in Marzell’s dictionary, for example, could be analyzed.

Adrian Koopman, a specialist in Zulu studies, outlines the relation between the name of a plant and the assumed power of a plant in European, African, and Zulu cultures from a comparative perspective (2013; 2015). He holds that incantations, spells, and other ‘words of power’ play a significant role in unlocking a plant’s potential for manipulating reality, which is the modern conception of

what entails ‘magic.’ Concentrating on Zulu plant names, Koopman points out an additional facet of naming: that plant names also serve mnemonic purposes so that Zulu healers and diviners remember the place of the plant in society, for example as an ingredient of a medicinal drug.

Ethnobotanical research, such as a project conducted by Alessandro Boesi, aims at discovering indigenous nomenclature and naming practices in Tibetan medicine (*Sowa Rigpa*). Boesi combines fieldwork and interviews with Tibetan experts on medicinal and other plants, but also includes modern scientific identification practices. In addition, he uses knowledge gleaned from both traditional medical treatises, which contain extensive sections on plant-based *materia medica* as well as modern Tibetan *materia medica* (Boesi 2007: 4). Variety in the designation of plants is common throughout the world. In Tibet, basic botanical plant names often refer to certain morphological features, their taste, natural environment, and growth. Metaphorical names refer to similarities with certain animal characteristics or parts²¹ or to legendary and divine figures. The names often relate to the plant’s use in daily life as medicine, food, or tool. According to Boesi, the traditional knowledge of vernacular plant names is increasingly being lost in Tibet due to political, cultural, and socio-economic changes, and his work is an attempt to preserve this knowledge.

Another focus of plant naming studies concerns what is named—the named object itself. For example, Sinologist Carla Nappi has shown through her analysis of the global commodification of ‘ginseng’ that the object, in this case a plant, becomes a ‘composite object’ in early Chinese modernity: a “collection of synonyms textually equated to each other” (2013: 45). In contrast, in the medieval period, Chinese textual sources such as compendia of *materia medica* and encyclopedias created an image of ginseng from narratives and historical etymologies. A similar observation can be made for the identification and naming practices of plants in Japan where the Chinese model was largely followed.

As Elisabeth Hsu outlines in her longitudinal study of the group of herbs with the designation *Artimisiae annuae* in Chinese *materia medica* literature from antiquity to the sixteenth century, the name of the living plant is usually, but not always, the name of the medicinal drug. Obstacles to the study of plants in the areas where Chinese *materia medica* were used include the variation of names (synonyms) conditioned by local distribution and the specific preparation of the drug (Hsu 2010: 87). Botanical illustrations sometimes developed independently from the

descriptive text in Chinese *materia medica* literature and, as they are often crudely executed illustrations, they are largely unhelpful for the identification of a plant.

Returning to our seventeen Japanese plant drawings and looking closely at the primary names (see Table 1 for Japanese names) the references to Buddhism and the horse are rather striking. When clustering these primary names into two groups, we find the following:

1) Plant names linked to Buddhism:

- No. 1 Medicine Buddha plant
- No. 2 Dharma medicine plant
- No. 8 In front of the Buddha
- No. 17 The Buddha’s seat

Two more primary names and one secondary plant name relate to Buddhism in an indirect way and can be added to this group:

- No. 7 Robe herb
- No. 16 Celestial garment plant
- No. 17 Hermit decline scent

The ‘robe’ (no. 7) points to the Buddhist monastic robe while the term for celestial garment (no. 16) is used to describe the clothes of Buddhist deities.²² The reference to a ‘hermit’ in the plant name (no. 17) is also a clear reference to the religious sphere.

2) Plant names linked to the horse and other mammals

The following primary names are linked to horses:

- No. 3 In front of wheel plant
- No. 12 Horse’s head plant

Several primary and secondary names mention other larger mammals:²³

- No. 6 Wolf sprout
- No. 11 Weasle’s buttock pouch, dog’s buttock
- No. 12 Ox’s knee
- No. 15 Big dog polygonum

No. 8 ‘In front of the Buddha / Unripe²⁴ wood scent’ has yet another connection to the horse: The medicinal plant in Japanese Chinese-style medicine is today also referred to as ‘horse’s bell herb’ (*umanosuzu-kusa* 馬の鈴草) because the leaves are shaped like a horse’s head and the seeds like the bells hung on horses. However, this is a contemporary designation and may not have existed in the medieval period.

In sum, four to seven plant names are associated with Buddhism, and two to six designations have a direct link to the horse or to a large mammal. Disregarding, for the



Figure 2. *Scroll of Equine Medicine* (detail, Iō Hōyaku), ink and color on paper, 29.6 x 610.2 cm, Tokyo National Museum (sign. A-10479), ©Tokyo National Museum

moment, the question of whether the names were given to the plants because they were thought to be important to equine health or whether they were selected because their names related to Buddhist equine medicine, I would like to contextualize the list of the seventeen plants and look at the scroll as a whole in its present shape.

2. Ten Deities as Protectors of Animals and Horses

The beginning of the scroll consists of a section with ten 'image units' showing drawings of ten deities. All are legendary and mythical figures related to the healing of horses or animals. Small text boxes in the upper left-hand corner of each image unit state the deity's name and a date used in religious calendars. The image units also contain mantras and *dhāraṇī* and indicate the names of attendants and the deities' horses, but they do not include any explanatory text as such. In some cases, the scroll also mentions the original Buddhist deity. Displaying the name of the original Buddhist deity is in line with the common belief that each local Japanese god or other divinity is a manifestation of a Buddha or bodhisattva. The artist(s) executed the drawings beautifully, and the horses look life-like and full of energy. The divine figures depicted in the scroll will be introduced below and are, in order of their appearance:²⁵

- Hakuraku (Bole) 伯樂
- Iō Hōyaku (Yiwang Fayao) 医王法藥
- Raikō (Laigong) 賴公, standing for Leigong 雷公
- Tōgun (Dongqun) 東群
- Ten (Tian) 天
- Ōnamuchi 大汝
- Ōryō (Wangliang) 王良

- Hongai (Fan Gai) 幡蓋, standing for Fan Kuai 樊噲
- Shinnō (Shennong) 神農
- Echigo no Tansuke 越後丹介.

The scroll must have been damaged at some point because the first figure, Hakuraku (Bole) is not shown. We can only see his two spritely horses in their stable. Bole was a Zhou-dynasty (seventh century BCE) Chinese cattle doctor who possessed an excellent knowledge of horses. In fact, Bole is the alleged author of important horsemanship manuals that predicted the character of a horse by the shape of hair whorls in its fur and other physiognomic features.²⁶ For this expertise, he was, according to legend, named after a star in the constellation of the Heavenly Horse. In the *Scroll of Equine Medicine*, his mantras are dedicated to the Medicine Buddha (Skt. Bhaiṣajyaguru) and bodhisattva Avalokiteśvara. Accordingly, this famous Chinese horse specialist is firmly embedded in the Buddhist world.²⁷

Iō Hōyaku (Yiwang Fayao) (see Fig. 2), which means 'Medicine-king Dharma medicine,' is shown as a Buddhist monk holding a vajra staff and a prayer chain (Jp. *juzu*). Above his head, we see a picture of Buddha Amitābha (or another Buddha) which is said to be Iō Hōyaku's original form. His mantra is dedicated to Amitābha. The name of his attendant, a young man in the clothes of a novice with a shorn head who seems to be feeding the magnificent black horse, is Dharma Master Impassioned (Aizen 愛染) (Skt. *Rāga*), an indication of a close connection to esoteric Buddhism. Takaosa Mitsui surmises that 'Medicine-king Dharma medicine' may be rather the name of a medicine that monks administered to the afflicted horses and not the name of the Buddhist monk depicted in the drawing (1994: 446; 448).

The next three figures, Leigong,²⁸ Tōgun (Dongqun) and Ten (Tian), look nearly identical. They are dressed as Chinese noblemen or officials, complete with hats and wooden staffs, sitting on mats that look as though they were fashioned from predatory animals' pelts. Such mats indicate the high position of the male figures. Except for Leigong, it remains a mystery who these figures are. Their names seem rather generic: Tōgun (Dongqun) means Eastern Herd and the third figure, Heaven, or just Deity, *ten* (*tian*) also being the established translation of the Sanskrit *deva* (god).

The figure after the three Chinese gods is labeled as Ōnamuchi. The picture in the scroll shows a shamaness (*miko* 巫女) handling a small double-sided drum. Her body posture indicates that she is dancing a ritual dance. The *miko*'s expression of entrancement and the long straggling hair make her look like a possessed shamanic medium. Both the dancer and her female attendant are on a straw mat. Such a mat traditionally marks a sacred activity. The attendant who is called Kotori, meaning Little Bird, is kneeling in front of the *miko* passing her a book. Both are dressed in white robes and are barefoot. The principal figure of this image unit is the only one from Shinto, the religion of the Japanese gods (*kami*), and may represent Ōnamuchi.²⁹ Ōnamuchi is one of the most important Shinto gods. Ōnamuchi is a male god, venerated as Ōkuninushi 大國主, Great Land Lord, for creating Japan and the world. This deity was probably not included in the scroll for his world creation powers but for a well-known episode from the *Kojiki*³⁰ myths. In the story, a mischievous hare, the White Hare of Inaba, becomes seriously injured and Ōnamuchi advises him to wash his wounds in cold fresh-water and roll his flayed body in cattail pollen (*kaba, gama* 蒲).³¹ This treatment proved successful and, in the end, the white hare manifests as a deity. This episode is evidently of great interest to animal doctors. As Shinto gods are rarely depicted, and if they are, they are usually depicted in the form of courtiers or court ladies, the *miko* shown here may be representing Ōnamuchi through her mediumistic dance.

Ōryō, meaning King Good, a reference to one of the divine kings of the Chinese Zhou dynasty, and Fan Kuai, a second-century BCE Chinese general, look like two men dressed in vermilion-colored robes holding a wooden ceremonial staff and a fan respectively. Both are identified with Ākāśagarbha bodhisattva through their mantra. Fan Kuai also has a second mantra, which hails Samantabhadra bodhisattva.

Shinnō (Shennong), the Divine Farmer, may be the best-known of the ten figures. In Chinese tradition, he is the mythical founder of agriculture and the healing arts. As a cultural hero, he showed the first people how to plow and how to use medicinal herbs. Without the name given in the

box in the left-hand corner, the Divine Farmer cannot be recognized. He is usually depicted as a hairy wild mountain man with horns and clad in a coat of leaves, with a medicinal plant in his mouth. In the *Scroll of Equine Medicine*, however, he is dressed formally like a Japanese court official. He sits leisurely on a handsome chair holding a brush in his hand like a scholar. Across from him stands a powerful looking black horse. The box with the text is the only one colored in red as if to emphasize the significance of this deity. His long *dhāraṇī* contains small glosses with numbers, presumably to aid recitation.

The final figure, Echigo no Tansuke, has the same *dhāraṇī* as the Divine Farmer. He looks like a Japanese nobleman from the time the scroll was created, with his splendid robes and elegant hat. In his hand, he holds a riding whip and he sits on a decorated woven rice straw mat (*tatami*). The god's name contains a place name, Echigo, which is one of the old provinces of Japan, located on the north shore of the main island far from the capital. A short text praising Echigo no Tansuke is provided next to the *dhāraṇī*: "The protector god of travelers, fervently revered in Kai province,³² works wonders in fixing wicker suitcases, palanquins, horses and clog supports."³³ As a protector god of travelers (*sae no kami*), he is a god of boundaries and translocal spaces. He is connected, even identified, with the Road Ancestor God (*dōsojin*). The boundary god's capacity included the protection of horses, as he was believed to ride back and forth to fend off malign influences such as epidemics. The scroll mentions concrete items apart from the horse, here a medium of transport for human travelers. As a protector of road-faring, items such as suitcases, palanquins, and the typical stilted clogs for walking, which were very important to travelers at the time, fall into the realm of his wondrous powers.

Just looking at the pictures, one can recognize multi-layered traditions, including deities from India, China, and Japan. The images are not in chronological order; the mythological deities come first followed by those of a more historical nature, as per tradition. The two parts of the scroll (deities and plants) have a similar layout: The image is in the center, while the text is subordinate to the image and adds meaning to it. The text also conveys meaning visually, making use of pictographic and ideographic characters, as well as phonetic script. Words from three languages—Sanskrit, Chinese and Japanese—are used.

3. The Scroll of Equine Medicine as a Secret Initiation 'Certificate'

The third and final part of the scroll contains a text of fourteen lines that reveals the work's actual function. The postscript lists a lineage of ten Chinese mythical healers and

healing divinities that, curiously, differ from the ten deities pictured in the first part of the scroll. In addition to the Divine Farmer, Bole, Thunder Duke, and Eastern Herd, the postscript also lists Yellow Thearch (Emperor), Jīvaka,³⁴ Bian Que 扁鵲,³⁵ Zaofu 造父,³⁶ Yaqian 雅遣,³⁷ and Qin 秦.³⁸

After a (fictive) Chinese date that falls in the Tang Dynasty, the author of the scroll makes it clear that the content is to be kept secret: “This knowledge should not be passed on carelessly, and those who are not noble should not receive this transmission” (*Scroll of Equine Medicine*, my translation). Then follows a list of ritual objects probably used either as part of the empowerment ceremony or as part of other rituals conducted in relation to the healing of horses.³⁹ The list of ritual objects contains “hawk feather arrows (seven), silk, a short-sleeved kimono, a horse, an ox, a great sword, a sword, a suit of armor, a deer skin, a waistband, a monkey skin, the five grains (seven each)” (*Scroll of Equine Medicine*, my translation). The list includes weapons, animals, and animal parts. No explanation is given with regard to what to do with these objects, but we are informed that “further details are found in the liturgical text(s)” (*Scroll of Equine Medicine*, my translation). The objects largely point to cavalry culture and myths connected to the horse. The mention of ‘silk’ is reminiscent of the legend of a human girl and a horse who became the patron deity of the silkworm and therefore of sericulture.⁴⁰ Monkeys and horses also enjoyed a close relationship in Japanese culture in the past, when live monkeys or parts of dead monkeys were kept in stables as talismans for the protection of the stabled horses.

The postscript ends with instructions for the safe transmission of the scroll to protect the secret knowledge contained within and a dated dedication: “Given to Tadayasu, Third Officer of the Seventh Rank of the Imperial Guards, on the twenty-sixth day, first month of the fourth year of Bun’ei” (*Scroll of Equine Medicine*, my translation). As we can see clearly from his title, the receiver of the scroll was a low-ranking member of the warrior class called the samurai. It can be assumed that Tadayasu must have been a practicing veterinarian who cared for cavalry horses. The name of the bestower of the scroll, however, indicates a connection to Buddhist practice: Sai Amidabutsu. He instructs Tadayasu in the postscript with the following words:

The orally transmitted empowerment into the healing methods presented in this scroll must not be easily passed on to anyone. If your apprentice passes away, leaving this world where death comes to old and young alike, then the scroll should be returned to me. If I, Sai Amidabutsu, should die

without leaving any apprentices, then this scroll should be burnt and the ashes should be spread.
(*Scroll of Equine Medicine*, my translation)

Since the scroll is still extant and in rather good condition, one can assume that Sai Amidabutsu did have apprentices, although the instructions must have been neglected at some point since the scroll in its digital version is now viewable by all who have access to the internet and so can potentially be passed on to everyone.⁴¹ The scroll places the new apprentice in the (Chinese and Indian) lineage that is mentioned in the postscript. The Tang Dynasty date guarantees additional authority and legitimacy. The actual ritual may have been conducted by Sai Amidabutsu himself, the transmitter of the secret scroll, who was probably a ‘secular’ veterinarian rather than a trained Buddhist priest although he may have become a monk after retiring from a military career as a veterinarian.

The scarcity of textual information and the choice of textual detail and imagery in this ‘secret’ scroll leads us to conclude that it was used in the context of an oral transmission and empowerment ritual, and the scroll itself can be said to be an object of ritual empowerment. The oral transmission may have included mythological explanations for each of the ‘deities’ in the first part of the scroll which are legendary, semi-historical, or divine figures forming the lineage of horse veterinarians in Japan. The figures of the ‘deities’ are rendered—with the exceptions of Iō Hōyaku who is depicted as a Buddhist monk and Ōnamuchi who looks like a possessed Shintō shrine maiden—very stereotypically as Chinese or Japanese scholars—including the Divine Farmer who is usually depicted as a primordial wild man chewing on a sprig. These images of scholars emphasize that the healing power and blessings manifest in spiritually advanced humans or indigenous deities not only in China but also in Japan. Through the rituals, the ritualist can gain access to these blessings for his ‘patients,’ the horses, no matter where he or she is located. There is a strong emphasis on drawing a connection to the Buddhist cosmos and the healing empowerment of Buddhist deities because of the mantras, *dhāraṇī* and, lastly, the auspicious days on which one can communicate with the deity particularly well. The images of the deities in the scroll may have functioned as a register for memorizing the names and incantations that were important in the ritual. The same can be said for the list of plants as it may have also had a mnemonic function. They might also relate to the lineage deities. Or the section with the special plants may have simply conferred secret *ritual* knowledge instead of bestowing practical medicinal knowledge kept secret from other, competing veterinarians. Comparison with a manuscript text from a later period provides a

compelling answer to the question of what the original purpose of the botanical section of the *Scroll of Equine Medicine* was.

4. Producing a 'Dharma Medicine': The Mount Tamura Formula for a Buddhist Panacea

Mitsui (1994) describes the content of a 1513 manuscript: A certain Raichū 頼忠 (dates unknown) copied a hippiatric manual, *Well-known Diseases of the Horse (Uma no yamai mishiru koto 馬之病見知事)* that contained a section on the production of a powerful panacea for curing horses. The formula requires sixteen of the seventeen plants that I listed above. Only *koromo-kusa* (Chinese ramie, no. 7) is missing. I have not been able to view the manuscript, so I have to rely on Mitsui's analysis. He provides a table itemizing the plant names of the two manuscripts (1994: 450). While the Chinese characters of the plant names vary only minimally, the Japanese reading of the names varies considerably. Assuming that the difference derives partly from copying mistakes or from factoring in Japanese vernacular names from a certain region, the two sets of plants are identical. The passage in question indicates the quantity of the potent plants used for the formula. It also includes details on the preparation of the medicine and instructions for the Buddhist rituals required to empower the panacea. The medicine is called "Mount Tamura Dharma medicine" (*Tamurasan hōyaku 田村山法薬*), probably referring to a particular Buddhist temple.⁴² The passage reads as follows:

With Jōnen's⁴³ Mount Tamura Dharma medicine you can cure every disease without exception in animal husbandry. For treating a horse suffering from a cold disease, you heat it up in rice wine. For a horse that is suffering from fever, you treat it with the Dharma medicine in cold water and the horse will cool down. This Mount Tamura Dharma medicine is the best panacea (*hiyaku 秘薬*) when horses need to be treated with medicinal drugs. In order to make some of this physic, choose the hour of the horse, just before the beginning of the hour of the sheep⁴⁴ on the fifth day of the fifth month and recite thirty-three chapters of the Avalokiteśvara-sūtra and the mantra of the Medicine Buddha one hundred and twenty times. After that, turn to the east and recite the name of the Medicine Buddha twelve times, look at the sky with your hands put together and pray by reciting three times: 'Hail, Hundred Medicines⁴⁵ Medicine-king Dharma Medicine, residence of Ōnamuchi, you, hail the Source.' And then you can begin preparing

[the medicine] starting with the Medicine Buddha plant. After that, dry it for thirty days in the shade. When it's dry, cover it with a lid. When pounding it all together you must do as you did before and recite the sutras and the names. You can also use it as a physic boiled in sifted rice wine lees. Jōnen-bō says: 'There is no better medicine than that.' And it is also said: 'You should transmit to others that the secret panacea of the Abbot of Kokawa (temple)⁴⁶ is a medicine that you can give to horses with both cold and hot disease.' (my translation of Mitsui 1994: 451)

As mentioned above, Mitsui maintains that in the *Scroll of Equine Medicine*, the 'Medicine-king Dharma medicine' is not the name of the Buddhist monk depicted but simply the name of the panacea. In his interpretation, the scroll is an instruction for producing this Buddhist miracle cure. It seems to me, however, that the power of this medicinal drug resides in the Buddhist deities as well as in the Japanese god. The names of the ten deities (see section 3) in the scroll have an abbreviated form, meaning that they do not use the usual affixes such as 'bodhisattva' or 'tathāgata' (for a Buddha). The Buddhist monk shown in the scroll is, in my view, the human form of a Buddha or bodhisattva revered for his power of healing, and the designation not the name of the medicine itself.

Remarkably, the notion of secrecy in this later text has been dropped. The recipe can now be transmitted to everyone who needs help with curing their animals. Still, in order to follow the ritual instructions, the horse owner or healer has to be trained in Buddhist recitation. Ritual practice is required to turn the potent plants into an all-healing miracle cure.

Interestingly, there are no references to Buddhism in the plant-based *materia medica* listed in the pre-modern hippiatric texts based on Li Shi's 李石 (786–847) Tang-Dynasty work *Collection of Remedies for Blood Horses by Stable Grooms* (Ch. *Simu anjiji 司牧安驥集*). Despite this, we know that some non-Buddhist equine veterinarians did incorporate Buddhist ideas and practices into their work. Veterinarians in the tradition of the Japanese Anzai School,⁴⁷ for example, connected healing with esoteric Buddhist cosmological thinking. It is certainly not the case that all texts based on *Collection of Remedies for Blood Horses by Stable Grooms* incorporated Buddhist⁴⁸ elements, however. Manuscripts and prints of the unabridged horse classic without these elements continued to be circulated in both Japan and China in the early modern period.⁴⁹

Conclusion

In medieval Japan, Buddhist ritual healing and medical therapies were clearly not limited to humans, but also included domestic animals such as the horse. Equine medicine was practiced in a religious context as well. The selection of the seventeen plants listed in the scroll from the Tokyo National Museum indicates that they were chosen because of their names, which either connect the plants to Buddhism, e.g. Medicine Buddha plant, or are associated with horses, e.g. horsehead plant. The scroll was a 'ritual certificate' for cavalry veterinarians in a particular location in Japan, possibly Kai province because of the description of the god Echigo no Tansuke. The plants appear to have been chosen because of the medicinal quality, but as I have pointed out with my examples, the plants were selected for medical practice primarily because of their names. I argue that the reason for the selection is the reference to divine powers found in the names and, by extension, in the plants as *materia medica*. Because of the meaningful and suggestive plant names, it stands to reason that they also transmit ritual knowledge intimately connected to plant lore. Mythical explanations for each plant might have played a role in the transmission within the lineage of healers as well. If this was the case, the empowerment gave the veterinarians to whom this scroll was bestowed access to the *potency* of these plants rather than purely providing academic knowledge about the plants. The plants' names indicate their potency within the realm of esoteric Buddhist healing and salvation. The seventeen plants were also the ingredients of a panacea for horses as a manuscript from the early sixteenth century indicates. I contend that in medieval Japan, healers of horses circulated knowledge about plant-based substances they thought had an inherent potency expressed by the plants' names. In the cases I explored in this article, activating the divine powers in rituals was to unlock the potency of the substances and lead to the healing of an afflicted animal.

Given that the connections between Buddhism and (equine) medicine in Japan and the Himalayas bear more than superficial similarities, comparative research through the analysis of sources such as horse books, veterinary manuals and other materials may yield further insights into the world of plant-based *materia medica* and medicinal drugs in these areas.

No.	Main plant name	Additional names or annotations
1	薬師草 ヤクシサウ <i>yakushi-sō</i> medicine Buddha plant	船裏 フナウラ ナリ <i>funaura nari</i> boat underside
2	法薬草 ホウヤクサウ <i>hōyaku-sō</i> dharma medicine plant	完条草 シタヤキクサ, 朽 クタシ トモ云 <i>shishiyaki-kusa</i> end stream herb (?) <i>kutashi to mo iu</i> also called “rotten”
3	車前草 ⁵⁰ <i>shazen-sō</i> in front of wheel plant	於々波古 ⁵¹ <i>oohako</i> ōbako ⁵²
4	木草伝 モクソテン <i>mokusoten</i> wood herb sprawl (?)	茯苓 フクリヤウ <i>fukuryō</i> fu mushroom
5	阿度者崎 アトハサキ <i>atohasaki</i> ⁵³ atoha cape (?) ⁵⁴	梅寄生 ムメノホヤ <i>mume-no-hoya</i> living with the plum ⁵⁵
6	草王 クサノワウ <i>kusanoō</i> king of plants	狼芽 コマツナキ <i>komatsunaki</i> [<i>komatsunagi</i>] wolf sprout
7	衣草 コロモクサ <i>koromo-kusa</i> robe herb	唐苧 カラヲ <i>karao</i> Chinese ramie
8	仏前 ホトケノマヘ <i>hotoke-no-mae</i> in front of the Buddha	青木香 シヤウモカウ <i>shōmokō</i> ⁵⁶ unripe wood scent
9	色々 イロタ <i>iroiro</i> all sorts	毒散味 トクタミ <i>tokutami</i> [<i>dokutami</i>] poison spreading taste
10	長小草 チヤウセウサウ <i>chōshō-sō</i> long short plant	芭蕉綴毛 ハセウノツツリケ <i>hashō-no-tsutsurike</i> [<i>bashō-no-tsu- zurike</i>] fibrous banana ⁵⁷
11	狸尻巾 イタチノシリノコイ <i>itachi-no-shiri-no-koi</i> weasle's ⁵⁸ buttock pouch or towel	犬尻 イヌノシリ <i>inu-no-shiri</i> dog's buttock
12	馬頭草 メツサウ <i>metsu-sō</i> horse's head plant	牛膝 キウシツ, キノクツチ <i>kyushitsu</i> [<i>gyushitsu</i>], <i>winokutsuchi</i> [<i>inoguzuchi</i>] ox's knee

Table 1. Names of Plants in the Scroll of Equine Medicine.

Note: I added transcriptions and literal translations of the plant names in English as far as I could determine the meaning of the Chinese characters or Japanese words used for the name. The drawings are numbered for convenience.

Table 1. (cont.)

13	甘草伝 カンサウテン kansōten [kanzōden] liquorice ⁵⁹	唐蓬 カラヨモキ Kara yōmuki [yōmugi] Chinese artemisia
14	阿古免草 アコメクサ akome-kusa [akomegusa] akome herb (?) ⁶⁰	蛭筵 ヒルムシロ hirumushiro leech's straw mat
15	傳地草 テンチサウ tenchi-sō sprawling(?) earth plant	大犬蓼ヲタイヌタテ ōinutate [ōinutade] big dog polygonum
16	天衣草 テンエサウ ten'e-sō celestial garment plant	蛇大鉢 ヘビノタイハツ hebi-no-taihatsu [hebi-no-tai- hatsu/hachi] snake big skull/pot
17	仏座 (ホトケ)ノサ hotoke-no-sa [za] the Buddha's seat	仙没香 センモツコウ senmotsu-kō [senbotsu-kō] hermit decline scent 一名喜蘭草 ichimei biran-sō alias beautiful orchid plant

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Endnotes

1. Such volumes include Gyatso (2015), Gerke (2011), and Adams et al. (2011).
2. See the anthology of pre-modern sources on Buddhism and medicine edited by Salguero (2017); other studies include Salguero (2014), Triplett (2012, 2014), and Andreeva (2016).
3. For an outline of medicine and religion in Japan, see Triplett (2012).
4. For the Dunhuang manuscripts, see Blondeau (1972); for more recent Tibetan manuscripts on horse care, see Maurer (1995 and 2001). For a French summary of the Tibetan translation of the *Aśvāyurveda* by Śālihotra, see Blondeau (1972: 53–65).
5. Horse bones found in prehistoric shell mounds in Japan initially led researchers to conclude that an earlier species of horse was indigenous to Japan and hunted for food. However, chemical analysis identified these bones as belonging to the Central Asian breed introduced in the fourth century (Shiraishi 2016: 91).
6. Dairy products were part of the human diet in ancient (and medieval) Japan. For the practice of keeping pets in medieval Japan, see Ambros (2012: 2-3). For an excellent overview on human-animal relationships in Japanese history and through the present day, see Ambros (2012: 17-50). For animal care and religious aspects such as funerary practices, see Kenney (2004).
7. Grumbach shows that different approaches to animal killing, animal sacrifice, and meat-eating existed in medieval Japanese society (2005); on horses see Grumbach (2005: 74, 79-80 and 84-85, n63). For a short overview on the consumption of meat as “medicinal eating” in early modern period Edo (today’s Tokyo), see Shimizu (2010).
8. The source consists of a single scroll that has been designated as an Important Cultural Property of Japan.
9. The scroll can be found at <<http://www.emuseum.jp>> (last accessed on February 28, 2018). The website provides texts in Japanese, English, French, Chinese and Korean.
10. Mitsui (1994). This contribution goes back to a two-part article published in 1968. See also Murai et al. (1994).
11. Bartlett and Shohara (1961) in their volume on the history of Japanese botany describe the appearance of the scroll as a ‘premonition’ of what they call the “natural history period of Japanese botany.” They quote the Japanese botanist Shirai Mitsutarō (1863-1932), who considers this natural history period to have commenced in 1601 (1961: 19), i.e. with the Edo era (1601-1868), Japan’s early modern period. Thought in this period was shaped by increasingly dominant rationalistic thinking in the Neo-Confucian tradition of the Chinese Confucian Zhu Xi (1130-1200) and the appropriation of scientific knowledge from Europe.
12. For a short overview on botanical illustration in China, see Haudricourt and Métaillé (1994). The authors mainly focus on a comparison of Chinese and European botanical drawings from the seventeenth century onward. For a book-length study on Chinese ‘traditional botany,’ see Métaillé (2015). An example of a Japanese herbal compendium that makes reference to *materia medica* is the *Japanese Materia Medica (Yamato honzō, 1708-1709)* by the Neo-Confucian scholar Kaibara Ekken (1630-1714).
13. Ueno (1973: 231); Kimura (1973: 130).
14. This common name indicates a use in equine medicine.
15. Most horse classics in Japan go back to the Tang-Dynasty *Collection of Remedies for Blood Horses by Stable Grooms* (Ch. *Simu anjiji* 司牧安驥集) by Li Shi 李石 (786–847); see below. The practice of equine medicine becomes more concrete in the ninth century with the first writings of veterinarians in Japan who had studied in China and brought back such books.
16. I am grateful to Dr. Sabine Aboling (University of Veterinary Medicine Hannover) for this valuable information.
17. It may even be a case of ‘retro-botanizing,’ a practice aptly described and criticized by Projit Bihari Mukharji (2014).
18. See, for example, the study by Volkmann (2002).

19. The mushroom that is nowadays identified with the 'spirit mushroom' and sold in the *materia medica* market belongs to the genus *Ganoderma*, a wood-decay fungus with a shining and colorful top surface.
20. See, for example, Hsu (2010: 83).
21. The flower of a violet looks like a horse's hoof, so the plant is named 'horse's hoof' (*rtā rmiḡ*), or in the case of a leaf that is similarly shaped to a horse's eye, the plant name is 'horse's eye' (*rtā miḡ*) (Boesi 2007: 11).
22. This is an established Buddhist term for garments of a bodhisattva, in pictures shown as a light cloth hanging down from both shoulders.
23. The leech and snake used in secondary names of two other plants may not be relevant here.
24. It may be a coincidence but the first character of the secondary plant name, 青 (unripe, green, blue), can also mean 'black horse.'
25. As the majority of them are of Chinese origin, Chinese transcriptions of the names are added.
26. See Harrist (1997) for a study of Bole's 'horse physiognomy' in Chinese visual culture. The prediction of the horse's character and the fate of its owner by interpreting the shape of the animal's hair whorls is also an important feature of Tibetan horse books that in part go back to Sanskrit compendia attributed to Śālihotra. This kind of divination is also found in Chinese horse classics (Maurer and von den Driesch 2006: 356-357); see Heerde (1999: 26-27); for the practice of interpreting patterns in nature and in animals, see Ambros (2012: 27). For contemporary Tibetan rituals for the protection of horses in connection with medical treatment, see Craig (2006).
27. In Japan, *hakuraku* became the general term for horse and cattle doctors.
28. Leigong, Thunder Duke, is connected to the Yellow Thearch (Emperor) and thus to medicine.
29. Although Buddhism and Shinto were practiced in combination until the modern era, this image unit with the Shinto god does not feature any Buddhist element such as a mantra.
30. The *Kojiki* is the oldest chronicle of Japan. It was completed in 712.
31. The plant's pollen is used as a hemostatic in Chinese-style medicine.
32. Kai is not far south of Echigo but is not a neighboring province. Kai province was famous for its horses known as Kurokoma 黒駒, literally meaning 'black horses.'
33. This word, consisting of the syllable *ha*, could also mean blades.
34. Jīvaka is the legendary personal doctor of Buddha Śākyamuni in ancient India.
35. Bian Que is a legendary physician from the time of the Yellow Thearch (Emperor).
36. According to Chinese mythology, Zaofu was a most accomplished charioteer, immortalized along with his eight-headed team of horses as a stellar constellation (Cepheus).
37. It is unclear what this figure is.
38. Qin stands for Qin shihuang 秦始皇, the first Chinese Thearch (Emperor).
39. Prayer texts from early Japan mention similar objects used for appeasing violent spirits. See, for example, Como (2007: 402), quoting the English translation by Phillippi (1990: 70).
40. See Lomi (2011: 236-237) and Como (2005). Mitsui correlates the items to those used in a ceremony in 676 CE. Similar items were used then as offerings on the altar (1994: 453; table 454).
41. Only very few copies of the scroll or fragments of similar pieces survive. One fragment is held at Tokyo National Museum (A-11961). It shows the horse from the panel with the god Ten.
42. Temple names in East Asia always include a so-called 'mountain name.' I was not able to identify this temple. It may also simply be a place name.
43. Jōnen, or further below Jōnen-bō, is the name of a monk.
44. This time designation covers the time period from 11 a.m. to 1 p.m. (horse) and 1 to 3 p.m. (sheep).
45. 'Hundred medicines' means all the medicines there are.
46. The Abbot of Kokawa was a famous Japanese horse doctor.
47. Anzai (or Ansai) is the name of a clan of horse veterinarians in Komagane in Shinano province (today Nagano Prefecture) which used to be an important horse breeding area.
48. 'Buddhistic' refers to cultural expressions that are associated with regions in which Buddhists are or were culturally dominant, rather than being specifically associated with the religion in the narrower sense.

49. A rare collection of horse books from early twentieth century China has recently been incorporated into the collection of veterinary manuscripts at the Staatsbibliothek zu Berlin—Preußischer Kulturbesitz (Berlin National Library), see catalogue under Sammlung Unschuld/Ramey. Many of these manuscripts have already been digitized.
50. No reading in *katakana* provided here.
51. No reading in *katakana* provided here.
52. The characters are used here for their phonetic value.
53. No *dakuten* (diacritic marks to indicate that a consonant should be voiced) are used in this scroll; the reading of this word would have actually been *atohazaki*. From here the voiced or modern reading is provided in square brackets in the main text.
54. The characters are probably used here for their phonetic value to write a place name (‘Atoha’).
55. The name describes a parasitic plant using the plum tree as its host.
56. The modern reading is *shōmōkkō*.
57. The characters literally mean ‘banana basting hair or fur.’
58. The first character is today used for the *tanuki* (Japanese racoon dog).
59. The characters literally mean ‘sweet plant.’
60. The meaning is unclear; the characters may have been used phonetically.

References

- Aboling, Sabine. 2006. The Attribute “Jude” in Historic Vernacular Plant Names in Germany. *Aschenas—Zeitschrift für Geschichte und Kultur der Juden* 16(2): 583-623.
- Adams, Vincanne, Mona Schrempf, and Sienna R. Craig. 2011. *Medicine Between Science and Religion: Explorations on Tibetan Grounds*. Epistemologies of Healing. New York; Oxford: Berghahn.
- Ambros, Barbara. 2012. *Bones of Contention: Animals and Religion in Contemporary Japan*. Honolulu: University of Hawai’i Press.
- Andreeva, Anna. 2016. Lost in the Womb: Conception, Reproductive Imagery, and Gender in the Writings and Rituals of Japan’s Medieval Holy Men. In *Transforming the Void: Embryological Discourse and Reproductive Imagery in East Asian Religions*, edited by Anna Andreeva and Dominic Steavu. Sir Henry Wellcome Asian Series, 420-478. Leiden; Boston: Brill.
- Bartlett, Harley Harris, and Hide Shohara. 1961. *Japanese Botany During the Period of Wood-block Printing*. Los Angeles: Dawson’s Book Shop.
- Blondeau, Anne-Marie. 1972. *Matériaux pour l’étude de l’hippologie et de l’hippiatrie tibétaines [à partir des manuscrits de Touen-houang]* Genève; Paris: Droz.
- Boesi, Alessandro. 2007. The Nature of Tibetan Plant Nomenclature. *The Tibet Journal* 32(1): 3-28.
- Chamovitz, Daniel. 2012. *What a Plant Knows: A Field Guide to the Senses of Your Garden—and Beyond*. Oxford: Oneworld.
- Como, Michael. 2005. Silkworms and Consorts in Nara Japan. *Asian Folklore Studies* 64(1): 111-131.
- . 2007. Horses, Dragons, and Disease in Nara Japan. *Japanese Journal of Religious Studies* 34(2): 393-415.
- Craig, Sienna R. 2006. Windhorses and Dharma Warriors: The Religious, Historical, and Cultural Significance of Horse Protection Rituals in Mustang, Nepal. In *Horses and Humans: The Evolution of Human-equine Relationships*, edited by Sandra L. Olsen, Mary Aiken Littauer and Ingrid Rea. BAR International Series, 339-354. Oxford: Archaeopress.
- Gerke, Barbara. 2011. *Long Lives and Untimely Deaths: Life-Span Concepts and Longevity Practices among Tibetans in the Darjeeling Hills, India*. Leiden: Brill.
- Grumbach, Lisa. 2005. *Sacrifice and Salvation in Medieval Japan: Hunting and Meat in Religious Practice at Suwa Jinja*. Ph.D. Dissertation. Department of Religious Studies, Stanford University, Stanford.
- Gyatso, Janet. 2015. *Being Human in a Buddhist World: An Intellectual History of Medicine in Early Modern Tibet*. New York: Columbia University Press.
- Harris, Stephen et al. 2010. History: Editorial Introduction. In *Plants, Health and Healing: On the Interface of Ethnobotany and Medical Anthropology*, edited by Elisabeth Hsu and Stephen Harris. New York, Oxford: Berghahn Books, 49-51.
- Harrist, Robert E. Jr. 1997. The Legacy of Bole: Physiognomy and Horses in Chinese Painting. *Artibus Asiae* 57(1/2): 135-156.

- Haudricourt, André Georges, and Georges Métaillé. 1994. De l'illustration botanique en Chine. *Études chinoises* 13 (1-2): 381-416.
- Heerde, Michael. 1999. *Pferdebehandlung mit traditioneller chinesischer Veterinärmedizin (TCVM): Der "Pferdeklassiker," hrsg. und übers. von Michael Heerde*. Stuttgart: Sonntag.
- Hsu, Elisabeth. 2010. Qing hao 青蒿 (Herba Artemisiae annuae) in the Chinese materia medica. In *Plants, Health and Healing: On the Interface of Ethnobotany and Medical Anthropology*, edited by Elisabeth Hsu and Stephen Harris. New York, Oxford: Berghahn Books, 83-130.
- Hsu, Elisabeth, and Stephen Harris, eds. 2010. *Plants, Health and Healing: On the Interface of Ethnobotany and Medical Anthropology*. New York; Oxford: Berghahn Books.
- Kenney, Elizabeth. 2004. Pet Funerals and Animal Graves in Japan. *Mortality* 9(1): 42-60.
- Kimura Yōjirō 木村陽二郎. 1973. Nakamura Tekisai no 'Kinmō zuan' ni tsuite 中村惕齋の訓蒙図案について. *Kyōyō gakka kiyō (Tōkyō daigaku kyōyō gakubu) 教養学科紀要 (東京大学教養学部)* 5: 105-131.
- Kohn, Eduardo. 2013. *How Forests Think: Toward an Anthropology Beyond the Human*. University of California Press.
- Koopman, Adrian. 2013. The Interface Between Magic, Plants and Language. *Southern African Humanities* 25(1): 87-103.
- . 2015. *Zulu Plant Names*. Pietermaritzburg: University of KwaZulu-Natal Press.
- Lomi, Benedetta. 2011. *The Precious Steed of the Buddhist Pantheon: Ritual, Faith and Images of Batō Kannon in Japan*. Ph.D. Dissertation. Department of Study of Religions, School of Oriental and African Studies, London.
- Maekawa Fumio 前川文夫. 1975. Bai-no-sōshi no shokubutsu ni tsuite 馬医草紙の植物について. *Journal of Japanese Botany / Shokubutsu kenkyū zasshi 植物研究雑誌* 50 (3): 24-26.
- Majupuria, Trilok Chandra, and Damodar Prasad Joshi. 1988. *Religious & Useful Plants of Nepal & India: Medicinal Plants and Flowers as Mentioned in Religious Myths and Legends of Hinduism and Buddhism*. Lashkar, Gwalior, India: M. Gupta.
- Marzell, Heinrich. (1937) 1943-1979. *Wörterbuch der deutschen Pflanzennamen*. 5 vols., Köln: Parkland.
- Maurer, Petra. H. 1995. The Horse Book of the Prince of Jharkot. *Kailash* 17(3-4): 147-156.
- . 2001. *Handschriften zur tibetischen Hippatrie und Hippologie*. Beiträge zur Zentralasienforschung. Bonn: VGH Wissenschaftsverlag.
- Maurer, Petra, H. and Angela von den Driesch. 2006. Tibetan "Horse Books" from the High Himalayas. In *Horses and Humans: The Evolution of Human-equine Relationships*, edited by Sandra L. Olsen, Mary Aiken Littauer and Ingrid Rea. BAR International Series. Oxford: Archaeopress, 355-361.
- Métaillé, Georges. 2015. *Traditional Botany: An Ethnobotanical Approach*. Part 4, Volume VI Biology and Biological Technology, Science and Civilisation in China Series. Cambridge: Cambridge University Press.
- Mitsui Takaosa 三井高孟. 1994. Emaki ni himerareta rekishi 絵巻に秘められた歴史. In *Bagaku: Uma o bungaku suru 馬学: 馬を科学する*, edited by Matsuo Shinichi 松尾信一. Uma no bunka sōsho 馬の文化叢書. Yokohama: Baji bunka zaidan, 442-462.
- Mukharji, Projit Bihari. 2014. Vishalyakarani as *Eupatorium ayapana*: Retro-botanizing, Embedded Traditions, and Multiple Historicities of Plants in Colonial Bengal, 1890-1940. *The Journal of Asian Studies* 73 (1): 65-87.
- Murai Hideo 村井秀夫, Matsuo Shinichi 松尾信一, and Shirai Tsunesaburō 白井恒三郎. 1994. Ba'i makimono (Bunroku yonnen) ni tsuite 馬医巻物 (文禄四年) について. In *Bagaku: Uma o bungaku suru 馬学: 馬を科学する*, edited by Matsuo Shinichi 松尾信一. Uma no bunka sōsho 馬の文化叢書, 537-38. Yokohama: Baji bunka zaidan.
- Nappi, Carla. 2013. Surface Tension: Objectifying Ginseng in Chinese Early Modernity. In *Early Modern Things*, edited by Paula Findlen, 31-52. New York: Routledge.
- Phillipi, Donald. 1990. *Norito*. Princeton: Princeton University Press.
- Pregadio, Fabrizio. 2008. "Numinous Mushrooms; Excrescences (Zhi 芝)." In *The Encyclopedia of Taoism*, edited by Fabrizio Pregadio, 1271-1274. London: Routledge.
- Rätsch, Christian. 1988. *Lexikon der Zauberpflanzen: aus ethnologischer Sicht*. Graz: Akademische Druck- und Verlags-Anstalt.
- Salguero, C. Pierce. 2014. *Translating Buddhist Medicine in Medieval China*. Encounters with Asia. Philadelphia: PENN/University of Pennsylvania Press.
- . ed. 2017. *Buddhism and Medicine: An Anthology of Premodern Sources*. Vol. 1. New York: Columbia University Press.
- Sen, Tansen. 2018. Introduction: Networks and Identities in the Buddhist World. In *Buddhist Encounters and Identities Across East Asia*, edited by Ann Heirman, Carmen Meinert and Christoph Anderl. Dynamics in the History of Religions 10, 1-18. Leiden; Boston: Brill.

Schiebinger, Londa L. 2004. *Plants and Empire: Colonial Bioprospecting in the Atlantic World*. Cambridge, MA: Harvard University Press.

Shimizu, Akira. 2010. Meat-eating in the Kōjimachi District of Edo. In *Japanese Foodways, Past and Present*, edited by Eric C. Rath and Stephanie Assmann. 92-107. Urbana: University of Illinois Press.

Shirai Mitsutarō [Kōtarō] 白井光太郎. (1891) 1934. *Nihon hakubutsu-gaku nenpyō* 日本博物学年表. 改訂増補版, reprint 1980 und 1982 ed. Tōkyō: Ōka shoten.

———. (1926) 2011. A Brief History of Botany in Old Japan. In *Scientific Japan, Past and Present. Prepared [by the National Research Council of Japan] in Connection with the Third Pan-Pacific Science Congress, Tokyo, 1926*, edited by Pacific Science Congress, 213-227. Tōkyō: Jigyokudō, Maruzen.

Shiraishi Taichirō 白石太一郎. 2016. Nihon rettō no kiba bunka wa donoyōni shite hajimattanoka 日本列島の騎馬文化はどのようにして始まったのか. In *Kiba bunka to kodai inobēshon* 騎馬文化と古代のイノベーション, edited by Kodaishi shinpojiumu “Hakken, kenshō Nihon no kodai” henshū iinkai 古代史シンポジウム「発見・検証日本の古代」編集委員会 et al., 88-103. Tōkyō: Kadokawa.

Triplett, Katja. 2012. Magical Medicine?—Japanese Buddhist Medical Knowledge and Ritual Instruction for Healing the Physical Body. *Japanese Religions (Special Issue: Religion and Healing in Japan, edited by Christoph Kleine and Katja Triplett)* 37 (1&2): 63-92.

———. 2014 For Mothers and Sisters: Care of the Reproductive Female Body in the Medico-ritual World of Early and Medieval Japan. *Dynamis* 34 (2): 337-356.

Tsing, Anna Lowenhaupt. 2015. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton: Princeton University Press.

Ueno Masuzō 上野益三. (1948) 1973. *Nihon hakubutsu-gaku-shi* 日本博物学史. Tōkyō: Heibonsha.

Volkman, Helga. 2002. *Märchenpflanzen, Mythenfrüchte, Zauberkräuter: grüne Wegbegleiter in Literatur und Kultur*. Göttingen: Vandenhoeck & Ruprecht.

Wohlleben, Peter. 2016. *The Hidden Life of Trees: What They Feel, How They Communicate—Discoveries from a Secret World*. Vancouver, BC, Canada: Greystone Books.