



Universiteit
Leiden
The Netherlands

Pepper to sea cucumbers: Chinese gustatory revolution in global history, 900-1840

Xu, G.

Citation

Xu, G. (2021, November 10). *Pepper to sea cucumbers: Chinese gustatory revolution in global history, 900-1840*. Retrieved from <https://hdl.handle.net/1887/3239180>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3239180>

Note: To cite this publication please use the final published version (if applicable).

Pepper to Sea Cucumbers

Chinese Gustatory Revolution in Global History, 900-1840

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof.dr.ir. H. Bijl,
volgens besluit van het college voor promoties
te verdedigen op woensdag 10 november 2021
klokke 16.15 uur

door

Guanmian Xu

geboren te Yueqing
in 1985

Promotor

Prof. dr. Anne Gerritsen

Copromotor

Dr. Fan Lin

Promotiecommissie

Prof. dr. He Bian (Princeton University)

Prof. dr. Hilde De Weerd

Prof. dr. Jos Gommans

Prof. dr. Eric Tagliacozzo (Cornell University)

© 2021 Guanmian Xu

All rights reserved. No part of this work may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means without written permission from the author.

The Ph.D. project is financed by the **Hulsewé-Wazniewski Foundation (Hulsewé-Wazniewski Stichting, HWS)** for the advancement of teaching and research in the archaeology, art, and material culture of China at Leiden University.

Printing: Ridderprint | www.ridderprint.nl

Acknowledgements

Completing this dissertation took four years (2017-2021), but the journey leading towards it was much longer. The idea of combining Chinese cultural history and Southeast Asian economic and social history originated in my M.Phil. study of sugar trade along the eighteenth-century China Coast at the Chinese University of Hong Kong (2014-2015), which was advised by Chi-cheung Choi. Turning that nascent idea into a book-length work, however, demanded far more training.

It was Leonard Blussé who offered mentorship and guided me through different programs at Leiden. Following his suggestion, I first took two-year intensive BA and MA course works in the Cosmopolis program (2015-2017) directed by Jos Gommans. Through this program, I learned to read Dutch colonial archives with help from Ton Harmsen, Rene Wezel, Peter van Summeren, Norifumi Daito, and Tristan Mostert; learned to approach Indonesian history with help from Blussé, Koh Keng We, Esther Zwinkels, Tristan, Simon Kemper, Maarten Manse, Alicia Schrikker, Sander Tetteroo, Ariel Lopez, Ligia Giay, Mark van de Water, Bente Leede, Melinda Susanto, Shohei Okubo, Philip Post, Alexander van der Meer, Sanne Ravensbergen, and Atsushi Ota; to speak basic Bahasa Indonesia with help from Surya Suryadi, Aone van Engelenhoven, and Nazarudin Nazarudin; and to engage with the ongoing debates about Indian Ocean history with help from Gommans, Mahmood Kooriathodi, Archa Neelakandan Giriya, Tom Hoogervorst, and Archisman Chaudhuri. Besides that, I also benefited immensely from scholarly discussions with Catia Antunes, Wei-chung Cheung, Wu Xiao An, Ulbe Bosma, Ryuto Shimada, and David Henley.

While the Cosmopolis program was driving me towards the history of the VOC in Asia, several meetings with Anne Gerritsen and Fan Lin in 2016 and 2017 rekindled my interest in Southeast Asian things in Chinese material culture. They encouraged me to apply for a four-year Ph.D. fellowship (2017-2021) sponsored by the Hulsewé-Wazniewski Foundation. With this generous financial support,

Anne and Fan Lin undertook to train me as a student of cultural history. They admitted me to their courses in material culture and art history. Anne further invited me to the UK for making presentations on medical history, China and global history, and global micro-history. Fan Lin let me present in several workshops in Leiden about cultural and material history. These activities witnessed how I gradually grew into a researcher of Chinese medical and food history.

Besides unfailing support from Anne, Fan Lin, and Blussé, my progress received continuous attention from Gommans, Hilde De Weerd, and the committee members of the Hulsewé-Wazniewski Foundation, especially Maghiel van Crevel. I also found that my interest in food history was shared by Françoise Sabban, Kathleen Burke, and Alice de Jong. My studies of Chinese medical history were encouraged by Xi Gao, Bridie Andrews, Xiaomeng Liu, and Nandini Bhattacharya. My talks about the materiality of pepper and sea cucumbers received many feedbacks from Fresco Sam-Sin, Doreen Müller, Ching-ling Wang, Yu-chih Lai, and Neilabh Sinha. My search for recently published Chinese primary sources was supported by our librarian, Marc Gilbert. Besides that, I benefited from joining workshops organised by the Dutch National Research School for Cultural History (the Huizinga Institute) and from participating in Manchu classes taught by Fresco and Juul Eijk. I was fortunate enough to conduct field work in Makassar with help from Amrullah Amir, Xiangzheng Chen, Ziqi Wu, and the staff of the EFEO library in Jakarta exactly before the global outbreak of COVID-19. By the final stage, He Bian, De Weerd, Gommans, and Eric Tagliacozzo joined the Promotiecommissie and provided constructive comments that remain crucial for developing this dissertation into a book or articles. Meimei Zhang helped polish my translation of Chinese poems. Juul helped edit the Dutch summary. I am alone responsible for all the remaining errors.

Writing the dissertation was but part of my six-year life in Leiden. I found joy in countless dinners with my friends, like Yujing, Zexu, Yixiu, Archa, Norifumi, Jialong, Simon, Jiayi, Ruixuan, Mengxing, Tzu-Yi, Xiao Ma, Xinrong, Jing Hu, Yiyun, and Sanhua. I had many online meetings with

a group of friends interested in Chinese material culture, including Meimei, Yu Yan, Pei-hsuan, Ted, Yunshuang, Wanmeng, You Wang, Lin Du, and Huijun. I was weekly visited by Peter who paid so much attention to me and my small family.

My wife, Hui Ji, joined me in 2016 and our daughter, Jiqiu, was born in Leiden in August 2020. We lived in a cosy apartment near the archaeological park of Matilo. I may never forget that the newborn Jiqiu was resting on my desk while I was preparing for teaching a BA course sometime in late September 2020. Indeed, to my wife and myself, the most wonderful outcome from our life in Leiden is not this dissertation but Jiqiu. She was one-year-and-eight-day old when I was notified by Fan Lin that the Promotiecommissie had recommended this work for public defence.

Note on Dates, Transliterations, and Measures

- ❖ All dates have been converted to accord to the Common Era. The date of each dynasty, book, and person is indicated on its first occurrence in the dissertation. If they occur in two places far apart, their dates will be noted again.
- ❖ Chinese book titles are all translated into English in the main text, but their pinyin transliterations are used in the footnotes. In the bibliography, their original Chinese characters, pinyin transliterations, and English translations are all presented.
- ❖ Traditional Chinese characters are used for primary sources and for research published in traditional Chinese. Simplified Chinese characters are only used for modern research published in mainland China.
- ❖ Chinese names of persons and places are all transliterated according to the pinyin system, except for modern authors who follow the Wade-Giles or Cantonese systems.
- ❖ Money, weights, and measures are all presented in the original units.
- ❖ The following conversions are used particularly for the trade of sea cucumbers in Makassar:

Picul: 120 catties or 133.3 pounds.

Tael (silver): 0.7 Spanish dollar.

Rijksdaalder: In the seventeenth and eighteenth centuries, a rijksdaalder had a similar silver content as a Spanish dollar, but the latter was more valuable in Asia because of the local preference.¹ In Makassar, the Spanish dollar, known as “*rijksdaalder Spaans*”, was a common current, while the rijksdaalder was the “money of account”.²

Foot (Rijnland): The Rijnland standard was used in the early modern Dutch Empire in Asia. 12 Rijnland inches are 1 Rijnland foot. 1 Rijnland foot is 31.40 cm.

¹ Wolters, “Heavy and Light Money in the Netherlands Indies.”

² Sutherland, “Trepang and Wangkang,” 453, note 3.

Contents

Introduction.....	1
Chapter 1 Warming the Centre.....	28
1. Warming Exotics.....	30
2. Foreign <i>Jiao</i>	35
3. Moving Pepper to the Centre.....	44
4. Warming the Centre.....	57
Conclusion.....	68
Chapter 2 Peppering the World.....	73
1. Peppering Chinese Cuisine.....	77
2. Spice Hubs of Java.....	86
3. To Malabar.....	96
4. Towards a Trans-Indian Ocean World.....	105
5. Bringing Fire Down!.....	114
Conclusion.....	131
Chapter 3 Sea Changes.....	134
1. Knowing Seafood.....	135
2. Smelly Fish to Sea Taste.....	142
3. Broths and Sea Delicacies.....	154
4. Transforming Edible Nests: From Hot-Spicy Stir-Frying to “Clear and Replenishing”.....	166
5. Conceptualising Sea Cucumbers: Towards a Perfect Therapeutic.....	186
Conclusion.....	198
Chapter 4 A World of Sea Cucumbers.....	201

1. In Search of Liao/Manchu Sea Cucumbers.....	203
2. The Rise of the Southern World of Sea Cucumbers	218
3. In the Shadow of the Liao/Manchu Sea Cucumbers	237
4. Beyond the Liao/Manchu Dominance.....	251
5. Against the Grain: The Rise of the <i>Marege</i> and the <i>Kayu Jawa</i>	263
Conclusion.....	278
Epilogue	281
Bibliography	295

Introduction

In 1820, John Crawfurd, a key figure in the building of the British empire in Southeast Asia, published an influential work, *History of the Indian Archipelago*, in which he reviewed the trade between the archipelagic region of Southeast Asia and China, pointing out that *tripang* (sea cucumbers) “constitutes, in quantity and value, the most considerable article of the exports of the Indian islands to China, unless, perhaps, we except pepper”.¹ To Southeast Asian specialists, the importance of these two commodities in the trade with China is no secret. China’s strong demand for pepper was a crucial factor in the emergence of the Age of Commerce in Southeast Asia (ca. 1400-1650) in the fifteenth century and the rise of the Dutch intra-Asian trading network in the seventeenth century.² Sea cucumbers, being a new Southeast Asian export to China from around the end of the seventeenth century, had a prominent role to play in the economic reorientation of this region after the Age of Commerce, including the post-Spice Wars transformation of the eastern Indonesian Archipelago (late 17th c.), the rise of the Sulu Zone (late 18th c.), and the British expansion in Southeast Asia and northern Australia (late 18th-early 19th c.).³

However, to most Chinese cultural historians, these topics might sound otherworldly. Due to the disciplinary gap between East and Southeast Asian studies, engaged dialogues between Chinese cultural historians and Southeast Asian economic and social historians are rare. As a result, in the

¹ Crawfurd, *History of the Indian Archipelago*, vol. 3, 441. In this context, “Indian islands” refer to the Indonesian Archipelago, as well as its adjacent Malay Peninsula. For Crawfurd and the British expansion in Southeast Asia, see Knapman, *Race and British Colonialism in Southeast Asia*.

² Reid, *Southeast Asia in the Age of Commerce, 1450-1680, Volume Two*, 10-16; Meilink-Roelofs, *Asian Trade and European Influence*. Wills, *Pepper, Guns, and Parleys*; Glamann, *Dutch-Asiatic Trade*, 73-90; Blussé, *Strange Company*.

³ Sutherland, “Trepang and Wangkang”; Tagliacozzo, “A Necklace of Fins”; Warren, *The Sulu Zone*; Macknight, *The Voyage to Marege*.

Introduction

scholarship about Chinese food and medicine, pepper and sea cucumbers are hard to find.⁴ The existing research on pepper mostly focuses on its introduction from India to China around the Tang dynasty (618-907) and its unique position in the tribute trade of the Ming dynasty (1368-1644).⁵ However, these studies have little impact on Chinese food history, as most Chinese food historians still tend to believe that pepper has played only a minor role in Chinese cuisine, as there is native Sichuan pepper and, after the sixteenth century, chili pepper prevails.⁶ In comparison to pepper, sea cucumbers, together with two other closely related rarities: edible bird's nests and shark fins, receive relatively more attention from specialists of Asian maritime trade.⁷ Yet, the current research falls short of discovering the medicinal and culinary shift behind their rise in the sixteenth and seventeenth centuries. As a result, although there is a rich corpus of Chinese recipes and medical texts concerning the widespread use of these exotics, a monograph that closely reads these sources and cross-examines them with evidence from Southeast Asia is wanting.

Because of this research gap, we are left with a basic question unanswered: Why did pepper and sea cucumbers feature so prominently in China's maritime trade with Southeast Asia? Both being edibles, pepper and sea cucumbers belong to two distinct culinary cultures: The former is a globally important spice, which emerged as a popular condiment in China from around the early thirteenth century when Chinese cuisine began to become increasingly hot-spicy; the latter only gained a

⁴ Among few exceptions, Françoise Sabban has pointed out the widespread use of pepper in the court cuisine of the Mongol Yuan period. Sabban, "Court Cuisine in Fourteenth-Century Imperial China."

⁵ Laufer, *Sino-Iranica*, 374-375; Schafer, *The Golden Peaches of Samarkand*, 149-152; T'ien, "Chêng Ho's Voyages and the Distribution of Pepper in China"; Ts'ao, "Pepper Trade in East Asia"; Chen, *Silu yiming*, 43-66; Wu, "Cong 'xiangyao' dao 'xiangliao'."

⁶ The history of chili pepper in China has recently been investigated by two important monographs. Dott, *The Chile Pepper in China*; Cao, *Zhongguo shila shi*.

⁷ Arai, *Kinsei kaisanbutsu bōekishi no kenkyū*; Blussé, "In Praise of Commodities"; Tsurumi, *Namako no me*; Sutherland, "Trepang and Wangkang"; Dai Yifeng, "Yinshi wenhua yu haiwai shichang"; Tagliacozzo, "A Necklace of Fins"; Salmon, "Le goût chinois pour les nids de salanganes"; Feng, "Renzhi, shichang yu maoyi"; Feng, "Luelun Ming Qing shiqi Zhongguo yu Dongnanya de yanwo maoyi"; Feng, "Qingdai Zhongguo yu Dongnanya de yuchi maoyi."

Introduction

prominent position in Chinese cuisine from the end of the sixteenth century, when a new food culture that highly valued preserved marine products was rising.

This dissertation will investigate how these two food cultures emerged, whether there was a link between them, and how they mattered to the global connections of China, Southeast Asia, and the broader world. For better understanding these processes, the research will engage with three fields, namely: Chinese medical and food history, Asian maritime history, and global cultural history. It will scrutinise some hotly-debated issues in Chinese medical history that concerned the nature of spices and marine products, as well as their efficacies to the body. It will read some long-ignored recipes to understand how these exotic spices and marine products stood in Chinese cuisine. It will further explore how their changing consumption in China interacted with the reconfigurations of Asian maritime trading networks. It, at the same time, situates this study in global cultural history, in order to critically revisit a Euro-centric global history of spices, which tends to conceptualise spices as “Out of the East” without seriously considering the history of spices “in the East” being equally global and dynamic.⁸ In the rest of this introduction, I will first elaborate on how this research connects understudied topics in these seemingly disparate fields and then articulate the methodology and structure.

Edible Exotics

While proposing pepper and sea cucumbers, I have to first address a basic question: Do they share any commonalities? To most Chinese diners, the most obvious common features they share are being exotic and edible. In global food history, these features can be widely identified with a group of well-studied edible exotics, including spices, sugar, coffee, tea, etc. Thanks to rich literature about their

⁸ Freedman, *Out of the East*.

Introduction

consumption in Europe, it has become well-known that these edible exotics were crucial for the emergence of the European capitalist world economy, as they energised European colonial expansion in the intertropical world and contributed to European economic ascendancy at the expense of many disenfranchised indigenous people.⁹

Tracing the origin of this food-driven globalisation, spices had a definitive role to play in its initial stage. In European food history, the concept of spices emerged in the medieval trade of Indian Ocean goods via the Red Sea and the Persian Gulf to the Mediterranean World.¹⁰ Among these Indian Ocean goods, edibles with a strong flavour or aroma, such as pepper, ginger, cloves, cinnamon, and nutmeg, were particularly prominent, so much so that the term, spices (*species* in Latin), shifted from its original meaning referring to all sorts of goods, to narrowly denoting pungent and aromatic condiments.¹¹ By the end of the medieval period, the trade of these exotic condiments had become enormously lucrative, stimulating the Portuguese to search for direct trading routes to their original places in South India (pepper), Sri Lanka (cinnamon), and the eastern Indonesian Archipelago (cloves and nutmeg), leading towards the first European global empire.¹²

Meanwhile, not only European consumers demanded these pungent and aromatic condiments. An interesting observation is that a large part of these spices was also in demand in China. Although China had native supplies of ginger and cassia (a substitute for cinnamon), it produced neither pepper, nor cloves, nor nutmeg. For them, the Chinese consumer market, as much as the European, relied on supplies from South India and Southeast Asia. Connected by the Indian Ocean World in-between,

⁹ Braudel, *Civilization and Capitalism, 15th - 18 Century, Volume 1*, 183-265; Wallerstein, *The Modern World-System II*; idem, *The Modern World-System III*; Mintz, *Sweetness and Power*; Schivelbusch, *Tastes of Paradise*; Halikowski-Smith, "Portugal and the European Spice Trade"; Nierstrasz, *Rivalry of Trade in Tea and Textiles*.

¹⁰ Ashtor, *Levant Trade in the Late Middle Ages*; Freedman, *Out of the East*.

¹¹ Halikowski-Smith, "Portugal and the European Spice Trade," 1-15; Morton, *The Poetics of Spice*, 18-28; Freedman, *Out of the East*.

¹² Halikowski-Smith, "Portugal and the European Spice Trade"; Freedman, *Out of the East*, 193-205; Cagle, *Assembling the Tropics*.

Introduction

China and Europe were in fact two important consumer markets in a globally connected spice network.¹³

Yet, it is hard to identify a Chinese term precisely corresponding to spices. The modern Chinese term for spices, *xiangliao* (香料), literally meaning “aromatic materials”, was not commonly used until the twentieth century. What occurred more often was *xiangyao* (香藥), literally meaning “aromatic drugs”.¹⁴ Both terms indicate a strong link with an olfactory property of being aromatic and fragrant. That link stemmed from the integration of these exotics into Chinese smell culture. Different from the European spice culture, the Chinese, like the Indians, were more inclined to use fine spices such as cloves and nutmeg as aromatics instead of condiments.¹⁵ These fine spices were joined by a large group of fragrant wood and resin, such as agarwood, sandalwood, frankincense, camphor, and benzoin, collectively constituting the so-called aromatic drugs in China, which were widely used for making incense, perfume, medicine, and beverages.¹⁶

Lacking a remarkable aroma, pepper was unique. Unlike other aromatic drugs, it had no function in Chinese incense and perfume culture, but, as we will see in chapter one, in its integration into Chinese medicine from the seventh through the tenth centuries, pepper acquired similar medical functions as many other aromatic drugs. They were all used as warming agents for treating indigestion, and hence became intimately connected to food. Moreover, from the early thirteenth century, for its strong hot spiciness, pepper would further emerge as an important condiment in Chinese everyday

¹³ For studying spices from an Indian Ocean perspective, see Pearson, ed., *Spices in the Indian Ocean World*; Hoogervorst, “Southeast Asia in the Ancient Indian Ocean World,” 172-197.

¹⁴ There is a rich Chinese and Japanese literature on *xiangyao*. Yamada, *Tōa kōryō shi kenkyū*; Lin, *Songdai xiangyao maoyi shi*; Wen, *Tangdai wailai xiangyao yanjiu*; Xia, *Songdai xiangyaoye jingji yanjiu*; Wen, *Zhongguo Zhongguo wailai xiangyao yanjiu*; Tu, *Xiangyao maoyi yu Ming Qing Zhongguo shehui*.

¹⁵ Zumbroich, “From Mouth Fresheners to Erotic Perfumes”; Sabban, “Court Cuisine in Fourteenth-Century Imperial China,” 179; Xu, “Junks to Mare Clausum,” 198-199.

¹⁶ Liu, *Songdai xiangpu zhi yanjiu*; Yang, *Xiangshi*; idem, “L’encens sous les Song (960–1279) et les Yuan”; Lin, *Songdai xiangyao maoyi shi*.

Introduction

cuisine. This change, as we will discuss in chapter two, made pepper the only important daily-used condiment exclusively imported from overseas. This unique culinary function eventually made pepper distinct from other aromatic drugs, which were rarely used for cooking.

Whereas pepper was a typical spice widely consumed by different food cultures across the Indian Ocean World, Chinese way of consuming preserved sea cucumbers was rarely shared by others. The rise of sea cucumbers in Chinese cuisine should be understood in the context of Chinese changing perceptions of seafood. Unlike pepper and other aromatic drugs that had been highly regarded by Chinese elite consumers since the Tang dynasty,¹⁷ seafood was at first disparaged by them. The Tang elites were overwhelmingly generated from aristocratic families in the metropolises in inland North China. They tended to consider seafood as a culture of the South, which, from their perspective, was alien and despicable. Critical change took place amid the Tang-Song Transition (ca. 8th-12th c.), through which a new category of political elites, known as literati, emerged. They climbed the social ladder through the more institutionalised civil-service examinations, instead of relying on hereditary privileges. That change opened a door for southerners to become literati.¹⁸ They, in turn, redefined the elite culture by incorporating things from the South, including seafood.¹⁹

This change was, however, only the first step. Far less well-known is that after seafood was accepted by the Chinese elite culture around the eleventh century, there would be a further shift towards preserved seafood. Most evidence concerning this “preserved turn” comes from the Ming (1368-1644) and Manchu Qing (1644-1912) periods, when preserved seafood, known as “sea taste” (*haiwei* 海味), became widely traded in many “sea taste” shops across China. Besides that, preserved

¹⁷ Schafer, *The Golden Peaches of Samarkand*.

¹⁸ Hymes, *Statesmen and Gentlemen*; Bol, “*This Culture of Ours*”; Bossler, *Powerful Relations*; Gerritsen, *Ji’an Literati*; Tackett, *The Destruction of the Medieval Chinese Aristocracy*; De Weerd, “Review of: Nicolas Tackett *The Destruction of the Medieval Chinese Aristocracy*.”

¹⁹ For seafood in the Tang-Song transition, see Yi, “Xianwei yu quanli”; Chang, “Bei Song wenren yinshi shuxie de nanfang jingyan”; Cao, “Zhong Tang zhi Song dai shige zhong de nanshi.”

Introduction

seafood was also sold together with spices, sugar, cured meat, candied fruits, and preserved vegetables in a widespread trade of “southern goods” (*nanhuo* 南貨) or “southern and northern goods” (*nanbeihuo* 南北貨).²⁰ These two terms became a category for a miscellany of preservable food ingredients that were not produced locally but imported from distanced domestic or overseas places, partly comparable to the trade of colonial or tropical goods in early modern Europe. Moreover, from the commercially traded preserved seafood, a small group, including edible bird’s nests (supposedly from the sea), sea cucumbers, shark fins, and abalones would further rise to the top delicacies in Chinese high cuisine during the sixteenth and seventeenth centuries. The intricate cultural transformations behind their rise will be the focus of chapter three.

Through this brief survey, we can find that pepper and sea cucumbers in China were, like their counterparts in Europe, such as spices, sugar, and tea, serving an evolving consumer market that developed a changing taste for edible exotics. To decipher how that change took place, the following two sections, “Two Worlds” and “Into the Body”, will examine the two essential features of pepper and sea cucumbers, namely, being exotic and edible. The former, “Two Worlds”, focuses on their global origins and explores when and how they became widely available to Chinese consumers. The latter, “Into the Body”, focuses on their places in Chinese food and medicine, particularly on why the Chinese were so willing to take these two exotics as food.

Two Worlds

²⁰ There has yet to be a comprehensive study of “southern goods”, largely due to the scarcity of sources. Fortunately, a pathbreaking document has recently emerged. It is a handbook by a Huizhou merchant specialising in the trade of “southern goods” in the Lower Yangzi region during the late eighteenth and early nineteenth centuries. We will return to it in chapter three. *Huizhou minjian zhenxi wenxian*, vol. 15, 263-430.

Introduction

Speaking of when and how these two exotics became widely available in China, we need to revisit Crawford's observation that in the early nineteenth century, pepper and sea cucumbers were the two principal exports from archipelagic Southeast Asia to China. China's maritime trade with Southeast Asia, as Leonard Blussé has argued in his study of edible bird's nest trade, was not "an almost one-millennium-old peddling trade in expensive goods (the so-called Jacobus van Leur thesis)".²¹ What Crawford observed was a result of centuries of changes. Before these changes took place, the Chinese consumer market was supplied with pepper and sea cucumbers from elsewhere. Pepper's native habitat was the mountainous hinterland of the Malabar Coast in South India.²² Sea cucumbers were first supplied to the Chinese consumer market from the temperate waters of Northeast Asia, including the North China Sea and the Japan Sea.

The rise of Southeast Asia as their new place of origin was a result of local initiatives to transplant pepper from South India and to transform tropical sea cucumbers into competitive products. These initiatives were so successful that by the time of Crawford, Southeast Asia had replaced or rivalled the first original places of these two commodities, emerging as an exclusive supplier of pepper for the Chinese consumer market and a principal source of commercially traded sea cucumbers.

The success of Southeast Asian local society in exploiting the Chinese consumer market has received much scholarly attention, particularly in association with a rich literature about two important themes, namely: the aforementioned ages of commerce and Sulu Zone. As a paradigmatic shift in Southeast Asian studies, the Age of Commerce (ca. 1400-1650) was first proposed by Anthony Reid in the late 1980s for redressing the Euro-centric interpretation of the economic cycles of early modern

²¹ Blussé, "In Praise of Commodities."

²² Here, we refer to black pepper (pepper), instead of its Southeast Asian substitute, cubeb pepper. For their entangled itineraries in China trade, see chapter one.

Introduction

Southeast Asia.²³ On the one hand, it emphasises the significance of the Chinese consumer market by proposing that the surging demand for pepper in China during and after Zheng He's maritime expeditions (1405-1433) triggered "a trade take-off" in early fifteenth century Southeast Asia, which gave rise to the Age of Commerce.²⁴ On the other hand, it suggests that the colonial expansion of the Dutch United East India Company (the VOC) in the seventeenth century not only failed to bring prosperity to the Southeast Asian economy, but instead ended the Age of Commerce, because of its violent monopoly of the spice trade and its suppression of Southeast Asian native maritime commerce.

This paradigm is followed by a series of debates. It faces criticisms from Victor Lieberman, who articulates that this model cannot work with mainland states in Southeast Asia, where agriculture had a larger role to play than maritime commerce.²⁵ It is meanwhile well-received by researchers of archipelagic Southeast Asia, and inspired conceptualisation of an Early Age of Commerce (ca. 900-1300), when China under the prosperous Song dynasties (960-1279), developed a strong demand for aromatics and spices. Southeast Asian trading ports benefited from it by offering native and transplanted produce, including pepper, which had been naturalised in Java by the eleventh century.²⁶

Whereas spices, particularly pepper, featured prominently in the debates concerning these two ages of commerce, marine products, represented by sea cucumbers, only became important in a later stage. They were key in James Warren's construction of the Sulu Zone. Warren proposed that in the late eighteenth century, along with the expansion of the European capitalist world economy, sea cucumbers became an important substitute for silver in European country merchants' trade with Canton, for balancing a growing trade deficit induced by insatiable demand for Chinese tea in Britain.

²³ Reid, *Southeast Asia in the Age of Commerce, 1450-1680, Volume One*; idem, "An 'Age of Commerce' in Southeast Asian History"; idem, *Southeast Asia in the Age of Commerce, 1450-1680, Volume Two*.

²⁴ Reid, *Southeast Asia in the Age of Commerce, 1450-1680, Volume Two*, 10.

²⁵ Lieberman, "An Age of Commerce in Southeast Asia?"; idem, "Maritime Influences in Southeast Asia."

²⁶ Wisseman Christie, "Javanese Markets and the Asian Sea Trade Boom"; Wade, "An Early Age of Commerce in Southeast Asia."

Introduction

Exploiting this opportunity, the Sulu Sultanate, situated in the present southern Philippines, sponsored pirates to build a far-flung raiding network covering the entire archipelagic region of Southeast Asia, spreading from Luzon to Sumatra, for enslaving coastal populations and relocating them to the Sulu Islands. Back in Sulu, according to Warren, a slave-based sea cucumber catching industry emerged, offering its products to visiting European country merchants and Chinese junk traders.²⁷ Around the same time, the British East India Company (EIC) also expanded to the Straits of Melaka and northeast Borneo, establishing trading ports to benefit from the prosperous trade of marine products with China.²⁸

Between these three booming periods, there were two intermediate stages. One was between the Early Age of Commerce and the Age of Commerce, roughly from 1300-1400. The other was between the Age of Commerce and the advent of the Sulu Zone, roughly running from 1650 until the late eighteenth century. They are usually perceived as two periods of crisis. The former was supposedly caused by the Mongol Conquest of South China in the 1270s and the ensuing Mongol invasions of Southeast Asia in the 1280s and 1290s. The latter is associated with the VOC's monopoly of the spice trade, which stifled many local trading regimes.²⁹

However, there is an “elephant in the room”. This periodisation, while being well-studied in Southeast Asian studies, has yet to be critically examined with updated evidence about Chinese consumption of pepper and sea cucumbers. If we scrutinise Chinese sources concerning their consumption, we may find that there is instead strong evidence indicating that demands for pepper

²⁷ Warren, *The Sulu Zone*; idem, *Iranun and Balangingi*; idem, “Saltwater Slavers and Captives in the Sulu Zone”; idem, “The Balangingi Samal.”

²⁸ Tagliacozzo, “A Necklace of Fins.” Recently, Atsushi Ota proposed that China’s strong demand for marine and forest products led to an “Age of China-oriented trade (c. 1750-1870)” in Southeast Asia. Ota, “Role of State and Non-state Networks.”

²⁹ For an insightful review of this periodisation, see Henley, “Ages of Commerce in Southeast Asian History.”

Introduction

and sea cucumbers were burgeoning during these two supposedly crisis-ridden intermediate periods, respectively (Table 0.1).

Southeast Asian commerce		Chinese foodway
Early Age of Commerce	900-1300	
A Mongol hiatus?	1300-1400	Expansion of pepper consumption
Age of Commerce	1400-1650	
A VOC hiatus?	1650 - late 18th c.	Rise of tropical sea cucumbers
Sulu Zone and British expansion	Late 18th - early 19th c.	

Table 0.1 Southeast Asian commerce and Chinese foodways.

In terms of pepper, chapter two shows that the Mongol period was in fact a critical stage through which pepper became a commonly used spice in China. This observation is based on a rarely acknowledged study by Kentaro Yamada in the 1970s, which proposed that “China’s age of pepper” (*Chūgoku no koshō jidai* 中国の胡椒時代) began from the early thirteenth century and witnessed a major expansion through the Mongol period.³⁰ Unfortunately, Yamada’s argument, which is written in Japanese, was unheeded by two important English articles about the Chinese pepper trade in the 1980s, of which the one by T’ien Ju-kang claimed that pepper did not become a daily used spice until the early Ming’s overseas expeditions.³¹ This leads to a chain of misunderstanding in global spice history and in the conceptualisation of the ages of commerce.

A similar problem exists for sea cucumbers. The rise of Southeast Asian tropical sea cucumbers in Chinese foodways, as we will discuss in chapter four, took place exactly during the intermediate period between the end of the Age of Commerce and the rise of the Sulu Zone. During this period, tropical sea cucumbers, which were previously disdained by Chinese elite consumers, became

³⁰ Yamada, *Tōa kōryō shi kenkyū*, 235-246.

³¹ T’ien, “Chêng Ho’s Voyages and the Distribution of Pepper in China”; Ts’ao, “Pepper Trade in East Asia.”

Introduction

increasingly diversified. Out of them, a number of high-value varieties emerged and challenged the dominance of sea cucumbers from temperate waters. As a result, Southeast Asian sea cucumbers gradually shed off the stigma that previously made them undervalued and marginal.

Why was there such a mismatch between Southeast Asian commerce and Chinese foodways? This research suggests rethinking the world(s) in which pepper and sea cucumbers were situated. Chapter two proposes that pepper belonged to a trans-Indian Ocean World that encompassed South India and Southeast Asia. The emergence of a trans-Indian Ocean empire of the Mongols in the late thirteenth century induced an expansion of the Chinese spice frontier from Southeast Asia to South India. In this expansion, China-based traders, under the patronage of the Mongol ruling elites, sailed directly to the Malabar Coast of South India for pepper and to the eastern Indonesian Archipelago for fine spices. With Chinese goods and Southeast Asian fine spices, they also made Malabar the rendezvous location to meet merchants from the Red Sea and Persian Gulf routes, eventually leading towards the rise of Calicut as the centre of this trans-Indian Ocean World by the mid-fourteenth century.³² These changes diverted a large part of commerce from Southeast Asian trading regimes to a trans-Indian Ocean network.

For sea cucumbers, chapter four, following innovative research by Japanese anthropologists,³³ argues that Northeast Asia, Southeast Asia, and the north coast of Australia were all integral parts of a Cross-China Seas World of sea cucumbers. In this world, knowledge and market information was circulated by Chinese junk traders who informed Southeast Asian collectors of Chinese consumers' gustatory preference. In return, Southeast Asian collectors exploited the rich diversity of tropical species and creatively transformed some of them into high-value products that could rival or even

³² Gao, "Gulifo/Gulin," 62-65. We will elaborate on it in chapter two.

³³ Tsurumi, *Namako no me*; Akamine, *Namako o aruku*. Although their reading and interpretation of historical evidence are sometimes questionable, their perspective to integrate Japan, Korea, China, Southeast Asia, and Australia inspires this research.

Introduction

surpass temperate sea cucumbers. This kind of cross-China Seas interactions gained momentum from the late seventeenth century when the Manchu Empire was opening to the sea and the Chinese consumer market was searching for tropical substitutes for the temperate variety. These changes timely provided new trading opportunities for the littoral society in the eastern Indonesian Archipelago, which was looking for a way out in the shadow of the VOC's monopoly of the fine spices. Deprived of the previously profitable spice trade, they gradually shifted to the trade of sea cucumbers with China, leading to a fundamental reorientation of this region from being part of an Indian Ocean spice network to the Cross-China Seas World of sea cucumbers.

Therefore, in revisiting the above-mentioned paradigms in Southeast Asian studies, I propose to look beyond the conventional geographic scope set by area studies and consider an amorphous space that linked Southeast Asia and China to two broader worlds of pepper and sea cucumbers, which spanned, respectively, from Malabar to Java and from the Japan Sea to northern Australia. These two worlds experienced two waves of expansions during the two intermediate periods as identified in the Southeast Asian historiography. These two expansions reshaped the maps of pepper and sea cucumbers respectively and facilitated their massive circulations to the Chinese consumer market. Behind these two expansions, there were also two non-Chinese empires in China, the Mongol and the Manchu, which had supportive maritime policies encouraging Chinese overseas trade.³⁴

Into the Body

Whereas the global origins of pepper and sea cucumbers lead us to reconceptualise the worlds in which they were situated, for their dietary functions, we need to think about the body into which they

³⁴ For the expansion of junk trade during the Mongol Yuan period, see the introduction of chapter two. For the far-reaching influence of the “open sea” (開海 *kaihai*) policy of the Manchu Empire from the 1680s, see Zhao, *The Qing Opening to the Ocean*; Blussé, “Chinese Century”; Po, *The Blue Frontier*.

Introduction

were ingested. The Chinese body, like the Chinese trade of pepper and sea cucumbers, is not timeless. Although there exist some basic conceptions of the body in the Chinese medical canons,³⁵ there is no such a thing as an idealised unchanging Chinese body. Charlotte Furth in her study of gender in Chinese medical history powerfully contends, “All of these idealizations of an Oriental body have been based on the self-fulfilling oppositions of colonialist cultural discourse.”³⁶ Following the more recent understandings of the Chinese body, this research aims to take a step further to challenge European exceptionalism by showing that the Chinese body was not only changing but these changes also had global implications. It proposes that behind the rise of these two edible exotics, there were medical debates about how the body reacted to ingested food. They influenced Chinese choice of food and propelled the shift from pepper to sea cucumbers.

A comprehensive survey of such a shift from the perspective of Chinese medical history is crucial for redressing a Euro-centric interpretation of food and globalisation in association with the world system theory behind the Sulu Zone. Unaware of the cultural background of sea cucumber consumption in China, the model of the Sulu Zone implies that the growing export of Southeast Asian sea cucumbers to China in the eighteenth century was energised by the expansion of the European world economy, which demanded a substitute for silver to pay for British consumption of Chinese tea.³⁷ This model entails a problematic assumption that marginalises non-European demand for edible exotics as derivative of the expansion of a world economy driven by the European consumer market. It may even contribute to a misleading perception, as if only evolving European taste for exotics

³⁵ Kuriyama, *The Expressiveness of the Body*; Unschuld, *Huang Di nei jing su wen*.

³⁶ Furth, *A Flourishing Yin*, 11.

³⁷ For an insightful criticism of the world system theory in the Sulu Zone, see Sutherland, “The Sulu Zone Revisited,” 136.

Introduction

mattered to globalisation, such as the surging demand for spices in the late medieval period, for sugar in the early modern period, and for tea around the Industrial Revolution.³⁸

For explaining more fundamental issues behind the rise of sea cucumbers, the model of the Sulu Zone is chronologically and geographically too limited. As mentioned in the previous section, the emergence of the Southeast Asian sea cucumber trade with China predated the advent of the Sulu Zone for over half a century. Following important works by Heather Sutherland, chapter four will explore how that trade emerged in the first place by focusing on Makassar, whose sea cucumber trade is richly documented in the archives of the VOC.³⁹ These archives show that Makassar had been exporting sea cucumbers to China since the 1690s. Into the eighteenth century, this port became the sea cucumber trade centre of the entire eastern Indonesian Archipelago and the north coast of Australia.⁴⁰ Through this port, Southeast Asian collectors sold their products to visiting Chinese junks.⁴¹ These junks would carry sea cucumbers back to Amoy, which was connected to a Chinese coastal trading network, linked to the prosperous domestic consumer market in the Lower Yangzi region.⁴² The entire collecting and trading system lay largely outside the European world economy, and was instead a constituent part of the cross-China Seas world of sea cucumbers, whose consumer market was in China.

Instead of searching for answers from the expansion of the European capitalist world economy, this research focuses on how Chinese consumption of edible exotics changed. It proposes that there was a chain of gustatory changes linking the world of sea cucumbers to the world of pepper.

³⁸ Another well-known case is opium, which is also often cast in this way, as if only popular in China because the European world economy pushed it. Wallerstein, *The Modern World-System III*, 167-168. For a thorough study of opium consumption in China, see Zheng, *The Social Life of Opium in China*.

³⁹ For Makassar's sea cucumber trade with China, see Sutherland, "Trepang and Wangkang". Chapter four will supplement new evidence about the origin of Makassar's sea cucumber trade.

⁴⁰ For the Makassar's role in the trepang fishery in northern Australia, see Macknight, *The Voyage to Marege*'.

⁴¹ For Makassar's maritime trade in the eighteenth century, see Knaap and Sutherland, *Monsoon Traders*.

⁴² Ng, *Trade and Society*.

Introduction

Retrospectively, the rise of tropical sea cucumbers from the late seventeenth century should be understood as a further development of a food culture, which had already cultivated the consumption of temperate sea cucumbers in China since the late sixteenth century. That food culture was in turn associated with key medical debates which had been critical of the popularity of pepper as a hot spice since the fourteenth century. These debates further targeted an even earlier medical culture, which enthusiastically conceived of pepper, together with a group of exotic aromatics and spices, as warming agents.

Behind these changes, there were strong concerns over the consequences of food upon the body. These concerns stemmed from the Chinese understanding of the visceral system in the body. In Chinese medicine, viscera can be categorised as five depots and six palaces (*wuzang liufu* 五藏六府 or 五臟六腑), which, according to a fundamentally important medical canon, *Basic Questions of the Yellow Emperor's Inner Canon* (*Huangdi neijing suwen* 黃帝內經素問, ca. 1st century BCE, hereafter the *Inner Canon*), consist of:

- Five depots: The lung (*fei* 肺), the heart (*xin* 心), the spleen (*pi* 脾), the liver (*gan* 肝), and the kidneys (*shen* 腎).
- Six palaces: The large intestine (*dachang* 大腸), the small intestine (*xiaochang* 小腸), the stomach (*wei* 胃), the gall bladder (*dan* 膽), the urinary bladder (*pangguang* 膀胱), and the triple burner (*sanjiao* 三焦).⁴³

The exact meaning of depots and palaces in this visceral system is hard to define. Following Paul U. Unschuld's study of the *Inner Canon*, we can consider that the depot organs are for storing items and the palace organs are "seen as places where important things are received only temporarily to be

⁴³ Unschuld, *Huang Di nei jing su wen*, 136-141.

Introduction

handled, assigned, and transmitted”.⁴⁴ There are associations between depots and palaces. Besides the theoretically constructed triple burner, the remaining five palace organs can be individually paired with the five depots, and the five depots further correspond to the five phases (*wuxing* 五行) (Table 0.2).

Lung (metal)	Heart (fire)	Spleen (earth)	Liver (wood)	Kidneys (water)
Large intestine	Small intestine	Stomach	Gall bladder	Urinary bladder

Table 0.2 Correspondence between depots and palaces based on the *Inner Canon*.

Among them, the tie between the spleen and the stomach is exceptionally strong. They are physically very close to each other at the centre of the body trunk, supposedly only separated by a membrane. In Chinese medicine, their function is highly synthesised, jointly accountable for digestion. The stomach as a palace organ receives ingested food, absorbs the vital force from it, and transmits the vital force to the spleen, nourishing the entire body. Given the central place of the spleen and the stomach in the Chinese conception of digestion, it comes as no surprise that the well-being of these two paired organs is a focus in Chinese dietary practices. They are supposedly vulnerable to irregular food and drink intake. Particularly, as we will discuss in chapter one, there was a strong concern over cold food, including food whose thermo-nature is cold. The cold food would supposedly cause damage to the spleen and the stomach, leading to indigestion and cold-related internal damage.

This kind of concern was crucial for the rise of pepper. First recorded by Chinese *materia medica* in the seventh century, pepper was defined as a warming medicine with an important medical efficacy for “warming the centre” (*wenzhong* 溫中), namely, warming the centre of the body trunk, where the spleen and the stomach are located. Chapter one will discuss how from the seventh through the tenth centuries, pepper, together with a group of exotic aromatics and spices, such as cloves, nutmeg, and cubeb pepper, was increasingly used as warming agents for treating cold-related digestive problems.

⁴⁴ Ibid, 130-131.

Introduction

It also shows how this group of warming exotics were further popularised from the eleventh century, amid a subtle shift of a mainstream medical theory, namely, cold damage (*shanghan* 傷寒).⁴⁵ Focusing on febrile diseases caused by contracting a pathogenic cold from the external environment, the cold damage theory became one of the most developed fields in Chinese medicine in the Northern Song period (960-1127).⁴⁶ Originally, its principal treatments, as defined by the *Inner Canon*, consisted only of sweating and purging. However, throughout the eleventh century, this theory was reinterpreted by some prominent physicians who favoured the therapy of warming the centre. They redefined the pathology of cold damage and made warming-the-centre a new principal treatment for cold damage.⁴⁷ This shift, as I will discuss in detail in chapter one, took place amid a changing perception of the body by the new social and political elites of the Northern Song dynasty, namely, the literati, who identified themselves as civil and literate, instead of military and war-like, and hence favoured the relatively mild therapy of warming the centre over the aggressive methods of sweating and purging.

As warming the centre rose to prominence in the mainstream medical theory of the Northern Song, the warming exotics, including pepper, which had already acquired efficacies for treating the spleen and the stomach at the centre of the body trunk, became popular medicines for broadly defined cold-related illness. They were now used not only for damage to the spleen and the stomach that was contracted internally by cold food but also for nourishing the body against diseases contracted externally from cold environments. It led to a medicinal culture in which people without any illness also regularly took decoctions made of warming exotics as health drinks, which were sold in beverage

⁴⁵ For cold damage in Chinese medicine, see Boyanton, “The *Treatise on Cold Damage* and the Formation of Literati Medicine”; Goldschmidt, *The Evolution of Chinese Medicine*, 69-102.

⁴⁶ For the conception of externally contracted diseases (外感病 *waigan bing*) in Chinese medicine, see Hinrichs, “The Catchy Epidemic”; Hanson, *Speaking of Epidemics in Chinese Medicine*.

⁴⁷ As we will elaborate in chapter one, this shift is first identified by Japanese researchers of the textual history of *Treatise on Cold Damage* (傷寒論 *Shanghan lun*). Okada, Makizumi, and Kotaka, *Sōizen shōkan ron kō*.

Introduction

stalls in cities, offered by well-off families to guests as a necessity like tea, and touted by the Imperial Pharmacy of the Northern and Southern Song (960-1279).⁴⁸

Moreover, among these warming exotics, pepper as mentioned earlier has a unique feature. It lacks any remarkable aroma but possesses strong hot spiciness, which would help pepper distinguish itself from other warming exotics to become a popular condiment. Chapter two shows that from around the early thirteenth century, some isolated evidence shows that pepper began to be combined with Sichuan pepper in a cooking technique that was popularised at that time known as Sichuan stir-frying (川炒 *chuanchao*). Thereafter, into the Mongol period, along with the rise of the trans-Indian Ocean world of pepper, more sources concerning pepper in Chinese foodways emerged. It becomes evident that by the Mongol period, pepper was no longer rare. It was either on its own used for seasoning or as an ingredient in ready-made spice mixtures.⁴⁹ Among a wide range of commonly used condiments, pepper was unique in two aspects. It was the only daily-used condiment that was exclusively imported from overseas, and it was particularly valued because its hot spiciness (*la* 辣) was stronger than most native condiments, making it assume a gustatory function comparable to chili pepper in modern Chinese cuisine. As a result, pepper, already being an important warming agent for energising digestion, further evolved into the only warming exotic that became widely used in Chinese cuisine as a hot spice.

These features exposed pepper to critics from a new medical culture. Section five of chapter two focuses on the three most influential of them, namely: Liu Wansu (fl. late 12th c.), Zhang

⁴⁸ For this beverage culture, see Yi, “Beisong de jianjian tangchayao”; Zheng, *Yaolin waishi*, 135-136; Liu Shufen, “Kezhi ze shecha, yuqu ze shetang”; idem, “*Chanyuan qinggui zhong suojian de chali yu tangli*”; Benn, *Tea in China*, 130-137; Chen, “Fa chu bosì,” 9-12.

⁴⁹ For the spice mixtures (*liaomu* 料物) in the Mongol period, see Sabban, “Court Cuisine in Fourteenth-Century Imperial China,” 177-181.

Introduction

Congzheng (fl. late 12th - early 13th c.), and Zhu Zhenheng (1281-1358).⁵⁰ They all belonged to the so-called “four great masters of the Jin and Yuan” (金元四大家) whose theories challenged the established medical culture of the Northern Song.⁵¹ Among them, the teachings of Liu Wansu were pathbreaking. He identified fire, instead of cold, as a major pathogenic factor of cold damage and hence opposed the popular therapy of warming the centre and advocated the use of cooling agents. As a follower of Liu, Zhang Congzheng was renowned for his preference for the aggressive methods of sweating, purging, and vomiting, which often employed cooling medicines. He specifically criticised the practice of using pepper for warming and replenishing the stomach in the treatment of indigestion.

Zhu Zhenheng, being the last great master from this period, was relatively eclectic. He reconciled rivalling theories from other medical masters, integrated them with Neo-Confucian philosophy, and created a synthesised system known as Danxi medicine. In Zhu’s theory, the body was perceived as relatively delicate and feminised (yin), appealing to the self-identity of the southern literati.⁵² Therefore, Zhu opposed Zhang’s aggressive methods, but at the same time, he welcomed Liu’s fire-centric pathology. With these backgrounds, Zhu developed a new cooling theory that reconceptualised fire from an external environmental factor into internal forces existing in the visceral system. He identified two types of internal fires, namely, the sovereign fire, whose abode was the heart, and the minister fire, whose abode was the kidneys and the liver. Among them, the minister fire in the kidneys was his major concern, because the kidneys corresponded to water, which was yin and crucial for balancing fire. Therefore, the gist of his teachings was known as “nourishing yin” (zhiyin 滋陰),

⁵⁰ See section five of chapter two.

⁵¹ Leung, “Medical Learning from the Song to the Ming,” 377-382; Fan, *Zhongguo yixue shilüe*, 227-265; Hanson, *Speaking of Epidemics in Chinese Medicine*, 39-43; Boyanton, “The *Treatise on Cold Damage* and the Formation of Literati Medicine,” 196-216. There are different versions of the “four great masters”. Here, I follow a widely acknowledged version, including Liu Wansu, Zhang Congzheng, Li Gao, and Zhu Zhenheng. They are all discussed in this introduction.

⁵² Wu, “A Medical Line of Many Masters”; Furth, “The Physician as Philosopher of the Way”; Simonis, “Illness, Texts, and “Schools” in Danxi Medicine.”

Introduction

particularly for nourishing the water and yin of the kidneys, and “bringing fire down” (*jianghuo* 降火), particularly for bringing down the minister fire of the kidneys. Pepper, identified by Zhu Zhenheng as belonging to fire and with a desiccating nature, contradicted both principles.⁵³

Yet, while pepper was losing ground, the culture of using warming medicines did not die out. Instead, it survived with a major adaptation by Li Gao (1180-1251). Li was also a “great master of the Jin and Yuan”, but his teachings were different from the above-mentioned three masters. Li opposed Liu Wansu and Zhang Congzheng’s cooling and aggressive methods. He re-emphasised the importance of warming the spleen and the stomach. Yet, instead of using acrid and warm medicines like pepper and aromatic drugs, Li preferred relatively mild medicines that were sweet and warm, such as ginseng. Li’s works had been published and become widely circulated in China since the mid-thirteenth century.⁵⁴ They profoundly influenced Zhu’s synthetic medical thoughts. For a long period, they offered an important supplementary therapy to balance the popular cooling medicine. However, in the early sixteenth century, new debates arose after a polemic work was published by a scholar-official-turned physician, Wang Lun (1453-1510). Wang’s work simplified Zhu’s comprehensive teachings to an overwhelmingly cooling therapy and overshot his target by one-sidedly criticising the use of warming and replenishing medicines, including ginseng.⁵⁵ It soon aroused strong responses from physicians who followed the warming culture. They defended the use of ginseng and criticised Wang’s preference for using cooling agents to nourish yin. Amid these debates, a “warming and replenishing” (*wenbu* 溫補) medical culture rose and became popular in the sixteenth and seventeenth centuries.⁵⁶

⁵³ See section five of chapter two.

⁵⁴ Liu, “Shuji kanke yu yixue chuancheng.”

⁵⁵ Simonis, “Illness, Texts, and ‘Schools’ in Danxi Medicine.”

⁵⁶ De Vries, “The Dangers of ‘Warming and Replenishing’.”

Introduction

While these medical debates have become well known among specialists of Chinese medical history, what is understudied is their links to the rise of a new food culture that favoured a group of sea delicacies represented by sea cucumbers and edible bird's nests. In chapter three, I will examine: 1) how edible bird's nests were transformed from a “vegetable” serving a spicy foodway into a “clear and replenishing” food item for a relatively bland culinary culture because of their imagined connection with a popular cooling medicine *haijfen* (海粉, egg masses of sea hares (*Anaspidea*)); and 2) how sea cucumbers were constructed as extraordinary ginseng from the sea with perfect medical properties addressing concerns from both the warming and cooling theories.

Furthermore, along with these medical debates, the cooking techniques of Chinese high cuisine also changed. Section five of chapter two shows that the strongly flavoured foodway that favoured the use of pepper was opposed by Zhu Zhenheng. Thereafter, chapter three demonstrates how in line with the retreat of strong condiments, a new cooking technique rose to introduce a more delicate flavour, *xian* (鮮), with the help of clear broths. This cooking technique became essential in literati-style cuisine that redefined Chinese high cuisine in the course of the sixteenth and seventeenth centuries. Amid this change, the preserved marine products, such as sea cucumbers and edible nests, emerged as perfect carriers of the aestheticised *xian* flavour for their gelatinous or fibrous texture could richly absorb clear broths.

Methodology and Structure

From pepper to sea cucumbers, changing Chinese taste for exotics points to an important topic in global cultural history, namely, how taste changes in a global context. Being part of the history of sensual culture, change in taste has been interesting cultural historians since at least the age of Johan Huizinga. There is rich literature about how European taste- and smell-scape evolved from the

Introduction

medieval through the early modern periods.⁵⁷ Researchers have identified a comparable gustatory transition in western Europe, through which strong spices gave way to a more delicate food culture, particularly in association with the rise of modern French cuisine.⁵⁸ The shift from a hot-spicy food culture that favoured pepper to a delicate foodway that favoured sea cucumbers in China from the Mongol Yuan to the Manchu Qing periods seems to also give a strong sense of déjà vu to a key argument by Huizinga in *The Autumn of the Middle Ages* (*Herfsttij der middeleeuwen*, 1919):

When the World was half a thousand years younger all events had much sharper outlines than now.⁵⁹

This strange parallel between Chinese and European culture, however, shall not encourage an extension from European exceptionalism to Chinese exceptionalism, or from Euro-centric to China-centric. Instead of proposing a gustatory modernity shared exclusively by European and Chinese material culture, this research chooses to problematise the Chinese-ness in this gustatory shift from the perspectives of cultural diversity and external influence.

To begin with, I have to acknowledge that for the change of taste in China, this research relies heavily on texts authored by literati or literati-style physicians. They collectively offered rich documentation about when, how, and why taste changed in China. Without closely reading these accounts, the hidden cultural shift connecting pepper and sea cucumbers may never be uncovered. Yet, we shall also be aware that these sources do not reflect a monolithic Chinese culture but show negotiations between rivalling food and medicinal cultures in China. For instance, in terms of the medical texts, their authors were, in many cases, keener to undermine each other than to form a

⁵⁷ To name just a few, Huizinga, *The Autumn of the Middle Ages*; Revel, *Culture and Cuisine*; Classen, Howes, and Synnott, *Aroma*; Korsmeyer, ed., *The Taste Culture Reader*; Howes, ed., *Empire of the Senses*.

⁵⁸ Halikowski-Smith, “Demystifying a Change in Taste”; Peterson, *Acquired Taste*.

⁵⁹ Huizinga, *The Autumn of the Middle Ages*, 1.

Introduction

commonwealth. From these rivalling voices, we can historicise how and why new medical theories emerged and influenced foodways.

For the more piecemeal information about cooking, the influence of the literati was also debatable. Up to the early sixteenth century, Chinese high cuisine was not fully dominated by the taste of the literati. For instance, an important food recipe collection, which witnessed both the epitome of pepper consumption in China and the advent of edible bird's nests, was compiled in 1504 by a son of a female cook, who travelled across the Ming Empire with her office-holding father and husband and memorised many popular recipes which are often unmentioned in literati-style cookery books coming from a later period.⁶⁰ Even after the rise of literati cuisine from the end of the sixteenth century, for many non-elite Chinese families, their everyday food in fact became more hot-spicy, because of the introduction of chili pepper to China.⁶¹ It is even arguable that there were two diverging gustatory revolutions in China. For the high cuisine that began to be defined by literati's taste from the late sixteenth century, the hot-spicy culture represented by pepper gradually gave way to a delicate foodway that favoured sea delicacies. In contrast, for most ordinary families living in economically backward inland China, locally cultivated chili pepper saved them from gustatory poverty and hot spiciness began to define their regional cuisines. The interactions between these two diverging foodways will be discussed in section five of chapter two.

Through examining these interactions among different medical and food cultures in China, we can find that there were strong anxieties among the literati to distinguish themselves from other Chinese or even from other literati through constructing a more delicate body and following a more exquisite foodway.⁶² Whereas Chinese cultural and art historians are no stranger to this kind of social

⁶⁰ See section one of chapter two and section four of chapter three.

⁶¹ Dott, *The Chile Pepper in China*; Cao, *Zhongguo shila shi*.

⁶² For how literati developed their distinctive material culture, see Clunas, *Superfluous Things*. For taste and social distinction, see Bourdieu, *Distinction*.

Introduction

distinction by the literati through consumption, what makes this research different is that it points to edible things of foreign origins.⁶³

These two edible exotics both originated from non-Chinese cultures. Behind their rise in Chinese cuisine, there were cross-cultural exchanges between China and the world. In terms of pepper, chapter one will critically read some early Chinese medical accounts, showing that pepper's integration into Chinese medicine had close interactions with other pepperlike exotics and they all received influence from Ayurveda. Chapter two further engages with Chinese geographic records about pepper's origins in Java and the Malabar Coast. These sources help understand how and why pepper changed from a rarity to a commonly used spice amid the reconfiguration of the Indian Ocean World through the Mongol Conquest.

For sea cucumbers, fortunately, we have a wealth of sources from multiple angles, including a number of literati's writings, a merchant handbook, and a large bulk of non-Chinese documents from Southeast Asia, Japan, and Korea. Chapters three and four use these sources to trace the change of Chinese taste in a broad world of sea cucumbers. Particularly, with Dutch sources from Makassar, we can critically examine how tropical sea cucumbers emerged in the shadow of their temperate counterparts and eventually challenged the dominance of the latter. Through the tension and interactions between them, we can explore initiatives out of the margins.⁶⁴ We may find that instead of being passively incorporated by an expanding Chinese commodity network and forced to follow

⁶³ Not many works have been done on exotics in Chinese material culture. Besides the early works by Schafer and the above-mentioned works on aromatic drugs and marine products, there are also remarkable works by Yangwen Zheng on opium and *yang huo* (foreign stuff/goods, mainly from Europe), by Lai Hui-min on *yang huo* and *Dongyang huo* (Japanese goods), by Anna Grasskamp on coral, by Jonathan Schlesinger on pearls, mushroom, and fur, and by He Bian on exotic medicines. Zheng, *The Social Life of Opium in China*; idem, "Qingdai yanghuo de liutong yu chengshi yang pinqian de chuxian"; idem, *China on the Sea*, 207-243; Lai, "Qianjia shidai Beijing de yanghuo yu qiren richang shenghuo"; idem, "Suzhou de Dongyang huo yu shimin shenghuo"; Grasskamp, "Branch and Bones"; idem, *Objects in Frames*, 127-162; Schlesinger, *A World Trimmed with Fur*; Bian, "An Ever-Expanding Pharmacy"; idem, *Know Your Remedies*, 153-178.

⁶⁴ For an overview of Chinese commodity networks in Southeast Asia, see Tagliacozzo and Chang, eds, *Chinese Circulations*.

Introduction

the gustatory hierarchy established by Chinese consumers, Southeast Asian indigenous collectors had a proactive role to play in this world of sea cucumbers. They actively joined that network and challenged that hierarchy.

This example encourages us to explore how Chinese taste for edible exotics was influenced by the global lives of these things.⁶⁵ Through cross-examining sources from China and Makassar, chapter four reveals that taste was not determined by Chinese literati consumer's aesthetic values alone but negotiated between Chinese consumers and Southeast Asian producers. It shows that Southeast Asian sea cucumbers fishers were in fact well informed of the gustatory preference of Chinese elite diners because that mattered directly to the price of their products. With that information, they had multiple strategies to interact with Chinese consumers' taste. They could either follow the established gustatory hierarchy in China by looking for some tropical species that resembled the temperate sea cucumbers, or challenge that hierarchy by diving deeper to the bottom of the sea to search for some large tropical species whose shape and texture superseded the temperate variety, or even redefine it by industrially transforming some less-valued shallow-water tropical species into new products that stood by their own gustatory merits.

Taking these different angles into consideration, I think there is no single genre of texts that can independently inform us of how this gustatory revolution took place and mattered to global history. Without the existing scholarship from Southeast Asian studies, we may never realise that China had such strong demand for pepper and sea cucumbers. Without the Chinese medical and culinary texts, we may never understand why that demand was so strong. Without the Dutch reports about sea cucumber fishery around Makassar, we may completely ignore influences out of the margins. With these diverse and cross-cultural sources, the challenge for this dissertation is how to integrate them

⁶⁵ For global lives of things, see Gerritsen and Riello, eds., *The Global Lives of Things*; Gerritsen, "From Long-Distance Trade to the Global Lives of Things"; Appadurai, ed., *The Social Life of Things*.

Introduction

and make them communicate with each other. That challenge, meanwhile, is also inspiring, as it encourages me to explore these two food-defined worlds and the culturally evolving Chinese body, and to discover many hidden links between these seemingly unrelated fields.

With such a challenge and vision, I am now going to demonstrate this untold Chinese gustatory taste in global history. The dissertation consists of four long chapters. The first two are about pepper and other aromatics and spices. The last two are about sea cucumbers and other marine products. Whereas the dissertation as a whole is arranged in chronological order, each chapter has a specific theme. Chapter one, “Warming the Centre”, and chapter three, “Sea Changes”, are about how these two groups of edible exotics emerged in Chinese medicine and foodways. Chapter two, “Peppering the World”, and chapter four, “A World of Sea Cucumbers”, are respectively about the two worlds of pepper and sea cucumbers. There are several transitional sections in chapters two and three for linking the retreat of pepper to the rise of a new group of top delicacies supposedly from the sea, namely: sea cucumbers, edible bird’s nests, shark fins, and abalones. Of them, I will elaborate on medical debates concerning sea cucumbers and edible nests, and a change of cooking techniques concerning shark fins. Besides that, chapter one will also discuss cloves, cubeb pepper, and other popular aromatic drugs in Chinese medicine during the Tang and Song periods, but throughout the dissertation, the main focus remains on pepper and sea cucumbers.

One

Warming the Centre

Sometime between 1225 and 1227, while the Mongols were conquering the Jurchen Jin dynasty (1115 - 1234) in North China,¹ the Imperial Pharmacy of the Southern Song dynasty (1127 - 1279) in South China proposed a “pepper drink” (*hujiao tang* 胡椒湯) to be sold in its local branches, with a recipe as follows:

- 1 tael (*liang* 兩) of red mung beans (*bongdou* 紅豆),
- 1 tael of cassia,
- 6 taels of pepper,
- 3 taels of dried ginger,
- 30 taels of balloon-flower root (*jiegeng* 桔梗), and
- 7 taels of liquorice.²

According to the formulary of the Imperial Pharmacy, these ingredients would be mixed, pulverised, and sold as a compound by many local branches of the Pharmacy spread across the territory of the Southern Song dynasty.³ Consumers were advised to scoop a big coin of it,⁴ add a little salt, and then pour hot water over it. As the Pharmacy advertised, this drink could:

¹ For the Mongol conquest of North China, see Wang, *In the Wake of the Mongols*.

² Chen, Pei, and Chen, comps., *Taiping huimin beji jufang*, juan 10, 397-398.

³ The Imperial Pharmacy was a kind of chain drugstores selling prepared prescriptions, instead of simples. Fan, “Liang Song guanyao ju” (2), 38-40; Goldschmidt, *The Evolution of Chinese Medicine*, 128-130.

⁴ A copper coin served as a scoop to take a small amount of powder up.

Warming the Centre

Cure the intrusion of cold in the spleen and the stomach, diaphragm impediment,⁵ pain in [the area of] the heart and the abdomen,⁶ vomiting with [qi] counterflow, and nausea. Regular use can warm the spleen and the stomach, remove cold, and soothe qi.

治脾胃受寒，胸膈不利，心腹疼痛，嘔逆，惡心。常服溫暖脾胃，去寒，順氣。⁷

In light of the advances of the Mongol forces, a pepper drink as well as its digestive and warming efficacies may seem to be an issue too trivial to recount, but if we shift our focus from military conquest to cultural exchange, we may find that this drink is a testimony to a unique age in Chinese history when spices and aromatics pervaded Chinese medicine and foodways and defined China's connections with the tropical world of Asia. Students of the Northern and Southern Song dynasties are no strangers to such an age, as the pervasive influence of the so-called aromatic drugs in Chinese material culture during this period has become a well-known theme.⁸ It may also sound familiar to Southeast Asian historians, as a commercial boom in Southeast Asia from the tenth through the thirteenth centuries has been identified and attributed to China's strong demand for tropical spices and aromatics.⁹

Yet, beyond a general consensus among East and Southeast Asian specialists over the immense scale of the spice and aromatic trade, there remains a fundamental question to be nuanced: Why was there such a strong demand for these flavour and aroma-rich exotics in China? Previous scholarship in this field tends to approach this question from an olfactory perspective, referring to these exotics as “aromatic drugs”, and associating them with the incense culture of Chinese literati, which had

⁵ Chinese medicine considered swallowing difficulties as the blockage of the diaphragm (膈不通 *ge butong*). Fan, *Zhongguo bingshi xinyi*, 131-132.

⁶ Chinese medicine tended to confuse the pain in the stomach with the heart. A vaguely defined term, “heartache and abdominal pain” (心腹疼痛 *xinfu tengtong*), was used to describe stomach pain. *Ibid*, 133-134.

⁷ Chen, Pei, and Chen, comps., *Taiping buimin heji jufang*, juan 10, 398.

⁸ Two standard works on this subject are Yamada, *Tōa kōryō shi kenkyū*; Lin, *Songdai xiangyao maoyi shi*.

⁹ Wisseman Christie, “Javanese Markets and the Asian Sea Trade Boom”; Wade, “An Early Age of Commerce in Southeast Asia.”

Chapter 1

attained a high level of refinement by the Northern and Southern Song periods.¹⁰ However, this smell culture-centric approach inadvertently marginalises a globally important spice, pepper. While possessing no remarkable aroma for perfuming and incense-burning, pepper became deeply integrated into Chinese medicine and foodways and came to play a dominant role in China's maritime trade with Southeast Asia by the dawn of the Mongol Conquest.¹¹ Targeting this gap, the chapter aims to answer how pepper, together with a group of exotic aromatics and spices, emerged at the intersection between medicine and food in China.

1. Warming Exotics

Back to the pepper drink of the Imperial Pharmacy, this drink is listed in a unique section in the Pharmacy's formulary entitled "all sorts of drinks" (*zhubutang* 諸湯), which contains 26 recipes in total. These recipes were added by the Pharmacy into its printed formulary at different stages. For instance, in the 1225-1227 update, the Pharmacy proposed, besides the pepper drink, also "fennel seed drink" (*huixiang tang* 茴香湯), "sandalwood drink" (*tanxiang tang* 檀香湯), and "suosha (*Amomum villosum*) drink" (*suosha tang* 縮砂湯).¹²

These flavour-rich drinks targeted no urgent issues. In the Northern and Southern Song periods, they served as health drinks for everyday consumption and assumed a social function tantamount to tea in China. By then, a spicy and aromatic drink was an everyday necessity for a well-off family because a basic etiquette in serving a guest prescribed that, "when a guest arrives tea is served, on

¹⁰ Liu, *Songdai xiangpu zhi yanjiu*, Yang, *Xiangshi*; idem, "L'encens sous les Song (960–1279) et les Yuan (1279–1368)."

¹¹ There have been some related studies about the introduction of pepper to China, but a thorough investigation is wanting. Laufer, *Sino-Iranica*, 374-375; Schafer, *The Golden Peaches of Samarkand*, 149-151; Yamada, *Tōa kōryō shi kenkyū*, 231-235; Ts'ao, "Pepper Trade in East Asia," 222-225; Chen, *Silu yiming*, 43-66.

¹² Chen, Pei, and Chen, comps., *Taiping huimin beji jufang*, *juan* 10, 393-401.

Warming the Centre

her/his departure decoctions are served” (客至則設茶，欲去則設湯).¹³ Ready-made decoctions were also sold on the street. In Kaifeng, the capital city of the Northern Song, they were sold together with tea as breakfast drinks.¹⁴ A renowned cityscape scroll of Kaifeng, *Along the River During the Qingming Festival* (*Qingming shanghe tu* 清明上河圖), depicts a beverage stall that advertises “aromatic drinks” (*xiang yinzi* 香飲子) on its banner and serves a passer-by with a bowl of drink (Figure 1.1).

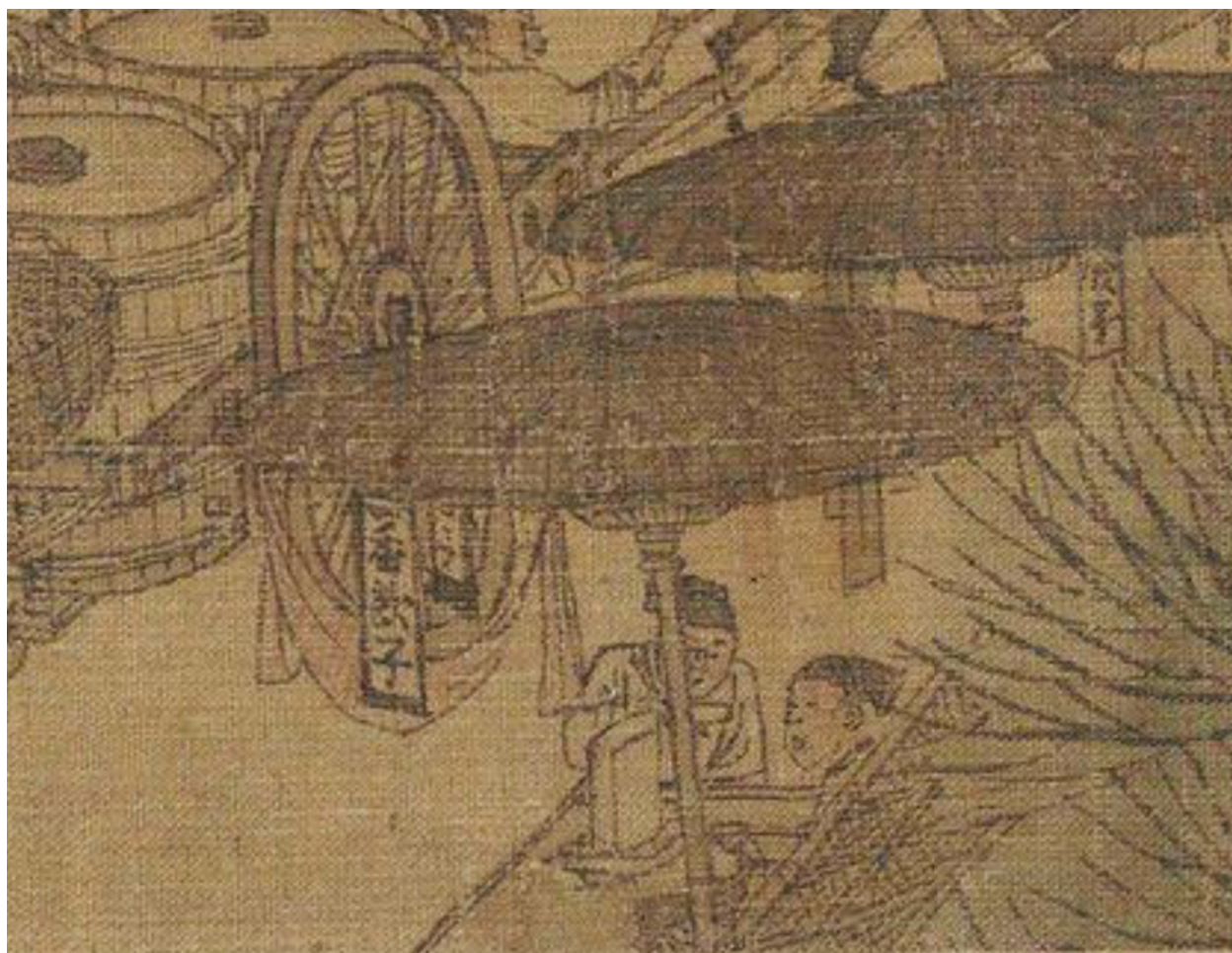


Figure 1.1 Street scene with a beverage stall from *Along the River During the Qingming Festival*, attributed to Zhang Zeduan (fl. early 12th c.).

Source: Palace Museum, Beijing.

¹³ Liu, “Kezhi ze shecha, yuqu ze shetang”; idem, “*Chanyuan qinggui zhong suojian de chali yu tangli*”; Benn, *Tea in China*, 130-137; Chen, “Fa chu bosu,” 9-12.

¹⁴ Meng, *Dongjing menghualu jianzhu*, 357; Yi, “Beisong de jianjian tangchayao”; Zheng, *Yaolin waishi*, 135-136.

Chapter 1

These drinks were a testimony to a medical culture that favoured exotic spices and aromatics. An important promotor of this culture was the Imperial Pharmacy. Established by the Northern Song imperial state in 1076 as part of a major fiscal reform, the Pharmacy aimed to at once sell ready-made medicines to the public for a reasonable price and to generate a profit.¹⁵ Endorsed by imperial power, it could easily access an immense store of exotic spices and aromatics collected by the Maritime Trade Superintendency (Shibosi 市舶司) from ocean-going ships.¹⁶ That supply encouraged the Imperial Pharmacy to widely prescribe exotics in its formulary.¹⁷ The formulary was well-received in the mainstream medical culture of the Northern and Southern Song dynasties, which favoured spicy and aromatic exotics.¹⁸ All but one of the 26 health drinks in its formulary contain at least one spicy or aromatic ingredient, such as cloves, clove twigs, clove bark,¹⁹ cassia, sandalwood, ginger, galangal, *suosha* (*Amomum villosum* 縮砂), pepper, nutmeg, fennel seeds, asafoetida, *bidenggjie* (cubeb pepper or *Embelia ribes* 華澄茄), *cao doukou* (*Alpinia katsumadai* 草豆蔻), and *zisu* (*Perilla frutescens* 紫蘇).²⁰ Among them, cloves, clove twigs, clove bark, sandalwood, pepper, nutmeg, fennel seeds, asafoetida, and *bidenggjie* were either from or preferably from overseas.²¹

What were the medical functions of these spicy and aromatic exotics? Through a survey of their medical descriptions in the mainstream *materia medica* promulgated by the Northern Song imperial state,

¹⁵ Fan, “Liang Song guanyao ju” (1), 29-38; Goldschmidt, *The Evolution of Chinese Medicine*, 126-128; Fan, *Beisong Jiaozheng Yishujie xintan*, 239-254.

¹⁶ Fan, “Liang Song guanyao ju” (2), 33-37; Lin, *Songdai xiangyao maoyi shi*, 204-269.

¹⁷ Fan, *Beisong Jiaozheng Yishujie xintan*, 250-258.

¹⁸ Liu, *Yongjia yipai yanjiu*; Fan, *Zhongguo yixue shilüe*, 167-169.

¹⁹ The so-called clove bark (丁香皮 *dingxiang pi*) was not the bark of a clove tree, but the bark of a cinnamon tree from Ambon and the Maluku Islands called *kulit lamang* in Malay, which “is chewed for its clove-like taste”. Zumbroich, “From Mouth Fresheners to Erotic Perfumes,” 51.

²⁰ The only exception is apricot-kernel cream drink (杏霜湯 *xingshuang tang*). Chen, Pei, and Chen, comps., *Taiping huimin beji jufang*, juan 10, 393-401.

²¹ For a general survey of their origins, see Wheatley, “Geographical Notes on Some Commodities Involved in Sung Maritime Trade”. For more discussions on cloves, sandalwood, pepper, nutmeg, fennel seeds, and *bidenggjie*, see the following sections and chapter two.

Warming the Centre

Zhenglei Materia Medica (*Zhenglei bencao* 證類本草), we find that they were mostly defined as acrid and warm (Table 1.1).²² The majority of them had certain clinical uses for treating digestive ailments, such as sudden turmoil (cholera), indigestion, and vomiting. These symptoms were typically associated with the over-abundance of yin and the depletion of yang in the principal viscera responsible for digestion, namely, the spleen and the stomach.²³ Therefore, these exotics were often considered to have warming effect such as “warming the spleen and the stomach” (溫脾胃), “warming the centre” (溫中), “curing accumulated cold” (治積冷), and “removing *qi* depletion and cold in the stomach mouth” (去胃口氣虛冷) (Table 1.1). Correspondingly, according to the Imperial Pharmacy’s formulary, these health drinks were also often for “curing all sorts of cold *qi*” (治一切冷氣), “warming the centre and benefiting *qi*” (溫中益氣), “removing cold and soothing *qi*” (去寒順氣), and “warming the spleen and the stomach” (溫脾胃).

	Flavour and nature	Main efficacies ²⁴
Asafoetida ²⁵ 阿魏	Acrid flavour and neutral 味辛、平	It kills all types of worms, removes malodorous <i>qi</i> , breaks concretion-illness accumulation, brings down malign <i>qi</i> , and eliminates evil demons and <i>gu</i> poison. 主殺諸小蟲，去臭氣，破癥積，下惡氣，除邪鬼、蠱毒。
Cloves ²⁶ 丁香	Acrid flavour and warm 味辛、溫	They warm the spleen and the stomach, stop sudden turmoil, [cure] congestion with distension, wind poison,

²² *Zhenglei Materia Medica* is not a single text, but a series of *materia medica* compiled mainly during the late eleventh and early twelfth centuries. Here I refer to a thirteenth century print, *Chongxiu zhenghe jingshi zhenglei beiyong bencao*.

²³ For their aetiology, see Wang et al., comps., *Taiping shenghui fang*, *juan* 5, 107 119, 121, 132, 138, 140; *juan* 47, 1432, 1435, 1440, 1448, 1454, 1457.

²⁴ For the translation of Chinese illness terms, this research mainly follows Zhang and Unschuld, *Ben cao gang mu Dictionary, Volume One*.

²⁵ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 9, 224.

²⁶ *Ibid*, *juan* 12, 307.

Chapter 1

		all types of swelling, and sweets-illness and bug-erosion of teeth. They are able to effuse all sorts of fragrances. 主溫脾胃，止霍亂、擁脹、風毒、諸腫，齒疳齩，能發諸香。
<i>Bidengqie</i> (cubeb pepper or <i>Embelia ribes</i>) ²⁷ 萹澄茄	Acrid flavour and warm 味辛、溫 Acrid and bitter flavour, and slightly warm 味辛苦，微溫	It brings <i>qi</i> down, dissolves food, [deals with] skin wind and <i>qi</i> distension in the heart and the abdomen, stimulates appetite, cures demon <i>qi</i> , dyes hair, and perfumes the body. 主下氣、消食，皮膚風，心腹間氣脹，令人能食，療鬼氣，能染髮及香身。 It deals with sudden pain in [the region] of the heart and the abdomen, sudden turmoil with vomiting and diarrhoea, phlegm aggregation-illness, and cold <i>qi</i> . 主心腹卒痛，霍亂吐瀉，痰癖，冷氣。
Fennel seeds ²⁸ 懷香子（茴香）	Acrid flavour and neutral 味辛、平	It deals with all sorts of ulcer, sudden turmoil, and harm caused by snakes. 主諸瘻、霍亂及蛇傷。
Nutmeg ²⁹ 肉豆蔻	Acrid flavour and warm 味辛、溫	It deals with demon <i>qi</i> and warm the centre; cures accumulated cold, distention with pain in the heart and the abdomen, sudden turmoil, strike by malign cold, attachment illness of vomiting and foam, and cold <i>qi</i> ; dissolves food, and stops diarrhoea and sudden turmoil among children being breast-fed. 主鬼氣、溫中，治積冷，心腹脹痛，霍亂，中惡冷，疰嘔沫，冷氣，消食，止洩，小兒乳霍。

²⁷ Ibid, *juan* 9, 235. For the two different accounts, see section three in this chapter.

²⁸ Ibid, 225.

²⁹ Ibid, 231.

Warming the Centre

Pepper ³⁰ 胡椒	Acrid flavour and greatly warm 味辛、大溫	It brings <i>qi</i> down, warms the centre, removes phlegm, and eliminates wind cold in the depot and palace organs. 主下氣、溫中，去痰，除臟腑中風冷。 It removes <i>qi</i> depletion and cold in the stomach mouth; [deals with] food remaining [in the body] overnight failing to dissolve, sudden turmoil (cholera), <i>qi</i> counterflow, sudden pain in the heart and the abdomen, and upward rushing of cold <i>qi</i> ; harmonises <i>qi</i> . 去胃口氣虛冷，宿食不消，霍亂，氣逆，心腹卒痛，冷氣上衝，和氣。
Sandalwood ³¹ 檀香	Hot 熱	It deals with the heart and the abdomen, sudden turmoil, and strike by malign demon <i>qi</i> ; kills worms. 主心腹，霍亂，中惡鬼氣，殺蟲。

Table 1.1 Warming exotics.

Source: *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*.

2. Foreign *Jiao*

How did these exotics come to be classified as warming and digestive? To answer this question, we shall investigate their integration within Chinese medicine. Being exotics, most of them only became known to Chinese medical practitioners from the mid-centuries of the first millennium, when Chinese *materia medica* began to incorporate spices and aromatics from southern and western Asia.³² This incorporation, in its initial stage, often intermingled medical knowledge of foreign origins with local adaptations.

³⁰ Ibid, *juan* 14, 349. For the two different accounts, see section three in this chapter.

³¹ Ibid, *juan* 12, 309.

³² Concerning their integrations with Chinese medicine, a case study that inspires this research is Leung and Chen, “The Itinerary of Hing/*Awei*/Asafetida across Eurasia.”

Chapter 1

This was the case with pepper. Pepper (*Piper nigrum*) is the seed of a vine plant that originally grows in the mountainous terrain of the Malabar Coast of South India. Its Chinese name, *hujiao* (胡椒), is a combination of *hu* (foreign) and *jiao*, literally meaning foreign *jiao*. In ancient China, *jiao* commonly referred to a woody plant whose seed husks are used as spices, which are presently known as *hua jiao* (flower pepper 花椒) in Chinese or Sichuan pepper in English. Medieval Arabic text transliterated it as *fagara*, influencing Carl Linnaeus in 1753 to name it *Schinus fagara* (now *Zanthoxylum fagara*).³³ In ancient China, *jiao* was classified in accordance with their original places. Among them, the most important were *qin jiao* (秦椒) and *shu jiao* (蜀椒). The former was native to Shaanxi, the core area of early Chinese imperial states. The latter was from Sichuan, a southern frontier of ancient China.³⁴ Based on this nomenclature, the Chinese name for pepper, *hujiao*, denoted a type of *jiao* from a foreign land.

To the Chinese in the first millennium, the exact origin of pepper was an enigma. Being the first Chinese record of pepper, the dynastic history of the Later Han (25-220 CE), *Hou Hanshu* (*The Book of the Later Han* 後漢書), notes that pepper was a product of India.³⁵ Thereafter, a mid-fifth-century geographic book, *Extensive Records* (*Guang zhi* 廣志), notes that pepper was “from the Western Regions”,³⁶ referring to the Inner Asian world to the west of China. The dynastic histories of the Wei (386-534) and the Sui (581-619) note that pepper was from Persia.³⁷ The official *materia medica* of the Tang dynasty, *Newly Revised Materia Medica* (*Xinxiu bencao* 新修本草, 659), records that pepper was

³³ Austin and Felger, “Sichuan Peppers and the Etymology of *Fagara* (Rutaceae).”

³⁴ Lin, “Jiaoshi chutan.”

³⁵ Fan, *Hou Hanshu*, *juan* 88, 2921; Ts’ao, “Pepper Trade in East Asia,” 222.

³⁶ This long-lost text was quoted by Jia, *Qimin yaoshu yizhu*, *juan* 4, 303. For the date of *Extensive Records*, see Wang, “*Guang zhi* chengshu niandai kao.”

³⁷ Wei, *Weishu*, *juan* 102, 2270; Wei et al., *Suishu*, *juan* 83, 1856-1857.

Warming the Centre

from Xirong (西戎), namely, the place of “western [warlike] people”.³⁸ The famous monk, Xuanzang (602-664), who made a pilgrimage to India and stayed there for over ten years, noted that in Aṭāli (Azhali 阿吒釐), a non-Buddhist province of the ancient kingdom of Malwa in west-central India, there were “pepper trees whose leaves are like Sichuan pepper” (出胡椒樹，樹葉若蜀椒也).³⁹ However, Xuanzang had likely never visited Aṭāli and eye-witnessed a pepper plant, as his description of pepper as a tree with leaves like Sichuan pepper is simply wrong. About two centuries later, a new account was provided by an erudite scholar living in Chang’an, Duan Chengshi (ca. 801-863). He claimed that pepper’s foreign name was *meiliuzhi* (昧履支), known as *marica* in Sanskrit. It was the seed of a vine plant from the kingdom of Magadha (*Mojiatuo guo* 摩伽陀國).⁴⁰ Magadha referred to the region around Patna in Middle India.⁴¹ It had intensive diplomatic, religious, and medical exchange with China during the seventh century.⁴²

Yet, none of these above-mentioned places was precisely the origin of pepper. Throughout the first millennium, the principal pepper producing area was the Malabar Coast in the Far South of India. This coast experienced a critical transition during the period when the Chinese became increasingly interested in pepper. From the fifth through the ninth centuries, it lost direct trade with the Roman Empire via the Red Sea route and was gradually integrated by West Asian traders into a Persian/Arab network.⁴³ Contemporary Chinese were unlikely aware of that change, but gradually more records about pepper in China during this period indicate that there was likely a diversion of Malabar pepper,

³⁸ Su et al., *Xinxiu bencao*, juan 14, 205.

³⁹ Xuanzang and Bianji, *Datang Xiyu ji*, juan 11, 907. Soothill and Hodous, comps., *A Dictionary of Chinese Buddhist Terms*, 286.

⁴⁰ Duan, *Youyang zazhu*, juan 18, 179.

⁴¹ Sen, “In Search of Longevity and Good Karma,” 7, footnote 16.

⁴² Ibid, passim.

⁴³ Malekandathil, “Muziris and the Trajectories of Maritime Trade”; Power, *The Red Sea from Byzantium to the Caliphate*; Hourani, *Arab Seafaring in the Indian Ocean*.

Chapter 1

which was previously oriented to the Mediterranean World and West Asia, towards an emerging consumer market in East Asia via overland routes via Central Asia.

With an exotic origin, pepper was initially known as a condiment for exotic cuisines in China. A sixth-century agricultural encyclopaedia, *Essential Arts of the Common People* (*Qimin yaoshu* 齊民要術), records a cooking technique called “*hu pao rou fa*” (胡炮肉法), literally meaning “meat roasted in a foreign way”. *Pao* in classical Chinese means “clay-wrapped baking”, namely, “to wrap meat up in vegetable leaves, paste clay all around it and bake it directly in the fire”.⁴⁴ The *hu pao rou fa* was to encase finely sliced threads of lamb into sheep’s stomach and then bury the stitched stomach in a hot pit. Its seasonings included fermented beans, salt, spring onion stems (*cong bai* 蔥白), ginger, Sichuan pepper, long pepper (*bibo* 萆茭), and pepper. The encyclopaedia remarks that it was “exceptionally fragrant and delicious” (香美異常).⁴⁵ Later on, in the ninth century, Duan Chengshi also noted that, when people made “foreign-dish meat” (*hupan rou* 胡盤肉), they all used pepper, which had an “extremely hot-spicy” (至辛辣) flavour.⁴⁶

Some of these exotic cuisines were incorporated into Chinese dietary therapies. In the seventh century, an eminent physician, Sun Simiao (fl. 7th c.), proposed two dishes for restoring a depleted body. The first was a stew of sheep heads and legs, recommended as a “recipe for replenishing five types of exhaustion, seven types of harm, and depletion detriment” (補五勞七傷虛損方). Its seasonings were very close to the *hu pao rou fa*, including pepper, long pepper, dried ginger, spring onion stems, and fermented beans.⁴⁷ The second was a “recipe for replenishing depletion and

⁴⁴ Huang, *Fermentations and Food Science*, 73.

⁴⁵ Jia, *Qimin yaoshu yizhu*, *juan* 8, 605-606.

⁴⁶ Duan, *Yonyang zazhu*, *juan* 18, 179. For more examples of the use of pepper for exotic cuisines in Tang China, see Wen, *Tangdai wailai xiangyao yanjiu*, 263-271.

⁴⁷ Sun, *Beiji qianjin yaofang jiaoshi*, *juan* 11, 376; idem, *Qianjin yifang jiaoshi*, *juan* 12, 204.

Warming the Centre

exhaustion” (補虛勞方), which was even closer to the *bu pao rou fa*, as it used a technique to encase sliced sheep viscera into a sheep stomach, and then boil it. It used similar seasonings, including pepper, long pepper, fermented beans, spring onion, and butter.⁴⁸

Why did Sun Simiao recommend these two dishes with exotic spices for replenishing the body? These recipes appear in a section entitled “elderly care and dietary therapy” (養老食療). It targeted elder’s illness, which, according to Sun, was “mostly because, while young, they took too much cool during spring and summer, and their food and drink are too cold” (夫老人所以多疾者，皆由少時春夏取涼過多，飲食太冷). Therefore, elderly people should stop eating cold things like finely sliced raw fish (*yukuai* 魚鱠), raw vegetables, and raw meat.⁴⁹ Addressing this strong concern over pathogenic cold, both recipes contained warming ingredients. The different body parts of sheep were defined by Chinese *materia medica* as warming and able to replenish body depletion.⁵⁰

Pepper also served a warming agent in these two dishes. In the age of Sun Simiao, pepper was for the first time recorded by Chinese *materia medica*. The 659 *Newly Revised Materia Medica* defined it as:

Acrid flavour, greatly warm, and not toxic. It brings *qi* down, warms the centre, removes phlegm, and eliminates wind cold in the depot and palace organs. [It] grows in Xirong. [Its] shape is like the seed of Chinese buckthorn (*Rhamnus utilis*, *shuli* 鼠李). [It] is used for seasoning food. [Its] taste is very acrid and delicious, but its fragrance is not as good as Sichuan pepper.

味辛，大溫，無毒。主下氣，溫中，去痰，除臟腑中風冷。生西戎，形如鼠李子。

調食用之，味甚辛美，而芳香不及蜀椒。⁵¹

⁴⁸ Sun, *Qianjin yifang jiaoshi*, *juan* 12, 204-205.

⁴⁹ Ibid, 203. For Sun Simiao’s dietetic medicine, see Chen, “Tang Song shiliao gainian yu xingwei zhi chuanyan”; Engelhardt, “Dietetics in Tang China.”

⁵⁰ Su et al., *Xinxin bencao*, *juan* 15, 216-217.

⁵¹ Ibid, *juan* 14, 205.

Chapter 1

The core efficacies in this description, such as “warming the centre” and “eliminating wind cold in the depot and palace organs”, well addressed Sun Simiao’s concern over cold. These efficacies were largely borrowed from native Sichuan pepper. For instance, both *shu jiao* (Sichuan pepper from Sichuan) and *qin jiao* (Sichuan pepper from Shaanxi) were for “warming the centre”. Additionally, *shu jiao* also had the function of “bringing *qi* down” and “eliminating cold in the five depot and six palace organs”.

Yet, two differences between Sichuan pepper and pepper highlight pepper’s exotic origin. The first concerns toxicity. Whereas both *shu jiao* and *qin jiao* were defined as toxic, pepper was not. The benign nature of pepper was most likely a result of Indian influence. In Ayurveda, pepper, together with dried ginger and long pepper, constitutes the “three acrids” (Skt. *trikatuṅka*; Ch. *sanxin* 三辛).⁵² They are the most basic hot medicines, so widely used so that “very few compound prescriptions are free from them”.⁵³ These three acrids also jointly appear as seasonings in the *bu pao rou fa* and in one of the replenishing recipes of Sun Simiao. Buddhist medicine, which drew heavily on Ayurveda, defined pepper as a basic dietetic material for long term consumption.⁵⁴ A seventh-century disciplinary text (*vinaya*) for Buddhist monasteries in China clearly regulated that a sick monk should take porridge seasoned with pepper, long pepper, and haritaki for the rest of his life.⁵⁵ As Chinese medicine received influence from Ayurveda mainly through Buddhist medicine, Buddhist benign perception of pepper was likely accountable for the benign nature of pepper in the *Newly Revised Materia Medica*.

The second and a more subtle difference is their specific clinical uses. Whereas *shu jiao* was used for treating digestive problems, such as dissolving “abiding rheum and food remaining in the abdomen overnight” (心腹留飲宿食), “stopping intestinal flush and diarrhoea” (止腸澀下利), and

⁵² Dutt, *The Materia Medica of the Hindus*, 241-242; Salguero, *Translating Buddhist Medicine in Medieval China*, 118. For pepper in Buddhist medical and dietary practices, see Chen, *Silu yiming*, 43-66.

⁵³ Dutt, *The Materia Medica of the Hindus*, 242.

⁵⁴ Chen, *Silu yiming*, 46-47.

⁵⁵ Daoxuan, *Sifen lü shanfan buque xingshibiao, juan xia*, 118. For the translation of *vinaya*, see Heirman, “*Vinaya*.”

Warming the Centre

“destroying the poison of worms and fish” (殺蟲魚毒); in the *Newly Revised Materia Medica*, pepper had none of these efficacies, but was characteristically for “removing phlegm”.⁵⁶ Sun Simiao in his clinical guidance for commonly used drugs also identified pepper as for treating “phlegm repletion” (*tanshi* 痰實) and “bringing *qi* down”.⁵⁷

Why was pepper used for treating phlegm? To answer this question, some early formulae may help. Shortly before the compilation of the *Newly Revised Materia Medica* in 659, Zhen Quan’s (fl. early 7th c.) *Tested Recipes Recorded from the Ancient to Present* (*Gujin luyan fang* 古今錄驗方) had already collected three pepper pill prescriptions, all for treating cough.⁵⁸ The first was a “pepper pill” (*hujiao wan* 胡椒丸) made of pepper, long pepper, dried ginger, *baizhu* (*Atractylodes macrocephala*), cassia, galangal, ginseng, *kuandong* flower (*Tussilago farfara* 款冬花), *ziman* (*Aster tataricus* 紫菀), and liquorice. It was for treating a syndrome of “coughing, rising *qi*, chest fullness, and at times vomiting foam” (療咳，上氣胸滿，時復嘔沫).⁵⁹ The second was a “pepper pill for ordering the centre” (*hujiao lizhongwan* 胡椒理中丸), made of pepper, long pepper, dried ginger, *kuandong* flower (*Tussilago farfara*), liquorice, tangerine peel, galangal, *xixin* (*Asari Radix et Rhizoma*), and *baizhu* (*Atractylodes macrocephala*). It was for “curing coughing, counterflowing *qi*, inability to eat, and short of *qi* (panting)” (療咳嗽逆氣，不能飲食，短氣).⁶⁰ This pill was derived from an important compound medicine, “ordering the centre pill” (*lizhong wan* 理中丸), whose original ingredients consisted of ginseng, dried ginger, liquorice, and *baizu* (*Atractylodes macrocephala*).⁶¹ In cold damage medicine, the “ordering the centre pill”

⁵⁶ Su et al., *Xinxiu bencao*, *juan* 13, 189; *juan* 14, 196-197, 205.

⁵⁷ Sun, *Qianjin yifang jiaoshi*, *juan* 1, 17, 20.

⁵⁸ Zhen, *Gujin luyan fang*, 77-78, 86-87; Wang, *Waitai miyao fang*, *juan* 9, 167-168; *juan* 10, 185.

⁵⁹ Zhen, *Gujin luyan fang*, 77-78; Wang, *Waitai miyao fang*, *juan* 10, 185.

⁶⁰ Zhen, *Gujin luyan fang*, 86; Wang, *Waitai miyao fang*, *juan* 9, 167.

⁶¹ Zhang, *Shanghan lun*, *juan* 7, 79, clause 386.

Chapter 1

was for making the “central burner” (中焦) in order,⁶² which corresponded to the spleen and the stomach.⁶³ Substituting ginseng with pepper, long pepper, *kuandong* flower (*Tussilago farfara*), tangerine peel, galangal, and *xixin* (*Asari Radix et Rhizoma*), the “pepper pill for ordering the centre” moved its function upwards from the central burner to the chest, for treating coughing and panting in the lungs caused by cold.⁶⁴ The last was a “small pepper pill” (*xiao hujiao wan* 小胡椒丸), containing only three ingredients, namely: pepper, dried ginger, and *kuandong* flower (*Tussilago farfara*). It was for curing “coughing, counterflow with cold, and cold in the chest, as if there were an item in the throat that fails to be pitted out” (療寒冷咳逆，胸中有冷，咽中如有物狀，吐之不出).⁶⁵

These pills, named after an exotic from India and used for treating cough supposedly caused by cold, bridged two medical traditions. On the one hand, they fit a major efficacy of pepper, namely, “bringing *qi* down”, which was derived from its nomenclatural link with *shu jiao* (Sichuan pepper from Sichuan). That efficacy helped stop coughing by bringing down the rising and counterflowing *qi*. On the other hand, the combined use of the three acrids (in the first two recipes) implies influence from Ayurveda.

In Ayurveda, cough, like many other diseases, can be caused by three principal faults (*doṣa*, often translated as humours), namely: phlegm (*kapha* or *śleṣman*), bile (*pitta*), and wind (*vāta*). Among them, bile and phlegm particularly represent a binary worldview, namely: Bile is associated with fire, heat, and the sun, with a main seat in the navel; phlegm is with water, cold, and the moon, and its main seat is in the chest.⁶⁶ For their hot nature, the three acrids are typically used for treating illness caused by

⁶² Ibid, *juan* 4, 51, clause 159.

⁶³ *Nanjing jiaozhu*, *juan* 23, 46; *juan* 31, 60.

⁶⁴ For the pathology of coughing and panting in early seventh-century Chinese medicine, see Chao, *Zhubing yuanhou lun jiaoshi*, *juan* 14, pp. 455-456.

⁶⁵ Zhen, *Gujin luyan fang*, 87; Wang, *Waitai miyao fang*, *juan* 9, 168.

⁶⁶ Wujastyk, “Agni and Soma,” 350-352, 363-365; idem, *The Roots of Āyurveda*, 30; Scharfe, “The Doctrine of the Three Humors.”

Warming the Centre

phlegm, including phlegmatic cough. For instance, in an important early Ayurvedic text, the Bower Manuscript (ca. early 6th c.), there is a section dedicated to “cough due to phlegm”, which recommended patients to take prescriptions that use the three acrids as main ingredients.⁶⁷ Pepper’s medical use, as one of the three acrids, for treating phlegmatic cough in Ayurveda was most likely accountable for its function in these three pepper pills for treating cough supposedly caused by cold.

This link further brings out an intricate history of translating the concept of phlegm from Ayurveda to Chinese medicine. From around the second century CE, Buddhist translators in China initially translated phlegm as *han* (寒) or *leng* (冷), both meaning cold, corresponding to the original meaning of phlegm as a fault in Ayurveda. From the second half of the sixth century, the translation shifted to *tan* (mucus or phlegm 痰) and *dan* (sloshing fluid 淡), mainly referring to viscous fluid (mucus) in the chest.⁶⁸ Therefore, when the *Newly Revised Materia Medica* (659) incorporated pepper into Chinese medicine, phlegm had been known as *tan* or *dan* in China. In line with that, pepper’s efficacy for treating phlegm as a cold fault in Ayurveda might be also translated as treating *tan* (痰), in association with mucus in the chest, in Chinese medicine.

Therefore, by the seventh century, although pepper had been integrated into Chinese medicine, some medicinal understanding from ancient India stayed as exotic elements with pepper. Albeit with efficacy to warm the centre, in clinical practices pepper was mainly used for treating problems located

⁶⁷ Hoernle, *The Bower Manuscript*, part II, 122-123, lines 463-468b. For more examples of using three acrids to treat cough in Ayurveda, see Wen, *Tangdai wailai xiangyao yanjiu*, 335-337.

⁶⁸ Endo et al., “Tan no kigen” I and II; Simonis, “Ghosts or Mucus?” 612-613; Salguero, “Mixing Metaphors,” 63-66; Köhle, “A Confluence of Humors.” Natalie Köhle’s article points out that the shift was associated with the concurrent evolution of another concept in Ayurveda which considered phlegm as a waste digestive product resembling sloshing fluid in the abdomen (淡飲 *danyin*) in Chinese medicine. The entanglement of this concept with phlegm as a fault mainly occupying the chest caused an upward movement of phlegm from a waste digestive product in the abdomen to viscous fluid (mucus) in the chest.

in the upper part of the body trunk, namely, cough and phlegm in the chest.⁶⁹ Although already used as a condiment, pepper often appeared together with long pepper and dried ginger, forming the three acrids in the Ayurvedic tradition and effusing a strong sense of exoticism.

3. Moving Pepper to the Centre

These exotic traces would gradually disappear amid further integration of pepper within Chinese medicine. From the eighth through the tenth centuries, there was a relocation of the main efficacies of pepper from the lungs (the chest) to the spleen and the stomach (the abdomen).⁷⁰ Through this relocation, pepper, together with a group of exotic spices and aromatics, became an important digestive agent, closely tied to the Chinese foodways.

An early piece of evidence concerning the use of pepper for treating digestive disorders is from Meng Shen (621-713) and Zhang Ding's (fl. 8th c.) *Dietetic Materia Medica* (*Shiliao bencao* 食療本草, ca. early 8th c.). It shows that pepper could “cure wind cold in the five depot organs, pain in the heart and the abdomen caused by cold *qi*, and vomiting with clear, watery fluid” (治五藏風冷，冷氣心腹痛，吐清水).⁷¹ Whereas the efficacies for treating wind cold and cold *qi* were not new, the use of pepper for treating “vomiting with clear, watery fluid” indicates that it was dealing with a stomach disorder. However, besides this case, there is no evidence supporting the widespread use of pepper for treating digestive problems, until about two centuries later when a completely new medical description of pepper emerged.

⁶⁹ Chinese medicine divides the trunk of the body into three parts. The chest, containing the lungs and the heart, corresponds to the upper part; the upper abdomen, containing the spleen and the stomach, corresponds to the central part; and the lower abdomen, containing the kidneys, the liver, the urinary bladder, and the intestine, corresponds to the lower part.

⁷⁰ *Huangdi neijing suwen*, *juan* 29, 89-90.

⁷¹ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 14, 349. For the date and authorship of *Dietetic Materia Medica*, see Engelhardt, “Dietetics in Tang China,” 184.

This new account had an intricate link with some “fake” pepper from Southeast Asia. In his 1960s study about the origin of Srivijaya, O. W. Wolters proposed that during a divided period (311-589) in Chinese dynastic history, when South China’s overland routes to India and West Asia were cut off by hostile regimes in North China, traders coming from maritime routes managed to supplant expensive exotics originally from the overland routes with Southeast Asian substitutes.⁷² Some key evidence to support this argument comes from three “vintage texts” dating from around the fifth century: *Extensive Records* (*Guang zhi* 廣志), *Description of Guangzhou* (*Guangzhou ji*, 廣州記), and *Description of the Flora of the South* (*Nanfang caowu zhuang* 南方草物狀, also known as *Nanzhou ji* 南州記). All the texts only survive in the form of fragmentary quotations in later works and can be understood as reconstituted texts.⁷³

Among them, *Extensive Records* by Guo Yigong contains two seemingly contradictory accounts about pepper. One, as mentioned in the previous section, was quoted by Jia Sixie (fl. early and mid-6th c.), showing “pepper is from the Western Regions” (胡椒出西域).⁷⁴ The other was cited by a Chinese physician of Persian descent, Li Xun (late 9th - mid 10th c.), showing that *bidengqie* (華澄茄) “is grown in maritime [countries]. It is tender pepper. When [the seeds of pepper plants are] still green, [people] pluck them from trees and treat them. It is the one that has a thick tail and a round pedicle” (按《廣志》云：生諸海，嫩胡椒也。青時就樹採摘造之，有柄麤而蒂圓是也).⁷⁵

⁷² Wolters, *Early Indonesian Commerce*, 87-158.

⁷³ Ibid, 87-94; Xiao, “*Haiyao bencao yu Liuchao shiqi Lingnan de yiyao wenhua*.” For the date of *Extensive Records*, see Wang, “*Guang zhi chengshu niandai kao*.” For the date of *Description of the Flora of the South*, see Ma, “The Authenticity of the “Nan-Fang Ts’ao-mu Chuang”,” 225-226.

⁷⁴ Jia, *Qimin yaoshu yizhu*, *juan* 4, 303.

⁷⁵ Li, *Haiyao bencao*, *juan* 2, 31; Laufer, “Vidanga and Cubebs,” 286; Wolters, *Early Indonesian Commerce*, 67. It is worth noting that both Laufer and Wolters were misled by a wrong citation made by Li Shizhen in his *Bencao gangmu* which attributed this record to Gu Wei’s *Guangzhou zhi* (廣州志 *Records of Guangzhou*).

Chapter 1

The so-called *bidenggie* was derived from a Sanskrit term, *viḍaṅga*, originally referring to pepper-like seeds of *Embelia ribes*, which is “a large climbing shrub, abundant in the hilly parts” of South Asia and part of Southeast Asia.⁷⁶ The seeds of *Embelia ribes* are a commonly used drug in Ayurveda.⁷⁷ According to European reports in the nineteenth century, *Embelia ribes* was also used as an adulterant for pepper in India.⁷⁸ Yet in Chinese *materia medica*, *bidenggie* (*viḍaṅga*) was not explicitly associated with *Embelia ribes*, but referred to another tailed pepper-like spice from Java and its surrounding islands, namely, cubeb pepper (*Piper cubeba*).⁷⁹

The complexity behind this strange borrowing, which used the Sanskrit term of an Indian drug (*Embelia ribes*) to refer to the seeds of an Indonesian plant (cubeb pepper) and claimed that they were “tender pepper” from the maritime countries, might never be fully unravelled.⁸⁰ What we may find particularly interesting is the historical context of its emergence in *Extensive Records*. *Extensive Records* was compiled in the mid-fifth century by Guo Yigong, who was living in North China.⁸¹ The mid-fifth century witnessed the intensified confrontation between the northern (Wei, 386-534) and southern (Liu Song, 420-479) dynasties,⁸² which likely caused the markets of North and South China to be segregated and supplied from two distinct routes. As a northerner, Guo had access to pepper in North

⁷⁶ Laufer, “Vidanga and Cubebs,” 282-283.

⁷⁷ Wujastyk, *The Roots of Ayurveda*, 158, 193, 297-298, 313; Watt, *Dictionary of the Economic Products of India*, vol. 3, 43; Dutt, *The Materia Medica of the Hindus*, 187.

⁷⁸ Watt, *Dictionary of the Economic Products of India*, vol. 3, 242-243; Laufer, “Vidanga and Cubebs,” 282-283.

⁷⁹ Hirth and Rockhill, *Chau Ju-kua*, 224; Laufer, “Vidanga and Cubebs,” 282-288.

⁸⁰ As far as I am aware, the confusion between cubeb pepper and *Embelia ribes* (*viḍaṅga*) only takes place in Chinese medicine. The English term “cubeb” is derived from its Arabic name, *kaḇāba*, which is related to *kaḇba* (ball) and *kaḇāb* (round balls of meat cooked upon skewers). King, “The New *materia medica* of the Islamicate Tradition,” 504. Meanwhile, Arabic has a different term for *Embelia ribes*, *falenja*, derived from the Sanskrit term *viḍaṅga*. Laufer, “Vidanga and Cubebs,” 285. In Malay, cubeb pepper has two indigenous names. One is *lada berekor* literally meaning tailed pepper; the other is *kemukus* related to vapour, steam, or fumigant. Hoogervorst, “Southeast Asia in the Ancient Indian Ocean World,” 185. In Ayurvedic classics, cubeb pepper has its own Sanskrit name, *kaṅkola* or *kakkola*. Zumbroich, “From Mouth Fresheners to Erotic Perfumes,” 65; Wujastyk, *The Roots of Ayurveda*, 354.

⁸¹ Wang, “*Guang zhi chengshu niandai kao*,” 54-55.

⁸² Wang, “The Nanhai Trade,” 46-47.

China, which was mainly imported via overland routes. Therefore, he noted that pepper was from the Western Regions. Meanwhile, he also incorporated texts from the South about tropical exotics.⁸³ These texts likely referred to pepper or “tender pepper” from the maritime routes. For instance, another vintage text, which was exclusively about the South, *Description of the Flora of the South*, clearly noted that pepper “grows in the countries of the South Sea” (生南海諸國).⁸⁴ It was likely from one of these southern texts that Guo learned that there was *bidengqie*, known as tender pepper, coming from “maritime [countries]”.

In the long term, the idea of *bidengqie* as tender pepper from the maritime routes would have profound impact on Chinese reconceptualisation of pepper. Initially, the *Newly Revised Materia Medica* (659) completely ignored this account and had no record about *bidengqie*. Thereafter, an excerpt, usually attributed to Chen Cangqi’s (fl. 713-741) *Supplement to Materia Medica* (本草拾遺 *Bencao shiyi*, 739), shows that *bidengqie* “grows in Srivijaya” (生佛誓國) and could “bring *qi* down, dissolve food, [deal with] skin wind and *qi* distension in the heart and the abdomen, stimulate appetite, cure demon *qi*, dye hair, and perfume the body” (主下氣、消食，皮膚風，心腹間氣脹，令人能食，療鬼氣，能染髮及香身).⁸⁵

This medical description is eclectic. Cubeb pepper, along with other Indonesian spices, such as cloves, nutmeg, camphor, and agarwood (aloeswood), was widely used in Indian perfumery.⁸⁶ That

⁸³ Wang, “*Guang zhi chengshu niandai kao*,” 55.

⁸⁴ It was cited in *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 14, 349. Shang Zhijun’s recompilation changes it to “生南海諸地”. That is an editing error. Li, *Haiyao bencao*, *juan* 3, 64.

⁸⁵ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 9, 235; Li, *Bencao gangmu*, *juan* 32, 1860. This passage appears in *Materia Medica of the Kaibao Period* (974) without a clear attribution. Li Shizhen attributed it to Chen Cangqi. Laufer and Wolters followed that. Shang Zhijun’s recompilation of Chen Cangqi’s *Supplement to Materia Medica*, however, does not include it. Chen, *Bencao shiyi jishi*. I tend to believe that it was written by Chen Cangqi or another Tang author because the text refers to Śrīvijaya as Foshi (佛誓), a term used during the late seventh and early eighth centuries for missions from Śrīvijaya, instead of Sanfoqi (三佛齊), a term emerging from the early tenth century. Wang, “The Nanhai Trade,” 74, 123; Haw, “Śrīvijaya, Java, and the Sunda Strait,” 426-429.

⁸⁶ Zumbroich, “From mouth fresheners to erotic perfumes,” 65-66, 69, 71-72, 75, 83.

Chapter 1

practice explains why this account referred to perfuming the body. In this Indian perfume culture, cubeb pepper was an important ingredient for making an important perfume paste, *yakṣa* mud (*yakṣakardama*),⁸⁷ whose association with *yakṣa* (nature spirits or demons) might evoke the function to exorcise demon *qi*. Its efficacies of being digestive can be possibly traced to its original place in Southeast Asia. According to a Portuguese account from the sixteenth century, in Java, cubeb pepper was “used much against the chill of the stomach”.⁸⁸ Yet, we have no conclusive evidence to support the use of cubeb pepper for hair dyeing outside China. Instead, in Ayurvedic hair dyeing recipes, *Embelia ribes*, together with powder iron, was commonly used.⁸⁹ We may, therefore, assume this account also incorporated a certain medical property from *Embelia ribes*. It likely witnessed the congruence of disparate functions of cubeb pepper and *Embelia ribes* from multiple traditions into a drug known as *bidengqie* in China.

Such rich functions notwithstanding, the clinical use of *bidengqie* was limited. Wang Tao’s (fl. early and mid-8th c.) voluminous recipe compilation, *Formulary of the Outer Terrace and the Arcane Essentials* (*Waitai miyao fang* 外臺秘要方, 752), contained no *bidengqie*. Li Xun in the early tenth century noted that “in ancient recipes, [*bidengqie*] is only partially used for dyeing hair, and not used for curing diseases” (古方偏用染髮，不用治病也).⁹⁰

It was Li Xun who redefined the medical properties of *bidengqie* and pepper. Li was from a family of Persian descent, who were involved in the exotic spices and aromatics trade in South China.⁹¹ As we will return to this point soon, by his age, warming exotics were becoming popular in the treatment of digestive problems. His major work, *Materia Medica of Overseas Drugs* (*Haiyao bencao* 海药本草, ca.

⁸⁷ McHugh, *Sandalwood and Carrion*, 137.

⁸⁸ Da Orta, *Colloquies on the Simples and Drugs of India*, 168.

⁸⁹ Chen, *Shufang yiyao*, 221, 226.

⁹⁰ Li, *Haiyao bencao*, *juan* 2, 31; *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 9, 235.

⁹¹ Chen, “The Transmission of Foreign Medicine via the Silk Roads in Medieval China,” 246-251.

early 10th c.), offered new medical and natural descriptions of these exotics and reconceptualised some of them, including *bidengqie* and pepper, in line with the new medical culture. Meanwhile, as this work primarily focused on exotics from the maritime routes, Li heavily drew on the above-mentioned vintage texts concerning exotics from the South Sea.⁹² Therefore, the entanglement between *bidengqie* and pepper re-emerged and played a critical role in the reconceptualisation of their medical properties.

For *bidengqie*, Li revived the “tender pepper” account, and provided a new medical description as follows:

Acrid and bitter flavour, slightly warm, and not toxic. It deals with sudden pain in [the region] of the heart and the abdomen, sudden turmoil with vomiting and diarrhoea, phlegm aggregation-illness, and cold *qi*.

味辛苦，微溫，無毒。主心腹卒痛，霍亂吐瀉，痰癖，冷氣。⁹³

Casting off cosmetic functions such as hair dyeing and body perfuming, and expanding its medical functions for treating digestive disorders, Li reduced *bidengqie* from a versatile exotic with rich functions derived from its historical links with cubeb pepper and *Embelia ribes* to a mildly warm digestive.

This shift was tied to pepper. In the same work, Li Xun provided a new medical description for pepper:

It removes *qi* depletion and cold in the stomach mouth; [deals with] food remaining [in the body] overnight failing to dissolve, sudden turmoil, *qi* counterflow, sudden pain in the heart and the abdomen, and upward rushing of cold *qi*; brings *qi* into harmony. Over-consumption is not

⁹² Xiao, “*Haiyao bencao yu Liuchao*”.

⁹³ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, juan 9, 235.

Chapter 1

recommended, [as it] will harm the lungs. Someone says the one that faces the yin [side] is *bidengqie* (*dengqie*), and the one that faces the yang (side) is pepper.

去胃口氣虛冷，宿食不消，霍亂，氣逆，心腹卒痛，冷氣上衝，和氣。不宜多服，損肺。一云向陰者澄茄，向陽者胡椒也。⁹⁴

This account, while unrelated to the record in the *Newly Revised Materia Medica* (659), has a clear intertextual link with the new medical properties of *bidengqie*. The core efficacies of pepper from “sudden turmoil” to “upward rushing of cold *qi*” are essentially the same as *bidengqie*, indicating that Li had either extended the latter to the former, or vice versa. This extension was facilitated by the hearsay recorded by Li Xun that pepper and *bidengqie* were simply from a same plant, one growing on the yang side and the other on the yin. Together with *Extensive Records*’ account of *bidengqie* as tender pepper, Li Xun established an inherent link between pepper and *bidengqie*.

Li Xun was not alone. A contemporary physician from Ningbo known as Rihuazi (日華子, fl. early to mid-10th c.), of whose background little is known, offered another two closely related accounts for pepper and *bidengqie*, both promoting clinical uses for digestive problems. Rihuazi suggested that *bidengqie* could “cure all kinds of *qi*, as well as sudden turmoil with diarrhoea, abdominal pain, kidney *qi*, and cold in the urinary bladder” (治一切氣，并霍亂瀉肚，腹痛，腎氣，膀胱冷).⁹⁵ Pepper could “harmonise the five depot organs, stop sudden turmoil, cold pain in the heart and the abdomen, strengthen the *qi* of the kidneys, deal with cold diarrhoea, and destroy all kinds of poisons from fish, meat, softshell turtles, and fungi” (調五藏，止霍亂，心腹冷痛，壯腎氣，及主冷痢，殺一切魚肉鼈蕈毒).⁹⁶ In comparison with Li Xun’s accounts, Rihuazi focused more on

⁹⁴ Ibid, *juan* 14, 349.

⁹⁵ Ibid, *juan* 9, p. 235.

⁹⁶ Ibid, *juan* 14, p. 349.

Warming the Centre

remedies for the lower part of the abdomen, associated with diarrhoea, the kidneys, and the urinary bladder. Moreover, Rihuazi also introduced the idea that pepper was an effective antidote for foodborne pathogens (food poison), which would have profound influence on Chinese dietary practices.

This tenth-century shift redefined the clinical uses of *bidengqie* and pepper. Over a century later, Su Song (1020-1101) in his 1061 *Illustrated Materia Medica* noted that *bidengqie* was “frequently used in the spleen and the stomach medicines in contemporary formularies as” (今醫方脾胃藥中多用).⁹⁷ This observation indicates that the trajectory set by Li Xun and Rihuazi was now followed by eleventh-century physicians. It also offers a clear contrast to the “ancient recipes”, which, according to Li Xun, only partially used *bidengqie* for hair dyeing. Along with *bidengqie*, pepper also became a principal digestive medicine. In a concisely compiled *materia medica*, *Dilatations on Materia Medica* (*Bencao yanyi* 本草衍義, 1116), Kou Zongshi (fl. early 12th c.) noted:

Pepper removes cold phlegm in the stomach, and [deals with] vomiting with water, and vomiting soon after having eaten. Indeed effective! Over-dosage however proceeds to the *qi*. It can also be used to treat the cold and smoothness in the large intestine, but in each [case it] shall be assisted by other drugs.

胡椒去胃中寒痰，吐水，食已即吐，甚驗。過劑則走氣。大腸寒滑亦用，須各以他藥佐之。⁹⁸

Therefore, different from the medical practice in the seventh century, which aligned pepper with phlegm, cough, cold, and the lungs, the new practice associated pepper with phlegm, vomiting, cold,

⁹⁷ Ibid, *juan* 9, p. 235.

⁹⁸ Kou, *Bencao yanyi*, *juan* 15, 98-99. Kou Zongshi was a minor official interested in medicine. He submitted this *materia medica* to the Imperial Medical Service (太醫 Taiyi) of the Northern Song in 1116. Goldschmidt, *The Evolution of Chinese Medicine*, 121-123.

Chapter 1

and the stomach. It foregrounds the concept of phlegm as a pathogen in the stomach, which can be traced back to the idea of *danyin* (淡飲) or *tanyin* (痰飲) in Chinese medicine, originally referring to a sloshing fluid in the abdomen in a medical work of Zhang Zhongjing (fl. late 2nd to early 3rd c.) from ca. 200 CE, to whom we will return in the next section. In the third and fourth centuries, this concept evolved into “a dense fluid that could form watery lumps” and “was prone to accumulations”.⁹⁹ Thereafter, at the beginning of the seventh century, a foundational work on aetiology in Chinese medicine, *Treatise on the Origins and Signs of Various Kinds of Illnesses* (*Zhubing yuanhou lun* 诸病源候论, 610), proposed a nosology of *tanyin*. It conceptualised a symptom called cold phlegm (*lengtan hou* 冷痰候), whose root was the depletion weakness of stomach *qi*, which debilitated the movement of food through the digestive system and induced the accumulation of phlegm water (*tanshui* 痰水), making people unable to eat.¹⁰⁰ A few decades later, Sun Simiao described a symptom that, “when *tanyin* is abundant, the vomiting of water can happen any time” (凡痰飲盛，吐水無時節). This had become very close to the phlegm symptom that pepper was used for treating in the early twelfth century. Sun believed that this symptom was caused by consuming an excessive amount of cold drink, which led to obstinate cold and depleted the *qi* of the spleen and the stomach, making them unable to dissolve food and drink. Therefore, when food and drink entered the stomach, they would be transformed into cold water to vomit.¹⁰¹

Whereas Sun Simiao’s work had established the pathology of cold phlegm in the stomach, the treatment it offered was fundamentally different from Kou Zongshi. Sun only recommended one recipe, made of a mineral, for treating cold phlegm in the stomach. It was red halloysite (*chi shizhi* 赤

⁹⁹ Köhle, “A Confluence of Humors,” 466-469, 490-491.

¹⁰⁰ Chao, *Zhubing yuanhou lun jiaoshi*, *juan* 20, 610.

¹⁰¹ Sun, *Qianjin yifang jiaoshi*, *juan* 19, 292.

Warming the Centre

石脂), a clay mineral rendered in Chinese as “red stone fat”. Sun Simiao suggested that a patient should pulverise three catties (*jin* 斤) of red halloysite and take a small amount of it with wine each time. After finishing this therapy, Sun believed that the patient would never suffer from vomiting water and diarrhoea again for the rest of her/his life. Moreover, it could also “replenish the five depot organs, and make one stout” (補五藏，令肥健).¹⁰²

This therapy points to an important medical culture that used minerals, instead of exotic spices and aromatics, for warming the visceral system and replenishing the body. There were a group of minerals defined by Chinese *materia medica* as warm and restorative. Being prescribed together with other mineral medicines, they could help generate an addictive psychological experience of being hot and energetic. From the third century CE, various sorts of mineral prescriptions, known as “cold food powder” (*hanshi san* 寒食散) or “five stone powder” (*wushi san* 五石散), were used by elite consumers for treating the intrusion of pathogenic wind and cold, or the emaciation of the body. However, because of their strong side effects, there was a tendency to dilute the dosage of minerals with herbal medicines.¹⁰³ By the end of the Tang period, mineral medicine gradually lost momentum.¹⁰⁴

In an important late tenth-century compilation of medical recipes sponsored by the Northern Song imperial state, *Formulary of Sagely Grace of the Taiping Period* (*Taiping shenghui fang* 太平聖惠方, 992), minerals and exotic spices and aromatics were both used for treating “turned-over stomach and vomiting” (反胃嘔噦). Of the seventeen formulae in this section, three prescriptions used minerals and four used spices and aromatics as main ingredients. Among them, red halloysite was once again separately used for curing vomiting. Sulphur and white alum (*bai fan* 白礬) formed another

¹⁰² Ibid.

¹⁰³ Jing and Xiao, “Zhonggu fusan de chengyin ji chuancheng.”

¹⁰⁴ Yu, “Hanshi san kao”; Zheng, *Yaolin waishi*, 124-131.

Chapter 1

prescription for treating the same symptom. White alum, yellow minium (*huang dan* 黃丹), and sulphur formed a prescription for treating “lasting accumulation of depletion cold in the depot and palace organs” (臟腑久積虛冷) and “turned-over stomach and vomiting”. Pepper appeared as a major ingredient in two prescriptions for treating “turned-over stomach and vomiting of food” (反胃嘔噦吐食), one together with raw ginger and the other with nutmeg, long pepper, and liquorice. Besides that, two other spicy and aromatic compounds, entitled “white cardamom powder” (*bai doukou san* 白豆蔻散) and “clove powder” (*dingxiang san* 丁香散), were also used for treating vomiting.¹⁰⁵

Elsewhere in the treatment of digestive ailments associated with the spleen and the stomach, exotic spices and aromatics had prevailed, and minerals had become hard to find. In the section for treating “depletion of spleen *qi*, and distention and fullness of the abdomen” (脾氣虛腹脹滿), all seven recipes used at least one exotic spice or aromatic, including cloves, putchuk, haritaki, pepper, and agarwood. For “depletion and cold of spleen and stomach *qi* and inability to digest water and grain” (脾胃氣虛冷水穀不化), six out of its eight recipes used exotic spices and aromatics, including cloves, white cardamom, haritaki, *bidengqie*, putchuk, nutmeg, long pepper, and pepper. So was the situation for “depletion weakness of spleen and stomach *qi* and inability to drink and eat” (脾胃氣虛弱不能飲食) (5 out of 8), “depletion weakness of spleen and stomach *qi*, vomiting, and inability to eat” (脾胃氣虛弱嘔吐不下食) (6 out of 12), “pain caused by cold *qi* in the spleen that attacks the heart and the abdomen” (脾臟冷氣攻心腹疼痛) (11 out of 11), “cold *qi* in the spleen and rumbling

¹⁰⁵ Wang et al., comps., *Taiping shenghui fang*, juan 47, 1454-1457.

Warming the Centre

in the abdomen” (脾臟冷氣腹內虛鳴) (6 out of 6), “depletion and weakness of spleen and stomach *qi* and emaciation of the body” (脾胃氣虛弱肌體羸瘦) (4 out of 9), etc.¹⁰⁶

With minor differences notwithstanding, these syndromes were all considered as caused by cold or depletion to the digestive system. These two problems often co-existed as cold was considered as accountable for depletion, while heat was accountable for repletion. It hence comes as no surprise that warming agents were prescribed a remedy for this kind of syndromes. The question is what kind of warming agents were preferably used. In the seventh century, Sun Simiao, for treating the same problems, also proposed a group of formulae for warming and replenishing the spleen and the stomach, such as “warming-the-spleen decoction” (*wenpi tang* 溫脾湯), “replenishing-the-spleen decoction” (*bupi tang* 補脾湯), “ordering-the-spleen decoction” (*jianpi tang* 建脾湯), “soothing-the-spleen decoction” (*roupi tang* 柔脾湯), “great warming-the-spleen pill” (*da wenpi wan* 大溫脾丸), “restoring-the-spleen pill” (*zhuanpi wan* 轉脾丸), and “harmonising the stomach pill” (*benwei wan* 和胃丸). Reading their ingredients, we may find that native herbal medicines of a warming nature, including native spices and aromatics, such as ginger, magnolia bark (*Magnolia officinalis*, *houpo* 厚樸), balloon-flower root, ginseng, cassia, and Sichuan pepper, formed the majority. Mineral medicines, such as red halloysite, were interposed. Warming exotics like pepper, *bidengqie*, cloves, nutmeg, and white cardamom were, however, nowhere to find.¹⁰⁷

Therefore, from the age of Sun Simiao to the tenth century, a critical change in Chinese medicine was that exotic spices and aromatics emerged from almost non-existence to principal warming agents in the treatment of cold- and depletion-related digestive disorders. Such a change might have

¹⁰⁶ Ibid, *juan* 5, pp. 107-142.

¹⁰⁷ Sun, *Qianjin yifang jiaoshi*, *juan* 15, 234-236.

Chapter 1

encouraged Li Xun, who compiled his *Materia Medica of Overseas Drugs* in the early tenth century, to redefine the medical properties of pepper and *bidengqie*. Hailing from a family involved in the trade of exotic spices and aromatics, Li was likely more aware than most of his contemporaries of the rise of these warming exotics in this specific field. He recognised that pepper, already with a crucial medical property for “warming the centre”, had good potential to be rebranded as a warming digestive. With the evidence we have examined, we may speculate that Li first revised *bidengqie*’s medical properties, making it a purely digestive agent without other functions. Then, as his *materia medica* focused on “overseas drugs” from the maritime routes and heavily cited these vintage texts, he became also aware of the historical entanglement between *bidengqie* and pepper in *Extensive Records*, which referred to some tender pepper from “maritime [countries]” as *bidengqie*. He therefore further consolidated this link and extended a large part of *bidengqie*’s medical property to pepper, making pepper also a principal warming digestive.

Pepper and *bidengqie* were not alone. Returning to the seventh century, the *Newly Revised Materia Medica* identified cloves and agarwood as perfume ingredients without important medical functions, and patchouli as mainly for perfuming, exorcising evil spirits, and Taoist self-cultivation.¹⁰⁸ Chen Cangqi, in his *Supplement to Materia Medica* (739), suggested “mother cloves” (*mu dingxiang* 母丁香)¹⁰⁹ could be used for hair dyeing, but without giving any medical property. It was in the early tenth century that cloves would be redefined by Li Xun and Rihuazi as an important digestive medicine.¹¹⁰ Nutmeg first appears in the *Supplement to Materia Medica* but the existing text only indicates it was imported by ocean-going ships, without offering any medical description.¹¹¹ White cardamom was not recorded by

¹⁰⁸ Su et al., *Xinxin bencao*, *juan* 6, 97; *juan* 12, 179-180.

¹⁰⁹ Mother cloves are the ripe fruits of clove trees. They are less aromatic than cloves made of the flower buds of clove trees.

¹¹⁰ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 12, 307.

¹¹¹ *Ibid*, *juan* 9, 231.

Warming the Centre

Chinese *materia medica* until the publication of *Materia Medica of the Kaibao Period* (*Kaibao bencao* 開寶本草) in 974.¹¹² With these diverse backgrounds notwithstanding, by the tenth century they were all assembled as warming and digestive medicines, jointly taking care of the spleen and the stomach right in the centre of the Chinese conception of the body trunk.¹¹³

4. Warming the Centre

Soon after acquiring these warming and digestive efficacies, these exotic spices and aromatics would be favourably received by Chinese medicine, in association with a pivotal change of a mainstream medical theory, namely, the cold damage.¹¹⁴ The theory of cold damage was founded in an aetiology that associated febrile diseases with damage by pathogenic cold. It was broadly defined by the *Inner Canon* (ca. 1st c. BCE) that “as for febrile diseases of the present day, they all belong to the category of cold damage” (今夫熱病者，皆傷寒之類也).¹¹⁵ The *Inner Canon* offered a model to explain how cold damage progresses within the body along six conduit vessels (*jingmai* 經脈), which goes as follows:

On the first day, cold damage affects the Great Yang (*juyang* 巨陽) conduit vessel;

On the second day, it affects the Yang Brilliance (*yangming* 陽明) conduit vessel;

On the third day, it affects the Minor Yang (*shaoyang* 少陽) conduit vessel;

On the fourth day, it affects the Great Yin (*taiyin* 太陰) conduit vessel;

¹¹² Ibid, 239.

¹¹³ Besides these cases, according to a statistic by Robert M. Hartwell, there was a dramatic increase of the uses of exotic spices and aromatics in the treatment of abdominal pain and constipation from the Tang to the Northern and Southern Song periods. Hartwell, “Foreign Trade, Monetary Policy and Chinese ‘Mercantilism,’” 477-478. For a survey of the medical use of these aromatic drugs in the Tang period, see Wen, *Tangdai wailai xiangyao yanjiu*, 320-469.

¹¹⁴ I tend to agree with Stephen Boyanton that the cold damage medicine had already become popular before the eleventh century. Goldschmidt, *The Evolution of Chinese Medicine*, 69-102; Boyanton, “The *Treatise on Cold Damage* and the Formation of Literati Medicine”.

¹¹⁵ *Huangdi neijing suwen*, *juan* 31, 92.

Chapter 1

On the fifth day, it affects the Minor Yin (*shaoyin* 少陰) conduit vessel;

On the sixth day, it affects the Ceasing Yin (*jueyin* 厥陰) conduit vessel.¹¹⁶

These six conduit vessels correspond to six organs (Table 1.2). The three yang conduit vessels, which are influenced by cold damage in the first three days, correspond to three palace organs, namely: the urinary bladder (Great Yang), the stomach (Yang Brilliance), and the gall bladder (Minor Yang). The three yin conduit vessels, influenced in the last three days, correspond to three depot organs, namely: the spleen (Great Yin), the kidneys (Minor Yin), and the liver (Ceasing Yin).¹¹⁷ This association had already created a common ground for cold damage, which was an externally contracted disease (*waigan bing* 外感病) usually with acute symptoms, to interact with internal damage (*neishang* 內傷) to the visceral system supposedly caused by unregulated emotion, diet, or fatigue.

The *Inner Canon* further introduced a yin-yang division for the nosology of cold damage, as well as their corresponding treatments. It classified the six palace organs as yang; and the five depot organs as yin.¹¹⁸ In association with that, the pathology of cold damage was also divided into two phases. In the first phase, namely, the first three days, cold damage influenced the three palace organs, which all belonged to yang, namely, the so-called three yang (*san yang* 三陽). In the second phase, the pathology entered the three depot organs, which belonged to yin, namely, the three yin (*san yin* 三陰). These two phases demanded two different ways of treatment, namely, sweating for the three yang and purging for the three yin (Table 1.2).¹¹⁹

1 st day	Great Yang	Urinary bladder	Palace organs	Three yang patterns	Sweating
2 nd day	Yang Brilliance	Stomach			

¹¹⁶ Ibid.

¹¹⁷ *Huangdi neijing lingshu*, *juan* 10, 300-305.

¹¹⁸ *Huangdi neijing suwen*, *juan* 4, 16-17.

¹¹⁹ Ibid, *juan* 31, 92-93.

Warming the Centre

3 rd day	Minor Yang	Gall bladder			
4 th day	Great Yin	Spleen	Depot organs	Three yin patterns	Purging
5 th day	Minor Yin	Kidneys			
6 th day	Ceasing Yin	Liver			

Table 1.2 The three-yang and three-yin pathology of cold damage, based on the *Inner Canon*.

During an epidemic period at the end of the Later Han dynasty (25-220 CE), this model inspired an important physician, Zhang Zhongjing (Zhang Ji), to compose an influential treatise on cold damage. Within ten years from 196 CE, Zhang witnessed two-thirds of his family members succumb to diseases. He attributed most of their deaths to cold damage, and decided to expand the brief description in the *Inner Canon* into comprehensive clinical guidance.¹²⁰ His final work, commonly known as *Treatise on Cold Damage* (*Shanghan lun* 傷寒論), elaborated on the typical symptoms of cold damage in the three yang and three yin stages and provided corresponding formulae.¹²¹ These formulae were influenced by an archaic text, *Classic of Decoctions* (*Tangye jing* 湯液經), which was attributed to a legendary chef Yi Yin, who allegedly used cassia and ginger as seasonings.¹²² Likely because of this influence, Zhang also widely prescribed decoctions made of warming and flavour-rich medicines, such as cured licorice, cassia, and ginger.

Decoctions made of these drugs had already carried the typical flavours of the spicy and aromatic health drinks mentioned in section one, as well as their warming efficacies, but they served distinct medical purposes. Zhang Zhongjing's medicinal decoctions were originally not for everyday consumption, but for curing acute symptoms. His favoured flavour-rich medicines, such as cassia, licorice, and ginger, were primarily for sweating and alleviating fever. Moreover, his work was

¹²⁰ Zhang, *Shanghan lun*, 6.

¹²¹ For the cold damage medicine by the age of Zhang Zhongjing, see Ye, *Shanghan xueshu shi*, 1-29; Fu, *Zhang Zhongjing yixue yuanliu*, 1-26.

¹²² Ye, *Shanghan xueshu shi*, 2-4; Huang, *Fermentations and Food Science*, 91.

Chapter 1

finished before the massive inflow of exotic aromatics and spices into China. It, therefore, contained hardly any warming exotics except the cassia from the Far South of China.¹²³

The boundaries between these two medical cultures, however, would be blurred amid a pivotal shift of the cold damage theory throughout the eleventh century. The shift is first identified by Japanese scholarship on the textual history of the *Treatise on Cold Damage*. Through meticulous comparison of three different editions of this treatise, compiled respectively in 992, 1065, and 1144, they point out there were some subtle textual changes in these three editions, which made a previously marginal and supplementary therapy, “warming the interior” (*wenli* 溫裏), a principal treatment for the three yin patterns of cold damage. As a result, purging, which was originally the basic treatment for the three yin, was squeezed into the Yang Brilliance pattern in the three yang. It therefore fundamentally changed the *Inner Canon*’s principle of sweating for the three yang and purging for the three yin, into sweating and purging for the three yang and warming the interior for the three yin.¹²⁴

An interesting observation is that this shift immensely expanded the clinical uses of exotic spices and aromatics. Step-by-step, they gradually occupied a prominent position in the cold damage medicine. Their uses in cold damage medicine are first well documented by the above-mentioned *Formulary of Sageby Grace of the Taiping Period* (992).¹²⁵ This formulary incorporated a full edition of the *Treatise on Cold Damage* in fascicle 8, and numerous recipes for treating various symptoms of cold damage in fascicles 9-14. In these recipes, we can find many exotics, including haritaki, patchouli, cloves, white cardamom, agarwood, camphor, nutmeg, fennel seeds, *bidenggie*, frankincense, and asafoetida.

¹²³ Cassia was mainly from the area to the south of the Nanling Range as well as northern Vietnam. Schafer, *The Vermilion Bird*, 195.

¹²⁴ Okada, Makizumi, and Kotaka, *Sōizen shōkan ron kō*. I, unfortunately, has no access to this book. The summary is based on a number of Chinese articles translated from this book, as well as a Japanese journal article by Kotaka Shuji. Makizumi, “Songban *Shanghan lun* de teshuxing”; idem, “Guanyu shanghan sanyin sanyang de bingtai lun”; Kotaka, “So Shoku (Tōba Kōji) o tsūshite Sōdai no igaku.”

¹²⁵ Wang et al., comps., *Taiping shenghui fang*, juan 9-14, 238-411.

Warming the Centre

What were their functions in this early stage? Take the compound entitled “clove powder” (*dingxiang san* 丁香散) as an example: it appeared four times in the treatment of cold damage. In each specific treatment, its composition varied, but cloves were always its principal ingredient. In the tenth and eleventh centuries, like many other warming exotics, the core efficacy of cloves was known as “warming the spleen and the stomach” (主溫脾胃).¹²⁶ Therefore, outside the cold damage treatment, clove powder was mainly used for treating digestive problems, such as “discordance of cold and hot *qi* in the spleen and the stomach” (脾胃冷熱氣不和), “incapacity to digest water and grain because of cold and depletion of *qi* in the spleen and the stomach” (脾胃氣虛冷水穀不化), and “body emaciation caused by weakness and depletion of *qi* in the spleen and the stomach” (脾胃氣弱肌體羸瘦).¹²⁷ Within cold damage medicine, clove powder assumed a similar function. It was used for dealing with “vomiting after cold damage” (傷寒後嘔噦), “discordance of *qi* in the spleen and the stomach after cold damage” (傷寒後脾胃氣不和), and “incapacity to dissolve food remaining [in the body] overnight after cold damage” (傷寒後宿食不消).¹²⁸ All targeted the after-effect of cold damage treatment, aiming to restore the digestive function of the spleen and the stomach, which supposedly suffered from the aggressive therapies of purging and sweating. Besides that, in one exceptional case, the clove powder was also used for treating a syndrome of headache, high fever, and coughing on the third day when the pathology was influencing the Minor Yang conduit vessel. In this case, cloves were accompanied by a typical cough and headache remedy, *qianhu* (前胡, *Peucedanum praeruptorum*).¹²⁹

¹²⁶ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, juan 12, 307.

¹²⁷ Wang et al., comps., *Taiping shenghui fang*, juan 5, 116-117, 121-122, 135-136.

¹²⁸ *Ibid*, juan 11, 318-320, 363-364, 366-367.

¹²⁹ *Ibid*, juan 9, 245-246.

Chapter 1

A similar pattern was followed by other warming exotics. In general, they were rarely used directly for treating cold damage while the pathology was developing along the six conduit vessels, but mainly for the digestive problems emerging as the after-effects of the conventional aggressive methods. Although still marginal, this pattern paved the way for the further integration of warming exotics and cold damage. In the next century, we will find warming exotics gradually moved from marginal to central, and their clinical uses also gradually moved forward from treating merely the after-effects to treating the main symptoms.

An early witness to this change is a concisely compiled formulary of only five fascicles, *Formulary of Extensive Relief* (*Boji fang* 博濟方, ca. 1041-1048), by a literatus-turned physician, Wang Gun (fl. mid-11th c.). Wang compiled this formulary out of his deep distrust of ignorant physicians, whom he blamed for the death of his father. Allegedly aiming to protect people from these physicians, Wang decided to publish the most essential part of his private medical recipe collection.¹³⁰ Exotic aromatics and spices featured prominently in these published recipes and were used for treating some acute symptoms of cold damage. For instance, Wang recommended a nutmeg powder (*doukou san* 豆蔻散) to treat a critical syndrome known as “double-infected cold damage” (兩感傷寒). This syndrome points to a theoretical impasse in the *Inner Canon’s* framework of sweating for the three yang and purging for the three yin. The problem is that what if the pathogenic cold infects a yang conduit vessel and a yin conduit vessel at the same time, namely, the so-called “double-infected”. The *Inner Canon* offered no solution and concluded that “one cannot avoid death” (必不免於死).¹³¹ The underlying dilemma was while sweating usually demanded hot medicines, purging usually required cold medicines.

¹³⁰ Wang, *Boji fang*, author’s preface. For the tension between literati and common physicians (including Wang Gun’s case) in the Northern Song period, see Boyanton, “The *Treatise on Cold Damage* and the Formation of Literati Medicine,” 78-97. For the emergence of literati physicians (儒醫 *ruyi*), see Hymes, “Not Quite Gentlemen?”; Chen, “Liangsong de shangyi shiren yu ruyi.”

¹³¹ *Huangdi neijing suwen*, *juan* 31, 92-93.

Warming the Centre

If they were taken at the same time, they would either offset each other or have too strong counter-effects. Therefore, a long-held tenet was that if one took strong sweating medicines and strong purging medicines at once to treat the double-infected cold damage, it would be extremely dangerous.¹³²

Wang Gun's nutmeg powder offered a possible third path. On the one hand, it contains typical sweating and purging medicines such as cassia and rhubarb. Its instruction also states a patient after taking this powder shall “be covered [with a quilt]” (蓋覆) in order to promote sweating, and shall also observe faeces, which can be slightly unshaped (稍溏利).¹³³ On the other, its namesake main ingredient, nutmeg (*rou doukou* 肉豆蔻), had neither sweating nor purging efficacies, but, like cloves and pepper, was mainly for “warming the centre and curing accumulated cold” (溫中，治積冷) and for treating various digestive problems including sudden turmoil (cholera).¹³⁴ These efficacies were valued in this therapy for reconciling the supposed side effects of the purging and sweating medicines upon the digestive system, and for warming the vital force of patients to survive through this critical illness.

Besides the “double-infected cold damage”, concerns over the manifestation of digestive disorders and *qi* depletion in the course of cold damage also encouraged the use of exotic spices and aromatics. Wang proposed an agarwood powder (*chenxiang san* 沉香散) to treat a cold damage syndrome of “vomiting, blockage, depletion and weakness of true *qi* in the chest, and sinking and fine pulse” (傷寒嘔、結痞、心胸真氣虛弱，脈息沉細). It consisted of an equal amount of agarwood, fennel seeds imported from ocean-going ships (*boshang buixiang* 舶上茴香), green tangerine peel, pepper, Sichuan Chinaberry fruit (*Chuan lianzǐ* 川棟子), and tangerine peel. After taking a certain

¹³² Wang, *Waitai miyao fang*, *juan* 1, 1.

¹³³ Wang, *Boji fang*, *juan* 1, 4.

¹³⁴ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 9, 231.

Chapter 1

amount of decoction made of this compound, Wang believed even a severely ill patient would feel “*qi* turns upright and pulse grows” (氣正脈生).¹³⁵

Concerns over digestive disorders in the course of cold damage treatment were shared by the members of the Bureau for Revising Medical Texts. Installed by the Northern Song imperial government, this Bureau edited, printed, and standardised a series of important medical texts in the mid-eleventh century to guide clinical practices in China. Among them was the so-called “Song edition of *Treatise on Cold Damage*” (*Songben Shanghan lun* 宋本傷寒論).¹³⁶ Published in 1065, this edition had some important differences from the earlier edition incorporated by the *Formulary of Sagely Grace of the Taiping Period* (992).¹³⁷ Among them, a critical change is the first clause of the Great Yin pattern.

This clause defines that the typical symptoms of the Great Yin pattern include vomiting and diarrhoea. For treating this syndrome, the original text in the *Formulary of Sagely Grace of the Taiping Period* suggests that “if the pulse (of the patients) is floating, make them sweat; if their pulse is sinking, it is suitable to attack the interior [with purging]” (若脈浮者，可發其汗。沉者宜攻其裡).¹³⁸ These two manifestations of pulse correspond to the two major stages of cold damage. The floating pulse indicates that the pathology has yet to reach the interior and can be sweated out from the surface; and the sinking pulse suggests that the pathology has already entered the interior and shall be purged (attacked). Therefore, this advice exactly follows the principle of the *Inner Canon*. However, the Song edition of *Treatise on Cold Damage* replaces it with a completely different sentence that “if one purges, hardness will form under the chest” (若下之，必胸下結鞭).¹³⁹ The “hardness” under the chest

¹³⁵ Wang, *Boji fang*, *juan* 1, 3.

¹³⁶ For the background of this Bureau, see Goldschmidt, *The Evolution of Chinese Medicine*, 87-101; Fan, *Beisong Jiaozheng Yishuju xintan*, 67-80.

¹³⁷ Makizumi, “Songban *Shanghan lun* de teshuxing”; idem, “Guanyu shanghan sanyin sanyang de bingtai lun”.

¹³⁸ Wang et al., comps., *Taiping shenghui fang*, *juan* 8, 221.

¹³⁹ Zhang, *Shanghan lun*, *juan* 6, 66, clause 273.

implies a congealing around the diaphragmatic region and blocks food from entering the stomach.¹⁴⁰ This caveat makes purging no longer an option for the treatment of the Great Yin pattern, once there is a typical syndrome of vomiting and diarrhoea.

Textual changes like this encouraged Chinese physicians to reconceptualise cold damage. Shortly after the publication of the Song edition of *Treatise on Cold Damage*, a renowned physician specialising in cold damage, Han Zhihe (fl. late 11th c.), published one of the earliest explications of this treatise, in which Han proposed that, for most yin-pattern cold damage, purging should be replaced with warming the centre. He criticised that his contemporary physicians who, following the principle of “purging for the three yin”, tended to prescribe purgatives once they diagnosed a patient’s pulse was sinking and chest diaphragm felt full. That practice, according to Han, unfortunately, led to many deaths. Han instead suggested that many patients, whose pulses fit the three yin patterns of cold damage, also had symptoms of vomiting, *qi* blockage (*qisai* 氣塞), abdominal sounds, or abdominal pain, which were particularly common in the summer.¹⁴¹ This observation suggests that many of Han’s patients were not suffering from narrowly defined cold damage, which was contracted in winter, but from broadly defined cold damage, which had different manifestations through other seasons.¹⁴² Han believed that these syndromes demonstrated overabundance of yin in the interior and demanded a

¹⁴⁰ For the concern over blocking in Chinese medicine, see Scheid, “Promoting Free Flow in the Networks.”

¹⁴¹ Han, *Shanghan weizhi lun, juan xia*, 32-33.

¹⁴² The *Inner Canon* suggested that cold damage contracted in winter could develop into warm diseases (*wenbing* 溫病) in spring. Another medical canon, *Classic of Difficulties* (*Nanjing* 難經, ca. 1 century CE), further elaborated that cold damage had five patterns, including wind strike (*zhongfeng* 中風), cold damage (*shanghan* 傷寒), damp warmth (*shiwēn* 濕溫), febrile diseases (*rebing* 熱病), and warm diseases (*wenbing* 溫病). Such a broad definition helped impose a functional-configurational model upon diverse contagious diseases, turning them into different manifestations of the non-contagious climate-induced cold damage in different seasons. *Huangdi neijing suwen, juan 3*, 15; *juan 5*, 20; *juan 31*, 93; *Nanjing jiaozhu, juan 58*, 103; Hinrichs, “The Catchy Epidemic,” 22-24; Unschuld, *Huang Di nei jing su wen*, 200-201.

Chapter 1

treatment outside the framework of sweating for the three yang and purging for the three yin, namely, warming the centre.¹⁴³

Han's preference for warming the centre rested upon his concerns over the aggressive treatments of sweating and purging. Han pointed out that, unlike the era of Zhang Zhongjing when there were grave social crises and wars, people of his age had been living in "great peace" (*taiping* 太平) for a long time. Their lives were relatively easy, and they indulged in vitality-wasting pleasure. As a result, their bodies became tender and fragile. To nourish life, wealthy families habitually took restorative medicines, leading to extra yang in their bodies.¹⁴⁴ As a result, on the one hand, it was dangerous to take a hot medicine such as cassia to sweat, because it would further raise up yang force beyond the capacity of their tender and fragile bodies.¹⁴⁵ On the other hand, it was also dangerous to quickly attack the pathology in the interior through purging, because patients' "depot and palace organs are tender and fragile" (臟腑柔脆) and "blood and *qi* are weak" (血氣虛弱).¹⁴⁶

The conceptualisation of a relatively weak body, which had not experienced wars, echoed a changing identity of Chinese political elites. A well-known theme in Chinese historiography about the Tang-Song Transition (c. 8th-12th c.) is that, in the Northern Song period, literati who held degrees through the civil-service examinations replaced semi-hereditary aristocrats as the ruling elites of the Chinese imperial state.¹⁴⁷ Potentially as major clients of a prominent physician like Han, their cultural awareness of being civil and literate, instead of military and war-like, had profound implications for the changing perceptions of the body in Chinese medicine. It limited the applications of aggressive therapies and facilitated the rise of the conservative warming the centre therapy.

¹⁴³ Han, *Shanghan weizhi lun, juan xia*, 32-39.

¹⁴⁴ Ibid, appendix, 58.

¹⁴⁵ Ibid.

¹⁴⁶ Ibid, *juan shang*, 22.

¹⁴⁷ Bol, "This Culture of Ours"; Tackett, *The Destruction of the Medieval Chinese Aristocracy*.

Warming the Centre

For warming the centre, Han proposed a group of mildly warming formulae. The first formula he proposed was a “warming the centre drink” (*wenzhong tang* 溫中湯). Its major ingredients were clove bark imported from ocean-going ships (*boshang dingxiang pi* 舶上丁香皮) and magnolia bark. Its minor ingredients were dried ginger, *baizhu* (*Atractylodes macrocephala* 白朮), clove twigs, and tangerine peel. It was also recommended that if one felt counterflow cold of the hands and feet (手足逆冷) and vomited, more clove bark and dried ginger should be added. Its main function was to deal with pathogenic cold in the stomach.¹⁴⁸

Another prescription, “magnolia bark drink” (*houpo tang* 厚樸湯), carried exactly the same name as a popular health drink. Its major ingredients were *danggui* (*Angelica sinensis* 當歸), magnolia bark, liquorice, clove twigs, and dried ginger and its minor ingredients were *xixin* (*Asari Radix et Rhizoma* 細辛) and ginseng. The drink was mainly for dealing with the overabundance of yin in the body.¹⁴⁹ By the late eleventh century, a beverage of the same name was regularly served by guards of the imperial palace to officials attending an audience with the emperor.¹⁵⁰ There was also a magnolia bark drink in the formulary of the Imperial Pharmacy. Its ingredients contained no *danggui* and *xixin*, but had additionally jujubes and clove bark. It dealt with a symptom akin to the overabundance of yin in the interior, namely, “depletion cold in the spleen and the stomach” (脾胃虛冷). The formulary touted long-term consumption of this drink could “warm the centre, soothe *qi*, and stimulate appetite” (常服溫中，順氣，進飲食).¹⁵¹

¹⁴⁸ Han, *Shanghan weizhi lun, juan xia*, 33-34.

¹⁴⁹ Ibid, 34-36.

¹⁵⁰ Liu, “Kezhi ze shecha, yuqu ze shetang,” 137-138; Sima, “Sima wengong shihua,” *juan* 88:9b.

¹⁵¹ Chen, Pei, and Chen, comps., *Taiping huimin heji jufang, juan* 10, 395-396.

Chapter 1

Into the early twelfth century, warming the centre would gain further ground along with Chinese changing perceptions of the pathology of cold damage. In his influential *Book for Saving Lives* (*Huoren shu* 活人書, 1118), Zhu Gong (fl. late 11th-early 12th c.), no longer adhered to the six conduit-vessel model of the *Inner Canon*, which stated that cold damage only began with contracting pathogenic cold from the surface through the Great Yang conduit vessel and then step-by-step moved to the interior yin conduit vessels. Instead, explicating a vaguely defined division between yin and yang patterns in the *Treatise on Cold Damage*, Zhu suggested that yin-pattern cold damage could be directly contracted via yin conduit vessels, without first going through yang conduit vessels. Zhu believed this occurred when “cold things damaged the spleen and the stomach” (冷物傷脾胃) and should be immediately treated with warm medicines.¹⁵² This interpretation blurred the boundary between cold damage, which was supposedly caught externally from environmental factors, and digestive ailments, which were supposedly damaged internally by irregular diet.¹⁵³ It would, on the one hand, further encourage the use of warming exotics, and, on the other hand, become a major target of criticisms from a new medical culture emerging in North China during the Jurchen Jin period, to which we will return in the final section of chapter two.

Conclusion

Before concluding this chapter, let us once again have a look at the famous early-twelfth-century cityscape scroll of the Northern Song imperial capital, *Along the River During the Qingming Festival*. The scroll depicts a pharmacy called “Home of the Imperial [Medical Service] Director Zhao” (Zhao Taicheng Jia 趙太丞家) on a busy street (Figure 1.2). The clients and physician in this pharmacy are

¹⁵² Zhu, *Shanghan leizheng huoren shu*, juan 4, 36-37, 41.

¹⁵³ For an overview of the treatment of digestive ailments in cold damage medicine, see Liu, “*Shanghan lun piwei xueshu*.”

Warming the Centre

all decently dressed, peaceful, and respectful. These features signify their elite status. The signs in front of this pharmacy, as TJ Hinrichs has noted, evoke its focus on ailments caused by “overindulgence in food and wine”.¹⁵⁴ Yet a closer reading of this image reveals that the patient in this pharmacy is a baby, who is unlikely suffering from any overindulgence of food and wine at her/his age. We may therefore assume that this pharmacy specialises in internal and digestive ailments associated with food and drink.



Figure 1.2 An elite pharmacy in *Along the River During the Qingming Festival*, attributed to Zhang Zeduan (fl. early 12th c.).

¹⁵⁴ Hinrichs, “The Song and Jin Periods,” 117-118.

Chapter 1

Source: Palace Museum, Beijing.

Two of its front door banners tout two popular medicines. One is “great ordering the centre pills for curing intestine and stomach [disorders]” (大理中丸醫腸胃?). The other is “the authentic prescription of assembling fragrance pills for treating hangovers” (治酒所傷真方集香丸). The “great ordering the centre pill” was an updated version of the above-mentioned “ordering the centre pill” in Zhang Zhongjing’s cold damage medicine. From the original four ingredients consisting of ginseng, dried ginger, liquorice, and *baizhu*, it now evolved into a complicated compound consisting of fourteen ingredients, including fennel seeds, pepper, and cloves, as follows:

Magnolia bark, cassia, tangerine peel, *baizhu*, liquorice, *xiongqiong* (*Ligusticum chuanxiong* 芎藭), *wuweizi* (*Schisandra chinensis* 五味子), *suosha*, fennel seeds, areca nuts, sal ammoniac (*naosha* 硃砂), dried ginger, pepper, and cloves.

Its function, according to a large compilation of formulae organised by Emperor Huizong (r. 1100-1126), was for treating “depletion of the spleen, obstacle of chest diaphragm with heart-pressure, tugging pain in the heart and the abdomen, and lack of appetite for drinks and food” (脾虛胸膈痞悶，心腹撮痛，不思飲食).¹⁵⁵ The pill was not only sold by this elite pharmacy for treating disorders of “the intestine and stomach”, but also taken by Emperor Huizong himself for treating a spleen ailment caused by “eating too much ice” (食冰太過).¹⁵⁶

The “assembling fragrance pill” appears in the formulary of the Imperial Pharmacy, which advocates that this pill could cure:

All kinds of *qi* illness, pain of the diaphragm with heart-pressure, distention and fullness in the [region of] flanks and ribs, pain in the heart and the abdomen, belching *qi* and sour swallowing,

¹⁵⁵ *Shengji zonglu*, *juan* 44, 835.

¹⁵⁶ Li, *Bencao gangmu*, *juan* 5, 395.

Warming the Centre

vomiting with [qi] counterflow and nausea, and unwillingness to drink and eat; or damage by hangovers and disharmony among the spleen and the stomach. [It] cures them all together.

治一切氣疾，胸膈痛悶，脇肋脹滿，心腹疼痛，噫氣吞酸，嘔逆惡心，不思飲食，或因酒過傷，脾胃不和，並皆治之。

This all-purpose digestive agent consisted of overwhelmingly spicy and aromatic ingredients including “white cardamom, *suosha*, putchuk, turmeric, cloves, *xiangfuzi* (*Cyperus rotundus* 香附子), musk, and liquorice”. The Imperial Pharmacy even recommended customers “take this pill regularly to broaden the centre and soothe *qi*, dissolve wine remaining [in the body] overnight, promote drinking and eating, wear out accumulation and sluggishness, and remove concretion-illness lumps” (常服寬中順氣，消宿酒，進飲食，磨積滯，去癥塊).¹⁵⁷

Being advertised by an elite pharmacy in a cityscape painting representing the prosperity of the imperial capital of the Northern Song dynasty, these two pills are a testimony to the florescence of a unique medical culture, in which exotic spices and aromatics were widely and often indiscriminately prescribed for warming (*wen* 溫), ordering (*li* 理), or broadening (*kuan* 寬) the centre of the body in order to cure, replenish, and energise the digestive system, whose well-being was considered essential for sustaining a healthy body and for treating dangerous diseases such as cold damage.

Tracing the rising trajectory of this medical culture, we can identify two important stages. The first stage was roughly from the seventh through the tenth centuries, when some previously hardly-known exotics such as pepper were integrated into Chinese medicine. This integration did not immediately turn them into digestive agents. Instead, in the beginning, they often assumed other functions, such as removing phlegm, dyeing hair, perfuming the body, or exorcising demons.

¹⁵⁷ Chen, Pei, and Chen, comps., *Taiping huimin heji jufang, juan 3*, 123.

Chapter 1

Thereafter, by the tenth century, they were assembled as warming and digestive agents for treating the spleen and the stomach in the centre of the body. Whereas the wider context of this assembling demands further research, from the case of pepper and *bidengqie* we may find that there were inter-textual communications among spices that shared similar shape, flavours, or names. These underlying links facilitated the borrowing of medical properties among each other and led to a convergence towards warming digestives.

In the second stage, roughly throughout the eleventh century, these warming exotics were met with a changing perception of a mainstream Chinese medical theory, cold damage, which turned to favour the mild therapy of warming the centre over the aggressive therapies of purging and sweating. In this process, the medical functions these exotics acquired in the first stage dovetailed a strong desire of the new social and political elites of the Chinese imperial state, namely, the literati, for mildly treating their self-perceived civil and literate body. After these changes, by the twelfth century, exotic spices and aromatics had become an integral part of Chinese medicine, widely perceived as warming and digestive, and intimately tied to food and drink. Thereafter, from these warming and digestive exotics, pepper would further emerge as a daily used condiment in Chinese cuisine, in connections with the forthcoming maritime expansion of the Mongols in a Trans-Indian Ocean World.

Peppering the World

In the early 1290s, a celebrated painter, calligrapher, and scholar-official, Zhao Mengfu (1254-1322), was serving a post in a North China city, Ji'nan.¹ His recently acquainted local friend, Liu Minzhong (1243-1318), suddenly suffered from a syndrome of vomiting and diarrhoea, supposedly caused by “deep-seated cold” (*chenhan* 沉寒) and urgently demanded pepper as a remedy.² Zhao generously shared his pepper and cured Liu. To express gratitude, Liu composed a poem, telling a personal experience of ingesting pepper:

Already is about to harmonise my drug, and now it also adds flavour to my dishes.

Within a few days, I really have felt my spirit and appearance are resumed.

New yang fire is kindled, and old retained ice instantly disappears.

Shortly I can boast a good appetite, just as easy as how snow melts when hot water is poured.

既將諧吾藥，又以逼我餽。

邇來未幾日，頗覺神觀復。

新陽火始然，宿滯冰旋沒。

行當誇健飯，庶比雪就沃。³

This poem appeared more than a decade after the Mongols captured the Southern Song dynasty (1279). The Great Khan, Khubilai (r. 1260-1294), had now shifted his attention to a maritime frontier by using the trading ports of South China as navy bases. Far away from the sea, this small gift exchange

¹ Zhao Mengfu served in Ji'nan between 1292 and 1294 (or 1295). The service was likely interrupted in 1293 and resumed in 1294. Zhao, “Zhao Mengfu tongzhi Ji'nan kao.”

² For the friendship between Zhao and Liu during this period, see McCausland, *Zhao Mengfu*, 354; Yi, “Liu Minzhong ci yanjiu,” 126; Liu, *Zhong'an xiansheng*, *juan* 18, 428-429.

³ Liu, *Zhong'an xiansheng*, *juan* 18, 429. This is an excerpt from a long poem entitled “On Zhao Zi'ang (Zhao Mengfu) gifting pepper to me” (趙子昂惠胡椒).

Chapter 2

between two Chinese literati is seemingly irrelevant to the ongoing maritime expansion of the Mongol Empire. However, if we closely examine the background of Zhao and Liu, we may find this case points to some important issues concerning the circulation of spices from maritime Asia to inland China around the Mongol Conquest.

To begin with, Zhao Mengfu was not only a cultural celebrity of his age but also a descendant of the former Song royal family and had affinal and economic ties to some wealthy merchants in the Lower Yangzi region. These merchants actively participated in the maritime expansion of the Great Khan and received investment and patronage from Zhao.⁴ In contrast, Liu Minzhong was born in North China, which was first conquered by the Jurchen Jin dynasty around the 1130s, and then incorporated by the Mongol Empire around the 1230s.⁵ We are unsure how that area was supplied with pepper during this long divided period, but after the Mongols reintegrated North and South China into a united empire, Liu was aware that “pepper grows to the south of the sea” (胡椒生海南), indicating the maritime route had already prevailed.⁶ This rather travail exchange, therefore, signifies a northward circulation of pepper by an official, who had access to the maritime trade with the tropical world of Asia, to a potential consumer in inland China, who craved for this digestive and exotic spice.

The existence of this kind of circulations encourages us to think about a question: How did Chinese trade and consumption of spices fare through the Mongol Conquest? This question points to an important debate concerning Asian maritime trade through the Mongol Conquest. In Southeast Asian historiography, researchers tend to focus on the negative impact of the Mongol Conquest upon maritime trade, for the appalling havoc it wreaked, for the supposed erratic maritime policy it instated,

⁴ Chen, “Zhao Mengfu yu zhexi hanghai jiazhu de jiaoyou.”

⁵ For the local society of North China through the Mongol Conquest, see Wang, *In the Wake of the Mongols*. For a biographical study of Liu Minzhong, see Liu, “Yuandai mingchen Liu Minzhong.”

⁶ Liu, *Zhong'an xiansheng*, *juan* 18, 429.

and for the putative diversion of trade by overland routes it induced.⁷ As a premise of Anthony Reid's *Southeast Asia in the Age of Commerce*, there was "a distinct lull in the seaborne trade for almost a century before 1370".⁸ Only after the collapse of the Mongol rule in China and the early Ming Empire dispatched its Indian Ocean fleets (1405-1433), a new wave of strong demand for spices in China would be unleashed and induce an age of commerce (1400-1650) in Southeast Asia.⁹

However, some contradictory evidence has come to light amid an oceanic turn in the studies of the Mongol Conquest. Since the 1990s, historians working with Chinese and Persian sources have increasingly realised that, instead of with a negative maritime policy, the Mongol Yuan dynasty was "the peak of China's long-distance maritime connections with Western Asia".¹⁰ Gao Rongsheng, after a thorough survey of Mongol maritime institutions, points out, in an important monograph published in 1998, the following: 1. The Mongols had never practised a long-term maritime trade prohibition and all recorded sea prohibitions were out of certain exigencies and temporary, lasting merely for one or a few years; 2. The Mongols streamlined the maritime administration system inherited from the Southern Song and abolished the cumbersome practice of compulsory purchase of a large percentage of cargoes by the state; 3. Instead of extracting extra goods through the compulsory purchase, the Mongol ruling elites made direct investments in maritime trade and equipped ocean-going fleets.¹¹

⁷ Wade, "An Early Age of Commerce", 264; Heng, *Sino-Malay Trade and Diplomacy*, 63-71; Lieberman, "Charter State Collapse in Southeast Asia," 937-963. There is a deep-seated negative perception of the Mongol Conquest among Southeast Asian specialists. An early example is G. Coedès' magnum opus, which attributed the decline of the "Indianized states" of Southeast Asia to "the repercussions of the Mongol conquests". Coedès, *The Indianized States of Southeast Asia*, 188-217.

⁸ Reid, *Southeast Asia in the Age of Commerce, 1450-1680, Volume Two*, 10.

⁹ Ibid, 10-16.

¹⁰ Gao, *Yuandai haiwai maoyi yanjiu*; Sen, "The Formation of Chinese Maritime Networks to Southern Asia"; Yokkaichi, "Chinese and Muslim Diasporas and the Indian Ocean Trade Network"; Qiu, "Background and Aftermath of Fakhr al-Dīn al-Ṭibī's Voyage"; Chaffee, *The Muslim Merchants of Premodern China*, 124-161; Yokkaichi, "The Maritime and Continental Networks of Kīsh Merchants under Mongol Rule"; Park, "The Peak of China's Long-Distance Maritime Connections with Western Asia during the Mongol Period"; Allsen, *The Steppe and the Sea*.

¹¹ Gao, *Yuandai haiwai maoyi yanjiu*.

Chapter 2

These institutional changes benefited merchants based on the China Coast, who enjoyed trading privileges through multiple patronage networks extended from the Great Khan.

Yet, these contradictory observations are not necessarily incompatible. On the one hand, the maritime expansion of the Mongols did not necessarily benefit Southeast Asian trading regimes but could instead circumvent and marginalise them. On the other hand, the decline of Southeast Asian spice hubs did not evidently indicate dwindling demand for spices in China, which could instead be better supplied by an alternative trading system.

To propose a compatible model that comprehensively addresses these issues, this chapter examines two understudied topics concerning spices and the Mongol maritime expansion: 1) A changing pattern of spice consumption in China; 2) A shift of Chinese spice frontiers from Southeast Asia to a trans-Indian Ocean world. We will first examine spices in Chinese cuisine from the thirteenth through the fifteenth centuries, pointing out the importance of pepper. Thereafter, we investigate how Java emerged as a principal spice supplier to China by the late twelfth and early thirteenth centuries, and how the late thirteenth century maritime expansion of the Mongols contributed to the emergence of direct trade with the pepper land of the Malabar Coast in South India, which led to a trans-Indian Ocean spice trading network at the expense of Southeast Asian intermediaries. By the end, we are going to discuss how the abundance of pepper in China, which was induced by the emergence of this trans-Indian Ocean world, would instigate strong concerns from a new medical culture, which was built upon a deep rethinking of the role of spices and aromatics in Chinese medicine and foodways.

1. Peppering Chinese Cuisine

Around the dawn of the Mongol Conquest, a new cooking technique known as Sichuan stir-frying (*chuanchao* 川炒) began to receive attention from literati in South China.¹² Among them, a self-styled recluse, Lin Hong (fl. early 13th c.), admonished in his cookery book, *Pure Offerings from the House in the Mountains*, that a hermit like him would avoid this cooking technique because it could destroy the true taste (*zhenwei* 真味) of food.¹³ Lin gave no further detail, but a recipe of Sichuan stir-fried chicken (*chuanchaoji* 川炒雞) is collected by a fourteenth-century everyday-life encyclopaedia, *Complete Collection of Classified Affairs Essential for Households* (*Jujia biyong shilei quanji* 居家必用事類全集). It goes as follows:

Wash a chicken, chop it into pieces, heat three taels of sesame oil, stir-fry the [chopped] chicken, add sliced spring onion and half tael of salt, and stir-fry until seventy percent cooked. Put a spoonful of sauce, together with pestled pepper, Sichuan pepper, and fennel seeds into a big bowl of water, add the mixture into the pan, and boil until fully cooked. It is good to add a small amount of good wine.

每隻洗淨，剝作事件。煉香油三兩，炒肉，入蔥絲、鹽半兩，炒七分熟，用醬一匙，同研爛胡椒、川椒、茴香，入水一大碗，下鍋煮熟為度。加好酒些少為妙。¹⁴

To those who are familiar with modern Chinese cuisine, this is a typical stir-fried dish with a flavour of “numbing and hot spiciness” (*mala* 麻辣). To this date, such a flavour is usually identified with the regional cuisine of Sichuan. Yet, an important difference is that this Sichuan stir-frying recipe used

¹² There is a concern whether the character *chuan* (川) can be translated as Sichuan (四川). This concern can be addressed as in the capital cities of Northern and Southern Song China, *chuanfang dian* (川飯店) referred to “Sichuan restaurant” and *chuanfang* (川飯) referred to “Sichuan food”. Therefore, *chuan* had become identical to Sichuan. For *chuanfang dian* and *chuanfang*, see Meng, *Dongjing mengbualu jianzhu*, *juan* 4, 430. Naidewen, *Ducheng jisheng*, 93; Wu, *Mengliang lu*, *juan* 16, 267

¹³ Lin, *Shanjia qingong*, *juan shang*, 17. For Lin Hong’s self-styled bland taste, see Chen, “Zhuiqiu yinshi zhi qing.”

¹⁴ *Jujia biyong shilei quanji*, *gengji*, 100. Besides that, in the fourteenth century, there was also Sichuan stir-fried pork (*chuanchao zhurou* 川炒豬肉). *Piao tongsbi yanjie*, *juan shang*:5a.

Chapter 2

pepper, instead of chili pepper, to couple with Sichuan pepper. Chili pepper, which is widely used in modern Sichuan cuisine, did not become part of Chinese foodways until the seventeenth century.¹⁵ Before that, Sichuan cuisine depended upon other hot-spicy condiments to pair numbing-spicy Sichuan pepper. The use of these pre-chili-pepper hot spices is poorly documented. Some scattered evidence suggests pepper from overseas used to assume an important role. The fourteenth century *Complete Collection of Classified Affairs Essential for Households* records a recipe of “fermented soybean juice of Chengdu Prefecture” (*Chengdu fu chizhi* 成都府豉汁), which used Sichuan pepper, pepper, dried ginger, and tangerine peel as seasonings.¹⁶ A fermented soybean juice like this was a basic liquid condiment in Chinese cuisine.¹⁷ It suggests that pepper like Sichuan pepper, dried ginger, and tangerine peel had become essential for the regional taste of Sichuan, of which Chengdu was the central city. A 1637 account shows that merchants from Sichuan regularly travelled to the Southeast China Coast to sell silk and purchase pepper.¹⁸ Without a strong demand for pepper back in Sichuan, such a strenuous journey through over a thousand miles of mountainous terrain was nonsensical. Although, for a lack of local culinary texts, we are unable to precisely identify the place of pepper in Sichuan cuisine before the introduction of chili pepper, as more cases will show in this section and section four of chapter three, a combination of Sichuan pepper and pepper was a common way to season food in Chinese cuisine from the Mongol Yuan to the Ming period.

Lin Hong’s account was an early witness to the spread of a (proto-)numbing and hot-spicy Sichuan foodway with a combination of Sichuan pepper and pepper. Lin was not living in Sichuan, but active in the imperial capital of the Southern Song dynasty, Hangzhou, and the Southeast China

¹⁵ Dott, *The Chile Pepper in China*, 18-28; Cao Yu, *Zhongguo shila shi*, 35-41.

¹⁶ *Jujia biyong shilei quanji, jiji*, 60.

¹⁷ Fermented soybean juice is different from soy sauce. It was “an aqueous decoction or percolation of” fermented soybeans and was popular in China before the rise of soy sauce. Huang, *Fermentations and Food Science*, 360.

¹⁸ Song, *Tiangong kainu, juan 2*, 94.

Coast.¹⁹ The existence of Sichuan cuisine in the capital cities of the Northern and Southern Song dynasties is well documented. In the Northern Song Imperial Capital, Kaifeng, there were Sichuan restaurants (*chuanfang dian* 川飯店) selling various kinds of noodle and meaty dishes.²⁰ After the sack of Kaifeng by the Jurchen Jin in 1127, some of these restaurants moved along with the imperial court to Hangzhou, spreading Sichuan cuisine to the region around the Lower Yangzi.²¹ The Sichuan stir-fried chicken was likely popularised by these restaurants in the early thirteenth centuries and raised Lin Hong's attention.²² Its popularity may explain the large-scale consumption of pepper in late thirteenth century Hangzhou, as Marco Polo in the late 1280s or early 1290s noted that according to an official, who attended at the Customs of the Great Khan, on any day forty-three loads of pepper was expended in this city, and "every load is of the weight of 223 pounds".²³

Why did this strongly flavoured foodway become popular from around the early thirteenth century? The condiments it used were not new to China. Pepper, as introduced in the previous chapter, had already been a popular spice for seasoning exotic cuisines, namely, the so-called "foreign-dish meat", in ninth-century China. Sichuan pepper was a widely-used native spice. By the eleventh century, many families in the Sichuan region in Southwest China had been commercially cultivating it for sales to the rest of China.²⁴ Fennel seeds were a naturalised exotic, first recorded by the *Newly Revised Materia Medica* in 659. A tenth-century pharmaceutical guidance, *Discourse on the Nature of Drugs* (*yaoxing lun* 藥性論), notes that "its flavour is bitter and acrid, but it becomes aromatic when used for seasoning all

¹⁹ Chung, "Cong shipu kan Songren de yangsheng yu shiliao," 108-111.

²⁰ Meng, *Dongjing menghualu jianzhu*, juan 4, 430.

²¹ Naidewen, *Ducheng jisheng*, 93; Wu, *Mengliang lu*, juan 16, 267; Gernet, *Daily Life in China on the Eve of the Mongol Invasion*, 134; Schaab-Hanke, "The Capital Behind the Capital," 195.

²² Lin Hong was active approximately in the early thirteenth century. Chung, "Cong shipu kan Songren de yangsheng yu shiliao," 108-111.

²³ Polo, *The Description of the World*, vol. 1, 340.

²⁴ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, juan 14, p. 340.

Chapter 2

kinds of food” (味苦辛，和諸食中甚香) and people “in Sichuan mostly eat it” (川中多食之). In the eleventh century, Su Song also noted that fennel seeds were widely planted in China and those imported from overseas were mainly for medicinal use.²⁵

What was new in the case of Sichuan stir-frying was the integration of these ingredients into a cooking style known as stir-frying. Back to the sixth century, when pepper, together with long pepper and dried ginger (the three acrids in Ayurveda), first appeared in China as seasonings for exotic cuisines, stir-frying was marginal.²⁶ A pre-condition for the wide spread of stir-frying as a typical Chinese cooking technique was the availability of large iron pans, known as woks (*huo* 鑊). Although “model woks” have been found at archaeological sites of the Han period (202 BCE-220 CE),²⁷ large iron pots could not massively replace pottery pots without a major breakthrough of iron production, which, as most researchers are in agreement, took place during the Northern Song period.²⁸

The rise of stir-frying around the Northern Song period influenced the use of spices in Chinese cuisine and facilitated the integration of pepper with Chinese foodways. Different from boiling, steaming, and baking, stir-frying could reach a high temperature within a short period and quickly dry food ingredients. It, therefore, needed ready-made condiments, whose flavours could be quickly released without going through slow cooking. A solution was to use pulverised spices with strong flavours like pepper and Sichuan pepper. As the recipe of the Sichuan stir-fried chicken shows, its spices were all pestled (*yanlan* 研爛) before use. In the fourteenth century, this kind of ready-to-use spice mixtures were known as *liaowu* (料物), literally meaning “matter-substance” or “matter-

²⁵ Ibid, *juan* 9, 225. For the textual history of this no longer extant work, see Shang, “Dui Yaoxing lun.”

²⁶ Huang, *Fermentations and Food Science*, 89-91; Anderson, *Food and Environment in Early Medieval China*, 157.

²⁷ Anderson, *The Food of China*, 43.

²⁸ A link between the revolutionary growth of iron production and the spread of stir-frying has yet to be critically investigated. On iron, see Hartwell, “A Revolution in the Chinese Iron and Coal Industries.” On iron pots, see Huang, *Fermentations and Food Science*, 230; Wagner, “Blast Furnaces in Song-Yuan China,” 62.

materials”, which, as Françoise Sabban has pointed out, had become a generic term for spices during the Mongol Yuan period.²⁹ The essential role of *liaowu* in stir-frying is attested by a dialogue between a Korean who travelled to Beijing in the fourteenth century and his Han-Chinese host. The former told the latter, “I am a Korean and I do not know how to stir-fry meat” (我是高麗人，都不會炒肉). The latter replied:

Is there any difficulty? Wash the pot, heat it till hot, and add half a small-cup of sesame oil. When the oil is cooked, put in meat and some salt, and use chopsticks to stir. When it is half cooked, blend some sauce, spring onion, and *liaowu*. Cover the pot with a lid, don't let steam evade, and bring fire up. Soon thereafter, it is cooked.

有甚麼難處？刷了鍋着，燒的鍋熱時，着上半盞香油。將油熟了時，下上肉，着些鹽，着筋子攪動。炒的半熟時，調上些醬水、生蔥、料物拌了，鍋子上蓋覆了，休着出氣，燒動火，一霎兒熟了。³⁰

Therefore, like the Sichuan stir-fried chicken, the typical stir-frying in fourteenth-century China was to first heat oil, then stir-fry the main ingredients till half cooked, then add condiments, including *liaowu*, and eventually blend everything and make it fully cooked.

There were different types of *liaowu*. Some served as fine spices for topping a delicate dish. An early 1330s edition of a popular everyday life encyclopaedia, *Extensive Records of the Forest of Affairs*, records a recipe of “great *liaowu*” (*da liaowu* 大料物) with following ingredients:

One tael each of cassia, galangal, long pepper, *cao doukou* (*Alpinia katsumadai*), tangerine peel, *suosha* (*Amomum villosum*), star anise, and fennel seeds,

²⁹ Sabban, “Court Cuisine in Fourteenth-Century Imperial China,” 177-178.

³⁰ *Laoqida yanjie, juan shang*:19a-20a. There are different editions. I choose the widely circulated 1670 edition, which basically followed a circa 1515 edition. For this text in other editions, see Lee, *Laoqida si zhong banben*, 129.

Chapter 2

two taels of Sichuan pepper,
five taels of apricot kernel,
one and a half taels of liquorice,
and half a tael of white sandalwood.

They would be pulverised, steamed, and kneaded into small pills for everyday use.³¹ A similar recipe, called “great *liaowu* from the kitchen of the Heaven” (*Tianchu da liaowu* 天廚大料物), is recorded by the *Complete Collection of Classified Affairs Essential for Households*.³² These two “great” spice mixtures contained no pepper, but many fine spices with rich aroma. They, as the title of the “great *liaowu* from the kitchen of the Heaven” indicates, were most likely used for enriching the flavour and aroma of delicate dishes served in a banquet. A Korean interpreter’s account dating from the fourteenth or early fifteenth century shows, in an elaborate banquet in Beijing, all major dishes were sprinkled with fine *liaowu* (*xi liaowu* 細料物). An annotation on this record refers to another edition of the *Extensive Records of the Forest of Affairs* (*Shilin guangji* 事林廣記), showing the ingredients of the fine *liaowu* were exactly same as the great *liaowu*.³³

Pepper was a main ingredient in other less delicately prepared spice mixtures, which were more likely used for time-saving cooking like stir frying. The *Complete Collection of Classified Affairs Essential for Households* collected a recipe called “easy to blend *liaowu* (*wuliao*)” (*tiaobe shengli wuliao* 調和省力物料), consisting of *maqin* (馬芹, *makedunis* in Arabic, namely, Muslim celery or Iranian parsley), pepper, fennel seeds, dried ginger, cassia, and Sichuan pepper. It was also kneaded into small pills for

³¹ *Xinbian zuantu zenglei qunshu leiyao shilin guangji* (Xiyuan jingshe edition), *bieji*, *juan* 10:8b-9a.

³² *Jujia biyong shilei quanji*, *gengji*, 139.

³³ *Piao tongshi yanjie*, *juan shang*:7a; Sabban, “Court Cuisine in Fourteenth-Century Imperial China,” 178. Many different editions of the *Extensive Records of the Forest of Affairs* were published from the fourteenth through the sixteenth centuries. For their textual history, see Wang, “*Shilin guangji* banben kaolue.”

Peppering the World

preservation, to be nipped by fingers before use.³⁴ Another simple mixture of spices, including Sichuan pepper, *maqin*, fennel seeds, pepper, apricot kernel, and raw ginger, was for curing spicy meat known as “once prepared, one hundred uses” (*yiliao baidang* 一了百當). The spicy meat could be stored in a pot and used either as food or a seasoning.³⁵ The *Extensive Records of the Forest of Affairs* records a recipe under the same title, which, however, used no meat, but stir-fried all these condiments in oil together with dreg, and then stored them in a pot for long term use. It notes that such a spice mixture had “sufficient ingredients and rich taste, being very convenient for cooking” (料足味全，甚便行饗).³⁶

Among the ingredients of these read-made and popular spice mixtures, pepper was unique. Besides the marginally used sandalwood, pepper was the only major ingredient exclusively imported from overseas.³⁷ All other condiments either were native to China, such as *cao doukou*, tangerine peel, star anise, *maqin*, ginger, cassia, and Sichuan pepper, or had already been naturalised in China, such as long pepper, fennel seeds, and *suosha* (*Amomum villosum*).³⁸ It, also, distinguished pepper from most of the warming exotics discussed in chapter one, such as cloves and nutmeg, which, albeit widely used in medicine, beverage, and incense, did not become an important condiment for cooking.³⁹

The success of pepper in Chinese foodways rested upon its unique position as being one of the hottest spices in China before the introduction of chili pepper. An important witness is a dietetic *materia medica*, *Materia Medica for Everyday Use* (*Riyong bencao* 日用本草), compiled by a Chinese physician,

³⁴ *Jujia biyong shilei quanji, gengji*, 139. Buell and Anderson, *A Soup for the Qan*, 148-149, note 154.

³⁵ *Jujia biyong shilei quanji, gengji*, 101.

³⁶ *Xinbian xuantu zenglei qunshu leiyaoshi lin guangji* (Xiyuan jingshe edition), *bieji*, *juan* 8:8b.

³⁷ Commercial cultivation of pepper only appeared in China first on the Hainan Island in the early twentieth century. From field work in Hainan and the Leizhou Peninsula, I learn that a major challenge to the cultivation of pepper in China is cold waves in winter, which reach as far south as Hainan and can destroy a perennial tropical plant such as pepper.

³⁸ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 9, 225, 228-229, 232.

³⁹ Sabban, “Court Cuisine in Fourteenth-Century Imperial China,” 179. Besides that, pepper was also extensive used in the Mongol court cuisine, mainly because of influence from West and Central Asian food culture. *Ibid*, 180; Husihui, *Yinshan zhengyao*; Buell and Anderson, *A Soup for the Qan*.

Chapter 2

Wu Rui, in 1329 and published around 1343.⁴⁰ As a concise dietary guidance, it summarised the essential medical properties of commonly used food ingredients, and adapted them for dietary purposes. On the one hand, it popularised pepper's medical functions as being warming, digestive, and able to destroy food poisons.⁴¹ On the other, it also creatively placed pepper in a new category, “five flavours” (五味), and specifically under the “acidic flavour” (*xinwei* 辛味) sub-category. That sub-category consisted of nine most commonly used spices including dried ginger, raw ginger, pepper, Sichuan pepper, *dangzi* (*Zanthoxylum ailanthoides* 欖子), long pepper, *shiluo* (dill or cumin 蒔蘿),⁴² *wu zhuayu* (*Evodia rutaecarpa* 吳茱萸), and *jingjie* (*Schizonepeta multifida* 荊芥). Among them, most was merely defined as *xin* (辛), meaning acrid or pungent. Only *dangzi* and pepper were *xinla* (辛辣), meaning a gustatory feeling of being extremely acrid or pungent, which I refer to here as “hot-spicy”. Pepper was furthermore emphatically noted as “with a very acrid and hot-spicy flavour when used [for cooking]” (用之味甚辛辣).⁴³

The idea of pepper embodying the strong flavour of hot spiciness can be identified with a number of food recipes. The early 1330s edition of *Extensive Records of the Forest of Affairs* noted two recipes with a flavour of hot spiciness. One was “vinegar of five hot spices” (*wula cu* 五辣醋), containing five ingredients, namely: spring onion, Sichuan pepper, pepper, raw ginger, and dried ginger.⁴⁴ Another recipe was “pestled pepper” (*lei hujiao* 擂胡椒). It pulverised pepper together with salt and spring onion. The final product, according to the recipe, was “extremely hot-spicy” (*jila* 極

⁴⁰ The original Yuan edition is no longer existent. A 1525 reprint is preserved in Japan. Wu, *Riyong bencao*.

⁴¹ Ibid, *juan* 8, p. 444.

⁴² It is debated whether *shiluo* was dill or cumin. Laufer, *Sino-Iranica*, 383-384; Schafer, *The Golden Peaches of Samarkand*, 148.

⁴³ Wu, *Riyong bencao*, *juan* 8, 443-444.

⁴⁴ *Xinbian zuantu zenglei qunshu leiyaoshi bilin guangji* (Xiyuan jingshe edition), *bieji*, *juan* 10:7b.

Peppering the World

辣).⁴⁵ A 1504 recipe collection, which we will return to in chapter three, changed the title of “Sichuan stir-fried chicken” into “hot-spicy stir-fried chicken”, in which fennel seeds disappeared and the numbing and hot spiciness of Sichuan pepper and pepper became more prominent.⁴⁶ It also recommended a cooking technique called “hot-spicy cooking” (*lapeng* 辣烹), for cooking many freshwater and marine products. The method was first to boil the main food ingredient, such as fish or mollusc, with liquorice, and then blend it with pepper, Sichuan pepper, spring onion, sauce, and vinegar. A dish cooked in this way again carries the numbing and hot-spicy taste, but the hot spiciness of pepper had become its signature flavour, as it now entitled this cooking technique.⁴⁷

There is furthermore an intriguing corruption case indicating hot spiciness was coveted as the most essential value of pepper. This case was disclosed in 1452 when for distributing an immense store of pepper imported by Zheng He’s voyages (1405-1433) from the Indian Ocean World, the Ming imperial state (1368-1644) paid pepper as salary to soldiers.⁴⁸ This pepper salary was, however, craftily embezzled by the officials in charge who first offered it to some restaurants. The restaurants would “put pepper in boiling water and boil out its hot spiciness” (將胡椒沸湯煮去辣味). In return, those officials would receive financial benefit from the restaurants.⁴⁹ As a result, what soldiers received was less-hot-spicy pepper. Much of its flavour went to pepper the food offered in the restaurants associated with those corrupted officials.

These examples have yet to exhaust the extensive use of pepper in Chinese foodways from the thirteenth through the early sixteenth centuries. The 1504 recipe collection is the epitome of “China’s

⁴⁵ Ibid, *juan* 10:9a.

⁴⁶ Song, *Songsbi yangsheng bu*, *juan* 3, 119.

⁴⁷ Ibid, *juan* 4, 131.

⁴⁸ For pepper and Zheng He, see T’ien, “Chêng Ho’s Voyages and the Distribution of Pepper in China,” 186-197.

⁴⁹ Ye, *Ye Wenzhuang gong zouyi*, “*bianzou cunqao*,” *juan* 1:8a-b.

Chapter 2

age of pepper”, as it used pepper extensively in several major food sections. By then, pepper, albeit still being an exotic exclusively imported from overseas, was no longer a spice mainly for exotic cuisines in China. Instead, it was now an essential part of Chinese foodways. We may conclude this phenomenon with a poem by an official, Wang Gong (fl. early 15th c.), who served the Emperor Yongle (1403-1424) in a period when Zheng He’s fleet was active in the Indian Ocean World:

In Praise of Pepper

Bearing folded, small, and copious seeds, the Central Plain has no place to let it take root.
Since it has been used in tripods for seasoning, ginger and cassia have been superseded one
after another.

詠胡椒

結實重番小更繁，中原無地可移根。

自從鼎鼐調和去，薑桂紛紛不共論。⁵⁰

2. Spice Hubs of Java

Where did such a plethora of pepper come from? Thanks to T’ien Ju-kang’s influential article in the 1980s, researchers of Asian maritime trade tend to take Zheng He’s voyages in the early fifteenth century as the turning point through which pepper was transformed from a rarity to a commonly used spice in China.⁵¹ However, this argument fails to address the analysis we have made in section one. As pepper had been used as a major ingredient in the popular spice mixtures (*liaown*) since the Mongol

⁵⁰ Wang, *Baiyun qiaochang ji*, juan 4:37a.

⁵¹ T’ien, “Chêng Ho’s Voyages and the Distribution of Pepper.” T’ien’s argument impacted Reid’s conceptualisation of the early fifteenth century as the starting point of the age of commerce in Southeast Asia. Reid, *Southeast Asia in the Age of Commerce, 1450-1680, Volume Two*, 12.

period, and the Sichuan stir-frying had already been popular since the early thirteenth century, we have to revisit T'ien Ju-kang's thesis by focusing on earlier periods.

A good starting point is a pepper-induced trade war between Java and the Southern Song dynasty, which took place circa two centuries ahead of Zheng He's voyages. In 1225, Zhao Rukuo, a Southern Song official serving the Maritime Trade Superintendency of Quanzhou,⁵² noted in his *Description of Foreign Countries* (*Zhufan zhi* 諸蕃志, 1225):

There is a vast storage of pepper in this foreign country (Java) and the merchant ships, in order to catch multi-fold profits, often smuggle [out of China] copper cash for bartering purposes. The court has repeatedly forbidden trade [with this country], but the deceptive foreign traders change its name to Sujidan.

此番胡椒萃聚，商舶利倍蓰之獲，往往冒禁，潛載銅錢博換，朝廷屢行禁止興販，番商詭計，易其名曰蘇吉丹。⁵³

This record marks a new era in China's maritime trade with the tropical world of Asia. Like never before, an exotic spice had become such a financial concern for an imperial state in China, and, also as never before, a Southeast Asian regime had been subject to such a full-scale trading embargo because of its success in exploring the Chinese consumer market. In the 1970s, Kentaro Yamada, a founding scholar of East Asian aromatic and spice history, proposed that this record marked the beginning of "China's age of pepper" (*Chūgoku no koshō jidai* 中国の胡椒時代), when strong demand for pepper in China drew supplies first from Java, then from the Malabar coast of South India, and eventually also from Samudera in northern Sumatra.⁵⁴ However, Yamada's thesis, which was unfortunately ignored by T'ien Ju-kang, has yet to receive due attention from Southeast Asian and

⁵² Zhao served in Quanzhou between 1225-1227. Dohi, *Sōdai Nankai bōekishi no kenkyū*, 207-229.

⁵³ Zhao, *Zhufan zhi jiaoshi, juan shang*, 55. Translation adapted from Hirth, and Rockhill, *Chau Ju-kua*, 78.

⁵⁴ Yamada, *Tōa kōryō shi kenkyū*, 235-246.

Chapter 2

Indian Ocean specialists. For the lack of follow-up research, the concept of “China’s age of pepper” still rests upon some scattered evidence cited by Yamada from Chinese geographic notes and Marco Polo’s travelogue. These sources, while generally delineating a China-centric expansion of pepper frontiers, cannot answer why Java assumed such an important role in the first place and why thereafter the frontiers shifted to the Indian Ocean World. To address these questions, we need to contextualise “China’s age of pepper” with updated scholarship from Southeast Asian and Indian Ocean studies.

To begin with, Java did not suddenly emerge as a pepper exporter. The advent of pepper production in Java preceded Zhao’s record for about two centuries. It was part of the commercialisation of Javanese society from the tenth through the early eleventh centuries when the political centre of Javanese states moved from the hinterland of central Java to the coastal area of eastern Java and enjoyed a maritime trade boom stimulated by surging demand from China for tropical spices and aromatics.⁵⁵ An inscription, which, according to Jan Wisseman Christie’s analysis of its style and script, dates to the reign of Airlangga, namely, the first half of the eleventh century, shows that a commercial warehouse in a seaport of the Brantas Delta in eastern Java had, among other typical local exports, a cash crop transplanted from India, namely, *mirica* (black pepper).⁵⁶ Although the context of this stele, which was discovered not in its original place but in an inland location in eastern Java, was vague, the term unambiguously carries a Sanskrit root (*marica*) and distinguishes itself from native cubeb pepper in Java, which as seen in chapter one was historically branded as tender pepper and *bidenggje* (*vidāṅga*) in China trade.

This transplantation helped Java in its long-term rivalry with other Asian maritime powers. From the late tenth through the early eleventh centuries, Java, Srivijaya, and Chola waged wars against each

⁵⁵ Wisseman Christie, “Javanese Markets and the Asian Sea Trade Boom”; idem, “Trade and Value in Pre-Majapahit Java”; Hall, “Indonesia’s Evolving International Relationships in the Ninth to Early Eleventh Centuries.”

⁵⁶ Wisseman Christie, “Javanese Markets and the Asian Sea Trade Boom,” 373-4.

Peppering the World

other for hegemony around the straits of Melaka and Sunda.⁵⁷ Whereas the exact causes of each conflict varied, there always lingered an economic incentive to maximise their share in trade with China, whose demand for tropical spices and aromatics had been unleashed by the change in Chinese medical culture discussed in chapter one. Among these rivalling powers, Srivijaya and Java represented two different patterns. The trading regime of Srivijaya primarily relied on the transshipment of Indian Ocean commodities in general, and highly valuable frankincense from West Asia in particular, to China.⁵⁸ It lacked a strong agricultural base, and its hinterland offered no cash crops but gold and forest products.⁵⁹ Java's sphere of influence was to the east, including the so-called spice islands, namely, Maluku and Banda, which produced cloves and nutmeg, and Timor and the Lesser Sunda Islands, which produced sandalwood. Besides that, the island of Java was densely populated and offered important cash crops for Asian maritime trade, such as rice, pepper, safflower dye, and white cardamom.⁶⁰

During the eleventh century, these two rivalling powers took divergent paths. Srivijaya survived repeated raids by Chola in 1017, 1025, and ca. 1068, and moved its centre to Jambi, to northwest of its original centre, Palembang, both on the east coast of Sumatra.⁶¹ For maintaining the status of being a trading entrepôt, it became increasingly belligerent, coercing traders to visit its port(s).⁶² It also

⁵⁷ For the conflicts between Java and Srivijaya, see de Casparis, "Airlangga"; Heng, *Sino-Malay Trade and Diplomacy*, 81-84. For the conflicts between Srivijaya and Chola, see articles in Kulke, Kesavapany, and Sakhuja, eds., *Nagapattinam to Suvarnadwipa*. For an updated overview of these conflicts, see Kulke, "Śrīvijaya Revisited," 64-72.

⁵⁸ So, "Dissolving Hegemony or Changing Trade Pattern?"; Heng, *Sino-Malay Trade and Diplomacy*.

⁵⁹ Manguin, "At the Origins of Sriwijaya."

⁶⁰ Wisseman Christie, "Javanese Markets and the Asian Sea Trade Boom".

⁶¹ There is a debate about whether Srivijaya was a single polity with a centre, or a putative title used by a group of trading regimes around the Straits of Melaka. I tend to believe Jambi was a major centre of Srivijaya since the end of the eleventh century, because otherwise it is difficult to explain why it was Jambi (Malayu), instead of other ports, that became the primary target of the Singhasari's expedition in 1275. Wolters, "A Note on the Capital of Śrīvijaya during the Eleventh Century"; Fukami, "Sanbutsusei no saikentō"; Jordaan and Colless, *The Mahārājas of the Isles*, 106-121.

⁶² Heng, "State Formation and the Evolution of Naval Strategies," 388-394.

Chapter 2

attempted to monopolise two high-value aromatics for the China trade, namely, frankincense and sandalwood. A Chinese jotting from the early twelfth century noted that Srivijaya had already controlled the trade of frankincense and was now working to monopolise sandalwood. For achieving that goal, it “orders traders to sell [sandalwood] to its rulers, causing a several-fold increase of price” (令商就其國主售之，直增數倍).⁶³ These two aromatics were from two different trading zones. Frankincense was primarily from West Asia, whose maritime circulation to China had to pass through the Malay World under Srivijaya’s control. Sandalwood was, however, not necessarily tied to Srivijaya, but from the islands of Timor and the Lesser Sunda, which traditionally fell within Java’s sphere of influence.⁶⁴

This record was not the only evidence of Srivijaya’s involvement in the trade in Java’s orbit. In 1156, following an invitation for tribute missions from Emperor Gaozong (r. 1127- 1162) of the Southern Song dynasty, a Srivijaya mission arrived with a rich load of goods. Among them, there was an astonishing amount of frankincense (81,680 catties), nutmeg (2,674 catties), pepper (10,750 catties), and sandalwood (19,935 catties).⁶⁵ The latter three were all typical exports from Java and the eastern Indonesian Archipelago.

Srivijaya’s trade of commodities from Java’s orbit took place in a divided period in Javanese dynastic history. In the 1040s, the kingdom of Airlangga (r. ca. 1010s–1040s) in eastern Java was split

⁶³ Zhu, *Pingshou ketan*, juan 2, 30. Translation adapted from Heng, “Shipping, Customs Procedures, and the Foreign Community,” 12.

⁶⁴ Derek Heng suggests the sandalwood that Srivijaya aimed to control was *Pterocarpus santalinus*, namely, sanders or red sandalwood from South India and the Malay Peninsula, mainly valued for its hardness and red colour, but possessing no remarkable aroma. However, the Chinese had a different term, *zitan* (紫檀, purple sandalwood), for *Pterocarpus santalinus*. The term used in this account, *tanxiang* (檀香 sandal incense), indicates that it was fragrant *Santalum album* from Timor and the Lesser Sunda Islands. Heng, “State Formation and the Evolution of Naval Strategies in the Melaka Straits,” 389-390; Schafer, “Rosewood, Dragon’s Blood, and Lac,” 130-131.

⁶⁵ *Song huiyao*, vol. 16, *fanyi* 7, 9966-9967.

Peppering the World

by his sons into Janggala and Pañjalu (Kaḍiri).⁶⁶ The history of these two regimes is poorly documented, and it is still debated when and how they were reintegrated by the Singhasari dynasty (mid-13th c.-1292) in the mid-thirteenth century.⁶⁷ Hardly anything is known about their participation in maritime trade. Chinese records show Java kept sending tribute missions in the twelfth century, but it is uncertain which regime initiated them.⁶⁸

Its political weakness notwithstanding, Java's trade with China was booming during this divided period. For merchants based in late twelfth century Canton, Java was a more important trading partner than Srivijaya.⁶⁹ This contrasted success hinged upon a new pattern in China's maritime trade, in which private merchants from the China Coast, instead of tribute missions from Southeast Asia, prevailed.⁷⁰ This pattern, as Derek Heng's monograph shows, was born with the change of Chinese maritime policy in the late eleventh century. For generating more fiscal revenue from overseas trade, the Northern Song imperial state abandoned previous restrictions upon private merchants, allowing them to sail overseas from more trading ports and with fewer registration requirements. With better access to and knowledge about the Chinese domestic market, these private traders gradually marginalised the trade by tribute missions. They also explored many small ports of Southeast Asia, directly traded with them for local products, and circumvented the established trading entrepôts of Srivijaya.⁷¹

⁶⁶ Buchari, "Sri Maharaja Mapanji Garasakan"; Nihom, "Ruler and Realm"; Jordaan, "Bêlahan and the Division of Airlangga's Realm."

⁶⁷ Hunter, "The Body of the King"; Sidomulyo, "From Kuṭa Rāja to Singhasāri"; Sidomulyo, "Kṛtanagara and the Resurrection of Mpu Bharāda."

⁶⁸ *Song huiyao*, vol. 16, *fanyi* 4, 9830.

⁶⁹ Zhou, *Lingwai daida jiaozhu*, *juan* 3, 126.

⁷⁰ Wolters, *The Fall of Śrīvijaya in Malay History*, 4. These private traders were not necessarily ethnic Chinese. Many were of foreign descent but had since long settled down in the trading ports of South China, such as Canton and Quanzhou. For their background, see Cheng, "Cong fanke dao tangren."

⁷¹ Heng, *Sino-Malay Trade and Diplomacy*, 38-54.

Chapter 2

Java benefited from this shift. The island itself offered abundant cash crops. The commercialised and populous Javanese rural society was furthermore a major consumer market for Chinese goods.⁷² Among them, Chinese copper coins were eagerly sought after by local traders because of an ongoing monetary transformation in Javanese society, which demanded small denomination coins to energise small-scale exchange in the rural market.⁷³ These factors attracted many traders from China to Java and induced a massive outflow of Chinese copper coins in exchange for Javanese products.⁷⁴

Among exports from Java, pepper had a large consumer market in China. In 1213, a local office of the Maritime Trade Superintendency in Hangzhou reported that merchants carried pepper, lakawood (*jiangzhen xiang* 降真香), *suosha* (*Amomum villosum*), *doukou* (*Alpinia katsumadai*, or white cardamom, or nutmeg), and *huoxiang* (*Agastache rugosa* 藿香) from Canton and Quanzhou to sell in Hangzhou.⁷⁵ Among them, *suosha* and *huoxiang* were cultivated in the Far South of China, the former being a widely used spice and the latter being a popular aromatic. Lakawood, as Derek Heng's research has shown, was an emerging low-value Southeast Asian aromatic catering to the everyday consumption of ordinary households in China.⁷⁶ Together with pepper and *doukou*, this group of southern goods constituted low-value spices and aromatics targeting mass consumption in the domestic market. Listed as the first among them, pepper was becoming a commonly traded exotic in the Chinese spice and aromatic market, echoing the concurrent rise of Sichuan stir-frying.

⁷² Wisseman Christie, "States without Cities"; idem, "Javanese Markets and the Asian Sea Trade Boom"; idem, "Trade and Value in Pre-Majapahit Java."

⁷³ Wisseman Christie, "Money and Its Uses in the Javanese States"; van Aelst, "Majapahit Picis."

⁷⁴ For the outflow of Chinese copper coins, see So, "Financial Crisis & Local Economy," 133-137; Schottenhammer, "The Role of Metals and the Impact of the Introduction of *huizi* Paper Notes"; Heng, "Export Commodity and Regional Currency."

⁷⁵ *Song huiyao*, vol. 7, *zhiguan* 44, 4221.

⁷⁶ Heng, "The Trade in Lakawood Products."

Peppering the World

In Chinese sources, Java's export of pepper was first noted by an important geographic treatise based on information from the trading community of Canton, *Representative Answers from the Region beyond the Mountains* (*Lingwai daida* 嶺外代答, 1178). It shows:

The country of Java (Shepo) is also called Pujialong (Pekalongan). It is located to the southeast of the sea, below the [sea] currents, and hence called the Lower Coast (下岸). A ship from Canton, sailing in the eleventh or twelfth month and following a favourable wind by day and night, can reach it within a month...It produces pepper, sandalwood, cloves, white cardamom, nutmeg, and agarwood.

闍婆國，又名莆家龍，在海東南，勢下，故曰下岸。廣州自十一月、十二月發船，順風連昏旦，一月可到。...土產胡椒、檀香、丁香、白豆蔻、肉豆蔻、沉香。⁷⁷

Therefore, with pepper and white cardamom from its own hinterland, and sandalwood, cloves, nutmeg, and agarwood from associated islands, the island of Java was now assembling these popular spices and aromatics for the China trade.

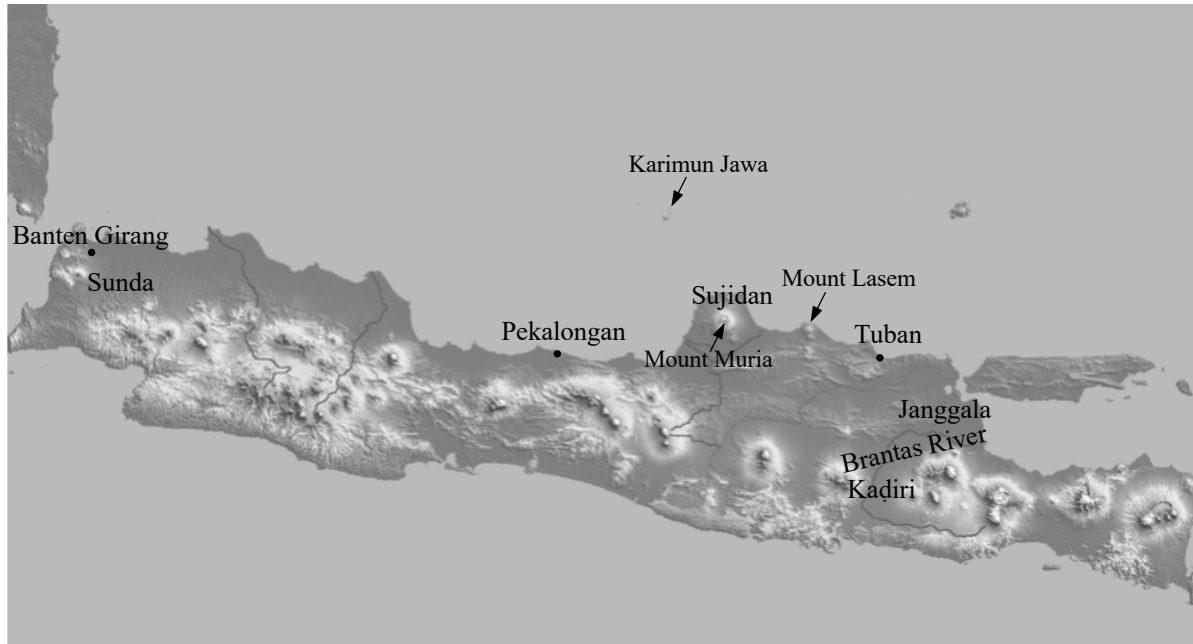
Yet, where were the trading ports of Java located? The leading commercial hub was certainly Pekalongan, as it was equalised by this account with the country of Shepo (Java). Pekalongan is located along the north coast of central Java, far away from the political centres of the then divided dynasties in eastern Java. From the seventh through the ninth centuries, when the political centres of Javanese kingdoms were still in central Java, the coast where Pekalongan is located was pivotal for their communications with the maritime world.⁷⁸ However, after the political centres moved to eastern Java in the early tenth century, this coast became peripheral. Little is known about its history until the

⁷⁷ Zhou, *Lingwai daida jiaozhu*, juan 2, 88-89.

⁷⁸ Van der Meulen, "In Search of "Ho-Ling""; Satari, *New Finds in Northern Central Java*; Wisseman Christie, "Revisiting early Mataram"; Degroot, *Candi, Space and Landscape*, 79-84; Griffiths, "The Epigraphical Collection of Museum Ranggawarsita."

Chapter 2

resuscitation of Pekalongan as a chief trading port representing Java in this late twelfth century Chinese account. This development likely reflects the political dividedness of eastern Javanese dynasties giving some breathing space for this coast to re-emerge as a trading centre.



Map 2.1 Java in the early thirteenth century (Adapted from “Topography of Java” by Sadalmelik, https://en.wikipedia.org/wiki/Java#/media/File:Java_Topography.png).

Pekalongan was not the only spice hub of Java. Zhao Rukuo, in the early thirteenth century, noted a string of trading ports along the north coast of Java (Map 2.1). To the west of Pekalongan was Sunda (Xintuo 新拖), which at that time was still a dependency of Srivijaya.⁷⁹ Its port should be Banten Girang, because Sunda Kelapa (present Jakarta) would only become a Sundanese trading centre after the establishment of Pajajaran Kingdom in Bogor in 1333.⁸⁰ Zhao noted that the mountains of Sunda produced high-quality pepper that was “small-grained but heavy, superior to that of Tuban” in eastern Java, but its trade was hampered by the lack of security.⁸¹ To the east of Pekalongan was a prosperous trade hub called Sujidan, whose exact location has yet to be identified, but certainly situated

⁷⁹ Zhao, *Zhufan zhi jiaoshi, juan shang*, 36; Hirth and Rockhill, *Chau Ju-kua*, 62.

⁸⁰ Guillot, *Banten avant l'Islam*, 120-121.

⁸¹ Zhao, *Zhufan zhi jiaoshi, juan shang*, 48; Hirth and Rockhill, *Chau Ju-kua*, 70.

somewhere around Mount Muria, which was known as its landmark.⁸² According to Zhao, the export of Sujidan was not much different from Java (Pekalongan), but with an uppermost abundance of pepper.⁸³ It helped to earmark a place name in Chinese rutters (sailing manuals) dating from the fifteenth century and on, referring to Mount Muria or nearby Mount Lasem as Mount Pepper (Hujiao shan 胡椒山, or Jiao shan 椒山).⁸⁴ To the east of Sujidan was Tuban (打板 Daban), about which Zhao offered little information, besides suggesting its pepper was inferior to Sunda.⁸⁵

Further to the east was one of the twin dynasties in eastern Java, Janggala (Rongyalu 戎牙路 or Chongjialu 重迦盧). Compared with the inland dynasty of Kaḍiri, Janggala was much better-known to the contemporary Chinese. Zhao described it as a country on a flat plain, easily accessible by boats and carts. Its buildings were like China, and it also produced pepper.⁸⁶ These descriptions imply Janggala was a relatively agricultural and prosperous country. Likely for that reason, Zhao noted another name for Janggala was Great Java (Da Shepo 大闍婆), indicating it was more important than Pekalongan (Java). These two places, representing central and eastern Java, were also juxtaposed in other Chinese sources. A late thirteenth-century text, *Miscellaneous Notes on Island Barbarians* (*Daoyi zazhi* 島夷雜誌), mentions both Janggala (Great Java) and Pekalongan, showing it took eight days to sail from Pekalongan to Janggala and their customs were the same.⁸⁷ Further to the east of Janggala, Zhao

⁸² Zhao, *Zhufan zhi jiaoshi, juan shang*, 62; Hirth and Rockhill, *Chau Ju-kua*, 85. Fukami suggests Sukodono, a village to the south of Jepara, is a good candidate, but it has yet to be supported by local archaeological or epigraphic evidence. Fukami, “Shōbanshi no Sujidan no ichi ni tsuite.” An important clue, which deserves further research, is a Dutch archaeological survey in the early 1940s, which reveals rich deposits of Chinese ceramics from the eleventh through the fourteenth centuries along the northeast and northwest lower slopes of Mount Muria. Van Orsoy de Flines, “Onderzoek naar en van keramische scherven in de bodem in Noordelijk Midden-Java,” 73-79.

⁸³ Zhao, *Zhufan zhi jiaoshi, juan shang*, 62; Hirth and Rockhill, *Chau Ju-kua*, 85.

⁸⁴ *Liangzhong haidao zhenjing*, 45, 57-58, 66-67, 69-71.

⁸⁵ Zhao, *Zhufan zhi jiaoshi, juan shang*, 48, 60; *juan xia*, 195; Hirth and Rockhill, *Chau Ju-kua*, 70, 82, 222.

⁸⁶ Zhao, *Zhufan zhi jiaoshi, juan shang*, 61; *juan xia*, 195; Hirth and Rockhill, *Chau Ju-kua*, 84, 222.

⁸⁷ This text was incorporated by *Extensive Records of the Forest of Affairs*. It was originally based on information from the Maritime Trade Superintendency of Canton. It mentions the establishment of the Mongol Yuan

provided brief accounts for many small trading places, which produced sandalwood, cloves, and *doukou* (most likely nutmeg).⁸⁸ These accounts represent a nascent understanding of the exact origins of fine spices and aromatics in the eastern archipelago of Indonesia, tantalising traders from China to explore a spice and aromatic trading world beyond Java.

3. To Malabar

After showing the prosperous spice and aromatic trade along the north coast of Java, Zhao's text, however, contains a strange note that "someone says that the country of Wuliba in Nanpi has the most [pepper], and that the [pepper] bought by the foreign traders in Java comes from Wuliba" (或曰南毗無離拔國至多，番商之販於闍婆，來自無離拔).⁸⁹ Most historians are in agreement that Nanpi (南毗) referred to the land of Nambūdiris, namely, the elite Brahmin class in Kerala (Malabar),⁹⁰ and Wuliba (in Amoy dialect Ma-li-bwat) was Malabar.⁹¹ It therefore points to the renowned pepper land of Malabar.⁹²

dynasty, but keeps referring to Java as Shepo (闍婆), which was mainly used in the Song period, instead of Zhaowa (爪哇), which substituted Shepo in the Mongol Yuan period. Therefore, the text should be edited shortly after the Mongol Conquest of South China in 1279. *Xinbian zuantu zenglei qunshu leiyaoshi shilin guangji* (Xiyuan jingshe edition), *qianji*, 5:2b.

⁸⁸ Zhao, *Zhufan zhi jiaoshi, juan shang*, 61; *juan xia*, 179-183; Hirth and Rockhill, *Chau Ju-kua*, 84, 208-211.

⁸⁹ Zhao, *Zhufan zhi jiaoshi, juan xia*, 195-196; Hirth and Rockhill, *Chau Ju-kua*, 223.

⁹⁰ Pelliot, "Encore à propos des voyages de Tch'eng Houo," 221; Narayanan, *Perumāls of Kerala*, 262-271, 316. Liu Yingsheng proposed that Nanpi could also be transcribed as Dravidian, referring to entire South India, because in some cases Nanpi also referred to the Coromandel Coast, where there was no Nambūdiris. Liu, "Song Yuan shidai de Maba'er, Xiyang, Nanpi yu Yindu." However, this transcription is difficult to address why, in the early fifteenth century account of Ma Huan, Nankun (南昆) (a variant of Nanpi) only referred to the ruling class of Malabar. Therefore, while acknowledging the vagueness and fluidity of this term, at this stage I still tend to adhere to the conventional rendering of Nanpi as Nambūdiris.

⁹¹ Hirth and Rockhill, *Chau Ju-kua*, 223, note 2.

⁹² There is a concern that the note might be interposed by Li Diaoyuan in the late eighteenth century when he re-edited the text for publication. However, this was unlikely because the two geographic terms, Nanpi and Wuliba, were rarely used after the fourteenth century, when they were replaced by new toponyms, such as Xiyang (西洋 Western Ocean) and Guli (古里 Calicut). Moreover, by the age of Li, Chinese junks had since long ceased to visit South India. It is therefore unlikely that Li, living in the eighteenth century, would have any new information to offer about the origin of Java pepper in the early thirteenth century. A more reasonable

Peppering the World

Although an epigraphic record attests to the presence of Malabar merchants in eastern Java in 1053,⁹³ there is no evidence to indicate a large-scale export of pepper from Malabar to Java. Commercially speaking, it was unprofitable for Malabar pepper to make a detour via Java, rather than to be shipped directly to China or transhipped via en route ports along the Straits of Melaka. Therefore, we may not take at face value this account to assume Java's prosperous trade of pepper with China relied upon supplies from Malabar. It was more likely a rumour that was not accurate in terms of the exact origin of Java pepper, but that enticed contemporary Chinese merchants to search for a pepper land beyond Java. It might also reflect overseas traders' anxiety to find an alternative source of pepper, because Java, as mentioned in the last section, had been subject to the strict trading embargo by the Southern Song imperial state in the early thirteenth century for the massive exchange of Java pepper for Chinese copper coins.

This isolated note was also the first Chinese record that associated Malabar with pepper. Until the early thirteenth century, Malabar was known in China mainly as a stop-over en route to the Arab countries (Dashi 大食). That role was particularly assigned for the southernmost commercial hub of Malabar, Kollam (Quilon, Gulin 故臨).⁹⁴ The history of Kollam as a trading port can be traced back to the early ninth century when some Christian merchants from West Asia moved to this region and received patronage from local rulers to establish this port city. Together with Jewish and Muslim merchants, they bridged a pepper production network in the hinterland of Malabar and a spice trading network across the Arabian Sea.⁹⁵ Meanwhile, for its relatively southern position (close to the southern

assumption is that the note was either made by Zhao himself, when he collected some contradictory accounts from overseas traders, or added by his contemporary by the time when these geographic terms were still in currency.

⁹³ Wisseman Christie, "The Medieval Tamil-Language Inscriptions in Southeast Asia and China," 246.

⁹⁴ For Kollam in Chinese sources, see Pelliot, *Notes on Marco Polo*, vol. 1, 399-402.

⁹⁵ Malekandathil, *Maritime India*, 38-62; Prange, *Monsoon Islam*, 37-41; Narayanan, *Perumals of Kerala*, 277-284, 313-316.

Chapter 2

extreme of Malabar), Kollam was a convenient rendezvous location between West Asia and China. In the mid-ninth century, shortly after the inception of this port city, Arab merchants had begun to take it as a regular stop on their trans-Indian Ocean journeys to China.⁹⁶ This trans-Indian Ocean route had become well known in China by the twelfth century. In the *Representative Answers from the Region beyond the Mountains*, Zhou Qufei described a journey from Canton to the Arab countries as follows: One should first sail to Lambri (Lanli 藍里), on the northwest tip of Sumatra, wait for a favourable monsoon there, and then cross the ocean to Kollam. In Kollam, one could change to a small ship to finish the final leg to the Arab countries (Map 2.2). Zhou also noted there were many migrants from the Arab countries living in Kollam.⁹⁷

A few decades later, Zhao Rukuo supplemented information about Kollam's trade with Southeast Asia. He shows that every year Srivijaya, Kompei (Jianbi 監篋), and Kedah (Jituo 吉陀) sent ships to Kollam. The commodities they carried consisted of silk textiles, porcelains, *zhang* camphor (*zhangnao* 樟腦, camphor from the trees of *Cinnamomum camphora*), rhubarb, Chinese goldthread (*Coptis chinensis*, *huanglian* 黃連), cloves, camphor, sandalwood, *doukou*, and agarwood.⁹⁸ Among them, we can discern that silk textiles, porcelains, rhubarb, and Chinese goldthread were transhipped from China, and cloves and sandalwood were originally from the eastern Indonesian Archipelago.

However, neither Zhou Qufei nor Zhao Rukuo mentioned pepper. Besides showing Kollam's strategical position for a journey to the Arab countries, Zhou offered no information about its local products.⁹⁹ Zhao combined Kollam with other Nanpi countries, showing that these countries

⁹⁶ Al-Sirāfi, *Two Arabic Travel Books*, 31-33; Hourani, *Arab Seafaring*, 70-71, 73-75; Chaffee, *The Muslim Merchants of Premodern China*, 27; Prange, *Monsoon Islam*, 41.

⁹⁷ Zhou, *Lingwai daida jiaozhu*, juan 2, 90-91.

⁹⁸ Zhao, *Zhufan zhi jiaoshi*, juan shang, 67-68; Hirth and Rockhill, *Chau Ju-kua*, 88-89.

⁹⁹ Zhou, *Lingwai daida jiaozhu*, juan 2, 90-91.

Peppering the World

produced grains, textiles, pearls, and gemstones.¹⁰⁰ The absence of pepper in these two Chinese accounts seemingly contradicted the anecdotal note that Java received pepper from Malabar, but it reflects the reality that the export of Malabar pepper to China had yet to be fully developed.

There were multiple factors hindering this trade. To begin with, the Southern Song imperial state restricted private traders from staying overseas for more than a year.¹⁰¹ A round-trip to Malabar, however, usually took two years because of the long distance and needing to wait for the change of monsoons around the Straits of Melaka.¹⁰² Therefore, Zhao noted that “the countries [of Nanpi] are the remotest and few foreign [trading] ships visit there” (其國最遠，番舶罕到).¹⁰³ The inconvenience for direct trade facilitated port regimes along the Straits of Melaka to assume an intermediary role. As Zhao’s account shows, Srivijaya, Kompei, and Jituo (Kedah?) all had close trading relations with Kollam. The commodities they offered for the Malabar trade were not only from the Malay Peninsula and Sumatra, such as camphor and agarwood, but also transhipped either from elsewhere in Southeast Asia such as cloves, sandalwood, or from China, such as silk textiles and porcelains.¹⁰⁴ These goods also appear in the archive of twelfth-century Jewish traders of the Red Sea route, indicating there were multiple transhipments for the trans-Indian Ocean circulations of spices and aromatics.¹⁰⁵ Given the extra costs derived from these long journeys and transhipments, goods that circulated from China to Malabar and vice versa could only consist of high-value commodities not locally available in a midway place. Pepper, already abundantly available in Java, was apparently not a good choice.

¹⁰⁰ Zhao, *Zhufan zhi jiaoshi*, *juan shang*, 67-68; Hirth and Rockhill, *Chau Ju-kua*, 88-89.

¹⁰¹ According to a 1164 regulation, the traders who returned within five months would receive tax reduction, and the traders who failed to return within a year would be punished. *Song huiyao*, vol. 7, *zhiguan* 44, 4218; Heng, *Sino-Malay Trade and Diplomacy*, 51-52, 64.

¹⁰² Zhou, *Lingwai daida jiaozhu*, *juan 2*, 90-91.

¹⁰³ Zhao, *Zhufan zhi jiaoshi*, *juan shang*, 67-68; Hirth and Rockhill, *Chau Ju-kua*, 88.

¹⁰⁴ Zhao, *Zhufan zhi jiaoshi*, *juan shang*, 68; Hirth and Rockhill, *Chau Ju-kua*, 88-89.

¹⁰⁵ Goitein and Friedman, *India Traders of the Middle Ages*, 382-383.

Chapter 2

This system, however, would be subject to a major reconfiguration from the 1270s. To begin with, after reunifying eastern Java in the 1250s, the Singhasari adopted an outward-looking policy by shifting its focus from the hinterland (represented by Kaḍiri) to the sea (represented by Janggala).¹⁰⁶ In 1275, it launched an expedition against Srivijaya, known as *pamalayu* in Indonesian history. The nature of this expedition is debated. Whereas previous research held it as punitive, an eminent historian of early Java and Srivijaya, J. G. de Casparis, suggested in the 1980s that the title of this campaign, *pamalayu*, indicates that it was rather for forging an alliance with Srivijaya in Jambi (Malayu), in preparation for an anticipated attack from the Mongols.¹⁰⁷

Yet, de Casparis might have been over-enthusiastic about the solidarity of the archipelagic society against Mongol invaders. An undeniable result of this expedition is that it precipitated a power vacancy in the Straits of Melaka by the dawn of the Mongol maritime expansion. Before this attack, the influence of Srivijaya was already dwindling. Offering alternative stopover places for the trade between the Indian Ocean and China, a string of petty regimes had emerged along the east coast of northern Sumatra in the course of the twelfth and thirteenth centuries.¹⁰⁸ Among them, Kompei had even formally renounced its dependency upon Srivijaya through a war sometime before the 1220s.¹⁰⁹ Singhasari's expedition against the centre of Srivijaya, Jambi (Malayu), was a final blow to the latter's dissolving hegemony and cleared a path for the expansion of the Mongols into the Indian Ocean World.

¹⁰⁶ Sidomulyo, "From Kuṭa Rāja to Singhasāri," 101.

¹⁰⁷ Andaya, *Leaves of the Same Tree*, 59; de Casparis, "Srivijaya and Malayu," 247-248.

¹⁰⁸ Wolters, *The Fall of Śrīvijaya*, 43-45; Milner, McKinnon, and Sinar, "A Note on Aru and Kota Cina"; McKinnon and Sinar, "A Note on Pulau Kompei"; McKinnon, "Beyond Serandib."

¹⁰⁹ Zhao, *Zhuban zhi jiaoshi*, *juan* 1, 49-50; McKinnon and Sinar, "A Note on Pulau Kompei," 54.

Peppering the World

Shortly after the *pamalayu*, the envoys of the Great Khan would take the Straits of Melaka as a thoroughfare to Malabar.¹¹⁰ In 1279, in the wake of the conquest of South China, Khubilai sent a Chinese envoy, Yang Tingbi, to Kollam. This mission was highlighted by the *History of Yuan* because Kollam was by then one among the few overseas countries that had yet to offer submissions to the Great Khan. After obtaining a letter from the ruler of Kollam, Yang Tingbi returned to China in 1280. However, Khubilai was unsatisfied by this letter and sent Yang to Kollam again. Yang departed in the first month of 1281, but encountered adverse winds around Sri Lanka (Mountain of Sinhala 僧伽耶山) in the third month of the same year. The mission had to detour to Pandya (Ma'bar in Arabic, Mabar'er 馬八兒 in Chinese) on the Coromandel Coast. In Pandya, the mission was unable to travel further via an overland route because the rulers of Pandya were preparing to invade Kollam.¹¹¹ Taking this lesson, they returned to China and decided to sail earlier next time. In the eleventh month of 1281 Yang Tingbi sailed from China again and safely reached Kollam in the second month of 1282. This mission managed to convince not only the ruler of Kollam but also the Christian and Muslim trading communities in that city. They all agreed to offer tribute to the Great Khan and sent envoys to accompany the mission back to China, likely because of some profitable trading opportunities Yang promised. En route, they stopped over in Samudera (Sumudula 蘇木都刺) and convinced its ruler to also submit to the Great Khan.¹¹² In 1283, Yang Tingbi was once again sent by the Great Khan to Kollam to secure the latter's vassalage.¹¹³ As a result of these continuous voyages, in 1286 ten countries,

¹¹⁰ Fukami Sumio insightfully proposed that the Melaka Straits “seem to have been merely a passage rather than an emporium during the Yuan period”. Fukami, “Gendai no Marakka Kaikyō,” 118.

¹¹¹ Kollam was then part of Vēṇāṭu, which became independent after the disintegration of the Cēra Perumāḷi dynasty (ca. 800-1124) in the early twelfth century. As the southernmost part of Malabar, Vēṇāṭu had a long-term struggle against Pandya and Chola. Narayanan, *Perumāḷis of Kerala*, 128-129, 191-194.

¹¹² Song et al., *Yuan shi*, *juan* 210, 4669-4670; Sen, “The Yuan Khanate and India,” 301-308; Mukai and Fiaschetti, “Yang Tingbi,” 88-92.

¹¹³ Song et al., *Yuan shi*, *juan* 12, 250-251; Sen, “The Yuan Khanate and India,” 308.

Chapter 2

including Sengjili (Cranganore? 僧急里),¹¹⁴ Pandya (Ma'bar), Lambri (Nanwuli 南無力), and Samudera, offered vassalage to the Great Khan.¹¹⁵

These envoys to Malabar were part of the Great Khan's designation of a maritime empire. In the early 1280s, while Yang Tingbi was travelling back and forth between Kollam and China, the Great Khan was planning a maritime expedition against countries in the South Sea by using Champa as a forwarding base.¹¹⁶ Whereas this plan was foiled by a series of defeats in Champa and Vietnam in the mid-1280s, military threat was still lingering and would be revived in the Mongol invasion of Java in 1293. At an undated moment around the late 1270s or early 1280s, there was even a debate in the Mongol court about whether military forces should be used in remote overseas countries such as Pandya, Kollam, and Samudera. Eventually, the strategy of requesting peaceful surrendering prevailed, and military options were reserved for the rulers who refused to submit, like the case of Java.¹¹⁷

Khubilai's aggressive maritime policy was not simply out of imperial aspiration, but also served pragmatic purposes. A well-known agenda was to secure a trans-Indian Ocean communication with Khubilai's chief supporter and ally, the Il-Khan in Persia. Throughout the 1280s and 1290s, a compelling issue for these two Mongol khans from the Toluid branch was that their overland communications were vulnerable in the face of assaults from rivalling branches in Central Asia led by Qaidu (1236-1301), who refused to acknowledge Khubilai as the legitimate Great Khan.¹¹⁸ By the late 1280s, Qaidu had managed to control the routes between Persia and China and cut down their

¹¹⁴ Sengjili was Shingly (Cyngilin), recorded by Odoric of Pordenone as one of the two cities in the pepper-producing area of Malabar in the early fourteenth century. In the local Jewish tradition, it is associated with Cranganore (Koḍuṅgallūr), the former capital of the Cēra dynasty, but this link has recently been challenged by Ophira Gamliel. Odoric of Pordenone, "The Travels of Friar Odoric," 133-134; Jussay, "A Jewish Settlement," 278; Ophira Gamliel, "Back from Shingly."

¹¹⁵ Song et al., *Yuan shi*, *juan* 210, 4670.

¹¹⁶ Mukai, "Kubirai chō shoki Nankai shōyu no jitsuzō," 136-138; Lo, *China as a Sea Power*, 284-295.

¹¹⁷ Song et al., *Yuan shi*, *juan* 134, 3260-3261; Sen, "The Yuan Khanate and India," 305-306.

¹¹⁸ Biran, *Qaidu and the Rise of the Independent Mongol State*, 37-63; Shim, "The Postal Roads of the Great Khans in Central Asia," 435-440.

overland communications.¹¹⁹ For instance, Bolad Chingsang (ca. 1240-1313), a Khubilai's envoy to the Il-Khan, was forced to stay in Persia, because, when returning to China in 1286, he was attacked by Qaidu's force en route.¹²⁰ This communication crisis necessitated the construction of an alternative route via the Indian Ocean. Therefore, while Khubilai was extending its influence as far as Kollam, from the other end, the Il-Khan supported merchants in the Persian Gulf, particularly, the al-Ṭībī family based on the Kish Island, to build a cross-Arabian Sea network leading towards Pandya.¹²¹ Their networks crossed in the trading ports of South Asia, forging a trans-Indian Ocean empire of the Mongols.¹²²

Yang Tingbi's voyages explored a fast-sailing route to make communication more efficient. Taking a lesson from the second voyage of 1281, he and his sailors learned how to follow the monsoons more accurately, so that they could reach Kollam within three or four months and return to China within a year.¹²³ In the following decades, the same route would be taken by many envoys travelling between the Great Khan and the Il-Khan, among whom the most famous is perhaps Marco Polo, to whom we will return soon.¹²⁴ Moreover, even after the collapse of the Il-Khan's rule in Persia in the 1330s, envoys from India and Europe would still use this route to communicate with the Great Khan. For instance, in 1342, Ibn Battuta was appointed by the sultan of Delhi to accompany a mission of the Great Khan back to China via Malabar.¹²⁵ In 1346 or 1347, the Pope's envoy to the Great Khan,

¹¹⁹ Biran, *Qaidu and the Rise of the Independent Mongol State*, 44; Dardess, "From Mongol Empire to Yüan Dynasty," 142-143.

¹²⁰ Allsen, *Culture and Conquest*, 72.

¹²¹ Kauz, "The Maritime Trade of Kish During the Mongol Period"; Yokkaichi, "The Maritime and Continental Networks of kish Merchants"; Qiu, "Background and Aftermath of Fakhr al-Dīn al-Ṭībī's Voyage".

¹²² I will elaborate on the concept of the Mongol Empire as a trans-Indian Ocean empire in a stand-alone article.

¹²³ For the changing patterns of sailing, see Fukami, "Gendai no Marakka Kaikyō," 108-113.

¹²⁴ Chen, "Yuandai de hanghai shijia Ganpu Yangshi"; Yokkaichi, "Cong Fengshi Bosi bei"; Qiu, "Background and Aftermath of Fakhr al-Dīn al-Ṭībī's Voyage".

¹²⁵ Ibn Battuta, *The Travels of Ibn Baṭṭūṭa*, vol. 4, 773-775, 812-818.

Chapter 2

Giovanni de' Marignolli, sailed from Quanzhou on St. Stephen's Day (26 December) and reached Kollam during Holy Week (ca. April) on his return journey.¹²⁶

These back-and-forth voyages mobilised ocean-going ships from the China Coast. In Yang Tingbi's second trip (1281), it was a Chinese sailor, Zheng Zhen, who advised Yang to take an overland route to Kollam via Pandya (Ma'bar).¹²⁷ Zheng's suggestion indicates that Chinese seafarers had certain knowledge about the sailing route to Ma'bar Coast (also known as the Coromandel Coast). This was because, in comparison with Malabar, Ma'bar had much more contact with China during the Song period. Before the rise of the Pandya dynasty (mid-13th to early-14th c.) in the mid-thirteenth century, this region was ruled by Chola (ca. 850-1279). Chola, as mentioned in the previous section, launched maritime expeditions against Srivijaya in the eleventh century, which helped the expansion of Chola-sponsored Tamil guilds into Southeast Asia and China.¹²⁸ Following the same route, some Chinese also sojourned in Ma'bar and left an inscription in its main trading port, Nagapattinam, in 1267.¹²⁹ Zheng Zhen's knowledge about the overland route between Ma'bar and Malabar was likely drawn from these early contacts between Chola and China.

Projected by the Great Khan, the repeated voyages to Kollam helped Chinese seafarers become familiar with the routes beyond Ma'bar and to take Malabar as new destinations in their Indian Ocean voyages.¹³⁰ An early witness to this change was Marco Polo. In 1291, Polo joined a trans-Indian Ocean mission to Persia.¹³¹ The mission embarked in Quanzhou, where Polo observed large ships with watertight compartments and iron-nails-fastened planks, capable to carry "five thousand baskets of

¹²⁶ Marignolli, "John de' Marignolli's Recollections of Eastern Travel (1338-1353)," 216, note 3; 230.

¹²⁷ Song et al., *Yuan shi, juan* 210, 4669.

¹²⁸ Wisseman Christie, "The Medieval Tamil-language Inscriptions."

¹²⁹ Sen, "The Formation of Chinese Maritime Networks," 426-427. Wang, *Daoyi zhibilue jiaoshi*, 285.

¹³⁰ For the rise of Chinese trading network in the Indian Ocean World, see Karashima, "Trade Relations Between South India and China"; Sen, "The Formation of Chinese Maritime Networks"; Yokkaichi, "Chinese and Muslim Diasporas".

¹³¹ Yokkaichi, "Cong Fengshi Bosi bei," 66; Vogel, *Marco Polo Was in China*, 82.

Peppering the World

pepper, and some six thousand”.¹³² These ships were the so-called junks, a hybrid of East and Southeast Asian shipbuilding technologies, which began to prevail in the maritime trade of the South China Sea from around the thirteenth century.¹³³ Likely carried by this kind of junk, the mission, “with about two thousand men”, first stopped over in Samudera in northern Sumatra.¹³⁴ Thereafter it sailed to South India, where Polo noted that Chinese ships were visiting Kollam and Eli (Hili in Arabic and Ezhimala in Malayalam). In Kollam, there were ships from China (Mangi), Arabia, and Levant, purchasing local goods, such as pepper, ginger, and brazilwood.¹³⁵ Eli, named after the promontory of Mount Eli in northern Kerala, had no harbour, but an anchorage outside a great river. Ships from China and other directions “come here in the summer and load in three days or in four days or perhaps in eight and go off as soon as they can”, because “it is very dangerous to stay since there are beaches and sand and no harbour.” Chinese ships had a comparative advantage as they carried “great anchors of timber that they hold their ships well in all great storms.”¹³⁶ As even such a dangerous port was now frequented by Chinese ships, we may conclusively argue that, in the early 1290s, ships from China had been deeply exploring the pepper coast of Malabar, leaving Java far behind.

4. Towards a Trans-Indian Ocean World

¹³² Polo, *The Description of the World*, vol. 1, 355.

¹³³ Manguin, “Trading Ships of the South China Sea.”

¹³⁴ Polo, *The Description of the World*, vol. 1, 91, 373. According to Polo, the mission stayed in Samudera for five months because of “the unfavourable weather” and “contrary winds”. The long stay, instead of directly sailing to Kollam, was likely because this mission’s final destination was not Malabar, but Persia. The sailors had to take the time needed for crossing the Arabian Sea into consideration. If they failed to cross it timely, it would be very dangerous to wait for the change of monsoons in an exposed anchorage along the Malabar Coast, which is subject to a very strong southwest monsoon. Therefore, it might be their strategy to wait in northern Sumatra so that they would have more time to cross the Indian Ocean during the next northeast monsoon. However, it seems that by the end, this strategy also failed to work, as it took another eighteen months for them to cross the Indian Ocean. They arrived at Hormuz approximately in early 1293. During this voyage, they likely experienced shipwreck(s) as most mission members died en route. For a recent study of Polo’s mission to Persia, see Qiu, “Ma Boluo huicheng jing Bosi xingzong kao.”

¹³⁵ Polo, *The Description of the World*, vol. 1, 414-415

¹³⁶ *Ibid*, 416-417.

Chapter 2

Whereas Java's pepper trade was largely oriented towards the Chinese consumer market, Malabar was not. It was situated at the centre of the Indian Ocean World and had, latest since the Roman period, been visited by spice traders from the Red Sea and Persian Gulf routes, which led further towards the Mediterranean World. Taking these pre-existing trading networks into consideration, a further question we may ask is: How did ships from China fit into the trading world of the Indian Ocean? To answer this question, we may begin with the dangerous anchorage of Eli. Whereas Kollam corresponded to the southern extreme of the main pepper producing area of Kerala, Eli was close to its northern boundary. If a Chinese ship was merely looking for pepper, she would preferably visit a central Kerala port such as Cranganore, where pepper abounded, without risking herself to the further north. Then, what attracted these Chinese ships to a dangerous port in Malabar?

Eli was distinct from those ports in central and southern Kerala for the network it belonged to. Along with a string of trading ports in northern Kerala, Eli had a strong tie to a newly risen Muslim trading network centred upon the Rasulid Sultanate (1229-1454) in Yemen, which controlled the entrance of the Red Sea route to the Mediterranean World.¹³⁷ Being a juncture between the Rasulid-sponsored Muslim trading network and the Mongol-sponsored Chinese trading network, Eli was likely a place where traders from China met their counterparts from the Red Sea route.¹³⁸ There is also

¹³⁷ A testimony to this link is a document of the port authority of Aden from the 1290s, which contains a list of stipends paid by the Rasulid court to Muslim religious leaders in over forty locations along the western and southeastern coasts of India. The Muslim communities in these places, which were ruled by non-Muslim local regimes, were crucial for the Rasulids' "oceanic policy". Through sponsoring these religious leaders and making the name of the Rasulid sultan being cited in their Friday sermons, it invited an extra-territorial allegiance of the Muslim traders in the non-Muslim-ruled ports of India to the Rasulid sultan, and attracted them to visit Aden, making Aden an entrepot of the Muslim trading network on the western Indian Ocean. Vallet, "Yemeni "Oceanic Policy""; idem, *L'Arabie marchande*, 568-571; Lambourn, "India from Aden," 87-88; Prange, *Monsoon Islam*, 255-263.

¹³⁸ Another place where these two networks interacted was the Pandya kingdoms on the Ma'bar Coast. Yasuhiro Yokkaichi's recent article shows that a leading Muslim merchant in Pandya receiving rewards from the Rasulid court, Taqī al-Dīn 'Abd al-Raḥmān al-Ṭībī, was a member of the al-Ṭībī family based on the Kish Island in the Persian Gulf. That family's members served the Il-Khan as local officials in the Persian Gulf and court-merchants. In 1298, a member of this family would lead a trans-Indian Ocean mission for the Il-Khan to the court of the Great Khan in China. That mission was received by a Chinese junk merchant at a South Indian

Peppering the World

evidence that Chinese ships kept visiting Eli till the mid-fourteenth century. In 1342, when Ibn Battuta visited Eli, he found that this was “the farthest town reached by ships from China” and one of the three principal ports visited by them in Malabar.¹³⁹



Map 2.2 A trans-Indian Ocean world.

For trading with local and western Asian merchants on the Malabar Coast, Chinese ships did not only carry Chinese goods but also Southeast Asian spices. Polo noted Chinese ships visited Malabar (Melibar) with copper as ballast, and “also silk, cloth of gold, and cloth of silk, sendal, gold, and silver, cloves, spikenard, and such spicery as these which they of Melibar have not.”¹⁴⁰ Among them, cloves, as introduced in the previous section, were an important eastern Indonesian spice whose trade to

port, whose trade was financed by the Mongol Yuan imperial state in China. Yokkaichi suggests that through these multiple patronage and trading networks, Chinese silver as well as other Chinese goods, such as porcelains, were circulated to Aden and the Red Sea route via South India. Yokkaichi, “The Maritime and Continental Networks of kīsh Merchants,” 454; Vallet, *L'Arabie marchande*, 567; Kauz, “The Maritime Trade of Kish During the Mongol Period”; Qiu, “Background and Aftermath of Fakhr al-Dīn al-Ṭībī's Voyage”; Chen, “Yuandai de hanghai shijia Ganpu Yangshi.”

¹³⁹ Ibn Battuta, *The Travels of Ibn Battūta*, vol. 4, 809. The other two were Kollam and Calicut.

¹⁴⁰ Polo, *The Description of the World*, vol. 1, 418-419.

Chapter 2

Malabar was previously carried out by the trading regimes along the Melaka Straits. Chinese merchants were now substituting them to be the carriers of Southeast Asian spices to South India.

By the time of Polo's voyage, Java was still a principal supplier of cloves to those ships from China. Polo was aware that the island of Java had pepper, nutmeg, spikenard, galangal, cubeb pepper, and cloves. He found merchants from China "have formerly drawn very vast treasure and still draw everyday" from Java.¹⁴¹ However, shortly after Polo's voyage, the Great Khan launched the Java campaign (1293). This invasion, albeit being a military fiasco, undermined Java's hegemony in the Indonesian Archipelago. While the invading Mongol/Chinese force unwisely involved themselves in the rivalries between different courts in eastern Java and were eventually driven out by the founder of the Majapahit dynasty (1293-early 16th c.), Kertarajasa Jayawardhana (Wijaya, r. 1293-1309), the former mighty Singhasari dynasty also collapsed.¹⁴² It would take decades for the Majapahit to consolidate its control of eastern Java, before resuming overseas expansion from around the 1330s-1340s.¹⁴³

A weakened Java gave more space for traders from China to explore direct trade with islands in the eastern archipelago of Indonesia. Roderich Ptak's research reveals that in the early fourteenth century there emerged a sailing route from Quanzhou, along the eastern edge of the South China Sea, penetrating through the Sulu Zone, and reaching the Maluku Islands, which produced cloves. It perhaps also further extended to the Banda Islands, which produced nutmeg, and Timor, which produced sandalwood.¹⁴⁴ With this eastern route, junks from China could bypass Java and purchase fine spices directly from the eastern Indonesia Archipelago.

¹⁴¹ Ibid, 368.

¹⁴² For the Mongol invasion of Java, see Bade, *Of Palm Wine, Women and War*. For a more thorough investigation of Chinese sources, see Deng, "Yuanchao zheng Zhaowa shishi kao."

¹⁴³ Krom, *Hindoe-Javaansche geschiedenis*, 360-398; Sidomulyo, "Kṛtanagara and the Resurrection of Mpu Bharāda," 130.

¹⁴⁴ Ptak, "From Quanzhou to the Sulu Zone and beyond"; idem, "Some References to Timor in Old Chinese Records," 37; idem, "The Northern Trade Route to the Spice Islands," 29-33.

Peppering the World

The key testimony to this change is Wang Dayuan's *Sketched Record of Island Barbarians* (*Daoyi zhibi* 島夷誌略). First published in 1349, this text records geographic knowledge collected by Wang from his two overseas voyages. The dates and itineraries of these two voyages are yet to be settled. The only undisputed account is that Wang's ship anchored at the west coast of Sri Lanka on the twelfth day of the tenth month of 1330 (22 November 1330), indicating that he was either sailing to or returning from the Malabar Coast around 1330.¹⁴⁵ For the eastern Indonesian Archipelago, the text offers detailed accounts about Chinese trade in Maluku, Banda, and Timor, showing that ships from China visited these islands for typical local products, namely, a small group of relatively expensive spices and aromatics, which I refer to here as "fine spices", including cloves, nutmeg, and sandalwood. Among them, the Maluku trade had become regular, as local chieftains expected Chinese ships to come every year, but trips to Timor were occasional and unwelcome to sailors for the fear of catching endemic febrile diseases (likely malaria).¹⁴⁶ As Chinese traders identified these islands as the origins of fine spices, they also realised that the trading ports along the north coast of Java were merely transshipping them. Wang indicated that the only important spice from Java was pepper. All other spices and aromatics, which were generally referred to as "drugs" (*yaowu* 藥物) by Wang, were transhipped from elsewhere (藥物皆自他國來也).¹⁴⁷

With better access to the fine spices from the eastern Indonesian Archipelago, ships from China had more cargoes to offer in the trans-Indian Ocean exchange of spices, particularly for the trade with West Asian merchants.¹⁴⁸ An important article by Gao Rongsheng reveals that there was a complicated "horse ship" (*machuan* 馬船) trading system in Malabar that connected spice traders from the two ends

¹⁴⁵ Wang, *Daoyi zhibi*, 311.

¹⁴⁶ Ibid, 175-178, 204-213.

¹⁴⁷ Ibid, 159.

¹⁴⁸ For an overview of Chinese transshipment of Southeast Asian and Indian Ocean goods, see Yang, "Yuandai Nanhai maoyi zhong de shangpin yu huobi wenti."

Chapter 2

of the Indian Ocean World.¹⁴⁹ Largely based on the notes of Wang Dayuan, Gao points out that ships from China carried Chinese goods as well as cloves and nutmeg to Malabar. There, they waited for the arrival of “horse ships” from West Asia in the eighth or ninth month (ca. September and October). These ships were larger than Chinese ships, but they used no nail and were not watertight, and the sailors had to bail out water day and night. These features distinguished them from Chinese junks, and likely made them less seaworthy and unable to winter in the stormy Malabar Coast, like what Chinese junks often did. They carried frankincense as ballast cargo and hundreds of horses on top of it.¹⁵⁰ In Malabar, they met both local merchants and traders from China. Through a tripartite exchange, traders from China carried back pepper and West Asian commodities, such as frankincense; Malabar traders obtained horses as well as Chinese goods; and West Asian traders purchased pepper, fine spices, and Chinese goods.

By the time of Wang Dayuan, this trading system had become well established and a principal rendezvous location emerged. In the early-mid fourteenth century, Calicut rose from obscurity to the centre of this trans-Indian Ocean world. Wang noted Calicut was the principal port of the Western Ocean. Ships from China, if unable to finish trade before the change of monsoons, would winter in the port of Kollam until the eighth or ninth month, and then move to Calicut to meet the “horse ships” from West Asia.¹⁵¹ Ibn Battuta, in 1342, observed Chinese vessels passed the winter in a sheltered port adjacent to Calicut, Pantalayani-Kollam, but the primary trading port was Calicut, which received traders from China, Java, Sri Lanka, the Maldives, Yemen, and Fars (Persia). He concluded “its harbour is one of the largest in the world”.¹⁵²

¹⁴⁹ Gao, “Gulifo/Gulin,” 62-65.

¹⁵⁰ Wang, *Daoyi zhibi*, 267-270, 321-330, 364-369. For an English translation, see Ptak, “Wang Dayuan on Kerala.”

¹⁵¹ Wang, *Daoyi zhibi*, 321-330.

¹⁵² Ibn Battuta, *The Travels of Ibn Battūta*, vol. 4, 812.

Peppering the World

Like Eli, Calicut had no geographical advantage. It had no sheltered harbour, and lighterage, namely, loading and discharging with lighters, was the only option for an ocean-going vessel, making it exposed to dangerous storms.¹⁵³ Therefore, those ships from China had to winter elsewhere in either Kollam or Pantalayani-Kollam. What attracted traders to Calicut, as recently proposed by Sebastian Prange, was a legal framework provided by its ruling house, the Zamorins.¹⁵⁴ Despite originally being a small principality in politically fragmented Kerala,¹⁵⁵ the regime of the Zamorins was unique in terms of its strong interest in promoting maritime trade through offering legal security for traders, which even extended to the properties of those who were shipwrecked in Calicut.¹⁵⁶ That policy attracted many Muslim traders to live in Calicut.¹⁵⁷ They helped integrate Calicut with the trading network of the western Indian Ocean, particularly into the two vital trading routes of the Red Sea and the Persian Gulf (Map 2.2).¹⁵⁸ With this network, the Zamorins managed to turn Calicut into a leading port of Malabar in the early-mid fourteenth century. Thereafter, with revenue from maritime trade, it launched a series of military expeditions against rivalling port systems, making itself the dominant power of Kerala by the arrival of the Portuguese in 1498.¹⁵⁹

Along with the rise of Calicut, traders from China began to realign the functions of the main trading ports of Malabar.¹⁶⁰ Kollam was no longer a principal pepper exporter, as Wang Dayuan merely

¹⁵³ Prange, *Monsoon Islam*, 43; Ibn Battuta, *The Travels of Ibn Baṭṭūṭa*, vol. 4, 815.

¹⁵⁴ Prange, *Monsoon Islam*, 160-166.

¹⁵⁵ The regime of the Zamorins in Calicut was originally one of the small principalities in the post-Cēra fragmentation of Kerala. Haridas, “The Emergence of a Medieval South Indian Kingdom”; Krishna Ayyar, *A History of the Zamorins of Calicut, Part 1*, 1-45.

¹⁵⁶ Prange, *Monsoon Islam*, 160-166.

¹⁵⁷ *Ibid*, 182-191.

¹⁵⁸ Compared with its neighbouring ports in northern Kerala, such as Eli, Calicut’s network relied less on Aden, and had instead a stronger tie with the Persian Gulf route through Gujarat and Hormuz for until 1393 the names of the Muslim rulers in these two regions, instead of the Rasulids sultan, were cited in the Friday prayer of Calicut. *Ibid*, 270-278.

¹⁵⁹ Krishna Ayyar, *The Zamorins of Calicut*, 56-110; Malekandathil, *Portuguese Cochin*, 33-36; Menon, *A Survey of Kerala History*, 175-187.

¹⁶⁰ For an overview of the history of the trading ports of Malabar, see Malekandathil, “Coastal Polity and the Changing Port-Hierarchy of Kerala,” 75-90.

Chapter 2

listed pepper among other local products without further remarks.¹⁶¹ It still served as a convenient stop-over and wintering place for ships from China, as the city was “the nearest of the Mulaibār towns to China and it is to it that most of the merchants [from China] come”.¹⁶² Calicut, being the centre of the “horse ship” trade, was also an important pepper-trading port. Local traders built godowns to store pepper, which was collected from the expanding territory of the Zamorins. Yet, its pepper export could not match a central Kerala port called “Xiali” (下里). Xiali, situated between Kollam and Calicut, most likely referred to Cochin.¹⁶³ It had pepper “superior to all other countries, so numerous to count,” so that “the pepper in other foreign [countries] is merely [as much as] the overspill of this country” (地產胡椒，冠於各番，不可勝計...他番之有胡椒者，皆此國流波之餘也).¹⁶⁴

After Wang Dayuan, China’s trade with this trans-Indian Ocean world would be subject to major political upheavals. To begin with, the fall of the Mongol Yuan dynasty in China in 1368 was preceded by a devastating rebellion (1357-1366) in Quanzhou, which destroyed the business of many

¹⁶¹ Wang, *Daoyi zhibi*, 321; Ptak, “Wang Dayuan on Kerala,” 47.

¹⁶² Ibn Battuta, *The Travels of Ibn Battuta*, vol. 4, 817.

¹⁶³ There is an attempt to identify Xiali with Alwaye, a river port situated at the top of the delta of Periyar, whence the Periyar River bifurcates into two major branches, one emptying into the Arabian Sea by Cranganore and the other by Cochin. It is right to locate Xiali in the delta of Periyar, as this river flew through the most productive pepper-growing region of Malabar, but the identification of Xiali with Alwaye is problematic for it was unlikely that an ocean-going ship from China would sail so upriver to Alwaye, while ignoring the two important seaports, Cranganore and Cochin, on its estuaries. There is a long-ignored link that may help associate Xiali with Cochin. The rise of Cochin is usually traced to 1341, when a large flood silted up the harbour of Cranganore and expanded the channel to the sea near Cochin. Likely because of this background, the original Malayalam name for Cochin was “Kochazhi” (Koch-Azhi), meaning “small or new harbour in order to distinguish it from the large or old harbour of Cranganore.” It was exactly noted by Wang Dayuan that Xiali was also called “Small Port” (Xiao Gangkou 小港口). Moreover, there is a phonetic connection between Kochazhi and Xiali. The pronunciation of Azhi in Malayalam sounds like “ali”, and the pronunciation of Xiali in Hokkien Chinese, which was the language of the Chinese sailors, sounds like “hali”. Wang Dayuan likely recorded a contracted form of Kochazhi, namely, Azhi, which means sea or harbour, while dropping Koch(u), which means small. Probably for avoiding confusion with Cranganore, Wang Dayuan emphasised that Xiali was Small Port, namely, Small Azhi. Wang, *Daoyi zhibi*, 268-269; Ptak, “Wang Dayuan on Kerala,” 44-45; Malekandathil, *Portuguese Cochin*, 29-57; Jussay, “A Jewish Settlement,” 278. Thanks to Archa Neelakandan Girija, who helped me navigate through these Malayalam toponyms.

¹⁶⁴ Wang, *Daoyi zhibi*, 267; Ptak, “Wang Dayuan on Kerala,” 44.

Peppering the World

Muslim traders in this city, who used to play a crucial role in the Indian Ocean trade.¹⁶⁵ Thereafter, the founder of the Ming dynasty, Emperor Hongwu (r. 1368-1399), attempted to revive the tribute system by restoring Srivijaya as the major trading partner of the Ming. That plan was soon foiled by the Majapahit, leading to the fall of Srivijaya and a major setback of the early Ming maritime policy.¹⁶⁶ Hongwu's son, Zhu Di, usurped his nephew's throne and became Emperor Yongle (r. 1402-1424) in 1402. He adopted a proactive policy by dispatching the voyages of Zheng He to the Indian Ocean. Whereas the first three voyages (1405-1411) took Calicut as the final destination, the remaining four voyages (1413-1433) became truly trans-Indian Ocean, as the main fleet sailed to Hormuz and several flotillas to Dhofar, Aden, and the east coast of Africa.¹⁶⁷ These voyages, as T'ien Ju-kang's research shows, carried back to China a huge amount of pepper, which was redistributed as salary to officials and soldiers.¹⁶⁸ The large-scale purchases made by Zheng He's fleets on the Malabar Coast might even account for the steep rise of pepper prices in Europe, which stimulated the Portuguese to search for an alternative route to Calicut via the Cape of Good Hope.¹⁶⁹

After Zheng He's voyages, Melaka assumed the former position of Srivijaya, acquiring a semi-monopoly of the transshipment of pepper from an emerging pepper frontier in Samudera to China through the Ming tribute system. That system prohibited the participation of private merchants based on the China Coast and caused a retreat of Chinese ships from the Indian Ocean World. Taking this opportunity, other tribute states of the Ming, such as Ryukyu, Siam, and Korea, also took part in the transshipments of pepper from Southeast Asia to China, constructing interwoven spice networks.

¹⁶⁵ Maejima, "The Muslims in Ch'uan-chou at the End of the Yuan Dynasty"; Chaffee, *The Muslim Merchants of Premodern China*, 157-161; Liu, "Yuanmo Fujian yanhai zhanluan yu yisibaxi yijun de zujian."

¹⁶⁶ Wolters, *The Fall of Śrīvijaya*, 49-76.

¹⁶⁷ For the details of these voyages, see Ma, *Ying-yai sheng-lan*. For the China-Calicut connection in the early Ming period, see Ptak, "China and Calicut in the Early Ming Period."

¹⁶⁸ T'ien, "Chêng Ho's Voyages."

¹⁶⁹ O'Rourke and Williamson, "Did Vasco da Gama matter for European Markets?" 662-664.

Chapter 2

However, into the second half of the fifteenth century, their roles would gradually be marginalised by Chinese private traders, who fought against the monopoly of the tribute system and sailed directly to Melaka and other trading ports in Southeast Asia to purchase pepper. Their interactions with the Ming tribute system would largely define China's maritime exchange with tropical Asia until the Portuguese occupation of Melaka in 1511.¹⁷⁰ Even thereafter, when the Portuguese in Melaka attempted to establish a trading relation with China, they found that in Canton, Chinese merchants' "whole idea is pepper".¹⁷¹

5. Bringing Fire Down!

From Java to the Indian Ocean, the reconfiguration of global spice networks triggered by the Mongol Conquest made pepper available to Chinese consumers in unprecedented abundance. However, at this same time, Chinese medical culture was undergoing a major change. From the late twelfth through the mid-fourteenth centuries, a number of influential physicians, often collectively known in Chinese medical history as "the four great masters of the Jurchen Jin (1115–1234) and Mongol Yuan (1271–1368) periods" (金元四大家), including Liu Wansu (fl. late 12th c.), Zhang Congzheng (fl. late 12th - early 13th c.), Li Gao (ca. 1180-1251), and Zhu Zhenheng (1281-1358), proposed polemic theories concerning the prevailing warming culture of the Northern and Southern Song medicine as we have seen in chapter one. Amid their debates, Chinese medicine experienced a major shift from a warming culture that favoured "warming the centre" with exotics, to a cooling culture that contended for

¹⁷⁰ Ptak, "Ming Maritime Trade to Southeast Asia," 170-182; idem, "The Fujianese, Ryukyuan and Portuguese"; Ts'ao, "Pepper Trade in East Asia," 237-243; Meilink-Roelofs, *Asian Trade and European Influence*, 27-88.

¹⁷¹ Pires, *The Suma Oriental of Tomé Pires*, vol. 1, 124.

“bringing fire down” (*jianghuo* 降火) by restraining their use.¹⁷² Against this backdrop, the abundance of pepper in Chinese medicine would arouse strong concerns among Chinese medical practitioners. This section focuses on how these concerns emerged, evolved, and eventually influenced Chinese dietary practices.

To begin with, concerns over over-consumption or over-dosage of strong spices such as pepper were not new. Already in the early tenth century, Li Xun, through indicating “the one that faces the yin [side] is *bidengqie* (*dengqie*), and the one that faces the yang (side) is pepper”,¹⁷³ had been implying that pepper was different from *bidengqie* (cubeb pepper or *Embelia Ribes*) in terms of its strong yang nature. He hence admonished that over-consumption of pepper would impair the lungs.¹⁷⁴ Thereafter, in the early twelfth century, Kou Zongshi advised that “over-dosage of pepper would (over-)proceed to *qi*” (過劑則走氣).¹⁷⁵ These precautions were founded in the *Inner Canon*’s correspondences of five flavours with five palace viscera and five body elements (Table 2.1). For instance, the acrid flavour supposedly entered the lungs (辛入肺) and proceeded to the *qi* (辛走氣). The consequences of “enter” or “proceed” were vaguely defined. It could be either benefiting or harming, but over-consumption, potentially leading to “over-entering” or “over-proceeding”, was certainly unrecommended. For instance, in the case of the acrid flavour, its over-consumption would supposedly worsen *qi*-associated illness.¹⁷⁶

Acrid	Lung	<i>Qi</i>
Sour	Liver	Sinews
Bitter	Heart	Bones

¹⁷² Wu, “A Medical Line of Many Masters,” 36-65; Furth, “The Physician as Philosopher of the Way,” 423-459; Simonis, “Illness, Texts, and “Schools” in Danxi Medicine,” 52-71; Leung, “Medical Learning from the Song to the Ming,” 374-398; Fan, *Zhongguo yixue shilüe*, 223-265.

¹⁷³ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao*, *juan* 14, 349.

¹⁷⁴ *Ibid.*

¹⁷⁵ *Ibid.*

¹⁷⁶ *Huangdi neijing suwen*, *juan* 23, 74-75.

Chapter 2

Salty	Kidney	Blood
Sweet	Spleen	Flesh

Table 2.1 Five flavours' correspondences.

Source: *Huangdi neijing suwen, juan 23*, pp. 74-75.

Besides these medical texts, there is evidence that maritime traders also felt an urgency to address the strong acrid flavour of pepper because of the large volume of pepper they handled. Zhao Rukuo in the early thirteenth century learned from the trading community of Quanzhou that in Sujidan (around Mount Muria in central Java), where pepper was most abundant, collectors often suffered from headaches caused by the acrid fumes from pepper (為辛氣熏迫). Therefore, traders from China sold *chuanxiong* (*Ligusticum chuanxiong* 川芎) to them for curing the pepper-induced headache.¹⁷⁷ Into the mid-fourteenth century, as ships from China took Xiali in central Malabar as the primary source of pepper, this account was also relocated to Xiali. Wang Dayuan also noted that in Xiali collectors were unable to stand the hot-spicy flavour of pepper (其味辣，采者多不禁) and had to take a *chuanxiong* decoction as antidote.¹⁷⁸ These two accounts were, however, unlikely faithful representation of the medical practices of pepper collectors in Indonesia and India, as there is no evidence that collectors in pepper plantations suffered from acrid-flavour-induced headaches, and also very few traders from China had a chance to visit the pepper-producing mountainous hinterlands of Sujidan and Xiali. These accounts more likely reflected Chinese pepper traders' concerns over their own long-term contact with huge amounts of pepper as a trading item. They, therefore, projected their understanding of the detriment caused by the strong flavour of pepper and its remedy onto these accounts.

In these two accounts, what is also remarkable is the idea of using a Chinese medicine *chuanxiong* as a remedy. As *chuanxiong* itself was also defined as acrid and warm,¹⁷⁹ it had no capacity to

¹⁷⁷ Zhao, *Zhufan zhi jiaoshi, juan 1*, 60-61.

¹⁷⁸ Wang, *Daoyi zhibi*, 267.

¹⁷⁹ *Chongxiu Zhenghe jingshi zhenglei beiyong bencao, juan 7*, 174.

counterbalance the warming nature of pepper. Instead, its use was based upon *chuanxiong*'s function as a headache killer,¹⁸⁰ and also upon the function of an acrid medicine to disperse pathogenic *qi* caused by another acrid thing, as the *Inner Canon* defined the acrid flavour had a capacity to disperse.¹⁸¹ Therefore, we may not associate these concerns with the cooling culture that had more fundamental conflict with the nature of pepper.

The medical culture that favoured cooling agents began as a regional medical movement in North China under the Jurchen Jin dynasty (1115–1234) from the late twelfth century, with little influence on the consumption and trade of warming exotics in South China under the Southern Song dynasty (1127 - 1279), which still followed the Northern Song medical culture. An undisputed progenitor of this northern movement was Liu Wansu (Hejian) (fl. late 12th c.). Different from the mainstream medical culture inherited from the Northern Song, Liu creatively identified fire as a principal pathogenic factor and re-oriented the pathology of cold damage from cold to heat. He literally interpreted febrile diseases (*rebing* 熱病) as heat (*re* 熱), and argued that the febrile diseases of cold damage, by their nature, were caused by heat.¹⁸² With this new interpretation, Liu criticised the pathology of yin patterns constructed by Northern Song physicians such as Zhu Gong and pointed out they were all but “heat patterns” (*rezhen* 熱證).¹⁸³ As a result, the practice of “warming the centre” for the three yin patterns could no longer stand, and the *Inner Canon*'s doctrine of “sweating for the three yang and purging for the three yin” revived.

This theory first found a group of followers in North China, where the Northern Song medical culture had not been endorsed by imperial powder since the Jurchen invasion in the late 1120s. Among

¹⁸⁰ Ibid.

¹⁸¹ *Huangdi neijing suwen*, *juan* 22, 73.

¹⁸² Fan, *Zhongguo yixue shilüe*, 233-234; Boyanton, “The *Treatise on Cold Damage* and the Formation of Literati Medicine,” 198-199.

¹⁸³ Liu, *Shanghan zhibe*, preface, 244; *juan zhong*, 254.

Chapter 2

Liu's followers, Zhang Congzheng (fl. late 12th - early 13th c.) was well-known for his three attacking methods of sweating, purging, and vomiting.¹⁸⁴ Preferring these aggressive treatments, Zhang largely abandoned the practice of “warming the centre” and strictly limited the use of warm and acrid medicines. He classified pepper, together with dried ginger, galangal, and aconite (*fuzi* 附子), as a typical “preparation for desiccating” (*zaoji* 燥劑). Their clinical use should be confined to illness caused by accumulated cold, and long-term consumption should be avoided because of their desiccating effects.¹⁸⁵

Zhang further criticised the common practice of using warming exotics to treat digestive problems. Zhang observed:

Physicians, without checking the roots [of the illnesses], roast ginger in fire and boil cassia in decoctions. Cloves have yet to stop; *doukou* continues. Long pepper has yet to stop; pepper continues. Although [they are] said to harmonise the stomach, the stomach is actually not cold. Although [they are] said to replenish the stomach, the stomach is actually not depleted.

醫氏不察本原，火里燒姜，湯中煮桂，丁香未已，豆蔻繼之，萹撥未已，胡椒繼之。

雖曰和胃，胃本不寒；雖曰補胃，胃本不虛。¹⁸⁶

In general, Zhang was reticent to attribute digestive problems to cold. For instance, he proposed that the cause of various types of occlusions (十膈五噎) of the digestive tract was heat congestion (熱結) in the three yang palace viscera, namely: the large intestine, the small intestine, and the urinary bladder. This interpretation went against most of his contemporaries, who, followed the medical culture we have seen in chapter one, diagnosed these digestive problems as caused by cold and depletion, and

¹⁸⁴ Fan, *Zhongguo yixue shiliu*, 237-241.

¹⁸⁵ Zhang, *Rumen shiqin*, *juan* 1, 373.

¹⁸⁶ *Ibid*, *juan* 3, 404-405.

hence prescribed these warming agents. As a result, when people learned that Zhang suggested treating digestive problems with purging and cooling agents, they were all aghast.¹⁸⁷

Whereas Zhang Congzheng's aggressive methods failed to arouse strong sympathy among literati, a more eclectic approach proposed by Zhu Zhenheng (Danxi) (1281-1358) in the mid-fourteenth century would make the cooling culture more appealing to them. Different from Liu and Zhang, Zhu was a southerner living in the Mongol Yuan period and was active in the early and mid-fourteenth century. By his age, the reintegration of China through the Mongol Conquest facilitated the spread of the new ideas of Liu and Zhang from the North to the South, challenging southerners' mainstream medical culture, which still favoured warming exotics. Zhu was among a new generation of southern physicians, who under the northern influence, began to develop a new medical system that at once opposed the warming exotics of the Imperial Pharmacy and took southern literati's expectation of mild treatment for their self-perceived delicate bodies into serious consideration.¹⁸⁸ Serving that purpose, Zhu Zhenheng's medical theory developed two interconnected concepts, both with profound influence on Chinese medicine and foodways. One was "nourishing yin" (滋陰 or 補陰), which, as we will return to in section five of chapter three, was crucial to the rise of sea cucumbers from the late sixteenth century. The other was "bringing fire down" (降火), which rang the death knell for the age of warming exotics such as pepper.

The idea of "bringing fire down" was not Zhu Zhenheng's invention, as it had already been essential to Liu Wansu's pathogenic fire theory. Yet, with influence from Neo-Confucianism and from another eminent northern physician, Li Gao (1180-1251), to whom we will return soon, Zhu reconceptualised fire from an external environmental factor into an internal vital element abiding in

¹⁸⁷ Ibid, 405.

¹⁸⁸ Wu, "A Medical Line of Many Masters"; Furth, "The Physician as Philosopher of the Way"; idem, *A Flourishing Yin*, 145-151; Fan, "Yizhe Ge Yinglei".

Chapter 2

visceral organs.¹⁸⁹ Zhu identified two types of internal fire, namely, sovereign fire (*junhuo* 君火) and minister fire (*xianghuo* 相火), the former mainly abiding in the heart and the latter abiding in the kidneys and the liver.¹⁹⁰

The division of fire into sovereign fire and minister fire was associated with the system of “the five circulatory phases and the six seasonal influences” (*wuyun liuqi* 五運六氣). This system became popular in China from the late eleventh century, for it offered a model for the Northern Song ruling elites to envision an orderly and predictable world.¹⁹¹ In this system, fire as one of the five phases was divided into two, namely: sovereign fire and minister fire, in order to turn the five phases into six to be corresponded with the six seasonal influences, namely: wind (*feng* 風), fire (*huo* 火), summer heat (*shu* 暑), dampness (*shi* 濕), dryness (*zao* 燥), cold (*han* 寒). For the same purpose, the kidneys were divided into the left kidney and the right kidney, the former being associated with water and the latter being associated with minister fire, and the heart, which was originally associated with fire, was redefined as associated with sovereign fire, so that the five depot organs became six and were now compatible with the sixfold system (Table 2.2).

Seasonal influences	Circulatory phases	Palace organs
Wind	Wood	Liver
Fire	Sovereign fire	Heart
Summer heat	Minister fire	Right kidney
Dampness	Earth	Spleen
Dryness	Metal	Lung

¹⁸⁹ Furth, “The Physician as Philosopher of the Way,” 445-448.

¹⁹⁰ Zhu, *Gezhi yulun*, 28-29.

¹⁹¹ Goldschmidt, *The Evolution of Chinese Medicine*, 183-186.

Peppering the World

Cold	Water	Left kidney
------	-------	-------------

Table 2.2 The sixfold system that associated seasonal influences with circulatory phases and palace organs.

Source: Despeux, “The System of the Five Circulatory Phases and the Six Seasonal Influences,” 126, 150-153.

This system had become an important source of innovation in Chinese medicine since the early twelfth century, when the Northern Song Emperor, Huizong (r. 1100-1126), personally promoted it. It, thereafter, also inspired the medical masters of the Jurchen Jin and Mongol Yuan periods to develop their own theories to apply this system for medical practices.¹⁹² An interesting observation is that, in these derivative theories, while the location of sovereign fire was not disputed, minister fire was subject to wildly different interpretations. Among them, Li Gao’s interpretations directly influenced Zhu Zhenheng. As a founding physician of the “warming and replenishing” medical culture, which we will discuss in detail in chapter three, Li proposed two very different interpretations of minister fire in his works. In a discourse concerning the kidneys, Li followed the division between the left kidney as water and the right kidney as minister fire, and suggested nourishing yin if there was extra minister fire and replenishing yang if minister fire is deficient.¹⁹³ The other was a discourse concerning the spleen and the stomach. It vaguely associated minister fire with yin fire and suggested that minister fire (yin fire) was situated in the Lower Burner (*xiajiao* 下焦), which corresponded to the lower part of the body trunk and supposedly contained the kidneys and the liver.¹⁹⁴

As a result of this interpretation, minister fire was considered no longer specifically located in the right kidney, but in the lower part of the body trunk and associated with both the kidneys and the liver. Li’s original conception was that the spleen and the stomach in the centre of the body trunk should be replenished with warming agents, so that they had sufficient yang force to control the

¹⁹² Despeux, “The System of the Five Circulatory Phases and the Six Seasonal Influences,” 153-157; Goldschmidt, *The Evolution of Chinese Medicine*, 184-186.

¹⁹³ Li, *Yixue faming*, 754.

¹⁹⁴ Li, *Nei wai shang bianbu lun, juan zhong*, 542. Li referred to both minister fire and yin fire in this text, but he did not explicate their relation. For the vagueness of this theory, see Ding, *Jin Yuan yixue pingxi*, 209-212.

Chapter 2

minister fire (yin fire) in the lower part. Li also suggested that minister fire (yin fire) was “the thief of primordial *qi*” (元氣之賊). He did not clearly explain why, but from his cryptic text, we may assume that he believed minister fire, like yin fire, was of a yin nature, and the primordial *qi* in the spleen and the stomach was of a yang nature. Therefore, if the yang force in the spleen and the stomach was depleted, primordial *qi* would become too weak to control the minister fire or yin fire in the lower part of the body trunk.¹⁹⁵

Zhu adapted this interpretation for proposing an opposing theory. On the one hand, Zhu followed Li Gao by suggesting that, as mentioned, minister fire occupied the kidneys and the liver. He also pointed out that these two organs belonged to the Lower Burner and were “both yin and lower” (皆陰而下者也). On the other hand, he did not associate minister fire with yin fire. Instead, he suggested that minister fire was extremely “violent and fierce” (暴悍酷烈), as he argued

Regarding the seasonal influence of sovereign fire, the classics speak of summer heat and dampness. Regarding the seasonal influence of minister fire, the classics speak of fire, for its violent and fierce manifestations are more intense than those of sovereign fire. This is why it is said that “minister fire is the thief of primordial *qi*”.

君火之氣，經以暑與濕言之；相火之氣，經以火言之，蓋表其暴悍酷烈，有甚於君火者也。故曰相火元氣之賊。¹⁹⁶

It is unclear which classics Zhu referred to, but his interpretation fundamentally contradicted the correspondence system of “the five circulatory phases and the six seasonal influences”. That system, as we just mentioned, in fact associated sovereign fire with fire instead of “summer heat and

¹⁹⁵ Li, *Nei wai shang bianhuo lun*, 542.

¹⁹⁶ Zhu, *Gezhi yulun*, 28-29. The translation is adapted from Furth, “The Physician as Philosopher of the Way,” 447.

dampness”, and minister fire with summer heat instead of “fire”. It is also vague why minister fire with more violent and fierce manifestations would become “the thief of primordial *qi*”. We shall bear in mind that Li Gao hinted that minister fire was “the thief of primordial *qi*” because of its yin nature. Zhu, however, never explicitly recognised minister fire as yin. Instead, his description of the “violent and fierce” nature of minister fire indicated that it was an extremely yang force that could damage yin. Zhu also proposed that minister fire, although situated in an overwhelmingly yin region of the body, tended to burn the “true yin” (*zhenyin* 真陰) of the body.¹⁹⁷

Zhu’s reconceptualisation of minister fire shall be understood in the context of his concern over the deficiency of yin. Zhu Zhengheng’s theory was established on his observation that “yang is in excess, and yin is deficient” (陽有餘陰不足).¹⁹⁸ Zhu perceived that yin was more essential than yang in terms of keeping a balanced body.¹⁹⁹ He believed that “when yin is depleted, one is sick; when yin is exhausted, one dies” (陰虛則病，陰絕則死).²⁰⁰ The conceptualisation of a violent and fierce minister fire in one of the most yin parts of the body likely helped Zhu stress the vulnerability of yin to a volatile fire force. As Zhu identified minister fire as an internal force not strictly corresponding to the right kidney, he also returned to the original fivefold system by corresponding the two kidneys to water, which was essentially yin. It hence led to a subtle situation in the two kidneys where water and minister fire coexisted, making the former vulnerable to the violent and fierce nature of the latter.

Out of these concerns, Zhu’s medicine focused on keeping minister fire tamed in its residing organs from burning yin and water. To avoid the minister fire being aroused, Zhu suggested that one should avoid indulgence in flavour-rich food and sexual activity. In his “Discourse on taking bland

¹⁹⁷ Zhu, *Gezhi yulun*, 28-29.

¹⁹⁸ *Ibid*, 7-8.

¹⁹⁹ *Ibid*, 28-29.

²⁰⁰ *Ibid*, 29.

Chapter 2

food” (茹淡論) and “Discourse on replenishing with the art of the bedchamber” (房中補益論), he admonished that both heavy flavours and sexuality could arouse desire and move the heart, which was associated with mind and emotion. Once one failed to control the heart, the sovereign fire in the heart would be out of control and would in turn arouse the minister fire in the kidneys and the liver, which would burn yin.²⁰¹

Yet not all flavours were harmful. Zhu suggested a division between “natural and bland flavours” (自然衝和之味), which were given by the Heaven with basic foodstuffs, such as like grains, beans, vegetables, and fruits, and “cooking, seasoning, and partially heavy flavours” (烹飪調和偏厚之味), which were made by the human beings with condiments. Whereas the former had a capacity to nourish yin, the latter would cause diseases and lead to death. Zhu admonished “the one who is satisfied with bland flavours can control the heart, and fire descends; the one who feels comfortable with partially heavy flavours indulges his (her) desires, and fire prevails” (安於沖和之味者，心之收，火之降也；以偏厚之味為安者，慾之縱，火之勝也).²⁰²

Among the so-called partially heavy flavours, Zhu particularly cautioned against hot spiciness (*xinla* 辛辣). In his medical work, he strongly associated it with heat. Zhu believed that elderly people usually had heat-pattern diseases and should avoid hot-spicy and sweet-slimy (辛辣甜滑) foods.²⁰³ The same idea was extended to the female body. For a woman who died of heat and phlegm-related madness, Zhu diagnosed that the root of the heat was that she attended a banquet during the hot months of summer, the environment was muggy and hot, and she took hot-spicy food during the

²⁰¹ Ibid, 30-31.

²⁰² Ibid, 30.

²⁰³ Ibid, 10.

banquet.²⁰⁴ Even for a two-year-old baby, Zhu diagnosed that he carried foetus poison (胎毒) from birth because his mother loved “hot spiciness and hot things” (辛辣熱物) during the pregnancy.²⁰⁵

Propelled by these aligned concerns over fire, heat, and strong flavours, Zhu turned against the formulary of the Imperial Pharmacy. He criticised the unscrupulous use of spices and aromatics in the popular health drinks proposed by the formulary:

Now look at the “various types of drinks” [of the Imperial Pharmacy]. Without the spiciness of *doukou*,²⁰⁶ *suosha* (*Amomum villosum*), dried ginger, and galangal, which pleases the mouth; without the aroma of cloves, agarwood, sandalwood, *zisu* (*Perilla frutescens* 紫蘇), and cassia, which pleases the nose; and [without] being seasoned with sour, salt, sweet, and bland [taste], how can they gratify people? In well-off families, during leisure time, hosts make them as a courtesy and guests take them as a pleasure.

今觀諸湯，非豆蔻、縮砂、乾薑、良薑之辛宜于口，非丁香、沉、檀、蘇、桂之香宜于鼻，和以酸咸甘淡，其將何以悅人？奉養之家，閒佚之際，主者以此為禮，賓朋以此取樂。²⁰⁷

The harms of these spices and aromatics, according to Zhu, were multi-fold. “Aroma and spiciness raise up *qi*, gradually leading to effusion; accumulated warming becomes heat, gradually leading to pent-up fire; sweet flavour loves [to stay on] the diaphragm, gradually leading to fullness in the centre” (香辛升氣，漸至於散；積溫成熱，漸至鬱火；甘味戀膈，漸成中滿). As the centre was blocked, and *qi*, heat, and fire all raised up, “yang becomes excited in the upper part [of the body trunk]

²⁰⁴ Ibid, 17.

²⁰⁵ Ibid, 11-12.

²⁰⁶ *Doukou* could be either nutmeg (*rou doukou*), or white cardamom (*bai doukou*), or *cao doukou* (*Alpinia katsumada*).

²⁰⁷ Zhu, *Jufang fabui*, 49.

Chapter 2

and yin becomes feeble in the lower part [of the body trunk]” (陽亢於上，陰微於下), leading to a dangerous imbalance.²⁰⁸

The same concerns targeted pepper. In his *Supplement to Dilatations on Materia Medica (Bencao yangyi buyi 本草衍義補遺)*, Zhu provided radically new and negative descriptions for some widely used exotics, including pepper, cloves, and camphor. For pepper, it goes as follows:

Pepper belongs to fire and has [the property of] metal. Its nature is dry. Eating it accelerates [food passing through] the diaphragm. The one who loves to eat [it] suffers greatly from the damage to the *qi* of the spleen, stomach, and lung. Being long accumulated, the great *qi* will also be damaged. For the one who suffers from *qi* illness, the damage will be great.

胡椒屬火而有金，性燥，食之快膈。喜食者，大傷脾、胃、肺氣，積久而大氣則傷，凡痛氣疾大其禍也。²⁰⁹

This account no longer rendered pepper as a benign warming medicine, but a dangerous hot spice. With properties like fire, metal, and dry, pepper became opposite to Zhu Zhenheng's doctrine that in a normal body, “yang is in excess, and yin is deficient”. The focus upon *qi* further alienated pepper from this doctrine, as, in Chinese medicine, *qi* was usually considered as yang, vis-à-vis blood which was considered as yin. Zhu believed “*qi* is always in excess and blood is always deficient” (氣常有餘，血常不足).²¹⁰ Pepper, with a capacity to proceed to *qi* for its acrid flavour, would only lead to further excessiveness of *qi*. With these problems, pepper was no longer depicted as a digestive agent for the stomach and spleen or a phlegm remover for the lungs, but instead harmful to these viscera.

²⁰⁸ Ibid.

²⁰⁹ Zhu, *Bencao yangyi buyi*, 62.

²¹⁰ Zhu, *Gezhi yulun*, 7.

Peppering the World

Zhu Zhenheng's teachings were propagated by his disciples, who formed a current of medical learning after Zhu's nickname, namely, the Danxi medicine. Among them, Dai Sigong (1324-1405) was crucial. Active in the second half of the fourteenth century, Dai was respectfully received by literati and the royal family of the newly founded Ming dynasty, becoming arguably the most prestigious physician in early Ming China.²¹¹ In Dai's career, there was a pepper-related case contributing to his fame. In that case, a patient felt cold during the summer and had to wear heavy clothes. All the food he ingested had to be hot, as otherwise he would vomit. Following an unnamed physician's advice, he took chicken boiled with pepper as a remedy, but the ailment only worsened. Dai Sigong, inspired by one of Liu Wansu's teachings that "fire in its extremity is like water" (火極似水), diagnosed that this cold illness was not caused by cold but by fire, and the fire had been only further instigated by pepper. Therefore, he made a fundamental shift by replacing the peppered chicken with cooling agents, which soon cured the patient.²¹² Cases like this helped popularise the fire-centric pathology of Liu Wansu and Zhu Zhenheng, and undermine the use of warming agents like pepper.

Whereas the first generation of Zhu's disciples, like Dai, acknowledged personal advising from Zhu, later physicians more often became affiliated to Danxi medicine through reading. In the fifteenth and sixteenth centuries, many books authored by Zhu or his disciples were published, forming the so-called "Danxi corpus".²¹³ They found avid readers among elite physicians, encouraging them to deeply rethink about the popularity of pepper in everyday cuisine. Among them, some attempted to reconcile with this hot-spicy foodway. For instance, a self-styled follower of Zhu Zhenheng, Wang Lun (1453-1510), to whom we will return in chapter three, published a polemic work in the early sixteenth century, in which he pointed out that people in Southeast China were supposed to take cold medicines because

²¹¹ Liu, "Yi yu wen, shi yu yin," 18-23.

²¹² Song, *Hanyuan xuyi*, *juan* 2, 806.

²¹³ Simonis, "Illness, Texts, and "Schools" in Danxi Medicine."

Chapter 2

of the hot climate, but in practices they ate a lot of pepper, ginger, and cassia, and were not sickened. To make this dilemma accountable, he explained

Although it is hot in the Southeast, the land is low-lying and damp; acrid and hot foods and drugs can also expel dampness.

東南雖熱，然地卑多濕，辛熱食藥亦能劫濕。²¹⁴

In the Danxi medicine, dampness was closely associated with heat, often collectively referred to as “damp heat” (*shire* 濕熱).²¹⁵ This account therefore implies that pepper, albeit being “acrid and hot”, could help control damp heat, which was the typical environmental factor of Southeast China, through expelling dampness from the body.

Yet the tension between the anti-fire principle of the Danxi medicine and pepper’s hot and fire nature was still lingering and would eventually impact one of the most influential physicians and naturalists in Chinese history, Li Shizhen (1518-1593). Born to a physician family in an inland province, Hubei, Li was a fan of pepper.²¹⁶ This appetite was likely cultivated by the regional cuisine of Hubei. In modern Chinese cuisines, Hubei, like its neighbouring Sichuan Province, is well-known for its hot-spicy foodway. Although there is no source to trace this foodway back to the sixteenth century, an important clue is the unique naming practice of chili pepper in Hubei. Different from the rest of China, chili pepper has been known as “big pepper” (大胡椒) or “surpassing pepper” (賽胡椒) in Hubei since at least the eighteenth century. It indicates that there was a replacement of pepper by hotter spicy chili pepper, which likely took place sometime around the seventeenth century when chili pepper was introduced to this region.²¹⁷ Before that replacement, one may expect that an inland province such as

²¹⁴ Wang, *Mingyi zazhu*, *juan* 1, 3. This translation is adapted from Hanson, *Speaking of Epidemics in Chinese Medicine*, 57.

²¹⁵ Zhu, *Gezhi yulun*, 26-27.

²¹⁶ Li, *Bencao gangmu*, *juan* 32, 1858-1859.

²¹⁷ Dott, *The Chile Pepper in China*, 55-58.

Hubei would have a limited supply of an exotic spice like pepper.²¹⁸ Yet, Li Shizhen, as a provincial physician living in sixteenth-century Hubei, not only acknowledged he himself “is fond of pepper since [he was] young” (自少嗜之), but also suggested pepper “is now everywhere in Chinese food and is a daily-used item” (今遍中國食物，為日用之物也).²¹⁹ However, at a certain moment in his life, Li turned against his favourite spice. He recounted:

I [used to] suffer from eye illness every year, but without suspecting [pepper]. Afterwards, I gradually learn its detriment, and hence stop it with determination. The eye illness also stops. [Now] even if I only eat one or two grains [of pepper], I immediately feel dim-sighted with roughness. This has never been tested by other people before.

歲歲病目而不疑及也。後漸知其弊，遂痛絕之。目病亦止。纔食一、二粒，即便昏
澀。此乃昔人所未試者。²²⁰

Behind this turn was a changing perception of pepper. Before the publication of Li Shizhen’s *Systematic Materia Medica* (*Bencao gangmu* 本草綱目, 1596), the mainstream *materia medica* in China was *Zhenglei Materia Medica*, which, as we have seen in chapter one, positively depicted pepper as a warm and digestive medicine.²²¹ In comparison, Zhu Zhenheng’s radically different account had limited publicity outside his disciples until the late fifteenth century, when his *Supplement to Dilatations on Materia Medica* was posthumously published as an appendix to other medical works attributed to him.²²² In the sixteenth century, a copy of it was read by Li.²²³ It inspired Li with the idea that pepper was of a fire

²¹⁸ Ibid, 58

²¹⁹ Li, *Bencao gangmu*, *juan* 32, 1858.

²²⁰ Ibid, 1859.

²²¹ For the transition between *Zhenglei Materia Medica* and *Systematic Materia Medica*, see Bian, *Know Your Remedies*, 23-48.

²²² Yan and Zhu, “*Bencao yanyi buyi xiaokao*.”

²²³ Li reviewed Zhu’s *Supplement to Dilatations on Materia Medica* in the introduction of the *Systematic Materia Medica*. Li, *Bencao gangmu*, *juan* 1, 10.

Chapter 2

nature, desiccating, and able to induce *qi* ailments. This idea led Li to diagnose his eye illness as a heat problem caused by his appetite for pepper. He argued that it was “because acrid flavour proceeds to *qi*, heat drives fire, and this item’s (pepper) *qi* and flavour are both heavy” (蓋辛走氣，熱助陽，此物氣味俱厚故也).²²⁴ Out of this personal experience, Li paraphrased Zhu’s account in his *Systematic Materia Medica*, and proposed that pepper “is acrid, hot, and purely yang. It proceeds to *qi*, drives fire, dims eyes, and induces sores” (辛熱純陽，走氣助火，昏目發瘡).²²⁵

Thereafter, as *Systematic Materia Medica* became a standard work in Chinese medicine, Zhu Zhenheng’s negative perception of pepper, through Li Shizhen’s adaptation, was also popularised. By the early 1640s, a popular dietary *materia medica*, *Materia Medica of Edible Items* (*Shiwu bencao* 食物本草), had already incorporated abridged accounts of Li Shizhen and Zhu Zhenheng in the section about pepper, using them to negate positive descriptions copied from the pre-Mongol period texts.²²⁶ By the early nineteenth century, dietary guidance by a physician Zhang Mu denied all medical functions of pepper by showing how dangerous its hot nature was. It suggested that even for cold-related illness, it was better to supplant pepper with Sichuan pepper, as the latter was less hot. It cautioned: Pepper, if used for seasoning, should be of a minimal amount. Otherwise, long term consumption would lead to numerous ailments.²²⁷

Among literati, an anti-hot-spiciness sentiment would be further instigated by the advent of locally cultivated chili pepper. As one of the earliest records about chili pepper in Chinese foodways, the *Materia Medica of Edible Items* described its flavour as “extremely hot-spicy” (極辛辣).²²⁸ A late

²²⁴ Ibid, *juan* 32, 1859.

²²⁵ Ibid, 1858.

²²⁶ Yao, *Shiwu bencao dianjiao ben*, *juan* 16, 959.

²²⁷ Zhang, *Tiaoji yinshi bian*, *juan* 1, 84-85.

²²⁸ Yao, *Shiwu bencao dianjiao ben*, *juan* 16, 965.

seventeenth century treatise on gardening noted that the flavour of chili pepper was “hottest-spicy” (最辣). People seeded it in the spring, harvested it in the winter, and then ground it until very fine, to be used as a seasoning material to substitute pepper.²²⁹ As two recent monographs about chili pepper in China have shown, the extremely intensive hot spiciness of chili pepper, as well as its successful adaptation to China’s environment and agriculture, made it a cheap spice welcomed by poor families in the economically backward inland regions of China, but at the same time also caused it to be denied by the refined taste of the literati.²³⁰

By the early nineteenth century, the anti-pepper physician, Zhang Mu, was stupefied by the popularity of chili pepper. He found that, of his contemporaries, seven or even eight out of ten ate chili pepper. They prepared it in various ways, such as salted, mixed with fermented beans, pulverised, or processed into sauce. Zhang believed that chili pepper in its hot nature was accountable for many diseases and people with internal heat would quickly die after ingesting it. He admonished that a sensible person should take bland and peaceful food and should not try any chili pepper.²³¹ Rethinking heat pattern diseases, Zhang even began to miss the age of the Qin (221-207 BCE) and Han (202 BCE-220 CE), when “in this world there were no perils of pepper and chili pepper” (世無胡椒、辣枚子之禍).²³²

Conclusion

Back to the poem on pepper that opens this chapter, to Chinese literati influenced by Zhu Zhenheng’s teachings in the post-Mongol era, this poem might sound otherworldly. For them, it was hard to

²²⁹ Chen, *Huajing*, *juan* 5, 267-268.

²³⁰ Dott, *The Chile Pepper in China*, 29-76, 106-118; Cao, *Zhongguo shila shi*, 52-58.

²³¹ Zhang, *Tiaoji yinshi bian*, *juan* 3, 174.

²³² *Ibid*, *juan* 1, 84.

Chapter 2

imagine that pepper once featured so prominently in the friendship between two highly esteemed scholars in late thirteenth-century China. For those post-Mongol-period Chinese literati, pepper, as a common condiment carrying strong hot spiciness, was no longer a proper gift. Even if such a gift exchange did take place, it deserved no poem in one's anthology. Instead, as blandness was now elevated by the new medical culture, openly denying a strong spice such as pepper, even if privately enjoying it in practice, was their new shared taste.

Such a change may sound familiar to historians of European spice history. In a certain way, the expansion of the Mongol Empire in the Indian Ocean World from the late thirteenth century is comparable to the expansion of the Portuguese Empire about two centuries later. They both took the pepper coast of Malabar as their major destinations and they both contributed to the change of the availability of pepper to their home consumer markets. Moreover, in European spice history, it is also well known that after a highly profitable initial stage, pepper, together with other fine spices, lost a strong market after the seventeenth century, largely because they were demystified by new knowledge about the nature of spices and became too common to be appealing.²³³ Although we have no comparable data to precisely indicate how much pepper was imported to China throughout the Mongol Yuan and Ming periods, from the medical and culinary evidence we have examined in this chapter, we may identify a similar shift that pepper became no longer appealing to Chinese elite consumers after it became widely available in China.

Tracing the origin of this change in taste, the Mongol period was crucial. It bears witness to two inter-connected developments with profound influence on Chinese foodways and global spice trade. On the one hand, the rise of a trans-Indian Ocean empire of the Mongols in the late thirteenth century led to an expansion of China's spice frontiers from Java to the Indian Ocean World, inducing junks

²³³ Halikowski-Smith, "Demystifying a Change in Taste"; Freedman, *Out of the East*, 216-226.

Peppering the World

from China to frequent the pepper coast of Malabar. That expansion boosted the widespread use of pepper in contemporary Chinese foodways, either for preparing spice mixtures, for stir-frying or simply for achieving a strong flavour of hot spiciness. On the other hand, the reintegration of China through the Mongol Conquest facilitated the transmission of new medical thoughts from the North to the South, inspiring Zhu Zhenheng to develop a new medical theory with the doctrine that “yang is in excess, and yin is deficient”. That theory targeted the popular hot-spicy foodway, and strongly opposed the use of pepper. It was further popularised by the disciples of Zhu Zhenheng in the early Ming period and eventually enlightened Li Shizhen in the sixteenth century to redefine pepper from a benign warming agent to a dangerous hot medicine of a fire nature in his influential *materia medica*, leading to a fundamental reconceptualisation of pepper among Chinese literati. As a result, the Mongol period became both a golden age in Chinese spice history and its turning point. There were at once an increasingly hot-spicy foodway and an increasingly anti-hot-spiciness medical culture. The irreconcilable tension between them urged literati to distance themselves from pepper, and, moreover, to search for some new rarities, which to be explored in the next chapter.

Three

Sea Changes

In 1792, Yuan Mei (1716-1798), a celebrated gastronome and retired scholar-official living in the prosperous Lower Yangzi region, published a cookery book, *Recipes from the Garden of Contentment* (*Suiyuan shidan* 隨園食單).¹ Catering to the taste of Chinese literati in the Manchu Qing Empire, this work became highly popular in China. It bears witness to the florescence of a new food culture, in which exotic spices had become hard to find and a new group of rarities supposedly from the sea emerged as top delicacies.

Under the rubric of “sea delicacy recipes” (*baixian dan* 海鮮單, literally “sea-fresh recipes”), Yuan enumerated nine of them, including edible bird’s nests (*yamwo* 燕窩), sea cucumbers (*baishen* 海參), shark fins (*yuchi* 魚翅), abalones (*fiyu* 鮑魚), mussels (*dancal* 淡菜), whitebait (*baiyan* 海蠔), cuttlefish’s “eggs” (*wuyu dan* 烏魚蛋)², scallops (*jiang yaozhu* 江瑤柱)³, and oyster meat (*libuang* 蠔黃).⁴ This rubric was arranged by Yuan ahead of all other recipes, followed in sequence by river delicacies, pork, assorted livestock (beef, mutton, venison, and civet), poultry, scaled aquatic animals, scaleless aquatic animals, vegetables (including many tofu recipes), side dishes, pastry, rice and porridge, and tea and wine.

To justify this order, Yuan Mei acknowledged that “there is no mention of seafood in the ancient Eight Precious Delicacies. As the customs of the present day have a preference for these, I have to

¹ For an updated biography of Yuan Mei, see Schmidt, *Harmony Garden*, 1-150. For his literati-style cookery book, see Hu, “Wenrenhua de *Suiyuan shidan*”; Wu, “Ming Qing yinshi wenhua zhong de ganguan yanhua yu pinwei suzao”; Wang, “Meishi zhong de youqing”; Liang, “A Recipe Book for Culture Consumers.”

² It is the nidamental gland of cuttlefish.

³ It is made of the scallop of *Atrina pectinata* (comb pen shells).

⁴ Yuan, *Suiyuan shidan*, 40-44.

conform and create the rubric of seafood recipes” (古八珍，並無海鮮之說。今世俗尚之，不得不吾從眾，作海鮮單。).⁵ Yuan Mei was not the first to make such an observation. A century earlier, Nie Huang (fl. late 17th century), a painter and amateur of marine creatures, in his richly illustrated fish album (1698), had already pointed out that there were four aquatic things highly appreciated by his contemporaries, namely: sea cucumbers, edible bird’s nests, shark fins, and abalones, but, besides abalones, none were mentioned in any classical text.⁶

When and how did this food culture emerge? What was its relationship with the preceding hot-spicy food culture? Why did this group of rarities become so important to the new culture? These questions urge us to examine a series of changes behind the rise of sea delicacies in Chinese cuisine, particularly in reference to changing Chinese perceptions of edible things supposedly from the sea.

1. Knowing Seafood

Edible things from the sea are rarely mentioned in the Chinese classics. Stemming from the Chinese ritual canons, the so-called “Eight Precious Delicacies” consisted overwhelmingly of land animals, such as piglet, ewe, beef, and deer.⁷ Even by the Tang period, when exotic spices and aromatics had been making their way into Chinese food and medicine, seafood was perceived as a taste of others.

⁵ Ibid, 40.

⁶ Nie, *Haicuo tu*, 186-187. Very little is known about Nie Huang. Only two of his works are extant. Zou, “Jiaoliu yu hujian,” 97-100.

⁷ The “Eight Precious Delicacies”, as a concept, first appears in *Rites of Zhou* (*Zhouli* 周禮), which mentioned that the chef of the royal family of the Zhou dynasty (ca. 1046 BCE – 256 BCE) “used eight things as precious delicacies” for the king, the queen, and the heir apparent, but the original text does not name them. Thereafter, an important commentator, Zheng Xue (127– 200), annotated that they consisted of 1) rice seasoned with hot sauce and lard (*chun’ao* 淳熬), 2) glutinous rice seasoned with hot sauce and lard (*chunnu* 淳毋), 3) grilled piglet (*paotun* 炮豚), 4) grilled ewe (*paozang* 炮臄), 5) jointly grilled tenderloin of beef, mutton, *mi* deer (麋), deer, and *jun* deer (麇) (*daozen* 搗珍), 6) seasoned raw beef (*zi* 漬), 7) cured beef (*ao* 熬), and 8) grilled dog liver (*ganliao* 肝膋). Another important ritual canon, *Book of Rites* (*Liji* 禮記) records a slightly different version which replaces the grilled ewe with rice cake mixed with beef, mutton, and pork (*san* 糝). Chuang, “*Cong bazhen de yanbian kan Zhongguo yinshi wenhua de yanbian*,” 433-444.

Chapter 3

An important witness to the cultural distance between the Tang political elites and seafood is a poem by Han Yu (768-824), “A Verse to the Chief Musician Yuan Shiba on the First Taste of Southern Food” (初南食貽元十八協律). It demonstrates a strong bias that perceived seafood as alien, unclassifiable, odorous, and inedible.⁸

Horseshoe crabs look like *huiven*⁹ hats; they have ossified eyes and carry each other to walk.

Oysters glue to each other and form a hill; in tens and hundreds they reproduce themselves.

Stingrays have a snake-like tail; their mouth and eyes are not on the same side.

Ha is in fact toads; they are the same in nature but in vain gain distinct names.

For octopuses and scallops, they compete to present their strangeness.

There are moreover tens of other sorts; none is less astounding.

I come here to fend off demons and shall certainly taste the southern dishes.

Season it with salt and sour and boil it with Sichuan peppers and tangerine.

Once the fishy odour begins to diffuse, I chew and swallow with my face sweaty and flushed.

蟹實如惠文，骨眼相負行。

蠔相黏為山，百十各自生。

蒲魚尾如蛇，口眼不相營。

蛤即是蝦蟇，同實浪異名。

章舉馬甲柱，鬪以怪自呈。

其餘數十種，莫不可歎驚。

我來禦魑魅，自宜味南烹。

⁸ For the Tang elites' exoticism of the south, see Schafer, *The Vermilion Bird*.

⁹ The *Huiven* hat 惠文冠 was a type of hat named after King Huiwen (r. 298 BCE – 266 BCE) of the Zhao Kingdom. Its front face was decorated by a piece of gold with the pattern of a cicada and its one side was inserted with a marten tail. Zou and Zeng, “Handai de huguan yu heguan kao.”

調以鹹與酸，芼以椒與橙。

腥臊始發越，咀吞面汗駢。¹⁰

Han composed this poem during his exile to Chaozhou, in present eastern Guangdong, in 819.¹¹ “Exile” in this context does not mean a banished life as a criminal. Instead, Han was one of a handful of prominent scholar-officials who were demoted to local government in the Far South of the Tang Empire as a result of intensified factional struggles during the Yuanhe period (806-820).¹² This tropical region, for its environmental and ethnic otherness, was not an enviable service place for the Tang elites, who until the end of this dynasty were overwhelmingly from aristocratic families in the metropolitan areas surrounding the two imperial capitals, Chang’an and Luoyang, in inland North China.¹³ While temporarily losing the Emperor’s favour, this group of disgraced scholar-officials were in a social and political position far more privileged than the people of the South they ruled. Therefore, they tended to highlight a cultural boundary by denying they shared the southerners’ food and taste. In Han’s poem, tasting the southern seafood was likened to fending off demons, and seasoning the seafood with condiments to make the taste more agreeable should be understood as a metaphor for civilising the South. By the end, merely the fishy odour from the seafood had already shattered this culinary civilising mission and made our famed poet sweaty and red-faced.

The situation dramatically changed after the Tang-Song Transition (ca. 8th-12th c.). A well-studied topic in Chinese food history is that during the Northern Song period seafood was gradually accepted by social elites.¹⁴ The elites’ changing perception of seafood during this period was largely

¹⁰ Han, *Han Changli shi xinian jishi*, vol. 2, *juan* 11, 1132-1136.

¹¹ For Han Yu’s poetry during this exile period, see Owen, *The Poetry of Meng Chiao and Han Yü*, 270-288; Hartman, *Han Yü and the Tang Search for Unity*, 85-100.

¹² Shang, *Bianzhe wenhua yu bianzhe wenxue*.

¹³ Schafer, *The Vermilion Bird*, 37-44; Yang, “The “Zhang” on Chinese Southern Frontiers”; Tackett, *The Destruction of the Medieval Chinese Aristocracy*.

¹⁴ Yi, “Xianwei yu quanli”; Chang, “Bei Song wenren yinshi shuxie de nanfang jingyan”; Cao, “Zhong Tang zhi Song dai shige zhong de nanshi shuxie”.

Chapter 3

because of a cultural transformation among themselves.¹⁵ The Song literati who tasted and ruminated about seafood were living in an intellectual and political milieu very different from the Tang.¹⁶ In general, a rift has been identified in the transitional period from the collapse of the Tang to the reintegration of a unified empire by the Northern Song dynasty.¹⁷ After this violent period, the monopoly of power by the northern aristocrats was undermined, and many local gentry families in the South began to generate high-ranking officials for the central government through the reformed civil-service examination system.¹⁸

Along with the rise of the southerners as a new elite class known as literati, things of the South previously considered alienating, including seafood, were increasingly considered as things of “ours”.¹⁹ An important witness to this transformation was an illustrated *materia medica* from a national drug survey directed by a polymath, Su Song (1020-1101). Su was born into a newly risen family in a recently developed coastal region of southern Fujian.²⁰ Well-known in the history of science for his design of a hydro-mechanical astronomical clock-tower around 1090, Su’s other notable career was his service in the Bureau for Revising Medical Texts, where he directed a national drug survey (1058-1061) to collect illustrations, samples, and reports about therapeutic things from their original places.²¹ This survey, following the long-established tradition of compiling illustrated guides (*tujing* 圖經) for

¹⁵ West, “Cilia, Scale and Bristle”; Chen, “Songdai linjie tiyong zhong de ziran guancha yu shuxie”; Chen, “Songshi zhong de haiyang yinshi fengshang”; Chen, “Songdai haichan jiagong jiqi shiyong pingjia”; Yi, “Xianwei yu quanli”; Chang, “Bei Song wenren yinshi shuxie de nanfang jingyan”; Cao Yimei, “Zhong Tang zhi Song dai shige zhong de nanshi.”

¹⁶ Bol, “*This Culture of Ours*”.

¹⁷ Tackett, *The Destruction of the Medieval Chinese Aristocracy*, 187-234.

¹⁸ Hymes, *Statesmen and Gentlemen*; Bossler, *Powerful Relations*; Gerritsen, *Ji’an Literati*.

¹⁹ Here, I adapt a concept from Peter Bol’s research about the critical change of Chinese intellectual history during the Tang-Song Transition. Bol, “*This Culture of Ours*”.

²⁰ For the rise of these local elite families, see Aoyama, “The Newly-Risen Bureaucrats in Fukien”; Clark, *Portrait of a Community*, 37-79. For the social and economic transformation of southern Fujian around this period, see Clark, *Community, Trade, and Networks*; idem, *The Sinitic Encounter*.

²¹ *Chongxiu zhengbe jingshi zhenglei beiyong bencao*, juan 1, 26-27; epilogue, 548; Fan, *Beisong jiaozheng yishuju xintan*, 120-43; Goldschmidt, *The Evolution of Chinese Medicine*, 112-115; Needham, *Heavenly Clockwork*.

imperial administration, gave a unique opportunity for the local elites to provide their local knowledge of the natural world to an imperial institute, to be transformed into imperial knowledge.²² A result of this epistemological transformation was Su's *Illustrated Materia Medica* (*Bencao tujing* 本草圖經, 1061). Given Su's background, it comes as no surprise that many things from the South, including a lot of marine creatures, are for the first time clearly illustrated, named, classified, and described in a pharmacopoeia published by the imperial state.

For instance, for oysters, a marine creature that once shocked Han Yu for its reef structure, Su offered an illustration and a long description. The illustration, captioned Quanzhou oysters (*Quanzhou muli* 泉州牡蠣), shows a small cluster of oysters clinging to each other, indicating how a nascent oyster reef grows (Figure 3.1).

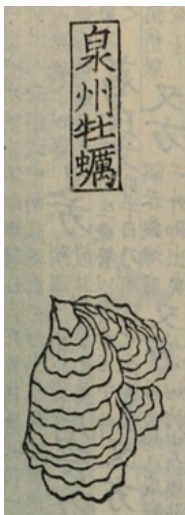


Figure 3.1 Illustration of a nascent oyster reef from *Illustrated Materia Medica*.

Source: *Chongxiu zhengbe jingshi zhenglei beiyong bencao*, juan 20, 412.

The accompanying text goes as:

Oysters grow in pools and marshes along the East Sea. Now the coastal areas all have them, and Nanhai (Canton), Fujian, Tongzhou, and Taizhou especially have a massive amount. They grow

²² Lin, "The Local in the Imperial Vision."

Chapter 3

by clinging to stones, interconnected like accumulated stones. They look like houses, hence called oyster houses. Another name is “oyster hill”. People in Jin’an²³ call them *haopu* (pronounced as *o-po* in Hokkien). When they begin to grow along the coast, they are like a human fist. Growing towards all directions, they can reach one or two *zhang* (ca. 3-6 metres). [Their reef structure is] as steep as that of a hill. Inside each house, there is a piece of oyster meat, whose size depends on the house. A big house is like the hoof of a horse and a small house is like a human nail. When a tide comes, all houses open. If a small worm falls in, the house closes and takes it as food. Sea people collect them by chiselling the houses [off the rockface], forcing them open with strong fire, and picking out the meat. Those whose shells face the left are male; those facing the right are female. Someone says that those with a pointed tip are male. In general, the big ones are more valuable. The left-facing ones that are collected in the eleventh month are for medical uses. Southerners take their meat as food whose taste is especially delicious. It is nutritive, with functions of smoothing skin and beautifying face. They are the most valuable among all marine creatures.

牡蠣生東海池澤，今海傍皆有之，而南海、閩中及通、秦間尤多。此物附石而生，硨磲相連，如房，故名蠣房（讀如阿房之房）。一名蠔山，晉安人呼為蠔莆。初生海邊，才如拳石，四面漸長，有一二丈者，嶄巖如山。每一房內有蠔肉一塊，肉之大小隨房所生。大房如馬蹄，小者如人指面。每潮來則諸房皆開，有小蟲入則合之，以充腹。海人取之皆鑿房，以烈火逼開之，挑取其肉。而其殼左顧者雄，右顧者則牡蠣耳。或曰，以尖頭為左顧。大抵以大者為貴。十一月採左顧者入藥。南人以其肉當食品，其味尤美好，更有益，兼令人細肌膚，美顏色。海族之最可貴者也。²⁴

²³ Jin’an 晉安 was an ancient name for Quanzhou.

²⁴ *Chongxiu zhenghe jingshi zhenglei beiyong bencao*, juan 20, 412.

This text drew on information from multiple sources. It synthesised some earlier accounts about the “gender” of oysters from Taoist medicine, and about their dietary functions from the aforementioned *Dietetic Materia Medica* (ca. early 8th c.).²⁵ It further demonstrates the compiler’s agency as Su selected his own native place, namely, Quanzhou, to caption the illustration, indicating Quanzhou as its most authentic origin (*daodi* 道地),²⁶ and offered its local name in his own dialect. Integrating those textual, visual, and personal accounts, Su presented oysters as a familiar, comestible, and nutritive thing, appealingly ready for everyday consumption.

Although aquatic things, such as oysters, were only a small part of this medical project, it offered an important channel to legitimise and promote the previous disparaged seafood culture of the South. Before the publication of this work, some privately compiled medical and dietary texts, such as the *Supplement to Materia Medica* (739) by Chen Cangqi and the *Dietetic Materia Medica*, had already been spreading medicinal and culinary knowledge about seafood.²⁷ Yet, none of them had achieved such a synthesis like Su Song, who had privileged access to the Imperial Library, to the survey reports, and to local knowledge from his own native place. After the Emperor decreed to publish Su’s work in 1062, its copies would be distributed across China.²⁸ By the end of the eleventh century, the images and texts from the *Illustrated Materia Medica* were further integrated into the influential *Zhenglei Material*

²⁵ Ibid.

²⁶ Su identified Quanzhou or Fujian as the native place for a number of tropical and aquatic things, such as the operculum of marine snails (*jiuxiang* 甲香, a kind of scent fixative), olives, and lychees. *Chongxiu zhenghe jingshi zhenglei beiyong bencao*, *juan* 22, 455; *juan* 23, 470, 478-479.

²⁷ Chen Cangqi (fl. early 8th century) was a southerner born in Mingzhou. His work, *Supplement to Materia Medica* (*Bencao shiyi* 本草拾遺, completed in 739), immensely expanded the previously brief section about aquatic creatures in the Tang official pharmacopeia, *Newly Revised Materia Medica* (659). Ibid, *juan* 1, 39; Chen, *Bencao shiyi jishi*; Huang, “Chen Cangqi *Bencao shiyi* jiqi bowuxue jiazhi.”

²⁸ *Chongxiu zhenghe jingshi zhenglei beiyong bencao*, epilogue, 548. It was a common practice by the Song imperial state to distribute recently compiled medical books and pharmacopeia to local government for transforming local medical practice. Hinrichs, “The Medical Transforming of Governance and Southern Customs in Song Dynasty China.” For the circulation of various editions of *Illustrated Materia Medica* in the Song period, see Su and Zhao, eds., *Bencao tujing de yanjiu*, 8-9. Su’s case was not isolated. Seafood was a popular theme in the Northern Song discourse on things. See Mai, “The Double Life of the Scallop.”

Medica, becoming widely shared knowledge among literati. Thereafter, learned scholars, no matters how hostile they might be towards the practice of eating seafood, could no longer make a comfortable claim like Han Yu to disparage seafood as alien, unknown, and hardly edible, because the knowledge refuting these prejudices had now been integrated into an illustrated work, which was promulgated by the Northern Song imperial state.

2. Smelly Fish to Sea Taste

While seafood had been accepted by Chinese elite culture since the eleventh century, a physical distance remained between the dining tables of hinterland consumers and fresh catches from the sea. Without modern logistics, it was extremely difficult to transport fresh seafood away from the coast. Although frozen transport of fresh seafood with boats carrying ice blocks had already appeared in the twelfth century and would become popular around the Lower Yangzi region from the sixteenth century onwards, its high cost and its seasonal nature prevented it from becoming a wider practice.²⁹ What was more widely available was preserved seafood, capable of being commercially offered to inland consumer markets on a massive scale.

Like fresh seafood, preserved aquatic things, either from the sea or from inland waters, were originally denied by the high taste of ancient China. An important trope is *bayou* (鲍鱼), literally meaning “putrid salted fish”.³⁰ It gained a smelly reputation in Chinese classics and gave rise to many allusions with overwhelmingly derogatory connotations.³¹ A story goes that they were used for covering the putrid smell of the decaying corpse of the despotic first emperor of a unified China (Qin

²⁹ Chiu, “Bingjiao, bingchuan yu bingxian.” Frozen transport was also carried out along the Grand Canal for delivering fresh fish from the Lower Yangzi to Beijing for the imperial court during the Ming and early Qing periods. Kuo, “Quanli de ziwei.”

³⁰ Xu, *Shuowen jiezi zhu*, 580; Wang, “Juyan hanjian baoyu kao.”

³¹ Chen, “Su Shi “Fuyu xing”,” 21-23.

Shi Huang, 259 BCE – 210 BCE), representing the despicable death of a tyrant.³² Another idiomatic expression is “the market of smelly salted fish” (*baoyu zhi si* 鮑魚之肆), meaning a smelly place where villains gather, as the counter-example of “the room of orchids and angelicas” (*lanzhi zhi shi* 蘭芷之室), meaning a fragrant place where gentlemen meet.³³ There is also evidence that these salted fish, although popular in daily life,³⁴ were denied by the ritual classics. The exemplary case was that Grand Duke Wang (Taigong Wang 太公望, 11th century BCE) tutored the future King Wu (? – 1043 BCE) to forsake his appetite for the putrid salted fish, because it was not considered proper for sacrificial rituals and hence inappropriate for cultivating the righteous behaviours of a ruler.³⁵ This story would be circulated in later pedagogical primers. For instance, a didactic picture book from the late Ming, *Cultivating Rectitude, Illustrated and Explained* (*Yangzheng tujie* 養正圖解, 1594), depicts under the title of “for food, reject salted fish” that a prince (the future King Wu), under the instruction of Grand Duke Wang, was ready to reject a platter of fish offered by a servant (Figure 3.2).³⁶

³² Sima, *Shiji*, *juan* 6, 264.

³³ Wang, *Da Dai Liji jiegou*, *juan* 5, 97.

³⁴ Wang, “Juyan hanjian baoyu kao.”

³⁵ Jia, *Xinshu jiaozhu*, *juan* 6, 214.

³⁶ Murray, *Mirror of Morality*, 101-2; Lin, “Mingdai banhua *Yangzheng tujie* zhi yanjiu.”



Figure 3.2 “For food, reject salted fish”.

Source: Jiao Hong, *Yangzheng tujie*, 3a, woodblock-printed book, ca. 24 x ca. 16 cm.

However, *baoyu* as smelly salted fish, while alive in Chinese poetry and literature, gradually lost its original meaning in Chinese dietary practice. In the South, *baoyu* was replaced by a local term, *xiang*, 養, which represented a far more agreeable sensory experience. *Xiang* likely originated as a word from Wu or Yue culture in the Lower Yangzi region. According to a local tradition, recorded in the gazetteer of Suzhou at least since the ninth century, this character was invented by a king of the Wu Kingdom, Helü (r. 514-496 BCE).³⁷ After tasting dried yellow croakers (*shishou yu* 石首魚), Impressed by its

³⁷ This anecdote is recorded in *Gazetteer of Wu (Suzhou) Prefecture* (1229), which also refers to a no-longer extant book *Record of Wu (Wudi ji 吳地記)* dating from the ninth century CE. Fan et al., comps., *Wujun zhi*, juan 50, 672-673.

delicious taste, Helü decided to combine two Chinese character, *mei* 美 (delicious) and *yu* 魚 (fish) into *xiang* 養, meaning delicious fish, for this kind of dried fish. In practice, dried yellow croakers are only one among many types of *xiang*, which virtually encompasses all dried and salted fish. For instance, in the mid-thirteenth century, Hangzhou, as the capital city of the Southern Song dynasty (1127-1279 CE), had a *xiang* market (*xiangtuan* 養團) with one to two hundred *xiang* shops (*xiangpu* 養鋪) selling many different sorts of dried fish, all known as *xiang*.³⁸

Besides dried and salted fish, there were many other types of preserved seafood, such as molluscs, shrimp, and crabs, and many other forms of preservations, such as pickling, fermenting, smoking, and candying.³⁹ There is a unique Chinese term for all types of preserved seafood, *haiwei* (sea taste 海味), literally meaning “the taste (*wei*) of the sea (*hai*)”. The meaning of this term experienced subtle changes since the Tang-Song Transition. In the early ninth century, a Tang official Yuan Zhen (779-831) opposed a speed relay of sea taste (*haiwei*) from Mingzhou to Chang’an. In that case, he was most likely referring to fresh seafood, because it would make no sense to arrange an expensive speed delivery for already preserved seafood.⁴⁰ However, in the Southern Song period, sea taste became strongly associated with pickled seafood. For instance, the aforementioned *xiang* shops in thirteenth-century Hangzhou sold, besides *xiang*, also various sorts of wine-pickled seafood, all referred to as sea taste.⁴¹ Another late thirteenth-century source about the city life of Hangzhou also collectively refers to various kinds of pickled seafood as sea taste.⁴²

Into the Mongol period, there is evidence that sea taste was kept as a daily-used food item. The early fourteenth century Mongol court cookery book, *Yinshan zhengyao* (*Proper and Essential Things for*

³⁸ Wu, *Mengliang lu*, *juan* 16, 270-271; Zhou, *Wulin jiushi*, *juan* 6, 440.

³⁹ Chen, “Songdai haichan jiagong jiqi shiyong pingjia”; Kuo, “Xianqing de chi.”

⁴⁰ Yuan, *Yuan Zhen ji*, *juan* 39, 440-441.

⁴¹ Wu, *Mengliang lu*, *juan* 16, 271.

⁴² Zhou, *Wulin jiushi*, *juan* 6, 442.

Chapter 3

Food and Drink 飲膳正要, 1330), advises that “dreg-pickled food such as sea taste” (海味糟藏之屬) would become inedible after being preserved for too long of a period or after being damaged in a humid and hot environment.⁴³ Wu Rui’s *Materia Medica for Everyday Use* (1329) lists four commonly used seasoning ingredients with salty flavour, namely: salt, sauce, dried seaweed, and “sea miscellany” (*baicuo* 海錯), which, according to Wu, included sea taste.⁴⁴

Whereas sea taste primarily referred to pickled, especially wine-pickled, seafood in the Southern Song and Mongol Yuan periods, into the late Ming and Manchu Qing periods, it seems that this term became more widely used for all kinds of preserved seafood and especially for commercially traded preserved seafood. A later Ming panoramic painting of Nanjing shows a shop selling “sea taste from Fujian and Guangdong” (Figure 3.3). Here, the sea taste was apparently preserved, because even the frozen transport could not deliver fresh seafood from a place as far as Fujian and Guangdong to Nanjing.⁴⁵ What was sold there must be a kind of preserved exotic seafood from the Far South not available around the Lower Yangzi region. In eighteenth-century Yangzhou there was a market specialising in the trade of salted and dried seafood, including *xiang* and shark fins, where traders “name their shops as sea taste [shops]” (署其肆曰海味).⁴⁶

Further north along the Grand Canal, a hinterland city Liaocheng also hosted sea taste shops. They were recorded as donors of the Association Hall of Shanxi and Shaanxi (*Shanshaan huiguan* 山陝會館) in 1809, indicating that they were associated with a large trading network of the Shanxi and Shaanxi merchants, which was influential in North China.⁴⁷ As Liaocheng was a commercial hub in

⁴³ Husihui, *Yinshan zhengyao*, *juan* 2, 104.

⁴⁴ Wu, *Riyong bencao*, *juan* 8, 445.

⁴⁵ In the Ming and Qing periods, frozen fresh seafood was mostly supplied to the Lower Yangzi region from the waters around the estuary of the Yangzi River. Chiu, “Bingjiao, bingchuan yu bingxian.”

⁴⁶ Li, *Yangzhou huafang lu*, *juan* 1, 17.

⁴⁷ *Qingdai Henan, Shandong deng sheng shangren huiguan beike*, 297-306.

Sea Changes

North China, these sea-taste traders were most likely redistributing preserved seafood from coastal and south China to a vast consumer market in North China. Based on the amount of their donation, which was in accordance with their annual turnover, the top three sea-taste shops' yearly revenue ranged between 2,000 to 4,200 taels, indicating that they were not small dealers merely focusing on the local market, but professional merchants involved in the long-distance trade of sea taste.⁴⁸



Figure 3.3 A “sea taste” shop in Nanjing.

Source: *Thriving Southern Capital* 南都繁會圖卷, c. 1600, anonymous handscroll, ink and colours on silk, National Museum of China.

⁴⁸ Xu, “Qing Qianlong zhi Daoguang nianjian de Liaocheng shangye,” 119, footnote 9.

Chapter 3

Moreover, into the eighteenth century, the trade of sea taste had become partially amalgamated with the trade of “southern goods” (*nanhuo* 南貨). The so-called southern goods, as explained in the introduction, encompassed a wide range of commodities from distant origin, including remote areas in China or foreign lands, such as Southeast Asia and Japan. Suzhou, as the commercial hub of the Lower Yangzi region, was a centre of the “southern goods” trade. A well-known example is the “southern goods” shop of Sun Chunyang (Sun Chunyang Nanhuo Pu 孫春陽南貨鋪). Founded by a merchant from Ningbo in the late sixteenth century, this shop thrived for over two centuries till the 1830s, witnessing the golden age of Suzhou. What is particularly remarkable is that by the early nineteenth century Sun Chunyang had developed into a department store, with six sections specialising in six types of southern goods, which corresponded to general southern and northern goods (*nanbei hu* 南北貨), marine products (*haibuo* 海貨), cured meat (*yanla* 醃臘), sauces (*jianghuo* 醬貨), candied fruit (*mijian* 蜜餞), and candles (*lazhu* 蠟燭).⁴⁹ There were many of this kind of southern goods shops in and around Suzhou, identifiable from either local inscriptions or city-scape paintings, of which an example can be found in the celebrated cityscape scroll of eighteenth-century Suzhou, *Prospering Suzhou* (*Gusu fanhua tu* 姑蘇繁華圖, 1759) (Figure 3.4).⁵⁰

⁴⁹ Qian, *Lünyuan conghua*, juan 24, 640-641.

⁵⁰ Fan, “Qingdai Suzhou chengshi gongshang fanrong de xiezha,” 112-113. For these inscriptions, see *Ming Qing Suzhou gongshangye beikeji*, 240-254.

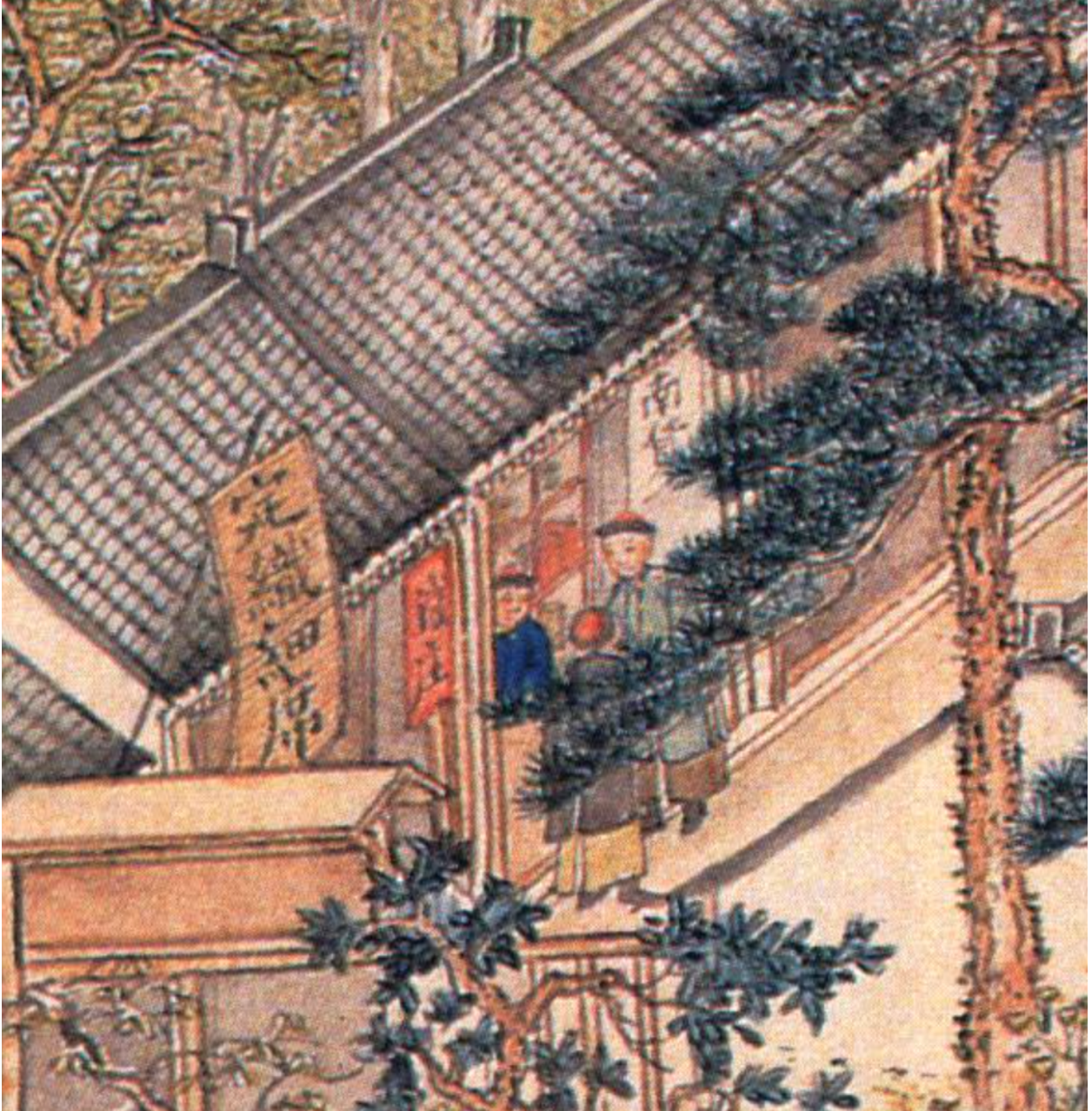


Figure 3.4 A “southern goods” store in a market-town, Mudu, near Suzhou.

Source: Xu, *Prospering Suzhou*, 1759, handscroll, 124.1 × 39 cm, Liaoning Provincial Museum. *Gusu fanhua tu*, section 9.

A deep insight into this trade has become possible because of a recently published merchant handbook specific about the trade of southern goods. The original manuscript is untitled, anonymous, and undated. It is collected by a leading researcher of Huizhou merchant archives, Wang Zhenzhong, and

Chapter 3

published in his compilation of Huizhou archives.⁵¹ Through a close reading of this text, we can identify that it was, with little doubt, compiled between 1784 and the 1820s. It refers to the Quanzhou and Zhangzhou Association Hall in Shanghai, which was established in 1763.⁵² It also mentions that in the “forty-ninth year” there was a change of regulations for soybean oil trade.⁵³ This is most likely the forty-ninth year of the reign of Emperor Qianlong, namely, 1784, because throughout the Manchu Qing period, only two emperors reigned in China for such a long period, namely Kangxi (1661-1722) and Qianlong (1735-1796). The forty-ninth year of Kangxi (1710) is apparently too early for a handbook compiled after 1763. Therefore, the forty-ninth year of Qianlong (1784) makes more sense in this context. Meanwhile, the handbook mentions Johor in many places, but has no single reference to Singapore (established in 1819). Therefore, it reflects the situation after 1784 and before the rise of Singapore in the 1820s.⁵⁴

This handbook was originally part of a private archive of a Huizhou family. Its author collected a wide range of market information about all-important “southern goods”, bringing to light a highly sophisticated trading world. From the information he collected, we can assume that he was a merchant based in the Lower Yangzi region. His handbook described not only what kinds of southern goods were traded in the Lower Yangzi region, but also professional knowledge about each commodity’s different grades, origin places, packages, trademarks, qualities, trading routes, weight units, currency exchange rates, and targeted consumers. Taking the first item in this handbook, edible bird’s nests, as an example, the handbook first introduces their different origins, advising that those from Johor (at the southern tip of the Malay Peninsula) were the best, those from Banjarmasin (in southern

⁵¹ *Huizhou minjian zhenxi wenxian*, vol. 15, 263-430. I plan to write a stand-alone article to closely read this handbook.

⁵² *Ibid*, 374. *Shanghai beike*, 236.

⁵³ *Huizhou minjian zhenxi wenxian*, vol. 15, 358.

⁵⁴ For Johor in the late eighteenth and early nineteenth centuries, see Koh, “Moving People and a Prelude to Colonialism.”

Kalimantan) were also good, northern and southern Siam (Thailand) offered different qualities of products, those from Annam (Vietnam) were inferior, and those from Taiwan were not only inferior but black. Besides them, according to this handbook, there were also edible bird's nests from Luzon, Zhangzhou, Quanzhou, Liaodong, Batavia, and Japan, but these nests were all packed by rattan baskets instead of being put together on a rattan string. Thereafter, it notes that these nests would be assorted in Suzhou and divided into four grades with different trademarks (Figure 3.5).⁵⁵

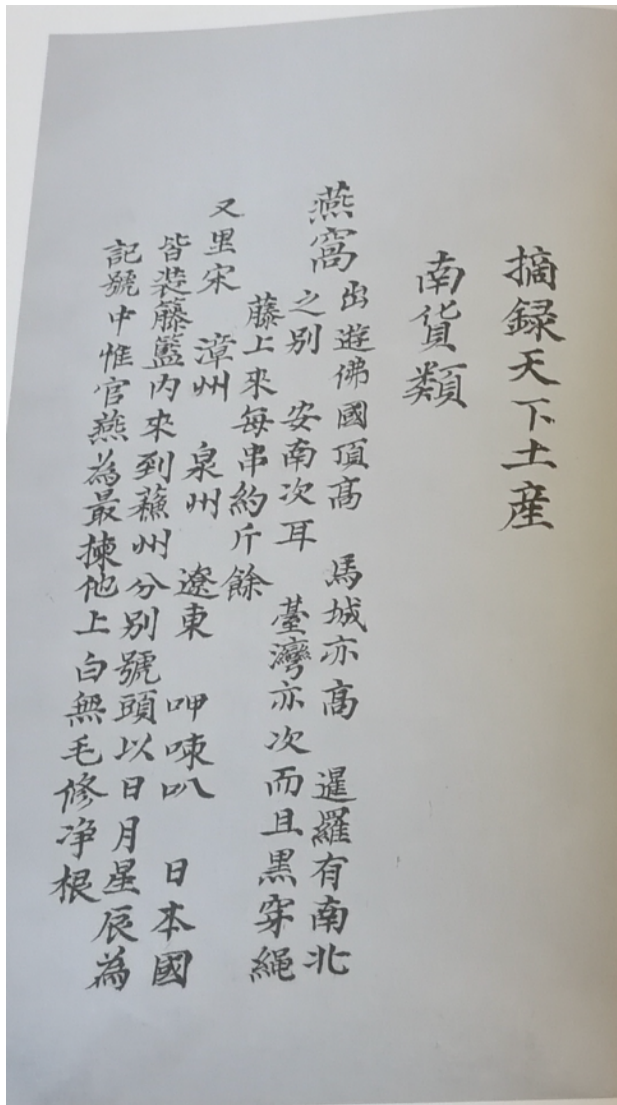


Figure 3.5 A Huizhou merchant handbook of southern goods, original size unknown (ca. 1784-1820s).

⁵⁵ *Huizhou minjian zhenxi wenxian*, vol. 15, 293-294.

Chapter 3

Source: *Huizhou minjian zhenxi wenxian*, vol. 15, 293.

Such sophisticated commercial knowledge about an edible exotic supposedly from the sea indicates that the southern goods trade had become highly professional and competitive. Commodities were supplied from rivalling sources across the China Seas. Traders had to understand the preferences of consumers and offer the most desirable and affordable commodities. For promoting their goods, some traders began to issue flyers. One such flyer dating from the late eighteenth century was even circulated to Japan, showing that a “long-established” trading house in Zhapu, a port city to the south of Suzhou, offered all kinds of southern and northern goods as well as sea taste from “the two oceans” (the East and West Ocean Routes in the Chinese junk trade network) (Figure 3.6).

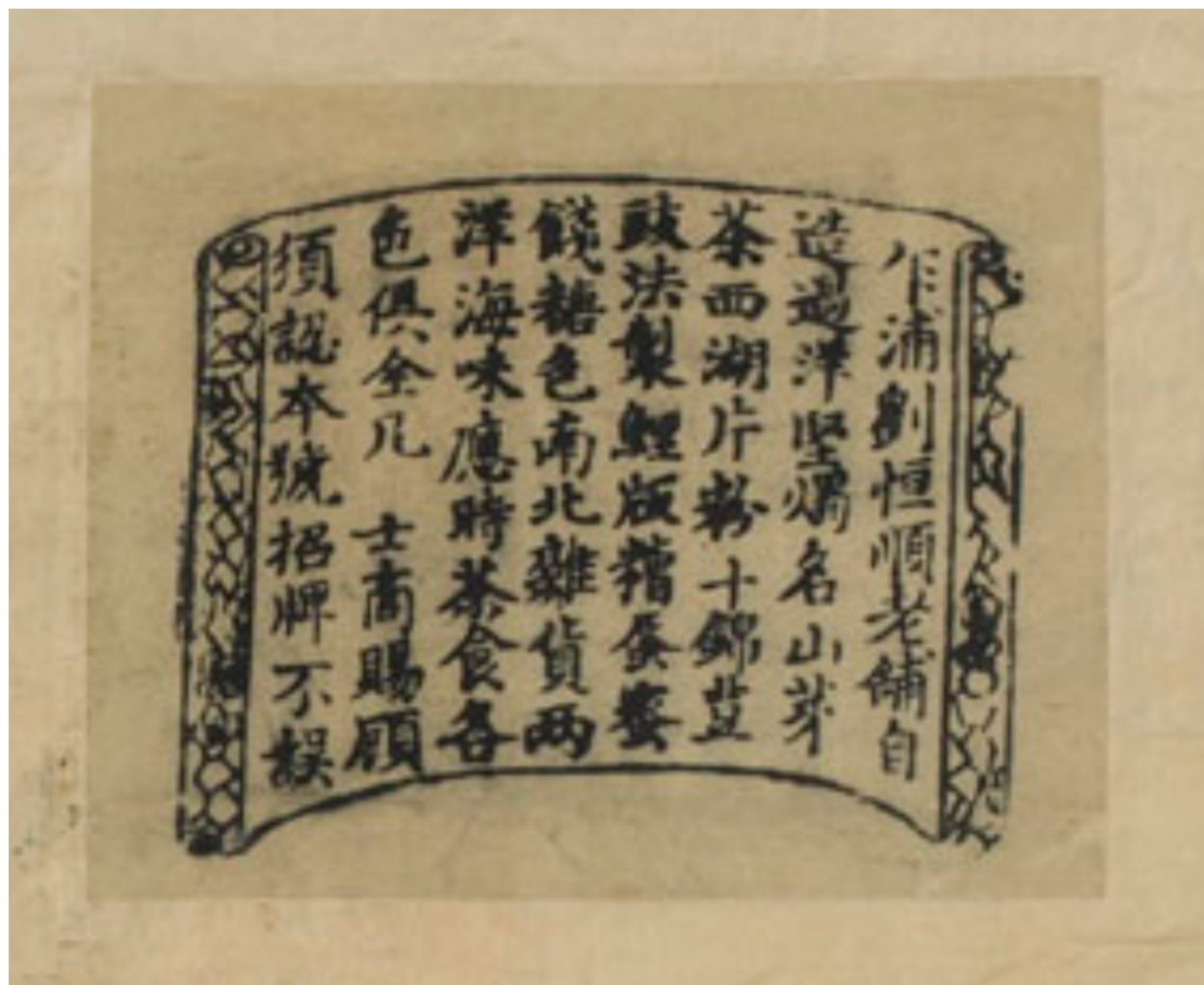


Figure 3.6 A flyer by a trader in Zhapu (ca. late eighteenth century, original size unknown).

Source: Waseda University Library, 文庫 08 J53, 惜字帖, vol. 2, fol. 22.

As a result of these changes, by the eighteenth century, smelly salted fish had become desirable sea taste, and the markets of smelly salted fish had become respectable department stores. The ancient derogatory term, *baoyu*, also lost its function in everyday life and was invested with a new meaning. It was observed by an erudite scholar-official, Xie Zhaozhe (1567-1624), in the early seventeenth century, that his contemporary northerners loved abalones, but they strangely called them *bao* (鮑). He tried to make sense of this mistake from a phonetic perspective, pointing out that the pronunciation of abalone (鮑 pronounced *fu* in modern Chinese and *biuk* in ancient Chinese) was like smelly salted fish 鮑 (*bao*).⁵⁶ About two centuries later, another learned scholar, Hao Yixing (1757-1825), who was from a principal abalone-producing area, Dengzhou, also pointed out that his contemporaries in Beijing called abalones *baoyu*.⁵⁷ In his treatise on marine creatures, he found it ridiculous to confuse abalones with smelly salted fish merely because of their similar pronunciation.⁵⁸

Xie and Hao were not the first to raise this issue. For their similar pronunciations, a phonetic confusion between abalones and salted fish had been long lingering in China. A no longer extant dietetic guide, authored by a Tang physician and quoted by a tenth century Japanese medical compilation, indicates that by the Tang period, people had already begun to mix *fu* (*biuk*) and *bao*. However, besides this isolated case, Chinese written sources are consistent in distinguishing these two terms.⁵⁹

Yet, by the eighteenth century, the semantic shift of *bao* from salted fish to abalones had become a matter of fact. The aforementioned merchant handbook only refers to abalones as *baoyu* (鮑魚) without evoking its original name *fu* (鮑魚). It uses *bao* as a generic term for all types of commercially

⁵⁶ Xie, *Wuzha zu*, *juan* 9, 259.

⁵⁷ Hao, *Shaishu tang bilu*, *juan* 3:45a.

⁵⁸ Hao, *Haicuo yijuan*, 7a.

⁵⁹ Tanba, comp., *Ishinbō*, *juan* 30, 639. Nakahashi, “*Cui Yuxi shijing* no kenkyū.”

traded abalones, such as horseshoe *bao* (*mati bao* 馬蹄鮑) referring to dried abalones as big as horseshoes.⁶⁰ Meanwhile, for dried and salted fish, the handbook uses not *bao*, but the aforementioned more agreeable term, *xiang*.⁶¹

Therefore, although learned scholars, like Xie and Hao, insisted on the classical meaning of *baoyu*, in everyday life, this term had lost its connotation as smelly salted fish, becoming instead a generic term for abalones. We may consider that, besides their phonetic affinity, a precondition for such a complete semantic shift was that by the eighteenth century, preserved seafood, now known as sea taste, was no longer perceived by Chinese consumers as distasteful, but, as we will discuss soon, had become an essential part of Chinese high cuisine. The negative connotations of *baoyu* hence became meaningless to most consumers, who instead used this term for a completely different marine product, abalones, which, albeit also preserved and dried, had since long been perceived as a top delicacy in China.

3. Broths and Sea Delicacies

Through the trade of sea taste, preserved seafood became widely available to inland consumers, and a seafood culture shared by both coastal and inland communities emerged in China. In this culture, preserved seafood also did not only end up as substitutes for fresh seafood, but out of it some top sea delicacies would rise to redefine high cuisine in China. A recent article by Lin Yu-ju points out that in nineteenth-century Taiwan, a place with renowned fisheries, what was preferred by local wealthy families was not locally abundant fresh seafood, but expensive preserved seafood imported from mainland China.⁶² This seemingly unnatural dietary preference can also be identified in the

⁶⁰ *Huizhou minjian zhenxi wenxian*, vol. 15, 302-303.

⁶¹ *Ibid*, 305-306.

⁶² Lin, “Jinkou daoxiang.”

Sea Changes

aforementioned late eighteenth-century cookery book by Yuan Mei, in which the top sea delicacies were nearly all preserved.⁶³ In comparison, delicacies made of fresh fish, either from rivers or the sea, were categorised under the rubric of “river delicacies” (*hexian* 河鮮) and tiered below the sea delicacies.⁶⁴ Among these sea delicacies, the most important, as suggested by Nie Huang at the end of the seventeenth century, were edible bird’s nests, sea cucumbers, shark fins, and abalones.⁶⁵ They were also ranked as the top four in Yuan Mei’s recipe collection.

How did this small group of preserved seafood rise to top delicacies? Among them, only abalones were long documented in Chinese sources. At least since the first century CE, abalones had been a well-known delicacy, craved by several famous rulers in ancient China.⁶⁶ For the iridescent inner layer of their shells, abalones had also been used as a medicine for brightening eyes since at least the fourth century CE.⁶⁷ By the Northern Song period, strong demand further stimulated industrial production along the Shandong Peninsula in North China. Su Shi (1037–1101), who once held a post there, described local collectors diving into the cold waters of the North China Sea and chiselling abalones from a rocky seabed. Once ashore, they ground their shells, boiled them, removed the shells, and dried the meat. For long-distance trade, merchants would pickle abalones with dregs (*zao* 糟) or oil.⁶⁸ By the late eleventh and early twelfth centuries, those preserved abalones from Shandong had been sold in the imperial capital, Kaifeng.⁶⁹

⁶³ Yuan, *Suiyuan shidan*, 40-44. The only uncertain item was scallops, which were mainly from a place close to the Lower Yangzi region, Ningbo, and were preferably served in a fresh status. Kuo, “Xianqing de chi,” 69-78.

⁶⁴ Yuan, *Suiyuan shidans*, 45-47.

⁶⁵ Nie, *Haicuo tu*, *juan* 2, 186-187.

⁶⁶ Wang, “Zhongguo gudai haichan zhenpin,” 78-80.

⁶⁷ Ge, *Baopuzi neipian jiaoshi*, *juan* 15, 274; Su, *Xinxiu bencao*, *juan* 16, 234. For the medical function of abalones, see also Tsurumi, *Namako no me*, 530-532.

⁶⁸ Su, “Fuyu xing.”

⁶⁹ *Chongxiu zhenghe jingshi zhenglei beiyong bencao*, *juan* 20, 416.

Chapter 3

Whereas abalones enjoyed a long reputation of being a top sea delicacy, edible bird's nests, sea cucumbers, and shark fins had no such a tradition to claim. They instead emerged from obscurity around the sixteenth and seventeenth centuries. Among them, only the shark fins had a “pre-history” to trace, as Chinese consumption of sharks was long documented. Su Song, in his mid-eleventh century drug survey, noted that southerners identified two types of sharks, of which those of a larger size and with a saw-like snout were more delicious (Figure 3.7). He also noted that the southerners preserved their meat with salt and ground off their sandy surface and turned their skin into a delicious dish. Over half a century later, Kou Zongshi noted that shark skin was used for decorating saddles and swords.⁷⁰ Yet, none of these sources mentioned the fins. The first *materia medica* paying attention to shark fins came centuries later. Li Shizhen's 1596 *Systematic Materia Medica* for the first time noted that contemporary southerners highly appreciated the dorsal and pelvic fins of sharks, because their taste was “fatty and delicious” (味並肥美).⁷¹

⁷⁰ Ibid, *juan* 21, 434.

⁷¹ Li, *Bencao gangmu*, *juan* 44, 2469.

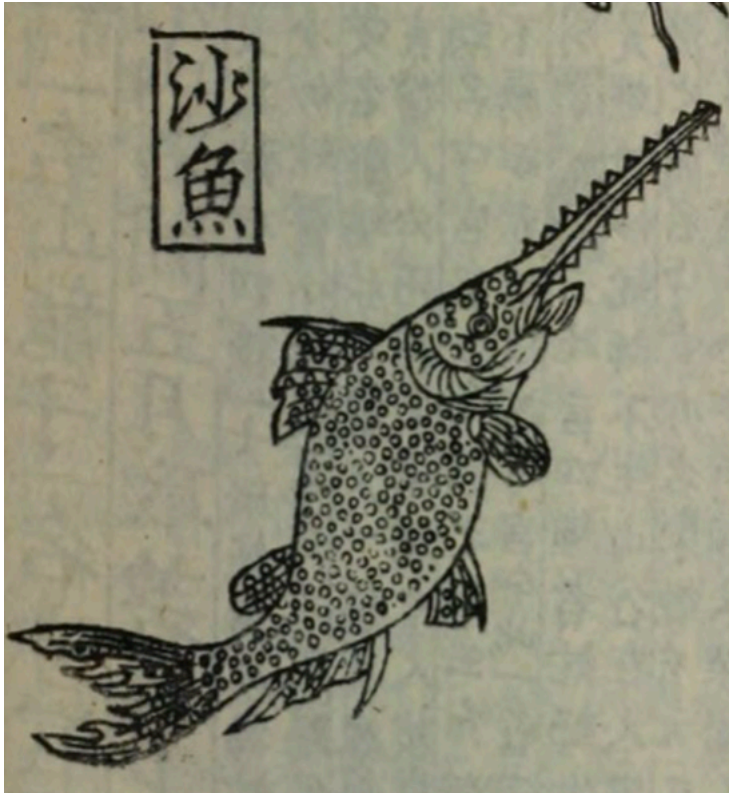


Figure 3.7 Illustration of a saw-like shark from the mid-eleventh century drug survey.

Source: *Chongxiu zhengbe jingshi zhenglei beiyong bencao*, juan 21, 434.

Why did the previously unremarkable fins become “fatty and delicious” by the age of Li Shizhen? After a thorough survey of Chinese sources, a pioneering researcher in this field, Feng Lijun, suggests that the earliest textual evidence concerning Chinese consumption of shark fins is from the mid-Ming period, in a poem by a prominent scholar-official, Shao Bao (1460-1527).⁷² Shao composed this poem sometime between 1516 and 1527 when he retired to his hometown in the Lower Yangzi region.⁷³ The poem shows that he first stripped the fin(s) into fine silver-like filaments and then seasoned them with fresh Chinese chives (*jin* 韭菜).⁷⁴ This operation, namely, dividing fins into filaments, was known as the most basic step for preparing the shark fins.⁷⁵

⁷² Feng, “Qingdai Zhongguo yu Dongnanya de yuchi maoyi,” 85.

⁷³ Shao Bao enjoyed this dish in a pavilion, Haitian Pavilion, in his academy, Erquan Academy, in Wuxi. That academy was built by Shao in 1516 when he retired. Shao, *Rongchun Tang xuyi*, juan 2:3b; Hua, “Erquan shuyuan.”

⁷⁴ Shao, *Rongchun Tang xuyi*, juan 2:3b.

⁷⁵ Feng, “Qingdai Zhongguo yu Dongnanya de yuchi maoyi,” 86.

Chapter 3

Why was it necessary to divide the fins into filaments? Whereas there is no contemporary record about how it exactly worked in the early sixteenth century, a cookery book dating from the mid-eighteenth century, *Notes from Awakening Garden* (*Xingyuan lu* 醒園錄), describes this process to a great detail:⁷⁶

Method for boiling shark fins (煮魚翅法)

Preparation

Thoroughly soak a piece of dried shark fin, and boil it until soft enough to be able to be ripped by hand. Put the boiled fin into cool water. Thereafter, one can remove its bone and skin, and strip it into bundles of filaments, which shall remain interconnected instead of being completely divided into separate threads. These stripped filaments shall be dried and stored in a porcelain container.

Cooking

By the time of cooking, take a certain amount of processed shark fin in accordance with the number of bowls one is going to serve. Soak it for half a day, boil it once or twice, and wash it. It is better to mix it with boiled pork or chicken shreds. Add Manchurian wild rice stem (*xianggu*, *Zizania latifolia* 香菰), together with oil and garlic, and stir-fry it several times. Add a little water and cook until it smells good. Thereafter, add broth, just enough to cover it, add vinegar, and make it boil several times. Add a little water with flour, add spring onion stem, and make it boil again.

Dividing fins into filaments was, therefore, an important step in the time-consuming preparation that transformed the strongly structured dried shark fins into soft and edible fibrous tissue (Figure 3.8).

⁷⁶ Li, *Xingyuan lu*, *juan shang*, p. 30.

Sea Changes

That transformation demanded repeated soaking, boiling, and drying. Through these operations, the original flavour of the shark fins, if there was any, had all but disappeared. What remained were bundles of filaments, dried, resilient, elastic, and ready to absorb any flavour offered by broths and seasonings.



Figure 3.8 A piece of nearly dried shark fin.

Source: Photo by the author in Makassar, 2020. The author denounces shark finning and is working on the demystification of this unethical, exotic foodway.

While demanding different level of preparations, the other three top sea delicacies also need to go through a basic process of soaking or boiling, known in Chinese as *fa* (rising, growing, or expanding 發), before being ready to cook. This process is necessitated by the texture of these sea delicacies. As we can find in a Chinese dried seafood market, all the four top sea delicacies are deeply dried and have fibrous (shark fins and edible bird's nests) or gelatinous (edible bird's nests, sea cucumbers, and abalones) texture. Before cooking, they have to be soaked with water and carefully washed. It helps

Chapter 3

remove unpleasant impurities and odours and soften their structure. In this process, they are also deprived of their original flavour, and their fibrous or gelatinous texture swells immensely through water absorption. Thereafter, they will be re-invested with flavour from a delicately prepared broth, which pervades the hydrophilic texture of their meat and largely replaces the previously absorbed water. As a result, the taste of a cooked sea delicacy ultimately depends on the flavour of the broth they absorb, as well as the chewy structure of their own meat.

Yuan Mei's late eighteenth-century recipes elaborated on how this cooking technique worked for these four top sea delicacies specifically. Abalones, for their tough meat, first, need to be cut into thin slices before cooking and thereafter can be cooked together with chicken broth and tofu. Shark fins can either be cooked with ham and chicken broth, together with fresh bamboo shoots and sugar candy, or with chicken broth and white radish strips. In the former case, less chicken broth is needed because the ham already has a strong flavour. In the latter case, the shark fins have to be divided into fine strips so that they can intermingle with sliced white radish. More dependent on the flavour of broths are sea cucumbers. For covering a fishy smell, they need to be first boiled with a meat broth three times, and thereafter to be stewed with a broth of meat and chicken, together with shiitake (*xiangxun*, *Lentinus edodes* 香菇) and wood ear, until very tender. The rule is that if you want to treat a guest with sea cucumbers, you have to start stewing them a day ahead. A relatively fast method to prepare sea cucumbers is to first chop sea cucumbers into small pieces and then stew them with a chicken broth, together with diced bamboo shoots and shiitake. The most subtly flavoured sea delicacy is the extremely expensive edible bird's nests. The edible nests have to be first poured with boiled spring water, and black impurities picked out. Thereafter, they shall be infused with three hot broths made separately of young chicken, ham, and fresh *möög* mushrooms (*mogu*, *Tricholoma mongolicum* 蘑菇).

Sea Changes

When the nests absorb these broths thoroughly and their colour turns jade-like, they are ready to serve.⁷⁷

Therefore, after being prepared for cooking, all four top sea delicacies had to be boiled with one or multiple broths. Among them, chicken broth was most commonly used. This technique of making broth for imparting flavour was long-established in Chinese cuisine. The 1330s *Extensive Records of the Forest of Affairs* collected two recipes for making broths. One was a stock made of mutton and bones and the other was a broth made of mushroom. In both cases, they were made of strained soups. For instance, the mutton stock was added with blood water to induce coagulation of impurities. Thereafter, foam, oil, and sediments would be removed. The purpose was therefore to keep only desirable flavour, while leaving no impurity. Whereas the flavour of the mushroom broth is unmentioned, the desirable flavour of the mutton stock was noted as “sweet and hot-spicy” (*tianla* 甜辣). The sweetness, according to the recipe, was from the mutton and bones, and the hot spiciness was from a spice, ginger.⁷⁸

Before being widely used for cooking sea delicacies, these broths had likely already played an important role in Chinese cuisine for making noodle soups or dumpling soups. The aforementioned 1504 recipe collection compiled by a lady of a wealthy family in the Lower Yangzi region, to whom we will return soon in the next section, contains four recipes for making noodle soups. Among them, one soup used a “fatty broth” (*feizhi* 肥汁) of chicken or goose, to be seasoned with pepper, Sichuan pepper, soy sauce, spring onion stem, and a little vinegar.⁷⁹ We may imagine that the same “fatty broth” could be also used for infusing stripped shark fins, turning the latter into a flavour-rich and fatty dish.

⁷⁷ Yuan, *Suiyuan shidan*, 40-44.

⁷⁸ *Xinbian zhuantu zenglei qunshu leiyao shilin guangji* (Xiyuan jingshe edition), *bieji*, *juan* 10:8b.

⁷⁹ Song, *Songsbi yangsheng bu*, *juan* 2, 37.

Chapter 3

This may help explain why Li Shizhen at the end of the sixteenth century noted that shark fins tasted “fatty and delicious” (*feimei* 肥美).

What was relatively underdeveloped in these pre-seventeenth-century broth recipes is a key gustatory concept, *xian*, which would play a definitive role in integrating these broth-saturated sea delicacies into an aestheticised taste-scape of Chinese literati. While in present-day Chinese cuisine, *xian* (鮮) can be roughly translated as “savoury” or “the flavour of umami”, the term originally referred to the pleasant flavour of fresh food, such as recently caught fish, recently butchered animals or recently harvested vegetables.⁸⁰ Therefore, when fresh seafood became popular in the Northern and Southern Song periods, they were generically referred to as *baixian* (海鮮), literally meaning “sea fresh”.⁸¹ However, a strange phenomenon in the eighteenth century was that this term was also used for preserved seafood. Yuan Mei used *baixian* as the generic term for all these above-mentioned sea delicacies, which as we have seen were nearly all preserved, and noted that his contemporaries loved dishes made from this kind of *baixian*.⁸²

Why was preserved seafood referred to as “sea fresh” (*baixian*) by eighteenth-century Chinese elite consumers? For understanding this puzzling contradiction, we need to closely engage a critical reconceptualisation of *xian*. A well-studied topic in Chinese food history is that in the seventeenth century, along with the ascendancy of literati-style cuisine, *xian* was elevated by Chinese literati as the most refined flavour.⁸³ A definitive work was a jotting by a celebrated literatus, Li Yu (1611-1679), *Sketches of Idle Pleasures* (*Xianqing ouji* 閒情偶寄, 1671), which repeatedly referred to *xian* as an idealised flavour for the literati’s aestheticised taste.⁸⁴ Li gave no clear definition of *xian* but attempted to make

⁸⁰ Yi, “Xianwei yu quanli,” 10-11.

⁸¹ Ibid, *passim*.

⁸² Yuan, *Suiyuan shidan*, 40.

⁸³ Wu, “Ming Qing yinshi wenhua zhong de ganguan yanhua yu pinwei suzao,” 71-72

⁸⁴ Li, *Xianqing ouji*, *juan* 5, 234-258

sense of it through comparisons. In a comparison between vegetables and meat, he suggested that the most pleasant flavour of vegetables that could surpass the flavour of meat was *xian*.⁸⁵ In describing the taste of fish, he suggested that the most valuable flavour of fish was *xian* and the secondary was fatty (*fei* 肥). Li attempted to correspond these two flavours to two different ways of cooking techniques. For attaining the *xian* flavour, Li recommended to “make a soup through purely boiling” (清煮作湯) a fish, indicating that it aimed to arouse the natural flavour from the fresh fish itself. By contrast, for some fish whose desirable flavour was fatty, Li suggested to “make minced fish through heavy cooking” (厚烹作膾), indicating that the fatty flavour was relatively heavy.⁸⁶ With these examples, Li conceived of *xian* as being pure, light, and close to the natural flavour of food.

This conception of *xian* was followed by eighteenth-century literati such as Yuan Mei.⁸⁷ Yuan also frequently referred to *xian* in the *Recipes from the Garden of Contentment*. He further proposed that *xian* surpassed blandness, which was a highly esteemed and sublimed concept in literati’s aesthetics.⁸⁸ Yuan contended that blandness (*danbo* 淡薄) had little merit, because “if one only covets blandness, then it is better to drink [clear] water” (如徒貪淡薄，則不如飲水矣).⁸⁹ Instead, a clear and *xian* (*qingxian* 清鮮) flavour was the “true flavour” (*zhenwei* 真味) of food. Therefore, by the age of Yuan Mei, *xian* developed into a “perfect flavour” embodying literati’s pursuit of pure and true flavour of food, subtly balanced between heavy flavour and blandness.

⁸⁵ Ibid, 235-236.

⁸⁶ Ibid, 253.

⁸⁷ Wu, “Ming Qing yinshi wenhua zhong de ganguan yanhua yu pinwei suzao,” 76-77.

⁸⁸ Jullien, *In Praise of Blandness*.

⁸⁹ Yuan, *Suiyuan shidan*, 20.

Chapter 3

The literati's enthusiastic reception of this elusive flavour, *xian*, shall be understood in the context of the tension between heavy flavours and blandness as we have seen in chapter two. Before Li Yu, this tension was essentialised in an influential literati-style cookery book authored by Gao Lian (ca. 1527-1603), *Discourse on Food and Drink* (*Yinzhuàn fúshí jiān* 飲饌服食賡, 1591). In this work, Gao noted that “one shall abide by blandness in everyday dietary practices, lest things that are supposed to nourish you instead harm you, and the five flavours become villains in the five internal [organs]” (人於日用養生，務尚淡薄，勿令生我者害我，俾五味得為五內賊。)⁹⁰ This concern, as discussed in chapter two, was based on the correspondence theory that associated the five flavours with the five palace viscera and the five body elements. The theory, however, had no place for the *xian* flavour, which was outside the conventional framework of the five flavours: sweetness, sourness, saltiness, bitterness, and acidity (spiciness). Unfettered by the restrictions imposed by the correspondence theory, *xian*, as a pleasant flavour with connotations of being fresh, pure, and natural, offered a common ground for reconciling human desires for gustatory enjoyment and the literati's aesthetical and medical concerns, becoming a “perfect flavour” worth to be pursued with utmost vigour and art.

As a pure and natural flavour of food, *xian* was also elusive. Before the invention of MSG (*umami*) in the twentieth century, there was no condiment specifically carrying a *xian* flavour. The only solution was to make a broth to absorb this flavour from a typically *xian* food ingredient. Li Yu proposed bamboo shoots, *xun* mushrooms (蕈, a kind of mushrooms mainly from Southeast China), and shrimp as *xian*-flavour-rich bases for making broths. Through such broths, their *xian* flavour could be transmitted to other food.⁹¹ Li even pointed out that cooks often stole *xian* flavour from food by

⁹⁰ Gao, *Yinzhuàn fúshí jiān*, 1. For further discussions on Gao Lian's literati-style cuisine, see Su, *Culinary Arts in Late Ming China*.

⁹¹ Li, *Xianqing ouji*, *juan* 5, 236-237, 254.

adding extra water during boiling, which helped them keep more *xian*-flavour-rich broth for themselves, at the expense of the diners whose food lost *xian* to the extra water added by the cooks.⁹²

An anonymous cookery book roughly dating from the later eighteenth century, *Collection of Seasoning Ding Vessels* (*Tiaoding ji* 調鼎集), provided professional advices about how to make clear and *xian*-flavour-rich broths.⁹³ It shows that the gist was to purify a broth until it carried a desirable flavour without any impurity. That was achieved by transforming unwanted suspense into removable sediment and foam, by adding certain catalysts, including sweet sauce (*tianjiang* 甜醬), soy sauce (*jiangyou* 醬油), shrimp paste, and eggs. It also shows how different broths served different gustatory functions. Pork broth had a fatty flavour, ham broth had a good smell, and pig's trotter broth served as a thickener. Chicken broth, which was most commonly used for cooking the sea delicacies was now, together with duck broth, defined as possessing a *xian* flavour.⁹⁴ Spices were also used for seasoning these broths, often being encased in a cloth bag to avoid decomposing during boiling and leaving impurities. Among them, pepper was recommended, most interestingly, no longer for hot spiciness, but for enhancing *xian*.⁹⁵ *Xian* even became the generic title for all of the above-mentioned broths, which were collectively known as “*xian* broths made of all sorts of things” (諸物鮮汁).⁹⁶

Thanks to these delicately prepared broths, *xian* was no longer an elusive flavour carried only by fresh food. It could be materialised by a broth. The broth could then infuse the hydrophilic texture of the sea delicacies, transmitting the *xian* flavour to the latter and turning them into “sea fresh”. This

⁹² Ibid, 253.

⁹³ This voluminous book is anonymous and undated. Before being edited for publication in the 1980s, it was preserved as a manuscript in the Beijing Library (the National Library of China). Several places in this book refer to a salt merchant, Tong Yuejian, who was active in Yangzhou during the Qianlong period (1736-1795), indicating that Tong was likely a compiler. *Tiaoding ji*, editor's preface.

⁹⁴ Ibid, *juan* 1, 54-56.

⁹⁵ Ibid, 55-57.

⁹⁶ Ibid, 56.

chain of flavour transmission explains why the deeply preserved seafood became top sea delicacies and were strangely referred to as “sea fresh”. After all, in a culinary culture that favoured the subtle *xian* flavour, the adaptable nature of the deeply dried seafood became its merit. Without a remarkable flavour by themselves and prone to richly absorb liquid, they could be perfectly re-invented by a broth with a desirable *xian* flavour imparted from chicken, mushrooms, or bamboo shoots. Yuan Mei was well aware how desperately these so-called sea delicacies depended on taste of others. He ridiculed that an official for showing his generosity extravagantly offered four taels of purely boiled edible bird’s nests in a big bowl, making them but insipid. Using this example, Yuan admonished that those expensive rarities, such as sea cucumbers and edible bird’s nests, had no merit in terms of their own flavours. The flavours of ordinary food ingredients, such as chicken, pork, fish, and ducks, were instead essential.⁹⁷

4. Transforming Edible Nests: From Hot-Spicy Stir-Frying to “Clear and Replenishing”

Yet, we shall also keep in mind that the feature of being both taste-neutral and hydrophilic is widely shared by many dried edible things. The question is: Why was it only this small group of edibles, supposedly from the sea, rising to the top delicacies? In the previous section, we have attempted to address the rise of abalones and shark fins. The former had a long-established reputation of being a top delicacy in China. The latter also had a long “pre-history”, as the other parts of sharks had since long been consumed in South China as delicacies. The rise of shark fins in the sixteenth century was an extension of that food culture, facilitated by the new technique that transformed the strongly structured dried fins into soft and delicately flavoured filaments.

⁹⁷ Yuan, *Suiyuan shidan*, 24-25.

Sea Changes

What remains unaccountable is the two foremost sea delicacies, namely, edible bird's nests and sea cucumbers. In both Yuan Mei and Nie Huang's texts, edible bird's nests and sea cucumbers were arranged ahead of shark fins and abalones, indicating that they were the top two. Their rising trajectories are, however, an enigma. Till the end of the fifteenth century, there is no record of their uses in Chinese cuisine.⁹⁸ Thereafter, sources concerning edible bird's nests emerge from the beginning of the sixteenth century, and then sea cucumbers begin to be recorded from the late sixteenth century. They gradually become richly documented in Chinese sources in the seventeenth century. By the eighteenth century, the records have become abundant. With these sources, in the remaining two sections of this chapter, we are going to first focus on edible nests and then sea cucumbers, to deeply contextualise their rise in relation to critical changes of Chinese medical and food culture from the sixteenth through the eighteenth centuries.

To begin with, we need to clarify that edible bird's nests by their nature are not a seafood. They are solidified saliva secreted by several species of swiftlets in the *Aerodramus* genus, who use it for building nests along a steep cliff or inside a cave. The natural habitats of these swiftlets are the mountainous and forested areas in Southeast Asia, as well as a few locations in the Far South of China.⁹⁹ Feeding on small insects, their life cycle is completely independent from the sea, except that their nests are often laid in coastal caves or on coastal cliffs, accessible to collectors approaching from a sea route.

With only a putative link to the sea, edible nests, in their advent in Chinese cuisine, also did not assume a culinary function as a sea delicacy but were instead integrated by a spicy foodway as a sort

⁹⁸ An often cited "earlier" work, *Guidance of Food and Drink* (飲食須知 *yinshi xuzhi*), mentioning both edible bird's nests and sea cucumbers is a fake book, falsely attributed to Jia Ming (14th century) by a publisher in the late seventeenth century. Cheng, "Yuan Jia Ming yu Qing Zhu Benzong *Yinshi xuzhi* zhenwei kao," 143.

⁹⁹ Salmon, "Le goût chinois pour les nids de salanganes," 252-253. For the expansion of the commodity frontiers of edible bird's nests in Southeast Asia, see Blussé, "In Praise of Commodities"; Feng, "Luelun Ming Qing shiqi Zhongguo yu Dongnanya de yanwo maoyi."

Chapter 3

of dried vegetable. The key testimony to this ignored “spicy stage” of edible nests in Chinese foodways is the aforementioned 1504 recipe collection, which is also the first Chinese written source referring to edible bird’s nests. A remarkable feature of this work is that it was based on culinary knowledge of a female cook, Madam Zhu (朱太安人 fl. later 15th - early 16th c.). She orally transmitted recipes to her son, Song Xu (fl. early 16th c.), who compiled them into the private collection of the Song family in Songjiang (present Shanghai) in 1504.¹⁰⁰ These recipes were later published as a cookery book under the title of *The Life-Nourishing Collection of the Song Family* (*Songsbi yangsheng bu* 宋氏養生部).

According to her son’s preface, Madam Zhu learned these recipes when accompanying her father and later on, her husband, on their long-term services in a number of posts across the Ming Empire, including the imperial capital, Beijing.¹⁰¹ This recipe collection, therefore, reflects the culinary culture of the political elites of the Ming Empire in the late fifteenth century, namely, the period immediately before its compilation. It has three recipes referring to edible nests. The first is, most strikingly, our familiar hot-spicy stir-fried chicken.¹⁰²

¹⁰⁰ Song, *Songsbi yangsheng bu*, preface, 1-3.

¹⁰¹ Ibid. For the background of the Song family, see Li, “Songjiang fu Songshi jiazu shixi ji wenxue chengjiu gaishu.”

¹⁰² Song, *Songsbi yangsheng bu*, *juan* 3, 119.

Hot-spicy stir-fried chicken (*la chao ji* 辣炒雞).

Chop chicken into pieces, put them into a heated pan, and stir-fry them until their colour changes. Add water and fully cook them. Season them with sauce, pepper, Sichuan pepper, and spring onion stem, and fully cook them again.

During cooking, one can also add following “harmonise things” (*hewu* 和物):

Cooked chestnuts, cooked water caltrops (*ling* 菱), edible bird’s nests, *möög* mushrooms (*Tricholoma mongolicum*), *jizong* mushrooms (a kind of termite mushrooms from Yunnan 雞棕), *tianhua* mushrooms (a kind of oyster mushrooms from Mount Wutai 天花菜), *yangdu* mushrooms (a kind of true morels from North China 羊肚菜), *haisi* seaweed (a kind of marine alga 海絲菜), fresh *xun* mushrooms, rock-ear lichen (*shi'er* 石耳), konjac jelly (*juruo*, jelly made from the starchy corms of konjac, *Amorphophallus konjac* 蒟蒻), asparagus, lesser bulrush roots (*puruo*, starchy roots of *Typha angustifolia* 蒲蒻), dried bamboo shoots, cucumbers, carrots, jelly fish, and dried arms and tentacles of cuttlefish (*mingfu xu* 明脯須).

What makes this spicy dish unique is a wide choice of the so-called “harmonising things”, functioning as toppings to garnish the stir-fried chicken. These toppings consisted not only of ordinary food ingredients widely available in China, such as chestnuts, water caltrops, dried bamboo shoots, cucumbers, and carrots, but also some rarities only accessible to privileged consumers, such as those mushrooms and edible bird’s nests. In the fifteenth century, the mushrooms used in this recipe, such as *jizong* mushrooms, *tianhua* mushrooms, and *yangdu* mushrooms, were precious rarities offered by local society from remote parts of the Ming Empire as tributes to the imperial court, often at an

Chapter 3

enormous cost.¹⁰³ These rarities were all preserved in dried form, as the recipe suggested that before being used for cooking, those mushrooms and edible nests should first be “washed with warm water” (溫水洗). Elsewhere, the cookery book also advised storing edible nests together with these mushrooms close to a fireplace, indicating that they were all dried.¹⁰⁴

The second recipe also suggests cooking edible nests and precious mushrooms in a spicy foodway, known as “stir-frying with oil and sauce” (*you jiang chao* 油醬炒).¹⁰⁵

Stir-frying with oil and sauce (*you jiang chao* 油醬炒)

1. Heat oil, add water and *tianhua* mushrooms, and then add sauce and vinegar.

or

2. Heat oil, add sauce, vinegar, and water, and heat again. Thereafter, add *tianhua* mushrooms.

Both shall be seasoned with spring onion stem, pepper, Sichuan pepper, and a little pine-nut oil or apricot kernel oil. Both can be further garnished by fresh vegetables (*xiancai* 鮮菜).

The *tianhua* mushrooms can be substituted with one of the following items as the main ingredient of this dish:

Jizong mushrooms, edible bird’s nests, *yangdu* mushrooms, *möög* mushrooms, *haisi* seaweed, *xun* mushrooms, bamboo shoots, Chinese yam, Manchurian wild rice stems, asparagus ...

(In total, 35 types of “vegetables” are recommended)

¹⁰³ Lu, “Mingdai jingji shiyongjun,” 65-67. For drugs as local tribute in the Ming dynasty, see Bian, *Know Your Remedies*, 49-73.

¹⁰⁴ Song, *Songsbi yangsheng bu*, *juan* 6, 227.

¹⁰⁵ *Ibid*, *juan* 5, 167.

Sea Changes

Arranged in the section of “vegetables and fruits” (菜果), this recipe was for stir-frying broadly defined vegetables, including mushrooms and edible nests, in a bouillon made of water, oil, and sauce, instead of directly in hot oil.¹⁰⁶ This technique could help keep the vegetables unscathed, and make it richly flavoured by first being coated by oil and sauce during stir-frying and then being seasoned with spices, including pepper and Sichuan pepper. By the end, the dish would also carry a numbing and hot-spicy flavour like the “hot-spicy stir-fried chicken”.

The third recipe is entitled “preparing a soup for cut-up meat” (*gengzi zhi* 羹裁製).¹⁰⁷

¹⁰⁶ It is known as “*luotang chao*” (drop into bouillon and stir-fry) in modern Chinese cuisine. Sabban, “Court Cuisine in Fourteenth Century Imperial China,” 186, note 14.

¹⁰⁷ Song, *Songshi yangsheng bu*, *juan* 5, 195-196.

Preparing a soup for cut-up meat (*gengzi zhi* 羹裁製)

A General Guideline

For preparing a new soup, first boil water, and then add the following broths in sequence: 1) A small amount of clear broth of bamboo shoots and gourds; 2) A small amount of clear broth of chicken, goose, and pork; 3) A small amount of clear broth of fresh shrimp. Keep the fire, spoon out oil on the surface, and filter out the sediment at the bottom (Blood water or water mixed with duck eggs can be added to induce coagulation). Add soy sauce, and a little amount of powdered pepper and Sichuan pepper. Remove oil and sediment again...

The following (vegetable) items can be added to the soup (one item for one soup):

Fermented bean curd, safflower seed paste, sesame curd, tofu, *tianhua* mushrooms, *yangdu* mushrooms, *jizong* mushrooms, edible bird's nests, *haisi* seaweed, konjac jelly, *möög* mushrooms, *xun* mushrooms, rock-ear lichen ...

(In total, 56 (vegetable) items are recommended)

Following cut-up meat can be added to the soup:

Fresh and fatty beef, mutton, and pork are the best. They can either be ripped and sliced to thin pieces and soaked in salted water, and then be “quickly boiled” (*weixun* 微燻) in the simmering soup, or thoroughly boiled [without being divided into thin pieces]. Chicken and goose can also be cut into pieces and boiled. Fish, shrimp, and crabs shall be quickly boiled. The meat of pigeons, deer, rabbit, muntjac deer, wild boars, and gazelles is also recommended.

This was therefore a guideline for preparing a hot-pot meal, with a menu including base soup, vegetables, and meat. Edible nests and these precious mushrooms functioned as vegetables to be

Sea Changes

boiled in the base soup. The soup, albeit being a mixture of several clear broths, was interestingly not for imparting a subtle flavour through slow cooking but served as a hot-pot soup to have “vegetables”, including edible nests, absorb a relatively strong flavour to be a companion for meat.

Reading these recipes, we may find that in late fifteenth-century China, edible nests assumed a culinary function distinct from the sea delicacies in eighteenth-century Chinese cuisine. We may even doubt whether Madam Zhu would agree that edible nests were a sort of sea delicacy, as in her recipes, the nests were not aligned with seafood but akin to these precious mushrooms and classified as “vegetables”, mainly for carrying relatively spicy and heavy flavours.

In the following two centuries, edible nests would leave this spicy food culture behind, to be reconceptualised as a top sea delicacy embodying a core aesthetic value of the literati. This shift began with an epistemological turn. Before the sixteenth century, Chinese literati’s knowledge about the sea was largely confined to trade and geography, as there had been a number of important geographic books, such as the aforementioned works by Zhou Qufei, Zhao Rukuo, and Wang Dayuan, on commodities and trading ports of overseas countries.¹⁰⁸ In comparison, knowledge about marine creatures was relatively underdeveloped, as although *materia medica*, such as the *Illustrated Materia Medica* (1061) by Su Song, incorporated substantial information about seafood, there was no specific treatise dedicated to marine creatures.

A pioneering work that kindled Chinese literati’s interest in the natural world of the sea was Huang Zhong (1474 - 1553)’s *Words of the Sea* (*Hai yu* 海語, 1536). This work was based on information from seafarers in Canton, from whom, Huang learned not only about commodities and trading ports,

¹⁰⁸ These works are extensively referred to in chapter two.

Chapter 3

but also fish, animals, and birds in the marine world.¹⁰⁹ From them, Huang learned an account about edible-nest swiftlets as follows:

Sea swiftlets are as big as crows. They return in the spring and pile up their nests on aged rocks and steep cliffs, which are [made of] white seaweed. Island barbarians wait until their departure in the autumn. They then make poles with spades to fetch the nests to sell. The nests are called the nests of sea swiftlets. They are carried by ocean-going ships to Canton. Wealthy families value them as a precious item for banquets. Their price is soaring.

海鷺大如鴉，春回，巢於古巖危壁葺壘，乃白海菜也。島夷伺其秋去以修竿接铲，取而鬻之，謂之海鷺窩，隨舶至廣，貴家宴品珍之，其價翔矣。¹¹⁰

This is the first Chinese description of the nature of edible nests. It would be soon followed by many curious accounts. In 1585, Wang Shimao (1536-1588), a prominent official serving in Fujian, proposed an alternative account that the swiftlets, while crossing the sea, carried their nests. When they felt tired, they let the nest float and had a rest on it.¹¹¹ This account was discredited by another official serving in Fujian, Tu Benjun (1542-1622). In his 1596 *Commentaries on a Miscellany of Marine Creatures in Fujian* (*Minzhong haicuo shu* 閩中海錯疏), Tu affirmed Huang Zhong's account with an adaptation that the nests were made of small fish, instead of white seaweed.¹¹² Thereafter, in the 1610s, Zhang Xie (1574-1640), a local literatus from southern Fujian, denied Wang Shimao's account, and explained that the swiftlets ate seaweed and spit out it for making the nests.¹¹³

Whereas these descriptions were merely about the nature of edible nests, new accounts emerging from the beginning of the seventeenth century would use the natural knowledge about edible nests to

¹⁰⁹ Papelitzky, "Editing, Circulating, and Reading Huang Zhong's *Hai yu*."

¹¹⁰ Huang, *Hai yu*, *juan* 2:4b; Salmon, "Le goût chinois pour les nids de salanganes," 256.

¹¹¹ Wang, *Minbu shu*, 11a, 681.

¹¹² Tu, *Minzhong haicuo shu*, *fulu*, 35

¹¹³ Zhang, *Dongxi yangkao*, *juan* 1, 15.

Sea Changes

redefine their medical nature. Sometime around 1607, an official serving in Quanzhou, Chen Maoren (fl. late 16th and early 17th centuries), noted that “in a place beyond the outer sea of Fujian and close to foreign countries” (閩之遠海近番處) there were “golden-thread swiftlets” (*jinsi yan* 金絲燕), who nested in rocky places near tideland and pecked “silk-worm sea snails” (*cangluo* 蠶螺). These sea snails had two strong white sinews on their back, like the silk of maple silkworms. These sinews could “replenish body depletion and stop exhaustion with dysentery” (可補虛損已勞痢). The swiftlets digested the meat of the sea snails but not their sinews, which were instead vomited out together with saliva to build the nests.¹¹⁴ This account systematically offered a plausible interpretation of the nests’ white and fibrous texture and their medicinal functions for the first time. In the 1690s, Nie Huang, after dissecting an edible nest, decided to follow this account, and depicted two golden-thread swiftlets attending a white nest in a rocky place near tideland (Figure 3.9).¹¹⁵

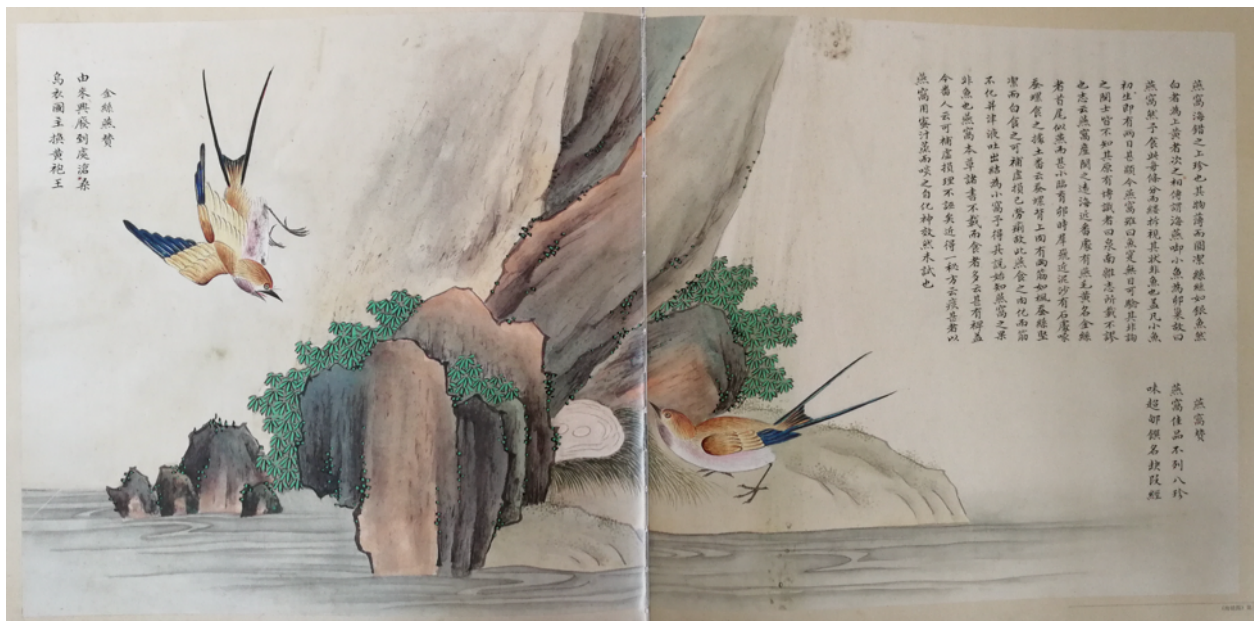


Figure 3.9 Nie Huang’s illustration of edible bird’s nests (1698).

Source: Nie, *Haicuo tu*, *juan* 3, 228-229.

¹¹⁴ Chen, *Quannan zazhi*, *juan shang*, 5. This work was undated. Its author was serving in Quanzhou in the beginning of the seventeenth century and the work refers to events in 1606 and 1607. Ibid, *juan xia*, 35-36.

¹¹⁵ Nie, *Haicuo tu*, *juan* 3, 228-229.

Chapter 3

Whereas this sea-snail account conceptualised edible nests as a replenishing agent, another account emerging from the end of the seventeenth century would make them not only replenishing but also “clearing” (*qing* 清). First recorded by a prominent scholar, Qu Dajun (1630-1696), in Canton in the 1680s or 1690s, it shows that there was some *hai fen* (海粉), literally meaning “sea powder”, on seashore rocks, accumulating and forming moss-like structures.¹¹⁶ The swiftlets first ingested it and then vomited it out for making the nests. This process, according to Qu Dajun, was transformative. *Hai fen* originally had a cold nature and a salty flavour. After being digested by the swiftlets, the cold nature was transformed into warm, and the salty flavour was transformed into sweet. Through this transformation, Qu believed that the nests acquired medicinal properties of “clearing phlegm” (*qingtan* 清痰) and “stimulating appetite” (*kaiwei*, literally meaning “opening up the stomach” 開胃).¹¹⁷

Why did this *hai fen* link matter? *Hai fen* (sea powder) by its nature is the egg masses laid by some shell-less molluscs commonly known as sea hares (Anaspidea). After being properly dried, these egg masses become string- and powder-like and their colour turns yellowish-green. The Chinese in the sixteenth and seventeenth century perceived *hai fen* to be sea slug excretion.¹¹⁸ Nie Huang depicted it as greenish waste excreted by a slug-like creature after it ingested marine algae (Figure 3.10).¹¹⁹

¹¹⁶ Qu, *Guangdong xinyu*, *juan* 14, 391.

¹¹⁷ Ibid.

¹¹⁸ Tu, *Minzhong baicao shu*, *fulu*, 35; Nie, *Haicuo tu*, *juan* 2, 194-195.

¹¹⁹ Nie, *Haicuo tu*, *juan* 2, 194-195.

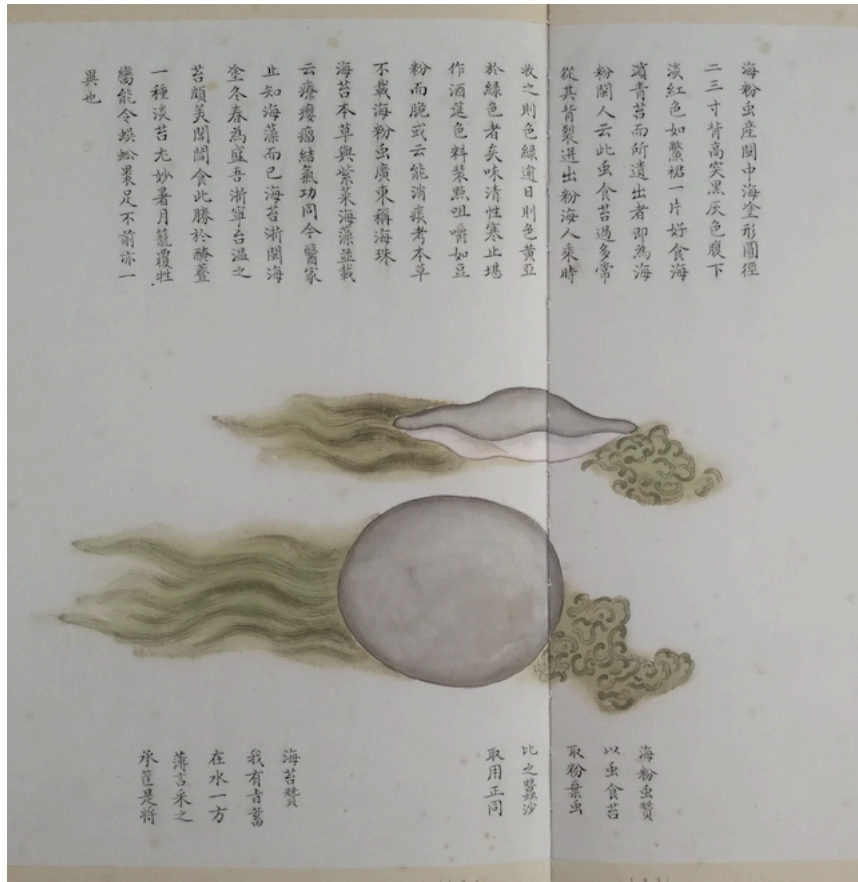


Figure 3.10 Nie Huang's illustration of *haifen* (1698).

Source: Nie, *Haicuo tu*, *juan 2*, 194-195.

From the fifteenth century, *haifen* emerged as an important medicine for treating viscous and heat-pattern phlegm, because of its salty flavour and cold nature. It was first touted by an important medical text, compiled by physicians who followed Zhu Zhenheng's teachings, in the second half of the fifteenth century, together with *haishi* (porous lava 海石), as a principal medicine for treating tough phlegm.¹²⁰ Thereafter, Wang Lun (1453-1510), the self-styled follower of Zhu Zhenheng, proposed a “dissolving phlegm pill” (*huatan wan* 化痰丸) in his famous *Miscellaneous Writings of Enlightened Physicians* (*Mingyi zazhu* 明醫雜著). The pill was made of eight overwhelmingly cooling drugs, including *haifen*, whose function, according to Wang, was for “softening hard” (*ruanjian* 軟堅) phlegm with its salty

¹²⁰ *Danxi xinfa*, *juan 2*, 177.

Chapter 3

flavour.¹²¹ This idea of using salty flavour to soften hard phlegm was based on the correspondence theory of the *Inner Canon*, which defined efficacies of the five flavours as follows:

Acrid [flavour] disperses (辛散);

Sour [flavour] pulls together (酸收);

Sweet [flavour] relaxes (甘緩);

Bitter [flavour] hardens (苦堅);

Salty [flavour] softens (鹹溼).¹²²

Besides that, *hai fen* also benefited from a nomenclatural link to clamshell powder (*ge fen* 蛤粉). Clamshell powder was recommended by Zhu Zhenheng as a perfect medicine for treating phlegm, with “a capacity to bring down [heat phlegm], dissolve [tough phlegm], soften [hard phlegm], and desiccate [wet phlegm]” (能降能消，能軟能燥).¹²³ In practices, physicians preferred powder made of sea clamshells (*hai ge fen* 海蛤粉), because they believed freshwater clams had no contact with the sea and hence carried no salty flavour for softening. As a result, *hai ge fen*, whose abbreviation was *hai fen*, became the most popular trading name of clamshell powder on the drug market, causing confusion with *hai fen*.¹²⁴ Another confusion was with *haishi* (porous lava). A late sixteenth-century medical text suggested *haishi* (porous lava) was the root of *hai fen*. Only the *hai fen* that naturally grew out of *haishi* was the best. It also indicated that clamshell powder was artificially made through burning and therefore not as good as the naturally grown *hai fen*.¹²⁵ Because of these connections, the three therapeutics from the sea, namely: *hai fen*, *haishi*, and clamshell powder, became interchangeable for

¹²¹ Wang, *Mingyi zazhu*, *juan* 1, 36-39.

¹²² *Huangdi neijing suwen*, *juan* 22, 73; Unschuld, *Huang Di nei jing su wen*, 298.

¹²³ Zhu, *Bencao yangyi buyi*, 71.

¹²⁴ Li, *Bencao gangmu*, *juan* 46, 2534-2535.

¹²⁵ Li, *Yixue rumen*, *juan* 2, 243.

treating phlegm.¹²⁶ *Hai fen*, for its connotation of being natural growth from the sea, was preferred by some contemporary physicians.

The phlegm that *hai fen* treated was different from the phlegm that pepper used to treat as we have seen in chapter one. There was a division between cold and heat patterns of phlegm in Chinese medicine. The phlegm caused by cold was supposedly waterier and clearer, known as cold phlegm (*bantan* 寒痰) or clear phlegm (*qingtan* 清痰).¹²⁷ It demanded warming medicines such as pepper. Yet, what Zhu Zhenheng and his followers mainly focused on was the phlegm caused by heat and fire. It was more viscous and muddier and demanded cooling and softening agents. Wang Lun conceptualised that “in regard to phlegm caused by rising fire, lung *qi* is unclear, cough at times occurs, and old phlegm and pent-up phlegm bind to become sticky lumps, which stagnate in the throat, difficult to be vomited and coughed out” (若夫痰因火上，肺氣不清，咳嗽時作，及老痰、鬱痰，結成粘塊，凝滯喉間，吐咯難出).¹²⁸ For such a symptom, *hai fen*, being both salty and cold, would be welcomed as a softening and cooling agent to clear the tough and muddy phlegm caused by fire and heat.

The idea of *hai fen* being able to clear tough and muddy phlegm contributed to the conceptualisation of *qing* (清). Tu Benjun in his 1596 *Commentaries on a Miscellany of Marine Creatures in Fujian* noted *hai fen*'s “flavour is very *qing* (clear). It can bring down phlegmatic fire” (其味甚清，可降痰火).¹²⁹ Nie Huang, in his 1698 *Album of a Miscellany of Marine Creatures*, also noted that *hai fen* had “a *qing* flavour and a cold nature” (味清性寒).¹³⁰ Later, a prominent eighteenth-century physician Wu Yiluo (ca. 1704 - 1766), noted in his *Materia Medica Conforming to New Standards* (*Bencao congxin* 本草從

¹²⁶ *Danxi xinfa*, *juan* 2, 177, *juan* 5, 300; Li, *Yixue rumen*, *juan* 2, 243.

¹²⁷ *Danxi xinfa*, *juan* 2, 177.

¹²⁸ Wang, *Mingyi zazhu*, *juan* 1, 36-37.

¹²⁹ Tu, *Minzhong baicao shu*, *fulu*, 35.

¹³⁰ Nie, *Haicuo tu*, *juan* 2, 194-195.

新, 1757) that *haifen* “is sweet, cold, and salty. It clears hard, tough, and heat phlegm” (甘寒而鹹。清堅、頑、熱痰).¹³¹

The interchangeable use of *qing* as a medical property and as a flavour points to the rich connotations of this term in Chinese culture. *Qing* can be translated as clear or pure, associated with the nature of clear water, in contrast to *zhuo* (濁), which means muddy or muddy water. In line with that, *qing* can also refer to a clear flavour that is bland and simple, like the taste of clear water. Like other sea delicacies, *haifen*, usually being traded in dried form and used for making soup, would lose its original salty flavour after being carefully washed and infused with clear water.¹³² It hence gave rise to a gustatory perception of being bland, simple, and clear, corroborating its medical function of clearing tough and muddy phlegm, making *haifen* an essentially clear (*qing*) thing.

Being conceptualised as characteristically *qing* notwithstanding, *haifen* could not become a top sea delicacy without going through a further transformation. Its culinary use was hindered by a strong concern over its cold nature. That concern had become intense after the publication of Wang Lun’s popular *Miscellaneous Writings of Enlightened Physicians*. Critics of this work cast doubt on the overwhelmingly cooling nature of the drugs it used. In terms of the “dissolving phlegm pill”, Xue Ji (1487-1559), as a major commentator of *Miscellaneous Writings of Enlightened Physicians*, pointed out that all the ingredients in this pill, including *haifen*, belonged to the categories of sweet, bitter, salty, and cold agents. “Although they can soften hard [phlegm], break pent-up [phlegm], dissolve phlegm, and bring fire down, isn’t there also peril of damaging the stomach?” (雖能軟堅開鬱、化痰降火，而不無損胃之禍乎?).¹³³ In the early seventeenth century, another influential physician, Zhao Xianke

¹³¹ Wu, *Bencao congxin*, *juan* 11, 168.

¹³² For soup made of *haifen*, see Qu, *Guangdong xinyu*, *juan* 24, 597.

¹³³ Wang, *Mingyi zuzhu*, 37.

(fl. early 17th century) criticised that in Wang Lun's prescription for dissolving phlegm, "cold and cool items are many, mostly causing damage to the stomach" (寒涼之品甚多，多致損胃).¹³⁴ At the end of that century, a leading physician, Zhang Lu (1617-1700), in his famous *Encountering the Origin with the Canon of Materia Medica* (*Benjing fengyuan* 本經逢原, 1695), pointed out that *haifen* was used for cooking and could dissolve poisonous heat (解毒熱), "but its nature is cold and slimy. The one whose spleen and stomach are in a state of depletion should not eat it" (但性寒滑，脾胃虛人勿食).¹³⁵

Concerns such as this remind us of the medical culture of warming the centre, which, as we have discussed in chapter one, perceived warming, instead of cooling, agents as essential to the well-being of the digestive system. Facing criticisms from Liu Wansu (fl. later 12th c.) and his followers, this culture survived through a major adaptation. It turned away from spices and aromatics, which were usually defined as "acrid and warm" (*xinwen* 辛溫), and embraced relatively mild therapeutics that were "sweet and warm" (*ganwen* 甘溫). The most influential physician in this reformed warming culture was Li Gao (1180-1251). Li's medicine focused on the spleen and the stomach, as he conceptualised these two organs as essential to the treatment of all internal damage (*neishang* 內傷).¹³⁶ For spleen and stomach-associated internal damage, Li recommended sweet drugs. He suggested that such an ailment "can only be cured when one uses sweet and warm medicines to replenish the centre and raise yang, and sweet and cold [medicines] to drain fire" (惟當以甘溫之劑，補其中，升其陽，甘寒以瀉其火，則愈).¹³⁷ He also proposed sweet and warm medicines for replenishing the primordial *qi* of the spleen and the stomach, which was essential to effectively absorbing vitality from

¹³⁴ Zhao, *Yiguan*, *juan* 4:18a.

¹³⁵ Zhang, *Benjing fengyuan*, *juan* 4, 235-236. Zhang Lu was a leading physician in a current of learning that aimed to reestablish medical authority through a return to the classics. Bian, *Know Your Remedies*, 111-112.

¹³⁶ Li, *Piwei lun*, 557-601.

¹³⁷ Li, *Nei wai shang bianhuo lun*, *juan zhong*, 542.

Chapter 3

food.¹³⁸ Li's preference for sweet drugs drew on a theory in the *Inner Canon*, which indicates that when there is an illness in the spleen, "the spleen wants relaxing. Quickly consume sweet [flavour] to relax it, use bitter [flavour] to drain it, and sweet [flavour] to replenish it" (脾欲緩，急食甘以緩之，用苦寫之，甘補之。).¹³⁹ This account supported the use of drugs of a sweet flavour for treating spleen ailments and for replenishing the spleen. As the spleen and the stomach were considered closely tied, the remedy could be extended to the stomach.

This concept helps decipher the fantasy of *haijen*'s metamorphosis into edible nests. According to Qu Dajun, after being ingested and vomited by the swiftlets, the salty and cold *haijen* would be transformed into sweet and warm edible nests. The transformation goes as follows:

Haijen's nature is cold, but it turns warm after being swallowed and vomited by the swiftlets; *haijen*'s flavour is salty, but it turns sweet after being swallowed and vomited by the swiftlets. Its shape and nature are thoroughly transformed. Therefore, it can clear phlegm and stimulate appetites.

海粉性寒，而為燕所吞吐而暖。海粉味鹹，而為燕所吞吐而甘。其形質盡化，故可以清痰開胃云。¹⁴⁰

Through this sophisticated imagination, edible nests became transformed *haijen*. They inherited *haijen*'s intrinsic clearness (*qing*), got rid of its unwanted cold nature, and became instead a sweet and warm digestive.

Qu Dajun was not alone. Contemporary to him, Zhang Lu, in his 1695 *Encountering the Origin with the Canon of Materia Medica*, offered a slightly different account. It shows that the swiftlets built

¹³⁸ Ibid, *juan zhong*, 542, 546; *juan xia*, 549; Li, *Pivei lun*, *juan shang*, 568; *juan xia*, 586-588.

¹³⁹ *Huangdi neijing suwen*, *juan 22*, 70; Li, *Pivei lun*, *juan shang*, 572.

¹⁴⁰ Qu, *Guangdong xinyu*, *juan 14*, 391.

their nests with *hai fen*, which “receive yang and harmonious *qi* from the sun and wind” (得風日陽和之氣). That influence transformed the salty and cold nature of *hai fen* into sweet and neutral, so that it could no longer harm the stomach. Moreover, this transformation, according to Zhang, was also a process through which “metal and water generate each other” (金水相生). It has a link to Zhu Zhenheng’s “discourse on the Heaven and *qi* belonging to metal” (天氣屬金說), in which Zhu defined that the Heaven (sky) and *qi* (air) both belong to metal.¹⁴¹ As the Heaven (sky) and *qi* (air) belong to metal, the upward movement of *hai fen* to becoming edible nests can be understood as a movement through which water (the sea) generates metal (*qi* or the Heaven).

It represents a harmonious relation because, according to the five-circulatory-phase theory, metal is the mother of water, if water turns to generate metal, it means they are benefiting each other. Following this metaphor, Zhang suggested edible nests could help “kidney *qi* move upward to nourish the lungs” (腎氣上滋於肺). As, according to the five-circulatory-phase theory, the kidneys correspond to water and the lungs correspond to metal, the upward movement of *hai fen* from the sea (water) to becoming edible nests in the sky (metal) is therefore like the movement from the kidneys (water) to the lungs (metal). This movement represents a harmonious relation: The kidneys (water) as the child return to nourish the mother lungs (metal), representing mutual benefit.¹⁴² Therefore, Zhang concluded that “among food items, (edible nests) are the most tamed and benign” (食品中之最馴良者).¹⁴³

Behind these complicated fantasies and metaphors, we may find that the making of edible nests as a top therapeutic was a result of the elite physicians and literati’s deep engagement with some critical

¹⁴¹ Zhu, *Gezhi yulun*, 31-32.

¹⁴² For more details about how the idea that “metal and water generate each other” works in the treatment of lung ailments, see Zhao, *Yiguan*, *juan* 4:17b-26b (particularly, *juan* 4:23a).

¹⁴³ Zhang, *Benjing fengyuan*, *juan* 4, 236.

Chapter 3

debates on Chinese medical theories. For them, the imagined metamorphosis of edible nests from a certain marine creature was a subject open to new interpretations. Throughout the seventeenth century, these interpretations continuously contributed to new medical properties of edible nests. Thereafter, into the eighteenth century, these seventeenth-century accounts would be amalgamated and integrated. For instance, in the mid-eighteenth century, Wu Yiluo collected a number of these accounts in his *Materia Medica Conforming to New Standards* (1757) and made a summary as follows:

Edible nests immensely nourish the *jin* of the lung, dissolve phlegm, stop coughing, are replenishing and clearing, and are the holy therapeutic for recuperating from depletion detriment and exhaustion-illness with consumption. For any illness that cannot be cleared and moved downwards because of the depletion of the lung, they can be used as a remedy. They [also] stimulate appetite, stop exhaustion with dysentery, and help children recover from smallpox papules.

大養肺陰，化痰止嗽，補而能清，為調理虛損癆瘵之聖藥。一切病之由於肺虛，不能清肅下行者，用此皆可治之。開胃氣，已勞痢，益小兒痘疹。¹⁴⁴

In this account, the properties for treating lung illness were developed from the concept of clearing phlegm, which, as we have seen, originated from the *hai fen* link. The property of “stimulating appetite” (開胃氣) drew on Qu Dajun’s interpretation of the metamorphosis from *hai fen* to edible nests, which transformed cold and salty *hai fen* into warm and sweet edible nests, making the latter a restorative for the spleen and the stomach. The idea of using edible nests for “replenishing” and for “stopping exhaustion with dysentery” (已勞痢) stemmed from the metamorphosis from sea snails to edible birds, which, as mentioned, assumed that the sinews of sea snails could “replenish body depletion and

¹⁴⁴ Wu, *Bencao congxin*, *juan* 16, 220.

stop exhaustion with dysentery”. The efficacy for “helping children recover from smallpox papules” (益小兒痘疹) drew on a 1667 account by Zhou Liangong, to whom we will return in the next section. That account indicated that edible nests of a red colour was most difficult to obtain and could “helping children recover from smallpox papules”.¹⁴⁵ Combining these accounts, Wu Yiluo proposed a concept that the edible nests were essentially “replenishing and clearing” (補而能清).

By the second half of the eighteenth century, while *hai fen* had become marginal because of the concerns over its cold nature, edible nests, benefiting from these imagined transformations, emerged as a top restorative sea delicacy embodying clearness (*qing*). In Zhao Xuemin’s (fl. 1753-1803) *Supplement to Systematic Materia Medica (Bencao gangmu shiyi 本草綱目拾遺)*,¹⁴⁶ there is a note against a popular practice of cooking edible nests with chicken broth, for a concern that this practice would potentially “disturb [edible nests] essential nature of being clear and replenishing” (亂其清補之本性).¹⁴⁷ Yuan Mei also developed a strong distaste for anything that might negatively influence the “clear” nature of edible nests. He objected to the practice of mixing minced crab meat and roe (*xiefen 蟹粉*) with edible nests as the strong flavour of the former would disqualify the latter’s clearness.¹⁴⁸ He also ridiculed that “vulgar cooks” (*suchu 俗廚*) preferred to scald heat lard on edible nests, because it polluted this “clearest thing” (至清之物).¹⁴⁹ He instead recommended cooking edible nests with winter gourd in order to “let clear things match each other” (以清入清).¹⁵⁰

¹⁴⁵ Zhou, *Min xiaoji*, *juan* 1, 41.

¹⁴⁶ The exact date of this work is hard to establish. It was prefaced in 1765, but some information was apparently supplemented thereafter. For an in-depth study of this work, see Bian, “An Ever-Expanding Pharmacy.”

¹⁴⁷ The paratext indicates that this note was cited from Wu Yiluo’s *Bencao congxin*, but we cannot find it in Wu’s original text. It is more likely that Zhao himself added this note but made an editing mistake attributing it to Wu. Zhao, *Bencao gangmu shiyi*, *juan* 9:33a.

¹⁴⁸ Yuan, *Suiyuan shidan*, 7.

¹⁴⁹ *Ibid*, 23.

¹⁵⁰ *Ibid*, 40-41.

Chapter 3

Yuan Mei's seemingly fastidious taste was cultivated in a food culture where edible nests had a preeminent role to play. From the eighteenth century, edible nests had become the top delicacy representing the so-called Manchu and Han banquets (*Man Han xi* 滿漢席), serving the ruling elites of the Manchu Qing Empire, including Emperor Qianlong (1733–1796).¹⁵¹ In this banquet culture, edible nests were not always cooked in the clear way as Yuan suggested. What we may find is a soup of edible nests with pork or chicken shreds,¹⁵² a stew of edible nests with sugar,¹⁵³ a dish mixing edible nests with quickly boiled chicken mince,¹⁵⁴ or a meatball coated with edible nests to be boiled in a clear broth.¹⁵⁵ Yet, the spicy tradition had disappeared, as there was, after all, no longer a dish using edible nests for hot-spicy stir-frying, for stir-frying with oil and sauce, or for a hot pot.

5. Conceptualising Sea Cucumbers: Towards a Perfect Therapeutic

While saturated with delicately prepared broth and framed by literati's aestheticised taste-scape, these sea delicacies were also global things. They were produced and circulated from littoral society marginal or even external to Chinese literati culture. The distance between these two cultures, on the one hand, made these sea delicacies exotic to Chinese elite consumers, and, on the other, also attracted Chinese literati to conceptualise their dietary functions with exoticised knowledge about their nature. Whereas the imaginative transformation of *haijfen* to edible bird's nests has already demonstrated such an example, sea cucumbers, as the last top sea delicacy we have yet to closely examine, provide a better-documented case about how an invertebrate animal from the bottom of the sea was conceptualised as a perfectly restorative in China.

¹⁵¹ Zhao, *Manban quanxi yuanlin kaoshu*, 229-303; Waley-Cohen, "Food and China's World of Goods," 296-299.

¹⁵² Li, *Xingyuan lu, juan shang*, 29; Li, *Yangzhou huafang lu, juan 4*, 106.

¹⁵³ *Qinggong yushan*, vol. 1, 105, 189, 192.

¹⁵⁴ *Tiaoding ji, juan 2*, 63.

¹⁵⁵ Li, *Xingyuan lu, juan shang*, 30.

Sea Changes

To begin with, a long-debated question in sea cucumber history is when they became part of Chinese cuisine. Akamine Jun, a leading anthropologist in this field, suggests that this process took place around the late sixteenth century.¹⁵⁶ A similar point of view was proposed by a Chinese historian, Dai Yifeng.¹⁵⁷ Thereafter, through an in-depth survey of Chinese sources, another Chinese historian, Feng Lijun, proposed a number of earlier sources.¹⁵⁸ These sources, however, demand further scrutiny. For instance, an isolated source allegedly dating to the Northern Song period is in fact a 1636 recompilation which, as its preface acknowledges, had undergone some major reorganisations.¹⁵⁹ Another source often falsely attributed to a late fourteenth-century author, Jia Ming, has been discovered as a fake work forged by a book dealer in the late seventeenth century.¹⁶⁰

Revisiting this issue, I suggest that, instead of narrowly depending on these apocryphal sources, we shall also take evidence from the broader world into consideration, which can help us contextualise when, how, and why sea cucumbers emerged as a sea delicacy in Chinese cuisine. This approach is inspired by pioneering works by two Japanese anthropologists, Tsurumi Yoshiyuki and Akamine Jun, who have convincingly shown that sea cucumbers connected a world from Hokkaido to Australia, of which China was merely one of the constituent parts.¹⁶¹ Following that model, this section goes a step further to critically examine how sea cucumbers, which were first documented in Japan and Korea, were appropriated by Chinese elite consumers from the late sixteenth century and conceptualised as extraordinary ginseng from the sea with perfect efficacies for solving a theoretical impasse in Chinese medicine.

¹⁵⁶ Akamine, “*Namako* and *iriko*,” 25.

¹⁵⁷ Dai, “Yinshi wenhua yu haiwai shichang,” 83-85.

¹⁵⁸ Feng, “Renzhi, shichang yu maoyi,” 49-56.

¹⁵⁹ Ibid, 49-50. Shao, comp., *Menglin xuanjie*, xu:7b-9a, juan 17:25a. For the textual history of this dream interpretation book, see Vance, “Textualizing Dreams,” 38-56

¹⁶⁰ Cheng, “Yuan Jia Ming yu Qing Zhu Benzong *Yinshi xuzhi* zhenwei kao.”

¹⁶¹ Tsurumi, *Namako no me*; Akamine, *Namako o aruku*.

Chapter 3

In this world of sea cucumbers, Japan keeps the earliest documentation. An unearthed wooden tablet shows that Nara as the imperial capital of Classical Japan received from Noto, a peninsula along the Japan Sea, six catty dried sea cucumber (*iriko* 煎海鼠, literally meaning “boiled sea rats” or “boiled *keo*”) in 732. Thereafter, a 927 code regulated that Noto was obliged to pay sea cucumber guts (*konowata* 海鼠腸, literally meaning “sea rats’ guts” or “*keo*’s guts”) as a tribute to the imperial court.¹⁶² In both cases, the written documents refer to sea cucumbers with two Chinese characters 海鼠, *haishu* (Mandarin Chinese pronunciation) or *kaiso* (Japanese *kanji* pronunciation), literally meaning “sea rats”. Given that Japanese has a completely different *kana* syllable, *keo* (コ), for sea cucumbers, which has no corresponding *kanji* character, we have good reason to assume that the *kanji* rendering of “sea rats” was a loanword introduced by a Sinicised literate-culture.¹⁶³

It is unclear why the Sinicised Japanese elites in the eighth century employed this Chinese term for sea cucumbers. A missing link might be some no longer extant Chinese texts which were appropriated by Japanese literate culture in an early stage but left no trace in China. A comprehensive tenth-century Japanese compilation of Chinese medicine, *Ishinbō* (*Formulas from the Heart of Medicine* 医心方, 982), cites two such archaic Chinese texts for sea rats. The first text is a dietetic guide entitled after its author, Cui Yu 崔禹 or Cui Yuxi 崔禹錫, dating to circa 650-891.¹⁶⁴ It shows that sea rats have a salty flavour, a very cold nature, and no toxicity. They “replenish the *qi* of the kidneys and remove hundred joints wind” (主補腎氣，去百節風). Their body has tens of small protuberances. “Dried sea rats are of a warm nature, control diarrhoea, stimulate hair growth, and treat yellow *dan*-illness and emaciation” (干者，溫，主下利，生毛髮，黃疸疲瘦). “Sea rats’ guts are especially

¹⁶² Kakiuchi and Kigoshi, “Noto no namako,” 64.

¹⁶³ Tsurumi, *Namako no me*, 534-535.

¹⁶⁴ Nakahashi, “*Cui Yuxi shijing* no kenkyū.”

effective for curing haemorrhoids” (其腸尤療痔為驗). Another text is elusively titled *Seven-Fascicle Canon* (*Qijuan jing* 七卷經), showing sea rats have no special medical function. Only raw sea rats may have a remedy for internal fatigue (*neidan* 內瘕).¹⁶⁵

These two texts appear in fascicle 30 of *Isbinbō*. That chapter consists of natural things indigenous to Japan. The compiler, Tanba Yasuyori, elaborated their medical properties with heavily adapted Chinese sources and Japanese oral pronunciations, with the purpose to integrate Chinese medicinal knowledge into Japanese practices.¹⁶⁶ We may find a similar function for these two Chinese texts. They supported Japanese dietary practices of eating fresh sea cucumbers (*namako*), dried sea cucumbers (*iriko*), and sea cucumber guts (*konowata*).

They also indicate that before the tenth century sea cucumbers used to be part of Chinese cuisine and might even be known as sea rats in China. However, for some unknown reasons, these two texts leave no trace in the mainstream medical publications sponsored by the Northern Song imperial state around the eleventh century and at a certain point became irrelevant to Chinese dietary and medical practices.¹⁶⁷ As a result, Chinese literati culture lost the term of “sea rat”, as well as its associated food and medical culture, and would import a new term from a very different sea cucumber culture.

This new term first emerged in Korea. The early evidence is from *King Sejong’s Treatise on Geography* (*Sejong sillok chiriji* 世宗實錄地理志, 1454), which showed that five places in Kyōngsang Province (慶尙道), including Tongnae (東萊縣 the county where Pusan is situated), had sea cucumbers as a local product (*tuchan* 土產) or a local tribute (*tugong* 土貢) to the Korean court.¹⁶⁸

¹⁶⁵ Tanba, *Isbinbō*, *juan* 30, 638.

¹⁶⁶ Mayanagi, “*Isbinbō* kan 30 no kiso teki kenkyū.”

¹⁶⁷ For the Northern Song Imperial State’s proactive role in reorganising medical knowledge, see Goldschmidt, *The Evolution of Chinese Medicine*.

¹⁶⁸ *Sejong sillok*, *juan* 150:9b, 27b, 29b, 31a, 32b.

Chapter 3

Facing the island of Tsushima, this region had close ties with Japan and witnessed many cross-strait trading, piratical, and military actions in the late fourteenth and early fifteenth centuries.¹⁶⁹ These exchanges might have facilitated a spread of a sea cucumber food culture across the Korean Strait.

This potential cross-strait link notwithstanding, neither of the Japanese names for sea cucumbers, *kanji* and *kana*, managed to cross the Korean Strait. Instead, two new names for sea cucumbers emerged, namely: a literate rendering, *haishen* (海參 or 海蔘), meaning “sea ginseng”, and an oral rendering, *ni* (泥), meaning “mud”.¹⁷⁰ The former appears in official documents, referring to a local tribute or product worth attention from the Korean imperial government. After those few records of “sea ginseng” in *King Sejong’s Treatise on Geography* in 1454, in a new geographic survey dated 1530, “sea ginseng” appeared again as a local product or tribute in many places along the south, east, and west coasts of the Korean Peninsula, indicating the production was rapidly expanding through the late fifteenth and the early sixteenth centuries.¹⁷¹ The usage of mud likely arose from coastal inhabitants’ everyday observation, as some sea cucumbers may change the stiffness of their body and turn into “muddy” jelly when leaving water.¹⁷² This term was recorded in a 1611 Korean cookery book.¹⁷³ Also in the beginning of the seventeenth century, a Korean scholar, in a trip to China, noted that Korean people referred to sea cucumbers as “mud” but Chinese people did not think so.¹⁷⁴

Whereas the oral rendering of mud had no influence in China, the rendering of sea ginseng was enthusiastically adopted by the Chinese, because of the nomenclatural link with ginseng. In Chinese

¹⁶⁹ Robinson, “An Island’s Place in History.”

¹⁷⁰ Heo, *Domundaejag*, 232; Tsurumi, *Namako no me*, 535.

¹⁷¹ *Sinjūng tongguk yōji sūngnam*, *juan* 19:12a, 16b; *juan* 22:3b and 28b; *juan* 23:4a, 20b, 22b; *juan* 25:20a; *juan* 30:7b; *juan* 31:9a, 12b, 20b, 31b; *juan* 32:22a, 33a, 39a, 44a, 49b; *juan* 37:10b, 15b, 23a; *juan* 40:4b, 29b; *juan* 43:44a; *juan* 44:7a, 36a; *juan* 45:2a, 9b, 15a, 20b, 27b, 32b; *juan* 48:8b, 19b; *juan* 49:5b, 12a, 21a, 25b, 29b, 32a; *juan* 50:4a, 10b, 17a, 21a, 27b, 36a, 39b, 48a.

¹⁷² Yi, *Jibong yuseol*, *juan* 20.

¹⁷³ Heo, *Domundaejag*, 232.

¹⁷⁴ Yi, *Jibong yuseol*, *juan* 20.

medicine, ginseng was long perceived as a top medicine able to cure a wide range of illnesses and was one of the most valuable drugs with insatiable demand. It led to long-term overexploitation in its natural habitat in North China. Into the Ming period, the most renowned ginseng land of North China, Shangdang 上黨, was exhausted,¹⁷⁵ the Chinese consumer market became dependent upon supplies from Manchuria and Korea.¹⁷⁶ That shift made the origins of ginseng and sea ginseng closely associated with each other, namely, one from the mountain of continental Northeast Asia and the other from the sea of Northeast Asia.

While ginseng and sea ginseng became entangled in Northeast Asia, Chinese physicians were engaged in a tense debate concerning the clinical use of ginseng. This debate revolved around two rivalling medical cultures, namely, “nourishing yin and bringing fire down” and “warming and replenishing”. It was largely instigated by the aforementioned polemic work by Wang Lun (1453-1510),¹⁷⁷ which criticised his contemporaries’ preference for taking ginseng and astragalus root (黃芪 *huangqi*) for warming and replenishing the body that was depleted by alcohol and sexual indulgence. Wang’s primary concern was that this practice would stir up fire in the body and damage yin. Therefore, he instead touted a “replenishing yin pill” (補陰丸 *buyin wan*) to be taken regularly, in order to keep the kidneys’ minister fire from exhausting yin.¹⁷⁸ This pill theoretically drew on Zhu Zhenheng’s famous discourses on “minister fire” and “yang is in excess, and yin is deficient” as discussed in chapter two.¹⁷⁹ It contains, among other cooling agents, an aquatic, namely, decayed turtle’s shell,

¹⁷⁵ Li, *Bencao gangmu*, *juan* 12, 701.

¹⁷⁶ Wang, “Renshen yuanliu kao”; Nappi, “Surface Tension”; Jiang, *Renshen diguo*; Kim, *Ginseng and Borderland*.

¹⁷⁷ Simonis, “Illness, Texts, and “Schools” in Danxi Medicine”.

¹⁷⁸ Wang, *Mingyi zazhu*, *juan* 1, 14-16.

¹⁷⁹ They are the titles of two important essays in Zhu’s anthology. Zhu, *Gezhi yulun*, 7-8, 28. For the philosophical background of these discourses, see Furth, “The Physician as Philosopher of the Way,” 423-456.

Chapter 3

which was recommended by Zhu Zhenheng as a “perfect” *yin* restorative, because turtles were “a thing of the uppermost yin among yin” (*yinzhong zhibiyin zhibiwu* 陰中至陰之物).¹⁸⁰

This nourishing yin therapy catered to a male audience consisting of well-off literati and merchants who eagerly embraced Zhu Zhenheng’s teachings, in which the body was conceptualised as weak and relatively yin, being vulnerable to social, sexual, and gustatory desires.¹⁸¹ These desires could supposedly instigate the dangerous minister fire in the kidneys, which would burn the waters and yin of the kidneys, leading to ailments and death. As a self-styled follower of Zhu Zhenheng, Wang Lun’s solution was to bring fire down by using cooling agents, in order to keep a balance with the water of the kidneys.¹⁸² Therefore, ginseng, a warm medicine that would raise up yang, should be cautiously used, and cooling medicines, such as decayed turtle’s shell, which could nourish yin, should be promoted.

However, Wang’s opponents, often collectively known as “warming and replenishing” physicians, developed an opposite therapy on the basis of similar theories.¹⁸³ Like the criticisms we have seen against the use of *haifen*, they contended that the therapy that brought fire down with cooling agents would at the same time undermine the digestive system and yang vital force.¹⁸⁴ Their solution was that the nourishing yin therapy should be supported with warming and replenishing medicines that could help keep the digestive system peaceful and yang vital force robust.¹⁸⁵ There was moreover an attempt to interpret the typical warming and replenishing medicine, namely, ginseng, as a balanced panacea that was able to not only raise up yang and replenish vital force, but also give rise to blood

¹⁸⁰ Zhu, *Bencao yanyi buyi*, 71; Zheng, ““Guijia, baigui, guiban” kaobian,” 57-58; Zhang, “Danxi buyin wan,” 99.

¹⁸¹ Furth, *A Flourishing Yin*, 145-151; Zhang, “Danxi buyin wan,” 107-111; Grant, *A Chinese Physician: Wang Ji*, 140-143; Hanson, “Depleted Men, Emotional Women.”

¹⁸² For the affinities between water, kidney, reproduction, and vitality, see Furth, *A Flourishing Yin*, 29.

¹⁸³ Simonis, “Illness, Texts, and “Schools” in Danxi Medicine”; de Vries, “The Dangers of ‘Warming and Replenishing’.”

¹⁸⁴ Zhang, “Danxi buyin wan,” 103-106.

¹⁸⁵ Wang, *Mingyi zazhu*, *juan* 4, 17; Zhao, *Yiguan*, *juan* 4:7a-13a; de Vries, “The Gate of Life,” 169-195.

and yin.¹⁸⁶ However, the tension between the “warming and replenishing” and “nourishing yin and bringing fire down” cultures remained, as it was difficult to argue that a warming and replenishing medicine such as ginseng could directly nourish the water and yin of the kidneys.

Amid this medical debate, sea cucumbers, under the name of “sea ginseng”, emerged in Chinese cuisine. Their earliest occurrence is in a 1591 accusation against the chief military commander of Liaodong, to which we will return in the next chapter. Thereafter, a concise dietary *materia medica*, compiled in 1614, describes sea cucumbers as a marine creature that had sweet and salty flavour, slightly cold nature, and was slimy, nontoxic, and able to moisten the five depot organs and to replenish the body, but should be avoided by those who were suffering from diarrhoea.¹⁸⁷ The early 1640s *Materia Medica of Edible Items* shows that the sea cucumbers considered the most desirable were black, with many rugged outgrowths, about 5-6 *cun* (15-18 cm) long, and very clean. This kind of sea cucumber was “extremely delicious, good at replenishing, and the most precious delicacy among all food” (味極鮮美，功擅補益，穀品中之最珍貴者也).¹⁸⁸

While these dietetic *materia medica* texts presented sea cucumbers merely as a sea delicacy without referring to the ginseng link, another genre of texts, authored by literati who were concerned with the above-mentioned medical debates, began to associate sea cucumbers with ginseng, the kidneys, and male sexuality. In the mid-1610s, Xie Zhaozhe noted:

Sea cucumbers (sea ginseng): The littoral region of Liaodong has them. They are called “men of the sea”, because their shape is like the external genitalia of men, forming a pair with mussels. Their nature is warming and replenishing, able to match ginseng. They are therefore called sea ginseng.

¹⁸⁶ Wang, *Shishan yi'an*, *juan* 1, 66; *fulu*, 111; Grant, *A Chinese Physician*, 69-71.

¹⁸⁷ Mu, *Shimn jiyao*, *juan* 7:15b, 364. For a comprehensive study of this text, see Yang, “Mingke Mu Shixi shiwu jiyao kaolue.”

¹⁸⁸ Yao, *Shimn bencao dianjiao ben*, *juan* 11, 695.

Chapter 3

海參，遼東海濱有之，一名海男子，其狀如男子勢然，淡菜之對也。其性溫補，足敵人參，故名海參。¹⁸⁹

This account evokes two affinities. The first was an erotic pair with mussels. Mussels had since long been known in China as “ladies of the East Sea” (*donghai furen* 東海夫人), because of their hairy vagina-like shape.¹⁹⁰ The recently risen sea cucumbers filled the vacancy as “men of the sea” (*hai nanzi* 海男子) for their male genitalia-like shape. The second affinity, based on the nomenclatural link, associated sea cucumbers (sea ginseng) with ginseng, and appropriated the latter’s reputed efficacy of being warming and replenishing for the former. Together this account implies that sea cucumbers were a kind of warming and replenishing aphrodisiac.

While Xie Zhaozhe’s account only superficially explained sea cucumber’s medical property, a new account emerging from the mid-seventeenth century provided a more sophisticated interpretation of its medical nature. This account was learned by a renowned literatus, Zhou Liangong (1612 - 1672), from an anonymous physician in Weixian (present Weifang, Shandong), likely during the early 1640s when Zhou served as a magistrate in that county. It goes:

Ginseng benefits human beings. Although the types of sandy (*sha* 沙), black (*xuan* 玄), and bitter (*ku* 苦) ginseng have different natures, they are all replenishing. Sea ginseng acquires its name also because it can warm and replenish [the body]. People liken the kidneys to the sea. This creature grows in saline water of the North Sea. Its colour is black. To nourish kidney water with it complies with their affinities. The one that grows in the earth is ginseng and the one that grows in the waters is sea ginseng. Therefore, sea ginseng collected from the Sea of Liao is better.

¹⁸⁹ Xie, *Wuzha zhu*, *juan* 9, 259.

¹⁹⁰ Li, *Bencao gangmu*, *juan* 46, 2545; Nie, *Haicuo tu*, *juan* 3, 258-259.

Sea Changes

Ginseng is like human beings; sea ginseng is like the genitalia of men, with no less efficacy than ginseng.¹⁹¹

參益人，沙玄苦參，性若異，然皆兼補。海參得名，亦以能溫補也。人以腎為海，此種生北海鹹水中，色又黑，以滋腎水，求其類也。生于土者為人參，生于水者為海參，故海參以遼海產者為良。人參像人，海參尤像男子勢，力不在參下。

Zhou concluded, “this argument is convincing” (說亦近理). It was convincing to a learned scholar such as Zhou because of its thorough integration with Chinese medical theory. It first made the nomenclatural link between sea ginseng and ginseng meaningful. The Chinese term for ginseng is *renshen* (人參), literally meaning “human (gin 人) *shen* (seng 參)”. Li Shizhen, whose father was a ginseng expert,¹⁹² explained that its original form was 人藎 (also pronounced as *renshen*), literally meaning “human immersion”, because its human-shaped root acquired divine power from long immersion in nature.¹⁹³ However, gradually, the second character “藎”, literally meaning “immersion”, was replaced by a simpler character “參” (both pronounced *shen* in Mandarin Chinese).¹⁹⁴ Thereafter, several other root herbs were also named as *shen*, such as *shashen* (*Adenophora stricta* Miq., sandy ginseng 沙參), *xuanshen* (*Scrophularia ningpoensis* Hemsl., black ginseng 玄參), *kushen* (*Sophora flavescens* Ait., bitter ginseng 苦參), and *danshen* (*Salvia miltiorrhiza* Bunge, red ginseng 丹參). For their different colours, flavours, and texture, these root herbs were associated by Chinese physicians with different medical functions, which supplemented the “warming and replenishing” efficacy of ginseng.¹⁹⁵

¹⁹¹ Zhou, *Min xiaoji*, *juan* 2:11b-12a.

¹⁹² Li Shizhen's father, Li Yanwen, composed a treatise on ginseng *Renshen zhuàn* 人參傳 [The story of ginseng], which was substantially quoted by Li Shizhen in his entry for ginseng. Li, *Bencao gangmu*, *juan* 12, 703-704; Unschuld, *Medicine in China: A History of Pharmaceutics*, 145-146; Nappi, *The Monkey and the Inkpot*, 13, 173 (note 101).

¹⁹³ For the implications of ginseng's human-like shape, see Nappi, “Surface Tension.”

¹⁹⁴ Li, *Bencao gangmu*, *juan* 12, 699-700.

¹⁹⁵ *Ibid*, *juan* 12, 710-712, 754-756, 758-761; *juan* 13, 798-802.

Chapter 3

Without referring to the Korean origin of sea ginseng, this account took a different approach to explain why a non-herbal marine creature was called “sea ginseng”. It argued that it was because they both had a warming and replenishing efficacy. The limit of this circular reasoning notwithstanding, it further likened sea cucumbers to ginseng in terms of origin and appearance. As ginseng from the land of Liaodong was renowned in seventeenth-century China,¹⁹⁶ sea cucumbers (“sea ginseng”) from the sea of Liaodong (the Sea of Liao, Liaohai 遼海) were perceived to be high-quality ginseng from the sea. As ginseng was taken as a top warming and replenishing medicine because of its human-like shape, “sea ginseng” for its genitalia-like shape should be no less potent than ginseng for male consumers.

Whereas the ginseng link catered to the warming and replenishing medicine, this account also attempted to address concerns from the “nourishing yin and bringing fire down” medicine with a kidney-sea metaphor. The idea of “the kidneys as the sea” (以腎為海) was a concept popularised by an important work by a famous physician in the warming and replenishing medicine, Zhao Xianke (fl. early 17th centuries). In this work, for explaining different manifestations of fire and water, Zhao proposed that, although there were different types of waters in the human body, all ultimately converged to their source, namely, the kidneys, which functioned as the sea of the body. In the same chapter, he also suggested that the minister fire in the kidneys was like a dragon in the sea of kidney water and should be guided to stay there peacefully. These metaphors served a key thesis in Zhao’s warming and replenishing medicine that, instead of using cold and bitter medicines to bring fire down, the water of the kidneys should be nourished to support and balance minister fire.¹⁹⁷

¹⁹⁶ Jiang, *Renshen diguo*, 33-36; Kim, *Ginseng and Borderland*, 21-24.

¹⁹⁷ Zhao, *Yiguan*, *juan* 1:30a-33b; de Vries, “The Gate of Life,” 146-154.

Sea Changes

This kidney-sea metaphor was key to the conceptualisation of sea cucumbers as a perfect nourishing yin medicine. It worked with some seemingly natural features of typical temperate sea cucumbers, as they grew in saline water of the North Sea and their colour was black. It points to a correspondence theory of the *Inner Canon*, which is expounded in a chapter captioned “General Discourse on the Motion of Five Circulatory Phases” (“Wuyun xing dalun” 五運行大論).¹⁹⁸ This chapter is part of the seven chapters that was most likely added by a commentator in the eighth century and had a transformative role to play in the evolution of Chinese medicine since the eleventh century.¹⁹⁹ The chapter offers highly synthesised correspondences between directions, environments, natural elements, flavours, viscera, colours, etc. Among them, there is a correspondence concerning the kidneys, showing that “the North generates cold, cold generates water, water generates saltiness, saltiness generates kidneys” and “its colour is black” (北方生寒，寒生水，水生鹹，鹹生腎...其色為黑).²⁰⁰ Therefore, these seemingly independent natural features of temperate sea cucumbers became interconnected pieces of evidence to support that sea cucumbers had perfect affinities with the kidneys because they were from the North Sea, namely, from the saline waters of the North, and their colour was exactly black.

Combining these affinities with the kidney-sea metaphor, sea cucumbers emerged as a perfect therapeutic for nourishing the kidneys. If the kidneys, for its watery nature, were like the sea, then a black creature from the saline water of the North Sea with perfect affinities with the kidneys would be ideally conceptualised as a perfect medicine for replenishing the water of the kidneys. The replenished water of the kidneys, in turn, helped nourish yin and control the minister fire in the kidneys, addressing a major concern of the “nourishing yin and bringing fire down” medicine over the warming

¹⁹⁸ *Huangdi neijing suwen, juan 67*, 189.

¹⁹⁹ Despeux, “The System of the Five Circulatory Phases and the Six Seasonal,” 128-129.

²⁰⁰ *Huangdi neijing suwen, juan 67*, 189.

Chapter 3

nature of ginseng. As a result, sea cucumbers became both warming and replenishing as ginseng and perfectly able to nourish the kidneys and yin. They hence perfectly reconciled the theoretical impasse between two these rivalling medical cultures. Published in the 1660s, this account received wide publicity in China and would be cited by two important *materia medica* compilations in the eighteenth century, becoming an integral part of Chinese medical and dietary culture, and had profound implications with the rise of a world of sea cucumbers, which will be elaborated on in the following chapter.²⁰¹

Conclusion

Through these changes, food supposedly from the sea underwent a chain of transformations in Chinese material culture. From an alien and despicable thing of the South, it was first accepted by Chinese literati as appreciable seafood through the Tang-Song Transition. Thereafter, preserved seafood, known as sea taste, became important commodities for long-distance trade, and were traded together with other edible exotics, such as pepper and sugar, as southern goods or southern and northern goods. Eventually, from around the sixteenth century, out of the preserved seafood, a select group of sea delicacies emerged to redefine Chinese high cuisine, amid some critical changes in Chinese cooking techniques and medical culture.

In these transformations, the sea featured prominently in different manners. For seafood in the Tang-Song Transition, the sea was essential to identities. Food from the sea was initially perceived by northern aristocrats in inland China as things of others, and thereafter from the eleventh century by newly risen literati from coastal and south China as things of ours. In the second transformation, when preserved seafood, known as sea taste, became important commodities in the domestic market of the

²⁰¹ Wu, *Bencao congxin*, *juan* 17, 252; Zhao, *Bencao gangmu shiyi*, *juan* 10:37a.

Sea Changes

Ming and Manchu Qing empires, the sea was associated with taste. This term, sea taste (*haiwei*), aroused gustatory desires of inland consumers who might never have a chance to see the sea per se. However, for those top sea delicacies emerging amid the third transformation from the sixteenth century, the gustatory link with the sea became no longer essential. These sea delicacies were usually repeatedly soaked and boiled, before being infused with a delicately prepared broth, typically made of characteristically *xian* food ingredients, such as chicken, mushrooms, and bamboo shoots. Through these preparations, any intrinsic flavour carried from the sea would be diluted or even completely lost. Instead, the fibrous or gelatinous texture of these sea delicacies became crucial for its capacity to richly absorb a subtly flavoured broth.

Yet, a conceptual link with the sea remained essential for constructing the top two sea delicacies, namely, edible bird's nests and sea cucumbers. As the most precious sea delicacy, edible nests were, by their nature, not from the sea at all. They were associated with the sea because they were imagined as a metamorphosis of other marine creatures, such as *haijen* or sea snails. They played an indispensable role in transforming edible nests from a vegetable serving a hot-spicy foodway into a "clear and replenishing" sea delicacy. For sea cucumbers, the sea further became a source of intellectual inspiration. It became pivotal for constructing affinities with the kidneys and for conceptualising sea cucumbers as extraordinary ginseng from the sea, with a capacity to not only warm and replenish the body, but also to nourish the kidneys and help address a major concern of the "nourishing yin and bringing fire down" medical theory.

These cultural constructions were, meanwhile, not simply self-amusement among elite physicians and literati. They were, on the one hand, an essential part of literati's social distinction in an increasingly commercialised Chinese society in which the consumption of edible exotics was no longer a privilege of the political elites. On the other hand, they were also entangled with a broad

Chapter 3

world extending far beyond the coast of China, which will be explored in the following chapter with the example of the world of sea cucumbers.

Four

A World of Sea Cucumbers

From 1831 to 1836, Dutch entrepreneur J. N. Vosmaer explored the waters of the eastern Indonesian Archipelago and founded a small colony in an important bay (the Kendari Bay) on the east coast of Sulawesi.¹ In this colony, he became a patron of some fishing communities and a participant and observer of the world of sea cucumbers.² In 1835, one year before his early death, he submitted a 121-page article to *The Journal of the Royal Batavian Society of Arts and Sciences (Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen)*.³ Under the long title of “A short description of the Southeast Peninsula of Celebes (Sulawesi), in particular of the Vosmaer’s Bay or of Kendari, enriched with some reports concerning the ethnic group of Orang Bajau and more other notes”, it offers rich information about a booming sea cucumber economy in that region, including a table enumerating 19 types of commercially traded sea cucumbers in four languages (Makassarese, Malay, Hokkien Chinese, and Dutch) (Table 4.1).

Makassarese	Malay	Chinese (Hokkien)	Dutch	Chinese (Translated by the author from the Hokkien Chinese names, drawing on other Chinese sources)	English (Translated by the author from the Dutch names, drawing on Makassarese dictionaries)
Kassi	radja or passir	soa-djao	zand-tripang	沙纒 (烏纒參)	sand trepang (sand sea cucumber)
batoe	batoe	ouw-tsjo	zwater klip-tripang	烏礁 (黑石參)	black stone sea cucumber
koro	soesoe	pae-tsjo	witte klip-tripang	白礁 (白石參、豬婆參)	white stone sea cucumber
pandang	nanas	tsjie	ananas-tripang	刺 (梅花參)	spiky sea cucumbers

¹ Van Dissel, “Pioneering in Southeast Asia in the First Half of the Nineteenth Century,” 50-54; Velthoen, “Contested Coastlines,” 242-51; Gaynor, *Intertidal History in Island Southeast Asia*, 17-21.

² Gaynor, *Intertidal History in Island Southeast Asia*, 19-21; Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 131-133; Velthoen, “Contested Coastlines,” 199-248.

³ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 63-184. For the history of this learned society, see Groot, *Van Batavia naar Weltevreden*.

Chapter 4

kai-djawa	kai-djawa	lamhai-pae	kai-djawa	南海白	kayu jawa ⁴
loeleng	itam	ouw	zwarte tripang	烏	black sea cucumber
kassoet	kassoet	hiah or ouw-hiah	platte tripang	靴烏靴	flat sea cucumber
boeang koeliet	gosok, or boeang koelit	thoet	ontvelde tripang	秃 (秃參)	skinned sea cucumber
marege	marege	lamhai	marege	南海	marege ⁵
gama batti	gama gomok	tsja-thang	gevlekte gama	?	spotted slimy sea cucumber
gama	gama	tsja	gama	赭 (黃玉參)	slimy sea cucumber ⁶
taaikongkong	taaikongkong	ba	vuile tripang	屮 (黃玉參)	foul sea cucumber
djapoen	djapoen	jepoen	japan	日本 (綠刺參)	Japan sea cucumber
kebo	poeti	sau-pae	witte tripang	瘦白	white sea cucumber
koengie	koening	jõe-poeë	gele tripang	橘皮	yellow sea cucumber
donga	donga	tsje-koe-oe	valsche ananas-tripang	?	bent sea cucumber
mossee	mossee	kian	mossee	?	burying sea cucumber ⁷
kawasa	kawas	tarik	kawasa	?	yellowish legume sea cucumber ⁸
katjang goreng	katjang goreng	sio-ba	gebrande tripang	燒屮	roasted-peanut sea cucumber ⁹

Table 4.1 The order of sea cucumbers in early nineteenth-century Makassar.

Source: Adapted from Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 162.

This perplexing table, while almost unintelligible to people outside the sea cucumber trade, is key to understanding how a world of sea cucumbers emerged and linked a place in the eastern Indonesian Archipelago with the change of taste in China. The table, by its nature, was a commercial assortment in Makassar made by dealers specialising the trade of sea cucumbers with China.¹⁰ It was ordered in accordance with the price of different types of tropical sea cucumbers in Makassar, which depended on a multitude of discernible features such as size, shape, colour, texture, flavour, and origin. These

⁴ From the Kayu Jawa coast of northern Australia (Kimberley).

⁵ From the Marege coast of northern Australia (Arnhem Land).

⁶ A sort of sea cucumber whose body has strings of slime. Matthes, *Makassaarsch-Hollandsch woordenboek*, 337.

⁷ A sort of sea cucumber that sometimes burrows under the surface of sand. *Ibid*, 697.

⁸ A sort of yellowish sea cucumber whose colour, perhaps also shape, is like the legume fruit of *kawasa*. *Ibid*, 337.

⁹ A sort of small sea cucumber whose shape is like roasted peanuts. *Ibid*.

¹⁰ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 161-162.

features were not only natural but also artificially controlled by Southeast Asian collectors. Vosmaer observed:

The trepang, called *haisom*, goes through such a shape change by their preparation, that all the original appearance features of the animal become almost completely lost, so that one, by comparison of it in its live and dried forms, can hardly discover any trace of commonality, and one will doubt that whether they belong to one and the same creature.¹¹

Why did these collectors offer such diverse types of sea cucumbers in Makassar? How were they received in China? How did these tropical varieties rise in the shadow of temperate sea cucumbers, which, as we have seen in the previous chapter, had perfect affinities with the kidneys in Chinese medicine? This chapter approaches these questions from the perspective of cross-cultural interactions in a world of sea cucumbers, which spanned from Hokkaido to northern Australia. It aims to understand how such a world took shape and how Chinese taste for sea cucumbers evolved amid interactions between different part of this world. In this chapter, sections one and two will first investigate how different regions across the China Seas joined an expanding world that supplied the Chinese consumer market with different types of sea cucumbers. Then, the remaining three sections will focus on the order of sea cucumbers in Makassar for understanding how cross-cultural interactions took place at the margins of this world and mattered to the change of taste in China.

1. In Search of Liao/Manchu Sea Cucumbers

Tracing the origin of this world of sea cucumbers, we can identify that a contested borderland in Northeast Asia, Liaodong (also known as the southern part of Manchuria), featured prominently in its initial stage. Sea cucumbers emerged as a product of Liaodong amid a border crisis of the late Ming

¹¹ Ibid, 164-165. Translated from Dutch.

Chapter 4

Empire. Two of the earliest records about sea cucumbers in China point both to the corruption of the Ming military system in this region. One was a memorial dated 1591 by a regional inspector of the Ming Empire, Hu Kejian (fl. late 16th and early 17th c.), disclosing that for falsifying a battle report, the most privileged military family in Liaodong, the Li family (fl. 1570s-1610s), bribed a superior official with sea cucumbers.¹² Also in 1591, another memorial by a special inspector to Liaodong disclosed that commanders, who were in one way or another affiliated with the Li family, mobilised the soldiers of Liaodong to work in all sorts of business, including trading horses and sable fur in border markets, collecting ginseng, leather, and pine nuts from forested regions, and collecting sea cucumbers and abalones from coastal area.¹³

Whereas it has become well known that the Li family was a major patron behind a burgeoning border economy in Liaodong that ultimately facilitated the rise of the Manchus, their involvement in the first sea cucumber economy in China has yet to raise scholarly attention.¹⁴ The sea cucumbers used by the Li's as a bribe in 1591 were for covering a major military fiasco that would lead to a crisis for them.¹⁵ As the only gift highlighted by this memorial, they could not be insignificant. Elsewhere, there is also evidence indicating that sea cucumbers were by then rising as a delicacy in the banquet cuisine in the imperial capital of the Ming. A report by a magistrate in Beijing shows that for a banquet serving the provincial civil-service examination of 1591, the prefectural government of Beijing prepared,

¹² *Wanli dichao*, 562. For the background of the privileged Li family, see Wada, *Chūgoku kanryōsei no fubai kōzō ni kansuru jirei kenkyū*; Swope, “A Few Good Men.”

¹³ Hou, “Anbian ershisi yishu,” *juan* 428:5b-6a.

¹⁴ Mitamura, *Shincho zenshi no kenkyū*, 167-181; Wada, *Chūgoku kanryōsei no fubai kōzō ni kansuru jirei kenkyū*. For the border economy of the Ming Empire's northern frontiers, see Iwai, “China's Frontier Society in the Sixteenth and Seventeenth Centuries”; Kishimoto, “Wan Ming de baiyin beiliu wenti”; Lin, “The Economy of Empire Building.” I unfortunately have no access to Lin Sun's dissertation, as it is currently not available online. From its abstract, it seems that “wild ginseng and sable fur” are its main focus.

¹⁵ Fan, *Chongxie wan Ming shi*, 129-137.

among a long list of food ingredients, 1 catty (equal to 16 taels) of sea powder, 12 taels of edible bird's nests, 6 taels of shark fins, 4 taels of *tianhua* mushrooms, and 1 catty of sea cucumbers.¹⁶

On the basis of these pieces of evidence, we can see that by the time sea cucumbers emerged in Chinese written sources, a sea cucumber economy in Liaodong and Beijing must have already been in place for some time. We can deduce from the above-discussed examples that sea cucumbers were collected by the soldiers of Liaodong, redistributed by their commanders as a local rarity to elite consumers or perhaps also sold by merchants associated with their commanders as a commodity to the Chinese consumer market, and became a delicacy serving banquets in Beijing. Although there is no earlier source tracing the origin of this economy, we may contextualise it with the historical ties between Korea, Liaodong, and Beijing. As we have seen in the previous chapter, long before their advent in China, sea cucumbers had been collected in Korea as a tribute to the Korean court since at least the mid-fifteenth century. Most interestingly, also from the fifteenth century, the Ming court frequently requested marine products from the Korean court.¹⁷ A dynastic history of Korea, *The Veritable Records of King Yejong*, notes that in 1469 the Ming Emperor Chenghua (r. 1465-1487) personally praised the marine products from Korea and further requested more “exotic taste of water and land” from Korea.¹⁸ We may speculate that sea cucumbers, in the name of sea ginseng, could serve very well as such an exotic to impress the Ming Emperor.

Situated between Korea and Beijing, Liaodong was a critical contact zone. Before the rise of the Ming Empire, Jurchens (Manchus), Mongols, Chinese, and Koreans intermingled in this region.¹⁹ From the late fourteenth century, when the Ming controlled this region and established many garrisons,

¹⁶ Shen, comp., *Wanshu zaji*, *juan* 15, 154, 158.

¹⁷ *Sejong sillok*, *juan* 45:6a (1429), *juan* 46:19b (1429), *juan* 49:4b (1430), *juan* 49:11a (1430), *juan* 50:14b (1430), *juan* 66:20b (1434); *Yejong sillok*, *juan* 3:32b (1469).

¹⁸ *Yejong sillok*, *juan* 3:32b (1469).

¹⁹ Robinson, *Empire's Twilight*.

cross-border communications with Korea continued and this region served as a stop-over place for missions travelling between Korea and Beijing.²⁰ We may also speculate that as the collection of sea cucumbers became widespread along the Korean Coast from the mid-fifteenth through the early sixteenth centuries, it also had an impact on Liaodong's border area adjacent to Korea. There were furthermore political and economic incentives among the commanders of Liaodong military system, such as the Li family, to mobilise their own soldiers to collect local sea cucumbers as a substitute for a desirable marine product originally from Korea, catering to privileged consumers in Beijing.²¹



Map 4.1 The northern world of sea cucumbers.

While the role of Korea in the emergence of the first sea cucumber economy in China remains vague and waits for further evidence, what is well-documented is that in the seventeenth century Liaodong

²⁰ Robinson, “Chinese Border Garrisons in an International Context”; Ma, “Chaogong zhiwai,” 137.

²¹ For a thorough study of the military system of Liaodong, see the recent monograph by Du Hongtao. Du, *Shugu fengyan*.

became the most renowned origin of sea cucumbers in China. Xie Zhaozhe's mid-1610s work acknowledged that although his native place Fujian had no shortage of seafood, most was too ordinary to rival two top sea delicacies from Liaodong, namely, sea cucumbers and abalones.²² In the late 1610s, an encyclopaedia noted that there were sea cucumbers in Liaodong with a spiky surface and their taste was most delicious.²³ Thereafter, as the origin of sea cucumbers became increasingly diverse, Chinese consumers came to think of Liaodong as the most authentic place producing the best sea cucumbers. For instance, the 1660s account by Zhou Lianggong compared sea cucumbers from the temperate and tropical waters and concluded that those "from the Sea of Liao(dong) are better".²⁴ Zhao Xuemin's late eighteenth-century *materia medica* cited a no longer extant herbal treatise to contend that those black and spiky sea cucumbers from Liaodong were the best.²⁵ In his early nineteenth-century dietary guidance, Zhang Mu even made the ranking, claiming Liaodong sea cucumbers as the best, the temperate sea cucumbers from Shandong as the second best, and the tropical sea cucumbers from Fujian and Guangdong as inferior.²⁶

However, the supply of Liaodong sea cucumbers was disturbed by the Manchu Conquest in the mid-seventeenth century. In 1634, a new Imperial Degree holder, Chen Hanhui (1590-1646), returned from Beijing to his homeland in the South along the Grand Canal. En route, he planned to buy sea cucumbers in Tianjin and found that the price was suddenly unaffordable. With this experience, he composed a poem, "Buying Sea Cucumbers in Tianjin and the Price Suddenly Soared".²⁷ This poem, as Feng Lijun has shown, demonstrates that domestic supply had become insufficient to meet

²² Xie, *Wuzha zu*, *juan* 9, 258.

²³ Chen, comp., *Shiyuan yaoxuan*, *wuji*, *juan* 3:37b.

²⁴ Zhou, *Min xiaoji*, *juan* 2:11b-12a.

²⁵ Zhao, *Bencao gangmu shiyi*, *juan* 10:37b.

²⁶ Zhang, *Tiaoji yinshi bian*, *juan* 6, 364-365.

²⁷ "Tianjin mai haishen jia hu tenggui" 天津買海參價忽騰貴. Chen, *Shancao*, 741.

Chapter 4

demand.²⁸ Yet, whereas this analysis is valid for a long-term change, it still falls short of explaining why, in 1634, the balance of supply and demand was disturbed and why that disturbance deserved special attention from an Imperial Degree holder who merely passed through Tianjin.

These questions lead us to a deep crisis in contemporary Liaodong that would soon topple the Ming Empire. From the 1610s, Liaodong began to face aggressions from the Manchus led by Nurhaci (1559-1626), who was previously supported by the Li family. After a disastrous defeat at the hand of Nurhaci in 1619, the Li family lost power in Liaodong, and mainland Liaodong fell to the Manchus in 1621. From then until the early 1630s, what remained to the Ming Empire was offshore Liaodong, consisting of a chain of small islands along the Liaodong Peninsula and Korea (invisible on Map 4.1, apart from the most important island, Pidao), supported by military supplies from Tianjin via sea routes.²⁹ In these islands, Ming military officers behaved not much different from the Li family, assuming a dual role as military commanders and entrepreneurs.³⁰

When Chen Hanhui was taking the imperial civil-service examination in Beijing in early 1634, offshore Liaodong was collapsing.³¹ From the early 1630s, the Manchus began to extend coastal control.³² In 1633, guided by some surrendering Ming officers, the Manchus occupied a strategic tip of the Liaodong Peninsula, Lüshun, threatening coastal supply routes (Map 4.1). At the beginning of 1634, Shang Kexi (1604-1676), a general leading some remnant Ming forces on these islands, rebelled and joined the Manchus, leaving offshore Liaodong in disarray.³³ The archive of the rising Manchu regime records many surrendering cases, among which there is a case referring to sea cucumbers, showing that some Ming officers presented 100 bags of sea cucumbers as a gift to the Khan of the

²⁸ Feng, “Renzhi, shichang yu maoyi,” 51.

²⁹ Chen, “Junliang gongxu yu Ming Qing Liaodong zhanzheng.”

³⁰ Zhao and Du, “Chongguan Dongjiang”; Yeh, “Ming Qing zhiji liaodong de junshi jiazu.”

³¹ Huang, “Liu Xingzhi xiongdi yu Mingji Dongjiang haishang fangxian de bengku”; Huang, “Wuqiao bingbian.”

³² Gao, “Lun Houjin shiqi de qianhai.”

³³ Huang, “Wuqiao bingbian,” 108.

emerging Manchu Empire.³⁴ The archive also shows that benefiting from the intensified control of offshore Liaodong from the mid-1630s, the Manchu Khan began to keep a store of sea cucumbers to be distributed as gifts.³⁵

This crisis may help us contextualise why the price of sea cucumbers suddenly soared in Tianjin in 1634. As we have seen, Tianjin was the base port that supplied offshore Liaodong via coastal routes. By following the same routes, sea cucumbers could also be circulated from offshore Liaodong to Tianjin. However, when Chen travelled through Tianjin in 1634, the coastal routes had been disturbed because of the collapse of offshore Liaodong earlier in that year. This crisis was most likely responsible for a shortage of sea cucumbers in the Tianjin market and led to their soaring price. Chen, as an elite Imperial Degree holder, was likely also bemoaning the loss of offshore Liaodong by using the unaffordable price of sea cucumbers as a metaphor. By the end, frustrated by this situation, Chen concluded in his poem that “critically studying cookery books, [I] urgently consider having [sea cucumbers] excised” (穎考庖經亟議刪).³⁶

Sea cucumbers would certainly not be deleted from Chinese cuisine. Instead, Chinese consumers looked for Liaodong-style temperate sea cucumbers from elsewhere. Opposite to Liaodong was the Shandong Peninsula, whose littoral society, as we have seen in the previous chapter, had been collecting abalones from shallow waters since at least the eleventh century. As the same technology could be used for collecting and processing sea cucumbers, it may not surprise us that as early as 1604, a local gazetteer had recorded that sea cucumbers and abalones were local products of a coastal place

³⁴ *Neige cangben Manwen laodang, Taizhu chao*, 264. The original archive is undated, but this event can be dated between the ninth month of 1632, when the Manchu Regime partly extended coastal control and fortified Gaizhou, and the seventh month of 1633, when Commander Huang Long died in the siege of Lüshun, because it mentioned that the gift was intercepted by Huang Long and two officers managed to escape to Gaizhou to join the Manchu Regime. *Neige cangben Manwen laodang, Taizong chao*, 658 (1632); Han, “Mingmo Lüshun zhiyi ji Huang Long qiren qishi.”

³⁵ *Neige cangben manwen laodang, Taizong chao*, 596 (1631), 668 (1636), 669 (1636), 671 (1636), 698 (1636).

³⁶ Chen, *Shancao*, 741.

Chapter 4

in southeast Shandong, Jiaozhou.³⁷ Situated in present Qingdao, Jiaozhou was a maritime trading centre in the late Ming period, connecting the Shandong Peninsula to the market in the South via coastal routes.³⁸ Zhou Lianggong also noted in his 1660s work that Jiaozhou and Liaodong were the two major sources of temperate sea cucumbers.³⁹

The Ming-Manchu Qing dynastic transition impacted Liaodong and Shandong differently. Liaodong's coastal area was largely depopulated, as local people either fled from the invading Manchu force or joined them to conquer the rest of China.⁴⁰ Shandong, separated by a strait from Liaodong, was much less influenced. In the 1660s, when the Manchu Qing Empire had occupied mainland China and began to impose the infamous coastal evacuation and maritime prohibition policies for fighting against the Zheng Regime in Taiwan, Shandong, for its relatively north position, was only partially and briefly affected.⁴¹ As a result, Shandong's sea cucumber fisheries survived through this chaotic period and became more important in the Chinese consumer market. For instance, in the mid-1660s, Wu Weiye (1609-1672), a prominent scholar living in the Lower Yangzi region, composed a poem on sea cucumbers, indicating that “the prohibition is still lenient in the North Sea, whose food can assist the southern cuisine” (禁猶寬北海，饌可佐南烹). He annotated that the North Sea referred to the sea of Dengzhou and Laizhou, namely, the two principal prefectures of the Shandong Peninsula, which were “not subject to the maritime prohibitions” (Map 4.1).⁴²

Into the eighteenth century, Dengzhou and Laizhou remained important sea cucumber sources. Two accounts cited by Zhao Xuemin in the late eighteenth century show a bustling sea cucumber

³⁷ *Laizhou fuzhi*, *juan* 3:104b.

³⁸ Li, *Haiyou fengqian*, 28-29.

³⁹ Zhou, *Min xiaoji*, *juan* 2:11b.

⁴⁰ Isett, *State, Peasant, and Merchant in Qing Manchuria*, 38-39.

⁴¹ Gu, “Qingchu de qianhai,” 62-63.

⁴² The 1670 edition (preface 1669) records “Denglai” 登萊, but the manuscript in his family archive records “Donglai” 東萊. The latter, not a valid toponym in this context, is likely a typo. Wu, *Wu Meicun quanji*, *juan* 14, 377-378. See also Wang, “Ming Qing yilai Nanhai zhuyao yuchang de kaifa,” 89-80.

economy in this region. Li Jinshi, from the capital county of Dengzhou, Penglai, informed Zhao that “sea cucumbers are also from the sea of Dengzhou, which is adjacent to Liaodong and whose sea cucumbers are also good” (海參亦出登州海中，與遼東接壤，所產海參亦佳). Therefore, local people were attempting to appropriate the concept of Liao (used as an abbreviation for Liaodong) by claiming that Shandong sea cucumbers, for sharing the same waters with Liaodong, were of the same quality as Liao[dong] sea cucumbers. Li Jinshi also recounted how the locals hunted seals on sea ice, extracted their oil, and dripped it onto the sea to form a floating membrane that would immediately illuminate the underwater so that the sea cucumbers could be detected and caught. He attributed the high price of sea cucumbers to the high risk of these works. Many died of falling into the icy sea when hunting seals or were killed by sharks when diving for sea cucumbers.⁴³

Another Shandong informant, Chen Lianghan, who was from a county next to Penglai, Fushan, claimed that “sea cucumbers from the North Sea are good and are of the first grade in this world” (海參生北海者佳，為天下第一). He then explained how seasons mattered. Every springtime, when sea ice was thawing, sea cucumbers moved to the seashore for reproduction. It was then easy to catch them, but their body, because of bearing many eggs, was empty. “Their skin was thin, their body was sloppy, they did not taste good, and the price was also low” (皮薄體鬆，味不甚美，價亦廉)。They were called “spring skin” (*chunpi* 春皮) in the market. In summer, they shifted to deeper water and were difficult to catch, but their body became fat and thick, their spiky surface became lustrous, and the taste became delicious. They were then called “hot season skin” (*fupi* 伏皮), becoming much more valuable and better for medical use.⁴⁴

⁴³ Zhao, *Bencao gangmu shiyi*, *juan* 9:55, *juan* 10:38a.

⁴⁴ *Ibid*, *juan* 10:38.

Chapter 4

These Shandong sea cucumbers had their own market in the South. The late eighteenth- or early nineteenth-century Low Yangzi-based Huizhou merchant's handbook notes that "Shandong sea cucumbers" (*Shandong shen* 山東參) were from Dengzhou and Laizhou. They could be classified into four grades. Their meat was most sticky, but they could not be preserved for a long period and were sold to the upriver market around Nanjing.⁴⁵ That trade was likely controlled by a group of merchants self-styled as Dongqi (東齊, literally meaning East Shandong) merchants. Following the early coastal trading routes between Jiaozhou and the South, these merchants established themselves in Suzhou and Shanghai exactly during the reign period of Emperor Shunzhi (1644-1661), when the entire China Coast was in turmoil but Shandong was relatively secure.⁴⁶ Into the eighteenth century, they had a prominent role to play not only in the coastal trade between Shandong and the Lower Yangzi, but also in the maritime trade of Liaodong.⁴⁷ Given the massive cross-strait migration from the Shandong Peninsula to the depopulated coastal region of Liaodong after the Manchu Conquest,⁴⁸ we may even assume that the Sea of Liao[dong], while remaining a useful concept for labelling sea cucumbers, had become de facto a Sea of Shandong, as it was now dominated by Shandong merchants and migrants.

Meanwhile, Liaodong (known as Liao), as a geographic concept, was also shifting. After the Manchu Conquest, Liaodong became part of the broadly defined Manchu homeland, namely, Manchuria, which extended all the way from Liaodong to the west coast of the Japan Sea (Map 4.2). This change led to a confluence of two geographic concepts, namely, Liao and Manchu. Because of this confluence, sea cucumbers from both coasts of Manchuria, namely, the North China Sea coast

⁴⁵ *Huizhou minjian zhenxi wenxian*, vol. 15, 299.

⁴⁶ Fan Jinmin, "Ming Qing shiqi huoyue yu Suzhou de waidi shangren" 明清时期活跃于苏州的外地商人 [Nonlocal merchants active in Suzhou during the Ming and Qing periods], *Zhongguo shehui jingjishi yanjiu*, 4 (1989): 42; *Shanghai beike*, 194.

⁴⁷ Isett, *State, Peasant, and Merchant in Qing Manchuria*, 256-259.

⁴⁸ Wang, "Qingdai Shandong yimin "chuang Guandong"."

and the Japan Sea coast, were all labelled as Liao or Manchu sea cucumbers, which I refer to here as Liao/Manchu sea cucumbers.

This shift further made the western coast of the Japan Sea a new source of Liao/Manchu sea cucumbers. This area, divided between present-day Russia, North Korea, and China, was historically a place occupied by various coastal Jurchen tribes known as Warka. In the early fifteenth century, many of them became subject to the king of Chosŏn and intermingled with Korean settlers in Hamgyŏng Province (Map 4.2).⁴⁹ Korean geographic records show that this Jurchen corner of Hamgyŏng had already become an important sea cucumber producing area by 1530.⁵⁰ The rise of the Manchu Empire brought these Warka people, as well as their sea cucumbers, into direct contact with Chinese consumers. Throughout the seventeenth century, Manchu rulers continuously incorporated Warka tribes into the Banner System.⁵¹ In this process, they compelled also the Warka population in Korea to “return” to Manchuria to join the Banner System.⁵² In Manchuria, these Warka people would soon meet some Chinese exiles. Banished because of a number of political persecutions from the 1650s through 1660s, these exiles consisted mostly of literati from the Lower Yangzi region, where eating Liaodong-style sea cucumbers was an expensive privilege.⁵³ Once in Manchuria, these Chinese literati delightedly found that this delicacy was easily accessible. A poem dating from approximately 1689-1690 even indicates that they became “tired of exchanging sea cucumbers as a gift” (人情厭海

⁴⁹ Robinson, “Residence and Foreign Relations in the Peninsular Northeast”; Bohnet, ““On Either Side the River”.”

⁵⁰ *Sinjŏng tongguk yŏji sŏngnam*, juan 50:4a, 10b, 17a, 21a, 27b, 36a, 39b, 48a.

⁵¹ Liu, “Guanyu Qingdai “xin Manzhou””; Chen, “Qingdai Dongbei diqu Kuyala “xin Manzhou”.”

⁵² Bohnet, “On Either Side the River”; Cong, *Zhongguo dongbei shi*, vol. 3, 780-784.

⁵³ Cong, *Zhongguo dongbei shi*, vol. 4, 1793-1803.

參).⁵⁴ Thereafter, a 1721 local gazetteer identifies a coastal place adjacent to Korea, Hongqijie (紅旗街), as the source of the best sea cucumbers.⁵⁵



Map 4.2 The two coasts of Manchuria.

Hongqijie was Hunchun (Map 4.2).⁵⁶ Nie Youcai's pathbreaking dissertation about the "South Sea" (the Japan Sea) of Hunchun shows that this town, situated along the Tumen River's downstream, became a commercial centre of the Manchu coast of the Japan Sea from the early eighteenth century.⁵⁷

The 1736 provincial gazetteer of Shengjing, which covered all of Manchuria, noted that "those [sea

⁵⁴ The poem dates to circa 1689-1690, when its author visited Ningguta to see his father, who had been banished there since the early 1660s. Yang, *Yang Bin ji*, 56.

⁵⁵ Wu, *Ningguta jilie*, 714.

⁵⁶ Nie Youcai indicates that the Tumen River, as the border river of Manchuria and Korea, is also called as "Hongxi River" (紅溪河) or "Hongqi River" (紅旗河). Therefore, Hunchun as an important market town along this river was known as Hongqijie, literally meaning "the market street of the Hongqi River". Nie, "Qingdai Hunchun "Nanhai" haijiang yanjiu," 33-34.

⁵⁷ Nie, "Qingdai Hunchun "Nanhai" haijiang yanjiu"; Kim, *Ginseng and Borderland*, 90-92; Schlesinger, *A World Trimmed with Fur*, 64, 72-73.

cucumbers] from Hunchun are especially good” (渾春出者尤勝).⁵⁸ The Manchu archives of Hunchun also show that local officials sent sea cucumbers as a tribute to Beijing and many Han-Chinese merchants came to Hunchun to purchase sea cucumbers. For instance, in 1786, 39 merchant houses carried 1685 bags of sea cucumbers from Hunchun.⁵⁹ Because of this booming sea cucumber economy, a rocky place at the head of a bay outside the Tumen River was called by Chinese as Haishenwai, literally meaning “wai (巖 a place where mountains and waters bend) of sea cucumbers”, which would later become an important Russian port city in the Far East, Vladivostok.⁶⁰

From this maritime fringe of Manchuria, these sea cucumbers became renowned in the Chinese consumer market in the eighteenth century. Zhao Xuemin, in his late eighteenth-century *Supplement to Systematic Materia Medica*, noted that among sea cucumbers from the Sea of Liao, those from Hongqijie (Hunchun) were better than those from Lūqijie 綠旗街.⁶¹ He also learned from an informant in Manchuria (Guandong 關東) that sea cucumbers were from the East Sea.⁶² From a Manchu perspective, the East Sea could not be the North China Sea, which was to its south. Instead, it more likely referred to the Japan Sea situated to the east of Manchuria. In fact, the 1684 provincial gazetteer of Shengjing already noted that “those [sea cucumbers] from the East Sea are better than those from elsewhere” (東海出較他處者勝).⁶³ It also identified that the East Sea was to the east of Ningguta, clearly indicating that it referred to the Japan Sea (Map 4.2).⁶⁴

The late eighteenth- or early nineteenth-century Huizhou merchant handbook also referred to Hongqijie (Hongqisuo) as an original place for two types of sea cucumbers. One was black and round

⁵⁸ *Shengjing tongzhi* (1736), *juan* 27:34b.

⁵⁹ Nie, “Qingdai Hunchun “Nanhai” haijiang yanjiu,” 26-28, 33-38.

⁶⁰ *Ibid*, 33.

⁶¹ Zhao, *Bencao gangmu shiyi*, *juan* 10:37a. Lūqijie’s location is yet to be identified.

⁶² *Ibid*, *juan* 10:37b.

⁶³ *Shengjing tongzhi* (1684), *juan* 21:25b.

⁶⁴ *Ibid*, *juan* 8:12b.

Chapter 4

sea cucumbers (*wuyuanshen* 烏園參), whose origins included the East Ocean (Dongyang), Manchuria (Guandong), Shandong, Hongqijie, Johor, Batavia (Kelapa), and Sulu.⁶⁵ This was likely the so-called “sea eggplant” (*haijie* 海茄), a type of spike-less black sea cucumbers known as a local product of Hunchun (Hongqijie).⁶⁶ The other was Beijing sea cucumbers (*jingshen* 京參), which were only from Liaodong and Hongqijie (Hongqisuo).⁶⁷ I suspect that these Liao/Manchu sea cucumbers were named after Beijing because they were first carried from Manchuria to Beijing and then redistributed to the Chinese consumer market.

Crossing a vaguely defined border, Korea was also exporting Liaodong-style sea cucumbers to China via Manchuria. In the wake of the Manchu invasion of Korea (1636), Korea began to send sea cucumbers to the Manchus, initially as a payment to redeem war prisoners.⁶⁸ Thereafter, it became a regular trade either via border markets or via tribute missions to Beijing. In the eighteenth century, sea cucumbers were an important supplement to the traditional exports from Korea, silver and ginseng.⁶⁹ Chinese sea cucumber collectors also transgressed Korean coastal waters. A 1734 entry in the *Veritable Records of the Joseon Dynasty* of Korea notes that every year hundreds of Chinese fishing boats came to the west coast of Korea to collect sea cucumbers. This practice, according to this Korean source, had an origin in the 1697 cross-sea famine relief initiated by the Manchu Emperor, Kangxi (r. 1661-1722), through which many Chinese seafarers familiarised themselves with Korean coastal waters.⁷⁰ Chinese consumers, however, were uninformed of that Korean origin, which was not widely acknowledged as a source of sea cucumbers. Most likely, Korean sea cucumbers were sold as

⁶⁵ *Huizhou minjian zhenxi wenxian*, vol. 15, 299.

⁶⁶ Saying'e, comp., *Jilin waiji*, juan 7, 111.

⁶⁷ *Huizhou minjian zhenxi wenxian*, vol. 15, 297.

⁶⁸ Chang, *Qing Han zongfan maoyi, 1637-1894*, 116.

⁶⁹ *Ibid*, 75, 103, 122, 172, 191, 201.

⁷⁰ *Yeongjo sillok*, juan 38:13b. For this cross-sea famine relief, see Chang, *Qing Han zongfan maoyi*, 49.

Liao/Manchu sea cucumbers in the Chinese consumer market, because, after all, Korea, Liaodong, and Shandong all shared the same shallow waters of the North China Sea.

Meanwhile, another important origin of temperate Liaodong-style sea cucumbers was Japan. The Huizhou merchant handbook shows that there were thirteen grades of *zhan* sea cucumbers (占參 *zhanshen*) from the East Ocean, Japan, Shandong, and a place called Quetoushan (缺頭山).⁷¹ This grading system, mainly based on the density and shape of surface pricks, was likely borrowed from Japan, where sea cucumbers were divided into ten grades.⁷² Chinese import of Japanese sea cucumbers began from around the mid-seventeenth century amid the turbulent Ming-Manchu Qing transition.⁷³ It gained new momentum from the 1680s, when the Manchu Qing Empire lifted maritime prohibitions and encouraged Chinese traders to import Japanese copper from Nagasaki. That policy raised financial concerns from the Tokugawa shogunate. As a response, the latter encouraged the export of preserved marine products such as sea cucumbers, abalones, shark fins, and kombu as substitutes for copper.⁷⁴ For that purpose, domainal lords on the northern frontier of Japan mobilised indigenous people of Hokkaido to collect these sea delicacies for the China trade.⁷⁵

Therefore, we may conclude that in association with the rise of the Manchu Empire, the seventeenth century bears witness to the formation of the northern world of sea cucumbers. With the evidence we have examined, Liaodong played a crucial role in the initial stage, as sea cucumbers first emerged as an important commodity in Liaodong's burgeoning border economy from the late sixteenth century. Thereafter, at least since the early seventeenth century, the Shandong Peninsula also

⁷¹ *Huizhou minjian zhenxi wenxian*, vol. 15, 296.

⁷² Arai, *Kinsei kaisanbutsu boekishi no kenkyū*, 47.

⁷³ Dai Yifeng points out a smuggling case dated 1660, in which some Chinese traders imported over 40 piculs of sea cucumbers from Japan against the maritime prohibitions imposed by the Manchu Empire. Dai, "Yinshi wenhua yu haiwai shichang," 84.

⁷⁴ Arai, *Kinsei kaisanbutsu boekishi no kenkyū*, 19-135.

⁷⁵ Walker, *The Conquest of Ainu Lands*, 94-97.

became part of the Chinese sea cucumber frontier and would play an important role in the mid-seventeenth century, when Liaodong was temporarily devastated by the Manchu Conquest. Later, in the wake of the Manchu Conquest of China, as a new world order was established in Northeast Asia, this northern sea cucumber world also expanded and integrated other pre-existing sea cucumber cultures that were originally external to China with the Chinese consumer market. One after another, the Manchu coast of the Japan Sea, Korea, and Japan all joined this world and supplied black and spiky temperate sea cucumbers to China.

2. The Rise of the Southern World of Sea Cucumbers

The world of these black and spiky sea cucumbers, however, had an ecological boundary. Known as *Stichopus japonicus*, they inhabited temperate waters only.⁷⁶ To the South, there was another sea cucumber world. The expansion of this tropical sea cucumber world, as we will see, mainly took place in the eighteenth century. After over a century of expansion, its far-reaching influence began to be richly documented in European sources in the early nineteenth century amid intensified European colonisation of archipelagic Southeast Asia and northern Australia.

For instance, in 1824, as part of a recolonisation mission in the eastern Indonesian Archipelago after the devastating Napoleonic War, a Dutch naturalist, Adrianus Johannes Bik, visited Aru, an island between Papua and Australia.⁷⁷ To the east coast of Aru, he found an extensive intertidal zone, which was too shallow for the navigation of European large vessels but ecologically perfect for a sea cucumber economy linked to China.⁷⁸ Bik depicted the scene of capturing sea cucumbers in both

⁷⁶ For the difference between temperate and tropical species, see Akamine, *Namako o aruku*, 158-188.

⁷⁷ For a short biography of Bik, see Blok and Molhuysen, *Niemv Nederlandsch biografisch woordenboek. Deel 8*, 108-110. For the local anti-Dutch revolts related to the control of sea cucumber trade in Aru, see Gordon, Djonler, and Hägerdal, “The Killing of *Postbouders* Scheerder and *Jifar Folfolon*.”

⁷⁸ Bik, *Dagverhaal eener reis*, 70.

A World of Sea Cucumbers

image (Figure 4.1) and words. He noted that “the sandbanks (*droogten*), where the sea cucumbers (*tripang*) are found, consist of sandy fine clay, often grown with broad slimy seaweed, which will emerge by low water.”⁷⁹ On these sandbanks, “hundreds of Alfur women and children from Workai, by the low water, with a small basket on their backs and equipped with a stick with an iron point, wade to the mentioned islands through the waters. On two-to-four-foot-deep place, small canoes are used by the Alfurs; on further distant sandbanks where sea cucumbers are found, the Alfurs and their entire family fish with a bigger prahu.”⁸⁰



Figure 4.1 A view of a sea cucumber gathering village on Workai, next to the east shore of Aru (1824). Sea cucumber gathering dominated the dreamy, exotic tropical scene.

Source: Adrianus Johannes Bik, watercolour, 320 x 568 mm, RP-T-1999-173, Rijksmuseum.

⁷⁹ Ibid.

⁸⁰ Ibid, 69. Translated from Dutch.

Chapter 4

These hundreds of indigenous children and women were from a small island next to the east shore of Aru, Workai, which had a population of no more than 4,000 (Figure 4.1).⁸¹ As a pillar economy of this community, sea cucumber collection was stimulated by a credit system controlled by overseas Chinese. On 24 April 1824, in a small village of Workai, Affara (Apara), Bik was visited by three Chinese who worked as agents for merchants based in Makassar. These Chinese informed Bik that they had been in this village for two months for collecting sea cucumbers. Normally the village could deliver 350 piculs of sea cucumbers, but that year it only delivered 180 piculs. These sea cucumbers were for redeeming debt, as the indigenes would not start collecting sea cucumbers until they received merchandise, such as textile, as credit from the visiting Chinese traders.⁸² The sea cucumbers collected by the locals would be carried to Makassar. There, they would be further assorted for China trade.⁸³

Makassar served as a sea cucumber trading centre for the entire eastern Indonesian Archipelago and northern Australia (Map 4.3).⁸⁴ This city was a Dutch colonial prize in the so-called Spice Wars (ca. 1600s-1660s), waged by the Dutch United East India Company (the VOC, 1602-1799) for monopolising the highly profitable trade of fine spices, including cloves, nutmegs, and mace, which were only produced in the eastern Indonesian Archipelago until the late eighteenth century. In a concluding battle of the Spice Wars, Makassar, a former spice trading centre, was conquered by an allied force of the VOC and the Bugis in 1669.⁸⁵ Thereafter, the entire region was deprived of spice trade, which became a pure monopoly by the VOC, and had to go through a thorough transformation

⁸¹ Ibid, 74.

⁸² Ibid, 63, 72.

⁸³ Ibid, 70-72.

⁸⁴ Two milestone publications in this field are Sutherland, "Trepang and Wangkang"; Macknight, *The Voyage to Marege*.

⁸⁵ Andaya, *The Heritage of Arung Palakka*; Noorduyn, "De handelsrelaties van het Makassarse rijk"; Stapel, *Het Bongaais Verdrag*.

A World of Sea Cucumbers

which, as Heather Sutherland's works have shown, ultimately led to a new economic system, in which the trade of sea cucumbers with China featured prominently.⁸⁶



Map 4.3 The southern world of sea cucumbers.

⁸⁶ Sutherland, "Trepang and Wangkang"; Knaap and Sutherland, *Monsoon Traders*; Sutherland, "Trade, Court and Company"; idem, "A Sino-Indonesian Commodity Chain"; idem, *Seaways and Gatekeepers*.

Chapter 4

The reorientation of Makassar from fine spices to sea cucumbers was accompanied by the rise of a locally based Chinese community. Different from other Asian and European merchants, Chinese traders managed to establish a collaborative relationship with the VOC in a critical early stage of the Spice Wars.⁸⁷ As a result, the Dutch, in general, tolerated the Chinese who settled down in their colonies in the eastern Indonesian Archipelago for provisioning garrison forces and for boosting the local economy.⁸⁸ The basic policy was that the trade of fine spices was strictly prohibited, but the Chinese were allowed to undertake other businesses that fell outside the VOC's primary interests. This collaborative relation was introduced to Makassar after the Dutch conquest in 1669. It opened new opportunities for Chinese merchants, helping them rise from a marginal position to economic ascendancy.⁸⁹

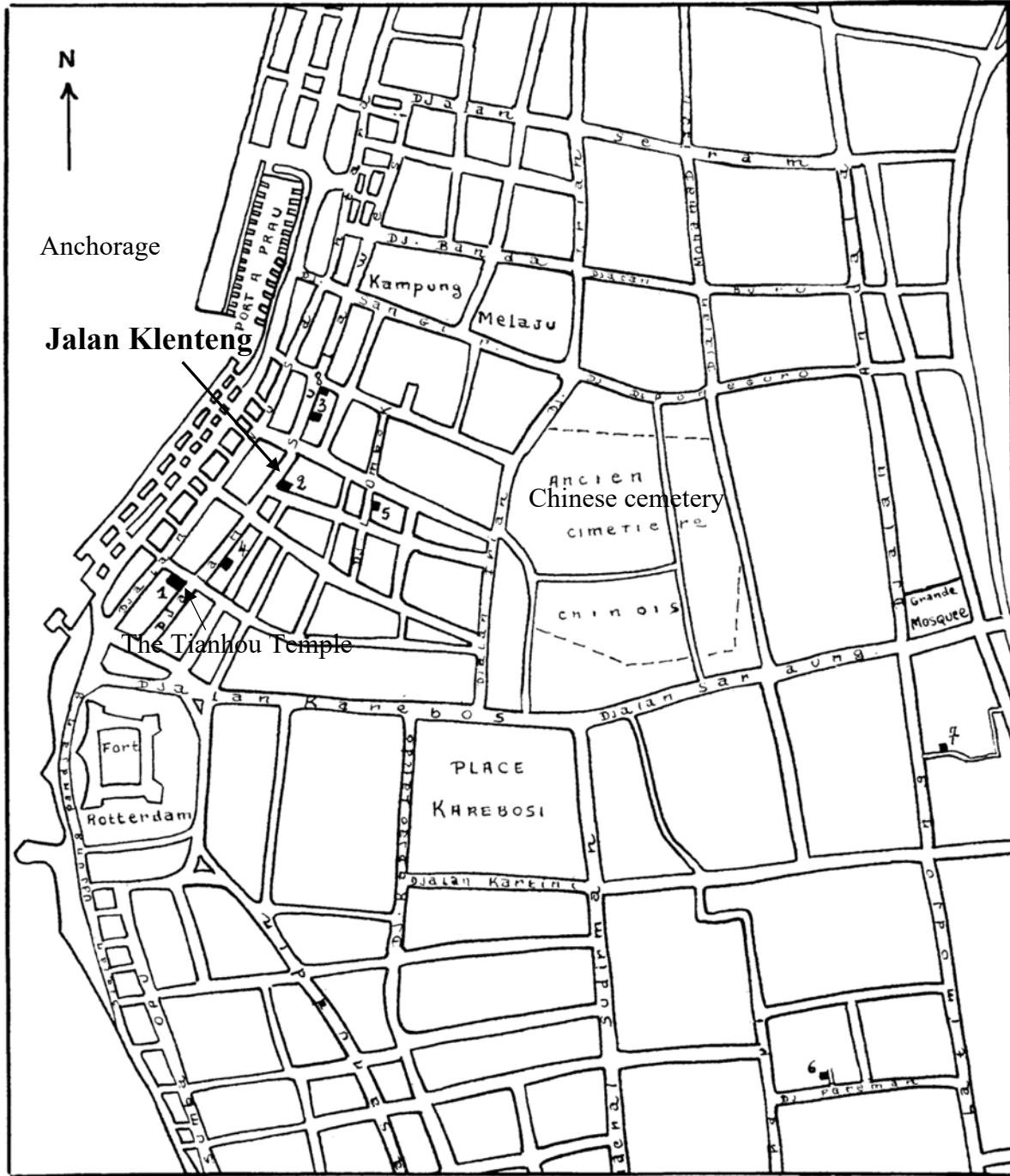
An important witness to the change is the first Chinese temple in Makassar, the Tianhou temple. It is situated on the Chinese Street of Makassar along the seaside. Present-day, the street is still a commercial centre and has many residents of Chinese descent (Map 4.4). It is known locally as Jalan Klenteng, namely, Chinese Temple Street.⁹⁰

⁸⁷ Xu, "Junks to Mare Clausum".

⁸⁸ Iwao, "Anboina (Amboina) no shoki Shinamachi ni tsuite"; Knaap, "A City of Migrants."

⁸⁹ Sutherland, "Trade, Court and Company"; idem, "Trepang and Wangkang"; idem, "A Sino-Indonesian Commodity Chain".

⁹⁰ For the history of those temples on this street, see Salmon, "La communauté chinoise de Makasar."



Map 4.4 The Chinese Street (Jalan Sulawesi, or Jalan Klenteng) of Makassar.

Source: Adapted from Salmon, "La communauté chinoise de Makasar," 249.

Next to the entrance of this temple, there is a stele dated 1867, telling a history about this Chinese community (Figure 4.2). It shows that the temple was originally built by a Chinese Captain called Wang Yue (Ongwatko 王悅, in office 1679?-1700), to have a place of worship for incoming and outgoing

Chapter 4

ships. Wang Yue (Ongwatko) was the second Chinese Captain in Makassar, leading this community from approximately 1679 to 1700.⁹¹ This period corresponds to the beginning of the open-sea policy of the Manchu Qing Empire. After the last resistance of the Ming-loyalists in Taiwan was crushed in 1683, the Manchu court in Beijing encouraged private Chinese junk traders to trade overseas.⁹² That policy would induce Chinese economic ascendancy in Southeast Asia, leading to the so-called Chinese century in Southeast Asia.⁹³ Exploiting the growth of the China trade via Batavia, Wang Yue and his family built a virtual monopoly of two important commodities coveted by Chinese consumers, namely, tortoise shell and edible bird's nests. In Makassar, they contracted local people to search for these rarities from surrounding waters and islands.⁹⁴ Moreover, as we will return to in the next section, with the same model, Wang Yue also pushed for the emergence of sea cucumbers as a new export from Makassar to China via Batavia in the 1690s.⁹⁵

⁹¹ Wirawan, *Sejarah Masyarakat Tionghoa Makassar*, 263.

⁹² For this critical policy shift in association with the Manchu Conquest of Taiwan, see Zhao, *The Qing Opening to the Ocean*; Cheung, "Admiral Shi Lang's Secret Proposal to Return Taiwan to the VOC"; Xu, "From the Atlantic to the Manchu."

⁹³ Blussé, "Chinese Century"; Blussé, *Strange Company*.

⁹⁴ Sutherland, "Trade, Court and Company," 102-5; Sutherland, "A Sino-Indonesian Commodity Chain," 177, 182-183.

⁹⁵ Wang Yue's personal involvement in sea cucumber trade is attested by a contract signed between him and an envoy of a local regime in Southeast Sulawesi, Buton, in 1695 for 156 piculs of sea cucumbers. Nolde, "Changing Tides," 157.

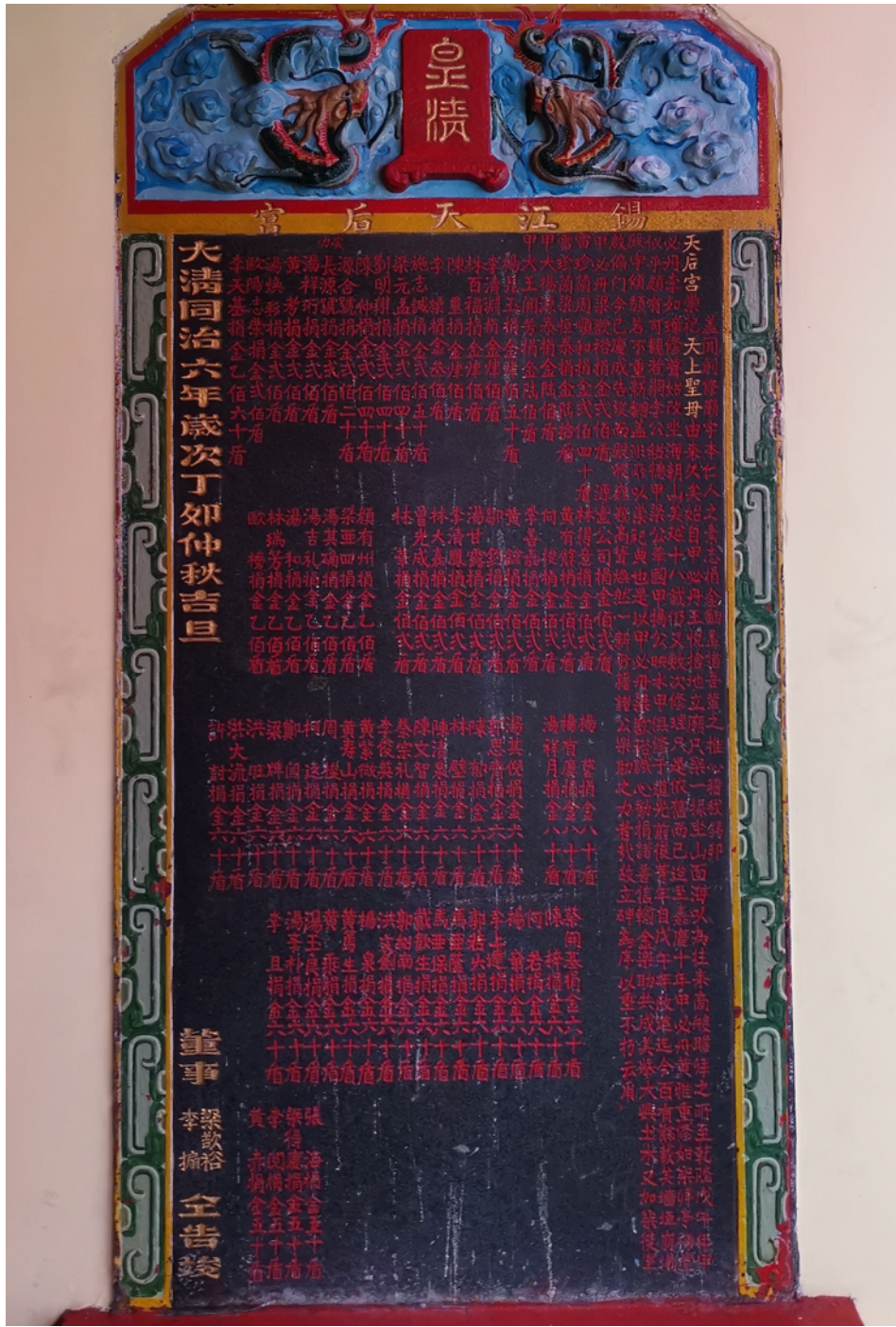


Figure 4.2 A stele on the entrance of Tianhou Temple.

Source: Photo by Ziqi Wu, 2020.

Chapter 4

Wang Yue's son, Ongkiego (Chinese characters unknown, in office ca. 1701-1731/2), succeeded his father's position in 1701.⁹⁶ In 1732, the position was in turn taken over by Ongkiego's son, Ongkingsai (Chinese characters unknown, in office ca. 1732-?).⁹⁷ After Ongkingsai, Ongkiego's nephew, Li Ruzhang (Lijauko 李如璋), became the Chinese Captain.⁹⁸ During Li Ruzhang's term (ca. 1738-1748/9), Chinese economic influence expanded enormously. The Tianhou Temple stele shows that in 1738 Li rebuilt this temple and changed its direction from facing the sea to facing the mountain. The local Chinese community might recall this change as an auspicious event, because within a few years, the first junk (called *wangkang* by the local community) from Amoy arrived at Makassar (1746), signalling the beginning of a new era in Makassar trade.⁹⁹ Also in 1746, Li Ruzhang obtained tax farming for incoming and outgoing ships, controlling the maritime traffic of this port city.¹⁰⁰ The third major renovation of this temple was by Captain Huang Ya (Oey Nyeeko 黃雅) in 1805. He rebuilt the temple and constructed a new praying pavilion (*baiting* 拜亭) and a new mediation hall (*chantang* 禪堂), making the temple "somehow spectacular" (似乎頗有可觀者).

By the time of the third renovation, Makassar's junk trade with China had been in full bloom. From the register of the Makassar Harbourmaster, we can that find following Chinese junks visited Makassar from 1797-1809 (Table 4.2).

	The size of junk (<i>wangkang</i>)	Captain (<i>anachoda</i>)	Arrival	Departure	Sea cucumbers (<i>tripang</i>)
1797 ¹⁰¹	400 <i>last</i> ¹⁰²	Ong Kongien	4 February	28 June	2000 piculs
1798 ¹⁰³	300 <i>last</i>	Oei Hianko	2 February	26 June	Unknown
1799 ¹⁰⁴	250 <i>last</i>	Ong Kongien	14 February	29 June	4500 piculs

⁹⁶ Wirawan, *Sejarah Masyarakat Tionghoa Makassar*, 263.

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ Knaap and Sutherland, *Monsoon Traders*, 145.

¹⁰⁰ Ibid, 30.

¹⁰¹ ANRI, Makassar 140, "Dag Register 1 Oct 1796 - 28 Sep 1800".

¹⁰² 1 last was about 20 piculs.

¹⁰³ ANRI, Makassar 140, "Dag Register 1 Oct 1796 - 28 Sep 1800".

¹⁰⁴ Ibid.

A World of Sea Cucumbers

1800 ¹⁰⁵	400 <i>last</i>	Oie Kiepko	7 February	3 July	4000 piculs
1801 ¹⁰⁶	400 <i>last</i>	Lie Ganko	22 February	12 July	Unknown
1802 ¹⁰⁷	400 <i>last</i>	Oie Kiepko	7 February	7 July	6000 piculs
1803 ¹⁰⁸	400 <i>last</i>	Thetio	7 February	6 July	Unknown
1804 ¹⁰⁹	400 <i>last</i>	Oie Tauko	20 March	8 July	6000 piculs
1805 ¹¹⁰	400 <i>last</i>	Oie Tauko	8 February	4 July	5000 piculs
1806 ¹¹¹	400 <i>last</i>	Oie Tauko	13 February	7 July	5000 piculs
1807 ¹¹²	Unknown	Kang Tiatlo ¹¹³	Shipwrecked near Makassar circa 17 February ¹¹⁴		
1808 ¹¹⁵	300 <i>last</i>	Koo Peauper	3 March	30 June	5000 piculs
1809 ¹¹⁶	Unknown	Unknown	8 March	Unknown	Unknown

Table 4.2 Junks (*wangkang*) to Makassar (1797-1809).

These records show an established pattern. Every year, a junk from Amoy appeared at the roadstead of Makassar in February, or March, in a few cases. The junk's capacity was between 250-400 last, or about 5,000-8,000 piculs, namely, among the largest oceangoing junks of Amoy.¹¹⁷ The commodities carried by the Amoy junk consisted of various Chinese goods, such as tobacco, textiles, porcelains, gold thread, etc. In Makassar, the junk would stay for a few months until later June or early July. Then, it returned to China, laden principally with sea cucumbers, ranging from 2,000-6,000 piculs, as well as other marine and tropical products, such as agar-agar, tortoiseshell, edible bird's nests, shark fins, rattan, etc. Each junk was commanded by a Chinese captain. Some captains made continuous trips, while others appeared merely once. Each of them, as we will see, represented a "ocean trading company" (*yanghang* 洋行) in Amoy which had managed to obtain a Makassar pass via an auction in Batavia the preceding year.

¹⁰⁵ Ibid.

¹⁰⁶ ANRI, Makassar 141, "Dag Register 1 Oct 1800 - 13 Mei 1804".

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid. ANRI, Makassar 142, "Dag Register 1 Juni 1804 - 31 Mei 1806".

¹¹⁰ Ibid.

¹¹¹ Ibid. ANRI, Makassar 143, "Dag Register 1 June 1806 - 31 Mei 1809".

¹¹² Ibid.

¹¹³ ANRI, Hoge Regering 3578, fols. 29-30.

¹¹⁴ ANRI, Makassar 115, "Secrete Dag-Register van 19 October 1803-Mei 1809," fol. 86.

¹¹⁵ ANRI, Makassar 143, "Dag Register 1 June 1806 - 31 Mei 1809".

¹¹⁶ Ibid.

¹¹⁷ Chen, "Qingdai zhongye xiamen de haishang maoyi," 63-66.

Chapter 4

The Amoy merchants, who geared these junks, formed a number of ocean trading companies. Their roles, like the *hong* merchants in Canton, included collecting tax from overseas trade, guaranteeing law-abidingness of seafarers, and sending tropical exotics to the Manchu court as tributes.¹¹⁸ Yet, they operated in a distinct milieu. Unlike Canton, Amoy barely received any European ships. It was a centre of a far-flung Chinese junk trading network, and functions as a rendezvous for three trading branches, namely: 1) northward coastal trade with the Lower Yangzi, North China, and Manchuria; 2) eastward cross-strait trade with Taiwan; 3) southward overseas trade with Southeast Asia (the so-called Nanyang).¹¹⁹ These ocean trading companies received licenses from the Manchu Qing Empire to enjoy a certain degree of monopoly in overseas trade with Southeast Asia, in a way like the chartered overseas trading companies of European colonial empires. For securing that monopoly, they routinely provided tropical rarities, such as edible bird's nests, to the Manchu court in Beijing, and paid substantial financial contributions for local governance.¹²⁰ Their business was most prosperous during the reign of Emperor Qianlong (1735- 1795). In a good year, less than ten ocean trading companies organised about 60-70 ocean-going junks to Southeast Asia.¹²¹

By the early nineteenth century, these licensed companies had begun to face fierce competition from unauthorised private traders, who were largely free from burdensome contributions to the Manchu court and local government. As a result, the licensed ocean trading companies gradually lost ground in Southeast Asia to private traders. Their last strongholds were Makassar and Batavia routes, thanks to a long-established relationship with the Dutch.¹²² Each year, when a junk arrived at Batavia, its captain delivered a letter from an ocean trading company, along with some gifts, to the Governor

¹¹⁸ Ibid, 61-100.

¹¹⁹ Ng, *Trade and Society*.

¹²⁰ Chen, "Qingdai zhongye xiamen de haishang maoyi," 92.

¹²¹ Ibid, 74, 92.

¹²² Blussé, "Junks to Java"; idem, "The Vicissitudes of Maritime Trade."

General of the Dutch Empire in Asia. Thereafter, they would bid for an annual pass to Makassar, which became highly valuable because of the huge profit from the sea cucumber trade. For instance, on 29 June 1809, a Makassar pass was acquired at an astonishing price of 130,000 *rijksdaalders* in Batavia by an Amoy junk captained by Que Tongsoeg.¹²³ With this pass, another junk would be geared from Amoy to Makassar by the same ocean trading company that made investment in the Batavia voyage and obtained the pass. In this deal, the ocean trading company that organised these voyages was Ko Hap Seeng (和合成), owned by Chen Ban'guan (陳班觀).¹²⁴ Chen would soon become the last ocean trading company merchant in Amoy in 1813, when all other ocean trading companies went bankrupt.¹²⁵

Also in 1813, the British East India Company (EIC), which had occupied Makassar in 1812 as part of the Napoleonic Wars, ended the pass system and temporarily closed Makassar for junks from China.¹²⁶ When the Dutch returned in 1816, they attempted to restore the pass system. However, Makassar was now facing increasing competition from alternative ports in the Melaka Straits controlled by the Bugis and the British, to which we will return soon. As a result, the junk trade between Amoy and Makassar never returned to its former prosperity and instead gradually ceased to exist in the 1820s.¹²⁷ Thereafter, Makassar remained as an important regional centre in the trade of sea cucumbers, but no longer played a dominant role.

¹²³ Van der Chijs, *Nederlandsch-Indisch Plakaatboek, 1602-1811, vijftiende deel*, 766; ANRI, Hoge Regering 1178, “generale resoluties, 1809 april 4 - 1809 juni 29,” 29 Jun. 1809, fol. 1246. The deal was guaranteed by two Chinese in Batavia: Tan Peengko (陳炳郎, Chen Binglang) and Tan Taplong. Tan Peengko was a Chinese Lieutenant in Batavia from 1792-1808. Blussé and Nie, *The Chinese Annals of Batavia*, 193, 255.

¹²⁴ Chen, “Qingdai zhongye xiamen de haishang maoyi,” 61-74.

¹²⁵ Ibid, 92.

¹²⁶ The EIC occupied Makassar from 1812-1816 and declined to issue the Makassar pass in 1813. ANRI, Makassar 291/6, “Bekendmaking,” 6 Jan. 1813.

¹²⁷ Sutherland, “Trepang and Wangkang,” 457-459; ANRI, Makassar 3/2, “Algemeen Verslag van het Gouvernement Makassar over 1833,” 1st Afdeeling_B_e. handel.

Chapter 4

While the Amoy-Makassar-Batavia system mainly drew sea cucumbers from the eastern Indonesian Archipelago and northern Australia, outside this system, two other sea cucumber networks were also taking shape in late eighteenth-century Southeast Asia. One was the famous Sulu Zone. From the late eighteenth century, Southeast Asian littoral society witnessed intensified raiding by the Iranun and Balangingi Samal from Mindanao and the Sulu Islands. They systematically enslaved coastal communities from Luzon to Sumatra, turning them into either coercive labour or domestic servants in Sulu, which was enjoying an economic boom stimulated by surging Chinese demand for Southeast Asian sea delicacies such as sea cucumbers and edible bird's nests.¹²⁸ The largely unpatrolled waters of the eastern Indonesian Archipelago were an important raiding zone of these "saltwater slavers".¹²⁹ Taking advantage of the absence of strong regional powers, they allied with local raiders, turning some coastal polities of Sulawesi, such as Toli-toli (Totoli) and Tambuku (Bungku or Tobungku), into their forwarding bases.¹³⁰

While the system of the Sulu Zone focused on raiding, the network of the Bugis evolved into an alternative trading system outside the monopoly of the VOC. After the Spice Wars, densely populated Southwest Sulawesi generated massive emigration, which gave rise to a far-flung Bugis-Makassarese diasporic network (Map 4.3).¹³¹ To the west, many moved to the Malay World and established settlements in the disintegrating Johor Sultanate.¹³² To the east, the shallow waters of the eastern coast of Sulawesi attracted them to establish trading posts to collect sea cucumbers from the

¹²⁸ Warren, *The Sulu Zone*; idem, *Iranun and Balangingi*; idem, "Saltwater Slavers and Captives"; idem, "The Balangingi Samal". For criticisms of the slaves to coercive labour model, see Henley, "Review of James F. Warren, *The Sulu Zone*"; Sutherland, "The Sulu Zone Revisited"; Gaynor, "Piracy in the Offing," 841-844.

¹²⁹ Warren, *The Sulu Zone*, 160-165.

¹³⁰ Velthoen, "Wanderers, Robbers and Bad Folk"; Warren, *Iranun and Balangingi*, 154-163.

¹³¹ Lineton, "Pasompe' Ugi," 173-201; Andaya, "Local Trade Networks in Maluku," 72-75; idem, "The Bugis-Makassar Diasporas"; Leirissa, "The Bugis-Makassarese in the Port Towns Ambon and Ternate."

¹³² Andaya, *The Kingdom of Johor*, 279-323.

local Sama people.¹³³ After 1819, via their trans-Java sea network, they increasingly circumvented Makassar to ship sea cucumbers from the eastern Indonesian Archipelago directly to Singapore for trading with the Chinese.¹³⁴

These trading networks bridged the Chinese consumer market with an intertidal zone in archipelagic Southeast Asia.¹³⁵ Along this intertidal zone, there were many coastal communities like the Alfurs in Aru, who, as mentioned earlier in this section, were seasonally mobilised when Chinese dealers came to their villages and exchanged merchandise for sea cucumbers. Besides them, the more professional sea cucumber collectors were the Sama people, recorded as Sama Bajau or Orang Bajau in many written records.¹³⁶ Well-known as “sea people”, they settled their families in boats or stilt-houses in the intertidal zone and practised a maritime-oriented life.¹³⁷ Their ethnic label “Sama Bajau” betrays two traditions. Sama is an autonym, widely used by the Sama in the southern Philippines and eastern Indonesia to refer to their own communities.¹³⁸ It is a word shared by modern Indonesian and Malay, meaning “together” or “same”. In self-reference, the Sama normally couple it with a toponymic modifier, for instance, an island or a strait, indicating their sense of littoral belonging. Bajau, instead, is an exonym. Its origin is debatable. The recent research by Jennifer L. Gaynor reveals a Portuguese root, showing “Bajau” or “Bajo” was derived from an Iberian term “*baixo/baxo*”, meaning “shoal”. It

¹³³ Velthoen, “Contested Coastlines,” 188-212.

¹³⁴ Tagliacozzo, “A Necklace of Fins,” 31, note 41; Crawford, *Journal of an Embassy from the Governor-General of India to the Courts of Siam and Cochin China*, vol. 2, 366-367; Trocki, *Prince of Pirates*, 21-74; Koh, “Familiar Strangers and Stranger-kings,” 397-399.

¹³⁵ For the concept of “intertidal”, see Gaynor, *Intertidal History in Island Southeast Asia*.

¹³⁶ For a survey of the early modern sources concerning Sama’s involvement in the sea cucumber economy, see Nolde, “Changing Tides,” 155-171.

¹³⁷ Gaynor, *Intertidal History in Island Southeast Asia*; Sopher, *The Sea Nomads*; Pelras, “Notes sur quelques populations aquatiques de l’Archipel nusantarien”; Sather, *The Bajau Laut*; Chou, *Indonesian Sea Nomads*; He and Faure, eds., *The Fisher Folk of Late Imperial and Modern China*.

¹³⁸ Sather, *The Bajau Laut*, 5.

Chapter 4

was used to refer to the Sama because they lived on the intertidal zone and were often employed by early Portuguese traders as pilots to navigate shallow waters with many shoals.¹³⁹

With deep knowledge about the tropical waters, the Sama exploited an ecological setting very different from the northern world of sea cucumbers. The relatively calm tropical sea surface of the eastern Indonesian Archipelago contributes to much better visibility than the North China Sea and the Japan Sea. The colourful coral seabed of the tropics also generates a far richer diversity of tropical species of sea cucumbers than the temperate waters of Northeast Asia. Among the rich diversity of tropical sea cucumbers, the types that were most sought after in the Chinese consumer market usually distributed on relatively deep sandy coral reefs, instead of the muddy intertidal zone.¹⁴⁰ The rule of thumb, according to Vosmaer, was that “the deeper the water, the better is the sort of the sea cucumbers for trade”. The typical underwater habitat of valuable sorts of sea cucumbers is “white sand with widespread coral stones, or also covered with a thin layer of mud and vegetated with a sort of seagrass”.¹⁴¹ John Crawfurd’s *History of the Indian Archipelago* (1820) also noted that sea cucumbers were found “chiefly on coral reefs, and never on flat muddy shores,” and “the most considerable fisheries are consequently to the eastward from Celebes (Sulawesi) to New Guinea (Papua) and Australasia (Australia)”.¹⁴² This observation is soundly founded on the rich concentration of coral reefs in this region, which, as Sutherland has pointed out, “were hazardous to shipping but provided essential marine resources”.¹⁴³

With this tropical marine environment, Southeast Asian littoral society developed different techniques to collect sea cucumbers. At a low ebb, sea cucumbers could be garnered from the exposed

¹³⁹ Gaynor, *Intertidal History in Island Southeast Asia*, 44-63.

¹⁴⁰ Bik, *Dagverbaal eener reis*, 69, note 2; Wang, *Haidao yizhi*, *juan* 4, 111.

¹⁴¹ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 151.

¹⁴² Crawfurd, *History of the Indian Archipelago*, vol. 3, 441.

¹⁴³ Sutherland, *Seaways and Gatekeepers*, 49.

intertidal zone. This demanded no special expertise and was undertaken mainly by Sama children and women as well as people who lived on the shore, who Vosmaer referred to as coastal inhabitants (*kustbewoners*).¹⁴⁴ For catching larger and more valuable types, certain equipment and expertise were required. Vosmaer noted that, in shallow waters, coastal inhabitants preferred to catch sea cucumbers during the night when the sea was relatively calm, and they could also avoid the scorching sun. They usually carried a torch to light up the sea and stood on their light canoes with a pole. That pole, as its Makassaerese name, *tokong-tokong tripang* (sea cucumber bargepoles),¹⁴⁵ indicates, served two purposes, namely, for steering the canoe and for piercing sea cucumbers. For the latter purpose, the pole was designed as a long and thin bamboo with two iron points on one end, like a fork.¹⁴⁶

The deeper waters, where the most valuable sea cucumbers abounded, were Sama's terrain. In 1773, a British country trader-cum-EIC officer, Thomas Forrest,¹⁴⁷ visited some coral islets of the Balabalagan Islands (Little Paternoster), halfway between Borneo and Sulawesi. There, he found many boats of the Sama, who were fishing sea cucumbers in "seven to eight fathom waters" (ca. 12.6-14.4 metres). When they saw sea cucumbers in clear water, they stroke it "with an instrument, consisting of four bearded iron prongs, fixed along an almost cylindrical stone, rather smaller at one end than the other, about eighteen inches long."¹⁴⁸ This device was called *tripang ladung* in Makassarese and Malay, meaning "sea cucumber plummet".¹⁴⁹ It had different local adaptations. Vosmaer, who was most actively along the south and east coasts of Sulawesi, observed that the Sama made it of lead, weighing

¹⁴⁴ Vosmaer, "Korte beschrijving van het zuid-oostelijk schiereiland van Celebes," 153.

¹⁴⁵ Koningsberger, *Tripang en tripangvisserij in Nederlandsch-Indië*, 61; Cense, *Makassaars-Nederlands woordenboek*, 859.

¹⁴⁶ Vosmaer, "Korte beschrijving van het zuid-oostelijk schiereiland van Celebes," 153.

¹⁴⁷ Forrest was then affiliated to the EIC factory in Balambangan, an island to the northeast of Borneo. He made several reconnaissance voyages to the eastern Indonesian Archipelago to challenge Dutch dominance. Miller, "English Country Traders and Their Relations with Malay Rulers."

¹⁴⁸ Forrest, *A Voyage to New Guinea and the Moluccas*, 373.

¹⁴⁹ Cense, *Makassaars-Nederlands woordenboek*, 353, 787; Vosmaer, "Korte beschrijving van het zuid-oostelijk schiereiland van Celebes," 152; Koningsberger, *Tripang en tripangvisserij*, 57.

Chapter 4

eight to ten pounds, to which three iron points without barbs were fixed. It was lowered with a line to reach a depth up to ten fathoms (18 metres), and often even deeper.¹⁵⁰ A sample from South Sulawesi is collected by the National Museum of Ethnology in Leiden (Figure 4.3).



Figure 4.3 Sea cucumber plummet (*tripang ladung*) (10 x 10 x 65 cm, palm wood, lead, brass, and rattan, collected from South Sulawesi).

Source: Museum Volkenkunde, Leiden, RV-131-7.

This device was key to the Sama's deep-water sea cucumber fishery. It targeted large sea cucumbers living on offshore coral reefs in clear tropical waters. It demanded familiarity with underwater terrain and sea currents. A precondition to accurately target underwater sea cucumbers was that the sea surface should not be very wave-rippled. The Sama exploited a relatively waveless period, namely, the first half of daytime, when land breeze was dying and slowly shifting to sea breeze.¹⁵¹ They also distinguished themselves from other sea cucumber fishers by adhering to this practice. Vosmaer noted that on the north coast of Australia, while the main fleets from Makassar focused on the mass-production of low-value varieties of sea cucumbers through diving in the relatively muddy waters,¹⁵²

¹⁵⁰ Vosmaer, "Korte beschrijving van het zuid-oostelijk schiereiland van Celebes," 152.

¹⁵¹ Ibid, 152-153.

¹⁵² Ibid, 154-155.

the Sama sailed with their own prahus and stroke more valuable species with their characteristic sea cucumber plummets.¹⁵³

Profit from this profession facilitated some of these so-called sea people to settle down. Vosmaer noted that about 200 households of the Sama chose to stay on Koningareng (Koedingaring), a small islet immediately outside Makassar. They became the so-called “settled Orang Bajau” (*wonende Orang Bajos*), which I refer to here as the settled Sama.¹⁵⁴ Although Makassarese still called them Water People (*Tau-ri-Djene* or *tu-ridje’ne*),¹⁵⁵ they had already received protection from local land-based political power and kept their wives and children on the shore.¹⁵⁶ They sailed with their relatively big ships, a type of *padewakang* of about 10 to 15 *keoyan* (ca. 270-405 piculs), which loaded a number of small canoes. Once they arrived at a fishing field, they searched for marine products, such as sea cucumbers, with these canoes.¹⁵⁷ Their settlement, Koningareng, became a renowned centre for processing and trading high-value sea cucumbers, and particularly the top-priced black and large sand sea cucumbers (*tripang passir*).¹⁵⁸

Yet, there were still many unsettled Sama people, labelled by Vosmaer as the “nomadic Orang Bajau” (*rondzwervende Orang Badjos*), which I refer to here as the nomadic Sama. They had no permanent residence and stayed in their boats. Each boat corresponded to a family. Their boats were also relatively small, seldom above 7-8 *keoyan* (189-216 piculs).¹⁵⁹ Many of them lived along the east and south coasts of Sulawesi, presumably under the protection of a major Bugis power in South Sulawesi,

¹⁵³ Ibid, 159, 161.

¹⁵⁴ Ibid, 115-116.

¹⁵⁵ Ibid, 114, 159, 161, 175.

¹⁵⁶ Ibid, 115.

¹⁵⁷ Ibid, 115-116.

¹⁵⁸ Ibid, 116, 127, 163, 165, 175; Bik, *Dagverbaal eener reis*, 71.

¹⁵⁹ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 116-117.

Chapter 4

Bone.¹⁶⁰ Their sea cucumbers, known as “*tripang* Bajo” (Bajau sea cucumbers) or “Buton *tripang*” (Buton sea cucumbers),¹⁶¹ were also renowned in Makassar, securing a price better than sea cucumbers collected by non-Sama coastal people.¹⁶²

As we will return to in the final section, the sea cucumbers offered in Makassar were not only from the eastern Indonesian Archipelago. From the second half of the eighteenth century, Makassar became a base for professional sea cucumber collectors, known as *trepangers*, who organised a yearly expedition to the north coast of Australia to catch and process sea cucumbers.¹⁶³ Their products would be sold in Makassar to the Chinese junk that came every year from Amoy. Back to Amoy, the junk’s load of sea cucumbers would be redistributed by Chinese coastal traders to the Lower Yangzi and North China, catering to a consumer market that was developing a new taste for tropical sea cucumbers.

Reviewing these changes, we may find that, after the Spice Wars, despite the VOC’s monopoly, the waters of the eastern Indonesian Archipelago did not end up as a closed sea (*mare clausum*) or “embittered backwaters”.¹⁶⁴ Instead, largely outside the VOC’s control, the former spice trading centre of Makassar became a sea cucumber hub, and the entire eastern Indonesian Archipelago became increasingly oriented towards a cross-China Seas world of sea cucumbers. The loss of spice trade to the VOC might have only made the emerging trade of sea cucumbers to China more attractive to the local society and pushed a fundamental reorientation of this region from the world of spices to the

¹⁶⁰ Ibid, 127-128; Velthoen, “Contested Coastlines,” 201-206; Gaynor, *Intertidal History in Island Southeast Asia*, 107-165.

¹⁶¹ Velthoen, “Contested Coastlines,” 204; Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 179.

¹⁶² Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 179-180.

¹⁶³ Macknight, *The Voyage to Marege*.

¹⁶⁴ Here, I adapt a concept (embittered backwaters) from Reid’s interpretation of the decline of “the cosmopolitan trading cities of Banten and Makassar” after the Dutch conquest. Reid, *Southeast Asia in the Age of Commerce, 1450-1680, Volume Two*, 281.

world of sea cucumbers. Makassar, moreover, became a forwarding base to further incorporate northern Australia into this sea cucumber world. I want to argue that by the early nineteenth century, from the perspective of Southeast Asian littoral society, the Dutch-controlled Spice Islands in the eastern Indonesian Archipelago, including the Maluku and Banda islands, had become no more than some isolated colonial enclaves surrounded by a globally connected sea cucumber world.

3. In the Shadow of the Liao/Manchu Sea Cucumbers

To many economic historians, the emergence and expansion of this southern sea cucumber world supported a powerful theory that the eighteenth century in Southeast Asia was a Chinese century. During this period, Chinese traders, agriculturalists, and miners penetrated to even the remotest corner of Southeast Asia and profoundly influenced the local economy and society.¹⁶⁵ However, if we change the perspective from economic dominance to cultural interactions, we may also argue that the eighteenth century was also a Southeast Asian century in Chinese food culture. Beyond the previously narrow focus on spices and aromatics, marine products from Southeast Asia, represented by sea cucumbers and edible nests, emerged from obscurity to become top sea delicacies in Chinese cuisine throughout the eighteenth century.

Therefore, instead of raising a question from a China-centric perspective about Chinese economic dominance in Southeast Asia, the following sections approach this issue from the other way around by asking: How did Southeast Asian things conquer Chinese taste? To answer this question, we shall return to the order of the sea cucumbers provided by Vosmaer in 1835. This puzzling table (Table 4.1) listed 19 types of tropical sea cucumbers commercially traded in Makassar. In practice, for indigenous sea cucumbers collectors in the eastern Indonesian Archipelago, such as the Sama, it would

¹⁶⁵ Blussé, “In Praise of Commodities”; Trocki, “Chinese Pioneering in Eighteenth-Century Southeast Asia”; Blussé, “Chinese Century”; Tagliacozzo, “A Necklace of Fins”; Sutherland, “Trepang and Wangkang.”

Chapter 4

be too laborious to precisely distinguish and negotiate a separate price for each type.¹⁶⁶ They instead grouped them into three-tiered categories (Table 4.3).¹⁶⁷

The first tier, called *batoe* by Makassarese or *balla sekali* by the Sama, included the first three types, namely: *kassi* (sand sea cucumber), *batoe* (black stone sea cucumber), and *koro* (white stone sea cucumber). The second tier, called *pandang* by Makassarese or *talipang* by Sama people, usually consisted of *pandang* (spiky sea cucumber), *loeleng* (black sea cucumber), *kassoet* (flat sea cucumber), and *boeang koeliet* (skinned sea cucumber). The third tier, called *gama* by both the Makassarese and the Sama, consisted of less valuable types from *gama batti* (spotted slimy sea cucumber) till *mossee* (burying sea cucumber), but it excluded the last two types, *kawasa* (yellowish legume sea cucumber) and *katjang goreng* (roasted peanut sea cucumber), whose value was too little to count.¹⁶⁸ In the early 1830s, the purchase prices of these three categories from the nomadic Sama were normally as follows

<i>Batoe / balla sekali</i>	25 Spanish dollars per picul ¹⁶⁹
<i>Pandang / talipang</i>	15
<i>Gama</i>	10

Table 4.3 Three categories of sea cucumbers in the eastern Indonesian Archipelago.

Source: Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 174-175.

These three categories provide a key to deciphering the order of the sea cucumbers and to understanding the rise of tropical sea cucumbers in Chinese cuisine. To begin with, the least-valued *gama* category points to a sea cucumber culture indigenous to Southeast Asia. *Gamat* is originally a Malay term, generically referring to all sea cucumbers.¹⁷⁰ Yet, in Makassarese, *gama*’ acquires a specific meaning referring to “strings or threads of slime”,¹⁷¹ and *taripang gama*’ specifically refers to a slimy

¹⁶⁶ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 148-149.

¹⁶⁷ Ibid, 149, 178-179.

¹⁶⁸ Ibid, 174-175.

¹⁶⁹ Reals of 24 silver *dubbeltjes*.

¹⁷⁰ Akamine, “The Role of Samas/Bajaus,” 155-156; Hairul and Khan, *Kamus Lengkap*, 268; Burkill, *A Dictionary of the Economic Products of the Malay Peninsula*, 1200.

¹⁷¹ Matthes, *Makassaarsch-Hollandsch woordenboek*, 72.

variety of sea cucumber that “secretes strings of slime in excretion”.¹⁷² This meaning likely stems from an everyday observation that the primary function of sea cucumbers in Malay medicine is for making liquid medicines, known as *gamat* water (Malay: *air gamat*) (figure 4.4) or *gamat* oil (Malay: *minyak gamat*), as a remedy for a wide range of illness, such as “wound healing, treatment of stomach ulcers and as a painkiller”.¹⁷³ The most commonly used species for making these liquid medicines are *Stichopus berrmanni* (curry fish) and *Stichopus horrens* (warted sea cucumber), whose body can excrete slimy fluid.¹⁷⁴ Given the close contact between the Malay and the Makassarese people since the sixteenth century,¹⁷⁵ it is possible that the former’s practice of using slimy sea cucumbers for making liquid medicines might have given the latter an impression that the sea cucumbers (*gamat*) used by the Malay people are slimy. As a result, they borrowed the Malay term, *gamat*, specifically for slimy sea cucumbers.

¹⁷² Cense, *Makassaars-Nederlands woordenboek*, 786.

¹⁷³ Choo, “Fisheries, Trade and Utilization of Sea Cucumbers in Malaysia,” 58-59.

¹⁷⁴ Ibid, 57; Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers of the World*, 102-105.

¹⁷⁵ After the fall of Melaka to the Portuguese (1511), dispersed Malays moved throughout the Indonesian Archipelago. Since at least the late sixteenth century, a Malay community had been established in Makassar. Cummings, “The Melaka Malay Diaspora in Makassar”; Amir and Hussin, *Pedagang Melayu di Sulawesi Selatan*.



Figure 4.4 A bottle of *gamat* water from Malaysia. The yellowish sea cucumbers depicted on the package represent the typical *gamat* sea cucumbers.

Source: <https://shopee.com.my/Air-Gamat-Asli-MH-Saujana-i.41498664.1489826238>.

Why did these slimy sea cucumbers, originally for making traditional Malay medicines, become the least-valued category in Makassar's China trade? This question is related to Chinese perceptions of tropical sea cucumbers. Within this *gama* category, the two relatively valuable types were *gama batti*

(spotted slimy sea cucumber) and *gama* (slimy sea cucumber). Vosmaer provided details about *gama batti*. It was a sort of spotted sea cucumber, whose entire surface was covered with circular, faint-yellow or white spots. When dried, it had unregular deep furrows and unevenness. Its body was pale brown. It was considered as the best in the *gama* category and was also the only *gama* species from the relatively deep waters.¹⁷⁶ Hokkien Chinese traders in Makassar called this spotted slimy sea cucumber (*gama batti*) “*tsja-thang*”, and the slimy sea cucumbers (*gama*) “*tsja*”. While *thang* (斑? or 點?) is likely a character meaning “spot”, the shared syllable *tsja* is the Hokkien pronunciation of 赭 (*zhe* in Mandarin Chinese), referring to a clay pigment, ochre, whose colour ranges from yellow to deep orange or brown.¹⁷⁷ This is exactly the typical colour of the most important *gamat* species in Malay tradition, namely, *Stichopus horrens* (warty sea cucumber) and *Stichopus herrmanni* (curry fish) (Figure 4.4).¹⁷⁸ For their yellowish colour, these two species are also known as yellow jade sea cucumbers (*huang yu shen* 黃玉參) in the present-day sea cucumber market.¹⁷⁹

Several other types of sea cucumbers in the *gama* category also fall within this colour range. *Taai-kong-kong* (*tai kong-kong*) in Makassarese means “dog dung” (*bondendrek*), apparently because of its unpleasant appearance.¹⁸⁰ Its Hokkien Chinese name *ba* (屎) refers to a similar thing, namely, excrement. In the present-day sea cucumber market, it is also made of *Stichopus herrmanni* or *Stichopus horrens*.¹⁸¹ *Koenngie* means yellow in Makassarese, known as made of *Holothuria fuscopunctata* (elephant trunkfish).¹⁸² According to Vosmaer, *Koenngie* was the largest sort of sea cucumbers in Makassar,

¹⁷⁶ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 171.

¹⁷⁷ Schlegel, *Nederlandsch-Chineesch woordenboek met de transcriptie der Chineesche karakters in het Tsiang-tsin dialect*, 716.

¹⁷⁸ Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 102-105.

¹⁷⁹ Akamine, *Namako o aruku*, 245.

¹⁸⁰ Cense, *Makassaars-Nederlands woordenboek*, 787.

¹⁸¹ Tuwo, “Status of sea cucumber fisheries and farming in Indonesia,” 51; Akamine, *Namako o aruku*, 236, 310.

¹⁸² Cense, *Makassaars-Nederlands woordenboek*, 786; Tuwo, “Status of sea cucumber fisheries and farming in Indonesia,” 51.

Chapter 4

sometimes reaching one foot long in its dried form.¹⁸³ Because of its large size, it was also the only type of low-value *gama* sea cucumbers that demanded cutting open before being dried. It, however, had a very low market value because its skin was too thick, but its edible part was very meagre and not delicious. The Chinese called them *jöe-poeë* (橘皮), namely, orange peel.¹⁸⁴ *Donga* is derived from a Malay term, *dongak*, which means “tilted upwards as of the end of an object”.¹⁸⁵ In Makassarese, it refers to a type of sea cucumbers “with a little bent snout”.¹⁸⁶ J. C. Koningsberger’s 1902-1903 sea cucumber survey shows that it corresponded to *Holothuria graeffii* (*Pearsonothuria graeffii*).¹⁸⁷ Its colour is “cream to tan with numerous large brown patches and with fine dark speckling”.¹⁸⁸

A shared feature of these colourful *gama* sea cucumbers is that they were all relatively easily accessible to Southeast Asian littoral society but fell outside the Chinese conceptualisation of the perfect sea cucumbers. According to Vosmaer, besides the spotted slimy sea cucumbers, all other *gama* sea cucumbers were from “shallow grounds” (*ondiepe gronden*).¹⁸⁹ They could be garnered by coastal populations, especially children and women, during a low ebb. Meanwhile, they were very alien to the taste of Chinese elite consumers, who initially only preferred black and spiky Liao/Manchu sea cucumbers from the temperate waters of Northeast Asia. All the above mentioned *gama* sea cucumbers are neither black, nor spiky, nor from temperate waters. Eighteenth-century Chinese medical practitioners explicitly depreciated them. For instance, a mid-eighteenth-century Chinese medical treatise, *Mirror of a Hundred Herbs* (*Baicao jing* 百草鏡), notes that yellow sea cucumbers were from the

¹⁸³ Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 56; Tuwo, “Status of sea cucumber fisheries and farming in Indonesia,” 51; Akamine, *Namako o aruku*, 310.

¹⁸⁴ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 171-172.

¹⁸⁵ Hairul and Khan, *Kamus Lengkap*, 232.

¹⁸⁶ Cense, *Makassaars-Nederlands woordenboek*, 786.

¹⁸⁷ Koningsberger, *Tripang en tripangvisserij*, 47.

¹⁸⁸ Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 38.

¹⁸⁹ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 171.

muddy tideland of the South Sea. They were large and spike-less. Their meat was tough and not delicious. They possessed no such medical functions as the Liao/Manchu sea cucumbers.¹⁹⁰

For Southeast Asian literal society, one strategy for countering these prejudices was to search for tropical species that resembled the idealised model of temperate sea cucumbers. In the *gama* category, there was a sort of sea cucumber called Japan (*jeboen* 日本 in Hokkien Chinese and *japan* in Dutch). The so-called Japan sea cucumbers are a type of greenish, squarish, and spiky tropical sea cucumber, namely, *Stichopus chloronotus* (greenfish).¹⁹¹ It is observed by the researcher of sea cucumber culture, Akamine, that, in the present-day sea cucumber market, the Japan sea cucumbers are known as green spiky sea cucumbers (*lii cishen* 綠刺參). After proper processing, its dried form closely resembles Japanese black and spiky sea cucumbers.¹⁹² Akamine has made an insightful suggestion that the fact that a type of commercially traded sea cucumber in early nineteenth-century Makassar was named after Japan, implies that there was communication between the northern and southern traditions in the early modern period.¹⁹³

Who made that communication possible? In Chinese maritime history, it is well-known that these two worlds were connected by a cross-China Seas junk trading network. Makassarese sea cucumbers, as mentioned in the previous section, were first shipped to Amoy, and then redistributed via a Chinese coastal trading network. An important port city in this coastal network was Zhapu (near Hangzhou), which was the centre of Sino-Japan trade in the eighteenth and early nineteenth centuries.¹⁹⁴ Via Amoy and Zhapu, information could be circulated between Japan and Makassar. This

¹⁹⁰ This work was compiled by the younger brother of Zhao Xuemin and cited in Zhao, *Bencao gangmu shiyi*, *juan* 10:37.

¹⁹¹ Koningsberger, *Tripang en tripangvischerij*, 42.

¹⁹² Akamine, *Namako o aruku*, 149-151.

¹⁹³ *Ibid*, 307-315.

¹⁹⁴ Ng, *Trade and Society*, 151-152; Liu, “Qingdai de Zhapu gang yu Zhong-Ri maoyi”, 187-244; Jiao, “Kuaguo maoyi yu defang shehui.”

link may also help explain why the greenish spiky sea cucumber from Makassar was named after Japan instead of Liaodong/Manchuria. Different from the domestically traded Liao/Manchu sea cucumber, both Japan and Makassar sea cucumbers were imported from overseas. Before entering the Chinese consumer market, they had a good chance to be mixed at a trading port along the China coast, such as Zhapu or Amoy.

Yet the price of these tropical “Japan” sea cucumbers was low. In 1789, it was sold at 12 Spanish dollars per picul in Makassar, lower than slimy sea cucumbers (*gama*, 17 Spanish dollars) and foul sea cucumbers (*taaikongkong*, 15) but higher than yellow sea cucumbers (*koine*, 11) and bent sea cucumbers (*longe* or *donga*, 9), merely achieving a medium price in the *gama* category (Table 4.7).¹⁹⁵ Such a low price, on one hand, might be caused by its easy accessibility in Southeast Asia. Like many other *gama* sea cucumbers, it is a shallow-water species, with a habitat “in shallow waters from the intertidal to depths of 10 m,” and can be gleaned by hand at low tide.¹⁹⁶ On the other hand, we must also acknowledge that although its shape resembles the black and spiky sea cucumbers from Japan, a seasoned trader can easily tell the difference. Its body is relatively squarish, its pricks are strictly aligned in four rows (instead of irregularly covering the entire dorsal surface), and its colour is greenish black (instead of greyish or brownish black). We shall bear in mind that the sea cucumber market in late eighteenth- and early nineteenth-century China had attained considerable sophistication so that even the authentic Japanese sea cucumbers were carefully classified into over ten grades in accordance with some subtle differences.¹⁹⁷ By the end of the eighteenth century, their export price in Nagasaki ranged from 0.09 tael per catty (ca. 15.43 Spanish dollars per picul) to 0.406 tael per catty (ca. 69.6 Spanish dollars per

¹⁹⁵ NA, VOC 3858, “Bijlaagen gehoorende tot de resolutien beginnende met den 1 Maij anno 1789...N. 3,” fols. 5-7.

¹⁹⁶ Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 100-101.

¹⁹⁷ *Huizhou minjian zhenxi wenxian*, vol. 15, 296.

picul).¹⁹⁸ In such a professional market, the “fake” Japanese sea cucumbers from Makassar might be used to adulterate a lower grade of Japanese sea cucumbers but could be easily exposed if being mixed with higher grades.

A better strategy was to find a tropical species that was no less spiky and black. This leads us to the second category, *pandang*. This category is named after its most valuable sort, *pandang*, which in Makassarese means the spiky fruit of pandanus (*pandan*). Its Malay name is *nanas*, meaning “pineapple”, and its Hokkien Chinese name is *tsjie* (刺), meaning pricks. It corresponds to a large deep-water species, *Thelenotia ananas* (spiky sea cucumbers), whose habitat is “reef slopes and passes, hard bottoms with large coral rubble and coral patches in waters between 1 and 25 m”.¹⁹⁹ Vosmaer noted that a well prepared *pandang* sea cucumber was black, large (between 0.5 to 0.75 foot long), and densely covered by pricks (Figure 4.5).²⁰⁰ These features made it a good rival for the Liao/Manchu sea cucumbers. In 1789, it was sold at 23 Spanish dollars per picul in Makassar, almost twice as much as the Makassarese Japan sea cucumbers (12), and already above the price of the lowest grade of Japanese sea cucumbers in Nagasaki (15.43).²⁰¹

¹⁹⁸ Arai, *Kinsei kaisanbutsu bōekishi*, 47.

¹⁹⁹ Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 116; Koningsberger, *Tripang en tripangrisscherij*, 41

²⁰⁰ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 167.

²⁰¹ NA, VOC 3858, “Bijlaagen gehoorende tot de resolutien beginnende met den 1 Maij anno 1789...N. 3,” fols. 5-7; Arai, *Kinsei kaisanbutsu bōekishi*, 47.



Figure 4.5 Spiky sea cucumber (*Tripang pandang*, *Thelenota ananas*).

Source: Photo by the author in Makassar, 2020.

Moreover, Vosmaer also noted that the Sama had a different term for the *pandang* category, namely, *talipang*.²⁰² It points to the root of a very commonly used word for sea cucumbers borrowed in English as trepang. Akamine has made an innovative study of the root of trepang. He points out that sea cucumbers are generally known as *gamat* in the Malay Peninsula, as *balat* in the Philippines and among the Sama, and as trepang in the Indonesian Archipelago.²⁰³ The last term spread globally after being appropriated by English as trepang and by Dutch as *tripang* around the late eighteenth century. However, as the root of trepang, *talipang* originally refers to something very different. It means centipedes in Sama languages. Likely for their similar appearance, the Sama refer to the spiky *pandang* sea cucumber as *bat lalipan*, *bat talipan*, or *balaq talipang*. As *bat* (*balaq*) is a generic term for sea cucumbers in the Sama language and *lalipan* (*talipan* or *talipang*) means centipedes, these terms in Sama languages

²⁰² Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 174.

²⁰³ Akamine, “The Role of Samas/Bajaus,” 155-156.

literally mean “centipede sea cucumber”. In the Indonesian Archipelago, these terms interestingly evolved into *trepang* referring to sea cucumbers generically, instead of centipede sea cucumbers only.²⁰⁴

The challenge, as Akamine acknowledges, is how to historicise this semantic shift. Searching Dutch sources, I find that this term first appears in the earliest evidence concerning the trade of sea cucumbers in Makassar. One is a report dated 17 January 1695 first identified by David Henley in his study of North Sulawesi. The report was written by a VOC official in Toli-toli (Totoli), an important bay in northern Sulawesi, about some sea cucumber fishers coming from Makassar. It shows that “with proper passes” issued by the Dutch authority in Makassar, the fishers came to the north coast of Sulawesi to collect “*tripan*”. According to these fishers, their “*tripan*” could be sold for 3 rijksdaalders per picul in Makassar, 7 rijksdaalders in Batavia, and 30 rijksdaalders if brought to China. By then, they had already collected 60 piculs and were planning to sail further to Manado on Northeast Sulawesi.²⁰⁵ Another report, first identified by Lance Nolde in his study of Sama’s sea cucumber fishery, is also dated 1695 (18 October 1695). It shows that the Chinese Captain in Makassar, who, as aforementioned, was Wang Yue (Ongwatko), had a contract with the king of Buton, a local regime in Southeast Sulawesi, to let the latter’s people search their beaches (*stranden*) for sea cucumbers (*taripan*), which were described in the Dutch report as “a type of jellyfish” (*een soort van quallen*), for 4 rijksdaalders per picul. It also shows that these people in Buton had already collected 156 piculs, but for unknown reasons, the Chinese Captain declined to pay.²⁰⁶

These records indicate that by 1695 a sea cucumber economy had been emerging in the eastern Indonesian Archipelago with Makassar as its centre. The Chinese community in Makassar was now searching for sea cucumbers around the island of Sulawesi, already as north as Toli-toli and as

²⁰⁴ Ibid, 157-159.

²⁰⁵ NA, VOC 1579, Ternate, fols. 171-172; Henley, *Fertility, Food and Fever*, 71, note 71.

²⁰⁶ Nolde, “Changing Tides,” 157; NA. VOC 7969, Makassar, fol. 207.

Chapter 4

southeast as Buton (Map 4.3). They mobilised the local people to collect sea cucumbers, who seemingly had already learned how to properly cure them for Chinese consumers. Some local fishers, such as those visiting Toli-toli, were even aware how the long-distance trade was organised and the huge price gap between Makassar and China. It is also interesting to note that the Dutch officials in Makassar tolerated these activities and even issued passes for these sea cucumber fishers to sail deeply to the patrolled waters around the Spice Islands.

While commercially traded sea cucumbers, known as *tripan* or *taripan*, were emerging in Makassar, in their consumer market, China, tropical sea cucumbers were facing prejudices. In the second half of the seventeenth century, there were popular rumours in China claiming tropical sea cucumbers from overseas as made of either cowhide or skin of big fish. Zhou Lianggong's 1660s account suggests that sea cucumbers from Fujian were white and were stretched by bamboo sticks to as large as human hand palm, and claimed that "people of the sea even artificially make them with cowhide to fool others" (海上人復有以牛革偽為之，以愚人者).²⁰⁷ Nie Huang's 1698 fish album also described tropical sea cucumbers as white and as stretched by bamboo sticks for drying. It further noted that "in recent years there are a lot of white sea cucumbers. They are all artificially made by foreigners with skin of big fish" (近年白海參之多，皆係番人以大魚皮偽造).²⁰⁸

These rumours can be interestingly linked to a Southeast Asian term for sea cucumbers, *balat* or *balaq*. There is evidence that *balat* was used to refer to sea cucumbers in the early modern Philippines.²⁰⁹ To this day the Sama people in the southern Philippines and eastern Indonesia still refer to sea cucumbers as *bat* or *balaq*.²¹⁰ As Akamine shows, these terms, including *balat*, *bat*, and *balaq*, originally

²⁰⁷ Zhou, *Min xiaoji*, *juan* 2:11b, p. 92.

²⁰⁸ Nie, *Haicuo tu*, *juan* 2, 186-187.

²⁰⁹ Blair and Robertson, *The Philippine Islands*, vol. 21, 308.

²¹⁰ Akamine, "The Role of Samas/Bajaus," 155; Verheijen, *The Sama/Bajau Language in the Lesser Sunda Islands*, 64-65.

mean skin or shell.²¹¹ For instance, in modern Tagalog, *balát* still means “bark of a tree; skin; peelings; leather”.²¹² The linguistic link between skin/leather and sea cucumbers reminds us of these late seventeenth century Chinese accounts, which indicate that a common practice to cure large tropical sea cucumbers was to cut the body open, stretch it with bamboo sticks, and then dry it in the sun.²¹³ This process, as we can imagine, resembles the process of tanning leather or treating fish skin. The resemblance between these two processes as well as their final products might lead to a linguistic link between skin/leather and sea cucumbers, which was accountable for the rise of the cowhide and fish skin rumours in late seventeenth-century China.

Facing these embarrassing rumours, sea cucumber collectors and traders in Southeast Asia might have some incentives to cut down the linguistic link by using a substitute term for *balat/balaq*. In late seventeenth-century Makassar, the emergence of *tripan* or *tariḡan* either as a generic term for sea cucumbers or as a specific term for spiky sea cucumbers likely served such a purpose. Makassar is, interestingly, situated between two Southeast Asian sea cucumber cultures. To its west, sea cucumbers are known by the Malay as *gamat*, mainly for making liquid medicines. To its north, sea cucumbers are known by the indigenous communities of the Philippines as well as the Sama as *balat*, implying their leather-like cured form. Makassarese, however, did not have an indigenous term for sea cucumbers. *Balat* had never been borrowed, and *gamat* was adapted only for slimy sea cucumbers. Back to the late seventeenth century, when the sea cucumber fishery was just emerging amid the economic reorientation of Makassar in the wake of the disastrous Spice Wars, there was likely an urgency to find a proper name to rebrand the stigmatised tropical sea cucumbers for the China trade.

²¹¹ Akamine, “The Role of Samas/Bajaus,” 155.

²¹² Ramos, *Tagalog Dictionary*, 30.

²¹³ Zhou, *Min xiaoji*, *juan* 2:11b; Nie, *Haicuo tu*, *juan* 2, 186-187.

Chapter 4

Against this backdrop, the emergence of *tripan* or *taripan*, whose root was centipede or centipede sea cucumbers, in late seventeenth-century Makassar likely served two purposes: 1). It helped destabilise the north-south dichotomy by indicating spiky sea cucumbers (centipede sea cucumbers) could be also from tropical waters.²¹⁴ 2). The materiality of the spiky sea cucumbers it originally referred to further helped shed off the cowhide or fish skin myth. Vosmaer noted that the way of processing the large spiky sea cucumbers (known as *pandang* by Makassarese and *talipang* by the Sama in early nineteenth-century Sulawesi) was distinct from other large tropical sea cucumbers. They had to be moderately dried, lest their surface became too dry and fragile, and lest their precious pricks broke away.²¹⁵ They also demanded no cutting openlikely because of their elongated shape and fragile pricks.²¹⁶ All these distinctive features made their cured form unlikely to be mistaken for cowhide or fish skin. After all, neither cowhide nor fish skin has a spiky surface.

Reviewing the nomenclatures of different types of tropical sea cucumbers in Makassar, I think that of the three-tiered categories, the least valued *gama* category represented an undervalued Southeast Asian sea cucumber culture, which favoured slimy and yellowish sea cucumbers for making the liquid Malay *gamat* medicines, but they failed to meet the established criteria of perfect sea cucumbers in China, which instead favoured the black and spiky Liao/Manchu sea cucumbers. The second tier, namely, the *pandang* or *talipang* sea cucumbers, bears witness to interactions between the northern and southern worlds. It shows a local initiative from the fishing and trading communities in Southeast Asia to emulate the Liao/Manchu sea cucumbers by collecting black and spiky sea cucumbers from tropical waters. In both cases, the southern world of sea cucumbers was in the shadow of the dominance of

²¹⁴ Akamine, “The Role of Samas/Bajaus,” 160.

²¹⁵ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 167.

²¹⁶ *Ibid*, 166-167.

the Liao/Manchu sea cucumbers, as it had to follow the standard established by the latter. However, for the top tier, the *batoe* category, the situation would become dramatically different.

4. Beyond the Liao/Manchu Dominance

The rise of the sea cucumbers in the *batoe* category was a process through which the southern world of sea cucumbers proposed its own high-value varieties that were able to challenge the dominance of the Liao/Manchu sea cucumbers. For understanding that process, I need to first introduce the change of the price of sea cucumbers in Makassar throughout the eighteenth century.

In the early stage, the price of sea cucumbers was very low in Makassar. As mentioned in the previous section, the 1695 report from Toli-toli indicates that these sea cucumbers, if “well dried and cooked”, were only sold for three rijksdaalders per picul in Makassar, merely one tenth of their expected price in China. The situation did not improve much till 1730, when the Makassar Harbourmaster register showed that there were four types of sea cucumbers (*tari pang*) traded in Makassar, namely: white (*wit*), spiky (*padang* or *doeri*), stone (*steen*), and black (*swarte*) (Table 4.4).²¹⁷ Their price was as follows:

Type	Price (rijksdaalders per picul)
Black sea cucumber	6
Stone sea cucumber	4
Spiky sea cucumber	3
White sea cucumber	2

Table 4.4 Price of sea cucumbers in Makassar (1730).

Source: NA, VOC 2163, fols. 132-139; Sutherland, “Trepang and Wangkang,” 465.

²¹⁷ NA, VOC 2163, fols. 132-139.

Chapter 4

The overall low price notwithstanding, distinctions had emerged.²¹⁸ Whereas white sea cucumbers received the lowest price, spiky sea cucumbers fared slightly better and stone and black sea cucumbers were the most expensive. This pattern likely represents an early stage of market differentiation when traders attempted to exploit the diversity of tropical sea cucumbers for trade to China. This attempt would soon bear fruit. The 1740 data (Table 4.5) shows that while the price of white sea cucumbers remained sluggish, the price of stone and black sea cucumbers had taken off. It is worth noting that above black sea cucumbers, sand sea cucumbers (*passir*) had emerged as the most valuable sort. Meanwhile, slimy *gama* sea cucumbers for the first time appeared and were rendered as the least valuable variety.

Type	Price (rijksdaalders per picul)
Sand sea cucumbers (<i>passir</i>)	32
Large black sea cucumbers	27
Small black sea cucumbers	21
Stone sea cucumbers	15.25
White sea cucumbers	5
Slimy sea cucumbers (<i>gama</i>)	4

Table 4.5 Price of sea cucumbers in Makassar (1740).

Source: Sutherland, "Trepang and Wangkang," 465.

We shall also bear in mind that before 1746, junks from China were not allowed by the VOC to visit Makassar. The trade depended on transshipment via Batavia, which apparently gave rise to extra costs. It is remarkable that, even without direct access to the Chinese consumer market, the sand, black, and stone sea cucumbers had already been sold at high prices. This change indicates that demand for these non-spiky tropical sea cucumbers in China had been growing. Thereafter, the visit of a junk from

²¹⁸ As a comparison, the register shows that the price of edible bird's nests was 80 rijksdaalders per picul and tortoise shell was also about 80. NA, VOC 2163, fols. 132-139.

A World of Sea Cucumbers

Amoy in 1746 opened a new era in Makassar's China trade.²¹⁹ Benefiting from the lowered shipping cost, the price of sea cucumbers in Makassar would increase further. In 1754, the price of sand and black sea cucumbers had reached 46.25 and 32 rijksdaalders respectively, and the price of spiky sea cucumbers had also climbed to 17.5 rijksdaalders.

Type	Price (rijksdaalders per picul)	Volume (piculs)
Sand sea cucumbers (<i>sant</i>)	46.25	19.83
Black sea cucumbers (<i>swaarte</i>)	32	40.96
Unspecified sea cucumbers	27.5	247.3
<i>Sangolo</i> sea cucumbers	23	164.05
Spiky sea cucumbers (<i>padang</i>)	17.5	67.8
Slimy sea cucumbers (<i>gama</i>)	8.5	149.47
Yellow sea cucumbers (<i>geel</i>)	8.125	50.92
Overall		740.33 piculs

Table 4.6 Price of sea cucumbers in Makassar (1754).

Source: NA, VOC 2859, fol. 192.

The volume of the Makassar-Amoy sea cucumber trade expanded enormously in the second half of the eighteenth century. Whereas the junk of 1754 merely purchased 740.33 piculs of sea cucumbers from Makassar, in the 1780s, a junk would typically carry about 6,000 piculs.²²⁰ While the trade volume grew, strong demand in China for tropical sea cucumbers was still pushing up the price. In 1789, the top two varieties, namely, sand and stone sea cucumbers, were sold for 63.5 and 45 Spanish dollars per picul, already above the average price of temperate sea cucumbers in contemporary Nagasaki, which ranged roughly from 15.43 to 69.6 Spanish dollars per picul (Table 4.7).²²¹ Given the longer distance and higher shipping cost of the Makassar trade, we may assume these top tropical sea

²¹⁹ Knaap and Sutherland, *Monsoon Traders*, 145. Before 1769, this direct trade was at times prohibited. Thereafter, it became regular.

²²⁰ Knaap and Sutherland, *Monsoon Traders*, 102.

²²¹ Arai, *Kinsei kaisanbutsu bōekishi*, 47.

Chapter 4

cucumbers from Makassar were sold at a higher price in the Chinese consumer market than temperate sea cucumbers from Japan.

Type	Price (rijksdaalders per picul)
Sand sea cucumber (<i>passer</i>)	63.5
Stone sea cucumber (<i>batoe</i>)	45
Black sea cucumber (<i>zwarte</i>)	41
Stone sea cucumber (middle size) (<i>batoe tenga</i>)	26
Spiky sea cucumber (<i>pandang</i>)	23
Slimy sea cucumber (<i>gama</i>)	17
Stone sea cucumber (small size) (<i>batoe kijjel</i>)	17
Foul sea cucumber (<i>taaikongkong</i>)	15
Marege (first sort)	13
Marege (second sort)	12.5
Japan sea cucumber (<i>Japong</i>)	12
Yellow sea cucumber (<i>konie</i>)	11
Black sea cucumber (small size) (<i>itang kijjel</i>)	11
Burying sea cucumber (<i>mose</i>)	9
Bent sea cucumber (<i>longe</i>) ²²²	9

Table 4.7 Price of sea cucumbers in Makassar (1789).

Source: NA, VOC 3858, “Bijlaagen gehoorende tot de resolutien beginnende met den 1 Maij anno 1789...N. 3,” fols. 5-7.

How did the southern world of sea cucumbers turn the order around? From these price lists, we may find that the most valued types in eighteenth-century Makassar were not the spiky (*pandang*), but the sand, stone, and black varieties. Among them, the so-called black sea cucumbers were not made of a single species. Among commercially traded tropical sea cucumbers, a number of species from the *Actinopyga* genus are black. They include *Actinopyga miliaris* (blackfish or hairy blackfish), *Actinopyga paleuensis* (deep-water blackfish), and *Actinopyga spinea* (burying blackfish).²²³ Besides that, some reddish

²²² *Longe* (*long* in Malay) has a similar meaning as *dongak* (*donga*), namely, curve or bend. Hairul and Khan, *Kamus Lengkap*, 638.

²²³ Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 20-25.

species in this genus, such as *Actinopyga echinites* (“deep-water”²²⁴ redfish) and *Actinopyga lecanora* (stonefish), are also traded as “black” sea cucumbers after being properly cured.²²⁵

Even the top-priced sand (*passir*) sea cucumbers were by their nature also a type of black sea cucumber. Their dried form was elongated, round, large, black, and not cut open (Figure 4.6).²²⁶ Its surface was distinctively wrinkled, as reflected by its Hokkien Chinese name, *Soa-djao* (*shazhou* 沙縐), literally meaning “sand wrinkles”, or *ouw-soa-djao* (*wu shazhou* 烏沙縐), literally meaning “black sand wrinkles” (Table 4.1). It was also known by contemporary overseas Chinese as “black wrinkles” (*wuzhou* 烏縐).²²⁷

These features helped distinguish the sand sea cucumber from less-valued ordinary black sea cucumbers. Vosmaer pointed out that while their preparation was the same, the ordinary black sea cucumbers had a flat and relatively brown belly, and the two ends of their body, as well as some other parts, had some plain surfaces (*vlakken*). Their dried size, seldom larger than 4 Rijnland inches, was smaller than the sand sea cucumber, which sometimes reached half a Rijnland foot (6 inches) long. Moreover, if those ordinary black sea cucumbers had a very flat and quadrilateral shape and a regularly wrinkled surface, they would be classified as flat sea cucumbers, known as *kaassoet* (shoe) in Makassarese and Malay, *hiah* (xue 靴) or *ouw-hiah* (*wuxue* 烏靴) in Hokkien Chinese, and *platte tripang* (flat sea cucumbers) in Dutch.²²⁸

Why did these distinctions matter? Contemporary Chinese sources shed light on their reception in China. Zhang Mu’s 1813 dietary guidance advises that large black sea cucumbers (*dawn* 大烏) that

²²⁴ It is in fact a shallow-water species, “mostly on flats (reefs and seagrass beds) down to 10 m depth”. Ibid, 14.

²²⁵ Akamine, *Namako o aruku*, 176-178, 184-186.

²²⁶ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 165.

²²⁷ Wang, *Haidao yizhi*, *juan* 4, 111.

²²⁸ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 167-168.

Chapter 4

were as hard as wood or stone and weighed over half a catty were the best because their “meat is thick and their flavour is delicious” (肉厚味美). The spiky sea cucumber, which weighed two to three taels, were the second best because their “meat is not as thick as the large black, but their flavour is equal” (肉不及大烏之厚，味則相等). “Bottom-of-straw-slippers sea cucumbers” (*caoxie di* 草鞵底), namely, the flat sea cucumbers, were ranked as the third because “their meat is meagre and they are tasteless” (肉薄無味).²²⁹

Therefore, the spiky surface, which was the typical feature of the conceptualised Liao/Manchu sea cucumbers, was no longer a determinant. What mattered was the gustatory feelings of being meaty and delicious. As we have introduced in the previous chapter, sea cucumbers, like other top delicacies, were mainly valued for the texture of their meat, which carried the delicately prepared broth and eventually determined whether it was delicious. By this standard, a large and meaty sea cucumber, like a sand sea cucumber, became highly valuable.

²²⁹ Zhang, *Tiaoji yinshi bian*, *juan* 6, 364.



Figure 4.6 A preserved black sea cucumber (likely a sand sea cucumber, *tripang pasir*) (18 x 8.5 cm, collected from Tobelo, Maluku, before 1883).

Source: Museum Volkenkunde, Leiden, RV-370-2155.

Moreover, sand sea cucumbers were not ordinary large black sea cucumbers. There is interestingly a distinction between sand sea cucumbers and ordinary black sea cucumbers in Makassar. For instance, in 1740, sand sea cucumbers were sold at 32 rijksdaalders per picul and black sea cucumbers at 27 (large) and 21 (small).²³⁰ In 1754, sand sea cucumbers were sold at 46 rijksdaalders per picul, black sea cucumbers at 32.²³¹ In 1789, sand sea cucumbers were sold at 63.5 Spanish dollars per picul, black sea cucumbers at 41 Spanish dollars per picul and small black sea cucumbers at merely 11 Spanish dollars

²³⁰ Sutherland, "Trepang and Wangkang," 465.

²³¹ NA, VOC 2859, fol. 192.

Chapter 4

per picul. By then, even the price of stone sea cucumbers had climbed to 45, standing above the black (Table 4.7).²³² By the early 1830s, while sand and stone sea cucumbers occupied the first category (*batoe*), the black together with flat sea cucumbers (shoe sea cucumbers), which, as mentioned above, were also black, had fallen into the second category (*pandang*), beneath spiky sea cucumbers.²³³

Therefore, sand sea cucumbers were distinguished from black sea cucumbers, even though among the latter there were large black sea cucumbers, but it seems that the sand was never confused with the black, including the large black. Instead, their price difference gradually increased. This divergence stemmed from ecological and social diversity in the eastern Indonesian Archipelago. Tropical black sea cucumbers, as we have mentioned, consisted of a number of species living in widely different habitats. For instance, *Actinopyga palauensis* (deep-water blackfish) is commonly “found on deeper hard reef surfaces and coarse sand with coral rubble”; *Actinopyga miliaris* (blackfish) is “distributed commonly between 0 and 10 m deep, on sandy beds and intertidal areas”; the so-called “deep-water redfish”, *Actinopyga echinites*, is in fact, a shallow-water species, living “in shallow waters, mostly on flats (reefs and seagrass beds) down to 10 m depth”.²³⁴

Among these varied habitats, the underwater environment of the most valued sand sea cucumbers was, like its namesake, sandy. Bik in 1824 noted that “where the sandbanks consist of more sand than mud, the sea cucumbers are typically the best and named *passir* (sand)”. He also pointed out that these sand sea cucumbers “appear many on Koning Aring (Koningareng)”.²³⁵ Koningareng, as discussed in section two, was a sandy coral islet immediately outside the port of Makassar, hosting a settled Sama community, who had managed to turn this small islet into a renowned sea cucumber

²³² NA, VOC 3858, “Bijlaagen gehoorende tot de resolutien beginnende met den 1 Maij anno 1789...N. 3,” fols. 5-7.

²³³ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 162, 168.

²³⁴ Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 14-15, 20-23.

²³⁵ Bik, *Dagverhaal eener reis*, 69, note 2; 71. Translated from Dutch.

processing and trading centre. We may not assume that all sand sea cucumbers were collected by the Sama residents of Kondingareng on its surrounding sandy sea-bed, because there were many islets like such in the strait of Makassar. What is remarkable is that this settled Sama community had managed to create awareness of the distinction of their sand sea cucumbers from other black sea cucumbers, representing the best sea cucumbers in Makassar.

Meanwhile, the relative decline of black sea cucumbers indicates the problem of quality control among non-Sama sea cucumber collectors. Vosmaer noted that by the early 1830s, the trade of ordinary black sea cucumbers (*tripang loeleng*) had been suffering from adulteration. Black sea cucumbers, like sand sea cucumbers, were not cut open. Their guts were vomited by themselves or partly squeezed by collectors. Their belly therefore became a hollowed space, which could be filled with adulterants such as small and inedible sea cucumbers, or even sand and small stones. This practice, on one hand, unfairly increased their size and weight, and, on the other, induced decay. Vosmaer attributed this practice to the ignorance of quality control among coastal inhabitants.²³⁶

This problem leads to a social and ecological division between coastal inhabitants and Sama people in the eastern Indonesian Archipelago. These so-called coastal inhabitants, as discussed in section two, mostly collected low-value sea cucumbers from tideland. Their black sea cucumbers likely consisted mainly of shallow-water species from a muddy environment, which were disdained by the market which increasingly favoured sand sea cucumbers collected by the Sama on the sandy seabed. Such kind of distinction between coastal inhabitants and the Sama was not limited to black and sand sea cucumbers but spread to products belonging to the same variety. Vosmaer noted that even for the same type of sea cucumbers, those from the Sama typically received a price higher than those from coastal inhabitants.²³⁷ Given the professionalisation of the Sama in the sea cucumber economy as we

²³⁶ Vosmaer, "Korte beschrijving van het zuid-oostelijk schiereiland van Celebes," 167-168.

²³⁷ Ibid, 179-180.

Chapter 4

have seen in section two, we may consider that their expertise contributed their products' good reputation. In comparison, coastal inhabitants, such as the Alfurs, often had other occupations and were less likely to specialise in collecting and processing high-quality sea cucumbers. Their amateurism may well be the explanation for their sea cucumbers' poor reputation and lower price.

Different from black sea cucumbers, another type of high-value sea cucumber, namely, the stone sea cucumbers, was largely controlled by the Sama. They were all cut open during the preparation, leaving no space for adulterants. There were two types of stone sea cucumbers, namely, the black stone and the white stone, made of two deep-water species, *Holothuria nobilis* (black teat fish) and *Holothuria fuscogilva* (white teat fish).²³⁸ Their typical habitat was the terrain of the Sama, namely, coral reefs. This is reflected in the names of black stone sea cucumbers. They were known as *batoe* in Makassarese and Malay, literally meaning stone, with a connotation referring to reef stone. Their Hokkien Chinese name, *ouw-tsjo* (*wujiao* 烏礁), and their Dutch name, *zwarte klip tripang*, both mean black reef sea cucumbers.²³⁹

White stone sea cucumbers are named differently in Makassarese and Malay. Whereas the exact meaning of their Makassarese name, *koro*, is unclear, their Malay name, *soesoe*, means milk or breast.²⁴⁰ It refers to two rows of teat-like outgrowths on both sides of its body. Although black stone sea cucumbers (*batoe*) also have this feature, it seems only white stone sea cucumbers were called *soesoe*, perhaps because its white colour evokes a connotation of milk. Besides colour, the major difference between these two types of stone sea cucumbers is their size. In the early 1830s, while the largest sort of preserved black stone sea cucumbers was four to five Rijnland inches, preserved white stone sea

²³⁸ Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 54-55, 70-71.

²³⁹ Vosmaer, "Korte beschrijving van het zuid-oostelijk schiereiland van Celebes," 165-166.

²⁴⁰ In Makassar, people also refer to a green and black fighting rooster as *djangang koro*, namely, *koro* rooster. It is however not sure what *koro* means. Cense, *Makassaars-Nederlands woordenboek*, 176.

cucumbers were much larger, sometimes as long as 0.75 Rijnland foot (nine Rijnland inches) and as heavy as half a catty.²⁴¹

An interesting observation is that the black colour, which was another distinctive feature of the conceptualised Liao/Manchu sea cucumbers, also became unessential. It was observed by the EIC officer, Thomas Forrest, in his 1773 visit to the Makassar Strait that some Sama people were fishing sea cucumbers on coral reefs. From them, he found that his previous perception of the black sea cucumbers (referred to as “black swallow” by Forrest) as the best was wrong.

The black swallow is reputed the best; but, I have seen some of a light colour, found only in deep water, which I was assured to be of more value in China than the black; and sold even for forty dollars a pecul. The pieces are much larger than are generally those of the black swallow, some of them weighing half a pound.²⁴²

These half-a-pound heavy, deep-water, “more valued in China than the black”, and light-colour sea cucumbers were, with little doubt, white stone sea cucumbers. The price Forrest recorded, namely, 40 Spanish dollars per picul, also accorded with the price of large size stone sea cucumbers in Makassar in 1789 (45 Spanish dollars).²⁴³ Vosmaer also noted that the Chinese preferred fat and large stone sea cucumbers, and graded them in accordance with their size.²⁴⁴ The price list of 1789 also shows no distinction between black and white, but only three grades distinguished by size, namely: the large size stone at 45 Spanish dollars, the middle size stone at 26 Spanish dollars, and the small size stone at 17 Spanish dollars (Table 4.7).²⁴⁵

²⁴¹ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 165-166.

²⁴² Forrest, *A Voyage to New Guinea and the Moluccas*, 373.

²⁴³ NA, VOC 3858, “Bijlaagen behoorende tot de resolutien beginnende met den 1 Maij anno 1789...N. 3,” fols. 5-7.

²⁴⁴ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 165-166.

²⁴⁵ NA, VOC 3858, “Bijlaagen behoorende tot de resolutien beginnende met den 1 Maij anno 1789...N. 3,” fols. 5-7.

Chapter 4

During fieldwork in Makassar in early 2020, I also had a relevant experience to share. When I asked a marine product trader about the difference between *batoe* and *gama*, he opened a plastic bag of sea cucumbers, dispersed them on the floor, and told me to look at their size. The three large cut open sea cucumbers are white stone sea cucumbers, and all the rest, according to this trader, are *gama* (Figure 4.7). These stone sea cucumbers in the present-day Chinese sea cucumber market are also known as *zhuo shen* (豬婆參), literally meaning female pig sea cucumbers, because their large and fat body with teat-like protuberances looks like a sow with rows of teats ready to feed her piglets.



Figure 4.7 *Batoe* and *gama*.

Source: Photo by the author in Makassar, 2020.

The preparation of stone sea cucumbers demanded expertise. Vosmaer noted that the Sama called the *batoe* (stone) category, *balla sekali*. In the Sama language and Makassarese, *balla* (*bella*) means “cook” or “boil”; *sekali*, like in Malay, means “very much”.²⁴⁶ Together, this term indicates “cooked or boiled a lot”. As boiling was an essential step in preparing any sea cucumber and deserved no special mention, it was highlighted here because these stone (*batoe*) sea cucumbers demanded a lot of boiling and preparation. According to Vosmaer, the typical preparation of stone sea cucumbers (both black and

²⁴⁶ Verheijen, *The Sama/Bajau Language*, 67; Cense, *Makassaars-Nederlands woordenboek*, 56.

white) was to first half boil them, then cut their dorsum open longitudinally to remove their guts, and then fully boil them. Afterwards, they would be dried above a slow fire and in the sun. This chain of operations should be punctually organised and would last for days.²⁴⁷ They were rendered necessary because stone sea cucumbers for their large size would easily decay if their body was not thoroughly cured.²⁴⁸

Therefore, the three most valuable types, all belonging to the *batoe* category, namely: the sand, the black stone, and the white stone, were all large and mostly preferably collected by the Sama. The Sama's deep knowledge about the waters of the eastern Indonesian Archipelago helped them exploit the deep-water species such as the stone, and the species with a restrictive habitat such as the sand. Their expertise in preparing these large-size sea cucumbers helped their products secure a good reputation in the market. Their high value no longer rested on the superficial feature of being spiky and black. Instead, the large size and meaty texture became essential, as they mattered to the gustatory feeling of chewing a broth-infused sea cucumber. This subtle change indicates that throughout the eighteenth century, Chinese taste for sea cucumbers was evolving beyond the dominance of the Liao/Manchu sea cucumbers, as these well-prepared and large-size tropical sea cucumbers were now appreciated for their own gustatory merits.

5. Against the Grain: The Rise of the *Marege* and the *Kayu Jawa*

Meanwhile, underneath these large and meaty *batoe* varieties, a more subtle change was taking place among previously disparaged tropical sea cucumbers, in association with the rise of deeply processed white sea cucumbers from northern Australia during the late eighteenth and early nineteenth centuries. An interesting observation from Vosmaer's report is that in early nineteenth-century Makassar, the

²⁴⁷ Vosmaer, "Korte beschrijving van het zuid-oostelijk schiereiland van Celebes," 165-166.

²⁴⁸ Ibid, 179-180.

Chapter 4

most deeply processed sea cucumbers were not from the *batoe* category, but two types of white sea cucumbers collected by some professional sea cucumber fishers, known as *trepangers*, based in Makassar from northern Australia.²⁴⁹ These Australian sea cucumbers fell outside the above mentioned three-tiered categories and were independently named after Makassarese names for two North Australian coasts, namely: Marege and Kayu Jawa, approximately corresponding to Arnhem Land and Kimberley.

Since the pathbreaking monograph by C. C. Macknight in 1976, the story of these *trepangers* from Makassar, who organised themselves for a yearly expedition to the north coast of Australia to catch and process a marine creature for the Chinese consumer market, has become well known.²⁵⁰ After that work, researchers in this field primarily focus on the interactions between *trepangers* and Australian aborigines and their cultural heritage.²⁵¹ However, there has yet to be a study to comprehensively examine the emergence of this industry with updated evidence concerning the change in Chinese taste for tropical sea cucumbers. As the final part of this dissertation, this section attempts to revisit the rise of *marege* and *kayu jawa* sea cucumbers from the perspective of the world of sea cucumbers.

To begin with, an interesting observation made by Macknight is that after making a strenuous voyage, those *trepangers* seemingly focused primarily on a low-value species. He noted: “There was a little very good trepang in the area visited by the Macassans, but their commercial success did not depend on it. Instead, they concentrated on transforming the abundant ‘chalk fish’ into trepang Marege’.”²⁵² Those sea cucumbers, known as “chalk fish” or “sand fish”, are a widespread tropical

²⁴⁹ Many of these *trepangers* were the Sama and Bugis. Fox, “Reefs and Shoals,” 136, note 7.

²⁵⁰ Macknight, *The Voyage to Marege*.

²⁵¹ Fox, “Notes on the Southern Voyages and Settlements of the Sama-Bajau”; Macknight, “Macassans and the Aboriginal Past”; Chaloupka, “Praus in Marege”; Morwood and Hobbs, “The Asian Connection”; Macknight, “Harvesting the Memory”; idem, “The View from Marege”; idem, “Studying Trepangers.”

²⁵² Macknight, *The Voyage to Marege*, 40.

A World of Sea Cucumbers

species known as *Holothuria scabra*, whose body is coated in a layer of limy spicules.²⁵³ In the early nineteenth century, Vosmaer also noted that they were a sort of white sea cucumber growing in a relatively muddy environment with poor visibility. As a result, *trepangers* had to dive for catching them by hand, instead of piercing them with a sea cucumber plummet (*ladung*).²⁵⁴ These features help distinguish them from the above-mentioned white stone sea cucumbers, which lived on coral reefs and were caught by the Sama with their skilled plummet-technique.

Northern Australia was not the only source of white sea cucumbers. In early nineteenth-century Makassar, there were four types of (non-stone) white sea cucumbers, two from northern Australia and the other two from the eastern Indonesian Archipelago (Table 4.8). Among them, the least-valued sort was plainly called “white” (*kebo* in Makassarese, *poeti* in Malay, and *witte tripang* in Dutch). Its Hokkien Chinese name, *sau-pae* (瘦白), means “meagre white”, suggesting that it was a sort of very meagre white sea cucumber.²⁵⁵ Falling in the third *gama* category, it was ranked by Vosmaer under the Japan (*djapoen*) and above the yellow (*koenngie*).²⁵⁶ These white sea cucumbers were collected from the eastern Indonesian Archipelago. They received no special processing, besides ordinary boiling and drying, because their low value made them “worth no other handling”.²⁵⁷

	Makassarese	Hokkien Chinese	Main features	Origin
<i>kayu jawa</i>	<i>kai-djawa</i>	<i>lambai-pae</i> (南海白)	Relatively large; cut open, dyed, and possibly also skinned	Kimberley, Australia
skinned sea cucumbers	<i>boeang koeliet</i>	<i>thoet</i> (秃)	Relatively large, skinned	Indonesian Archipelago

²⁵³ Macknight, *The Voyage to Marege*, 39-40, 54; Hornell, “The Indian *Beche-der-mer* Industry,” 140.

²⁵⁴ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 155, 159.

²⁵⁵ Ibid, 168-169.

²⁵⁶ Ibid, 162.

²⁵⁷ Ibid, 169.

Chapter 4

<i>marege</i>	<i>marege</i>	<i>lambai</i> (南海)	Small size; cut open, dyed, and possibly also skinned	Arnhem Land, Australia
white sea cucumbers	<i>kebo</i>	<i>sau-pae</i> (瘦白)	Small size; merely boiled and dried	Indonesian Archipelago

Table 4.8 Four types of white sea cucumbers in early nineteenth-century Makassar.

The *marege* was also a relatively small-sized white sea cucumber, but it went through a process that was even more complicated than the highly-priced stone sea cucumbers. It was first boiled for a quarter of an hour and then cut open longitudinally on its dorsum. Thereafter, it would be boiled for another quarter. During the boil, bark from a locally abundant mangrove tree was added to dye its surface with a reddish colour. This dyeing material helped its preservation. After being well cooked, it would be dried once or twice for 24 hours above a gentle fire and then exposed to the sun for two or three days.²⁵⁸ Besides that, there is also evidence that it went through a skinning process through being buried in sand.²⁵⁹ Thanks to these careful preparations, in early nineteenth-century Makassar, it was sold at a price higher than all *gama* sea cucumbers.²⁶⁰

Immediately above the *marege* were skinned sea cucumbers (*boeang koeliet*), which already belonged in the *pandang* category. They were made of relatively large and fat white sea cucumbers collected from the waters of the eastern Indonesian Archipelago. Before being skinned, they were first cooked and buried in sand for about 24 hours.²⁶¹ Thereafter, their chalky skin could be easily removed, because the skin's chalky structure had been dissolved in the weakly acidic environment in the sand.²⁶² After skinning, they would be cooked again and then dried. A properly skinned sea cucumber was elongated, round, curved, and had circles of grooves on its surface. The length of its dried form

²⁵⁸ Ibid, 159-160; Macknight, *The Voyage to Marege*, 48-56.

²⁵⁹ Macknight, *The Voyage to Marege*, 53-54.

²⁶⁰ Vosmaer, "Korte beschrijving van het zuid-oostelijk schiereiland van Celebes," 162.

²⁶¹ Ibid, 169-170.

²⁶² Macknight, *The Voyage to Marege*, 54.

sometimes reached half a Rijnland foot.²⁶³ There were also some white sea cucumbers only partially skinned, called *gossok* (*gosok* in Malay means “brush, rub, polish”), whose value was lower.²⁶⁴

The *kayu jawa* was the most valuable white sea cucumber. It was larger than the *marege* but cured in the same way. Like the *marege*, there is evidence that it was also skinned.²⁶⁵ In the early 1830s, its price was usually twice as much as the *marege*, reaching the level of the spiky sea cucumber.²⁶⁶ In the 1810s, it was sold in Makassar for 26 Spanish dollars per picul, above the *marege* (19) and the skinned (20), but lower than the large black, which was sold at 30 Spanish dollars (Table 4.9).²⁶⁷

How did these different types of white sea cucumbers emerge? Why did some of them go through such deep processing? To answer these questions, we need to understand how white sea cucumbers were received in their consumer market. Back to the early seventeenth century, when Liaodong-style sea cucumbers had become well-known in China, Chinese literati were unfamiliar with white sea cucumbers from tropical waters. For instance, Xie Zhaozhe, in his mid-1610s encyclopaedia, lamented that in his native place, Fujian, there were no marine products as precious as sea cucumbers, which he, as abovementioned, identified as a product of Liaodong.²⁶⁸ However, Fujian, as a coastal province in South China, in fact, had tropical species of sea cucumbers, which were simply ignored by Xie. Also in the 1610s, Xie’s contemporary, Li Rihua (1565-1635), had a chance to taste white sea cucumbers (*bai haishen* 白海參) in a friend’s home in the Lower Yangzi Region in 1612. This was likely the first time that Li had ever seen a white sea cucumber. Back at home, Li noted in his diary that it was such a “rare taste” (*qiwei* 奇味).²⁶⁹

²⁶³ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 169-170.

²⁶⁴ Ibid, 170.

²⁶⁵ Matthes, *Makassaarsch-Hollandsch woordenboek*, 337.

²⁶⁶ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 178.

²⁶⁷ Crawford, *History of the Indian Archipelago*, vol. 3, 442-443.

²⁶⁸ Xie, *Wuzha zu*, juan 9, 258.

²⁶⁹ Li, *Weishuicuan riji*, juan 4, 233.

Chapter 4

However, after this initial stage, distinctions emerged. From the mid-seventeenth century, Chinese elite consumers began to exclude white sea cucumbers from their conceptualisation of perfect sea cucumbers. In Zhou Liangong's 1660s synthesis of black sea cucumbers from the North Sea with the medical theory of nourishing the kidneys, white sea cucumbers from tropical waters were proposed as a counterexample. As mentioned early, Zhou identified that sea cucumbers from Fujian were white and were stretched by bamboo sticks to as large as the palm of a human hand. He suggested that their natural features, such as white colour and southern origin, failed to meet the affinities with the kidneys, and hence they did not carry the same medical functions as black sea cucumbers from temperate waters. He even claimed that their "flavour is also thin and inferior" (味亦澹劣).²⁷⁰

Nie Huang, in his 1698 fish album, further essentialised these differences with an illustration (Figure 4.8). Nie demonstrated that different from the black and spiky sea cucumbers from Liaodong and Japan, there were "white sea cucumbers" (*bai haishen* 白海參) from Guangdong, whose habitat was sea mud (*haini* 海泥), whose dorsum was blue-green (*qing* 青), and whose belly was white. The prototype of Nie's conceptualised tropical sea cucumbers was therefore a type of white sea cucumber living in a muddy environment, likely the same as the species from which the *marege* and the *kayu jama* would be processed in a later stage, namely, *Holothuria scabra* (sandfish).²⁷¹ Yet, back in the late seventeenth century, the preparation of these white sea cucumbers was distinct from the *marege* and the *kayu jama*. As abovementioned, according to Nie, collectors cut their dorsum open, cured them with oyster shell ash, and stretched them with bamboo sticks for drying. Their dried size was like the palm of a human hand. This preserving technique introduced a dilemma: The shell ash served preservative but was accountable for a poor taste, as it influenced the texture of meat, making it like

²⁷⁰ Zhou, *Min xiaoji*, juan 2:11b.

²⁷¹ For the habitat and distribution of *Holothuria scabra*, see Purcell, Samyn, and Conand, *Commercially Important Sea Cucumbers*, 80-81.

cowhide, difficult to be tendered through boiling in broth, but without using shell ash, the sea cucumbers would quickly decay in a tropical environment.²⁷²



Figure 4.8 Temperate (black) and tropical (white) sea cucumbers in Nie Huang's fish album (1698).

Source: Nie, *Haicuo tu*, *juan 2*, pp. 186-187.

Following this dilemma, Nie evoked a cultural prejudice against the South. Nie noted that “the nature of things from the North is gathered within so that their flavour is all thick; the nature of things from the South of Guang is dispersed outwards so that their flavour is all thin” (北地之物性斂於內，諸味皆厚；廣南之物性散於外，諸味皆薄。).²⁷³ This north-south distinction originated from a medical conception concerning the human body, which claimed southerners' pores were loose, so that their vital force could easily be drained out from the body; northerners' pores were tight, so that their vital force could be safely stored inside the body.²⁷⁴ What is interesting here is that Nie extended this concept to a marine invertebrate, claiming sea cucumbers' body as well as their flavour was determined by the same environmental factors.

The emergence of these prejudices against tropical white sea cucumbers in the second half of the seventeenth century reminds us of the contemporarily popular rumours that claimed tropical white

²⁷² Nie, *Haicuo tu*, *juan 2*, 186-187.

²⁷³ Ibid, 187. South of Guang (Guangnan 廣南) referred to the sub-tropical and tropical areas to the south of the Nanling Range, namely, present-day Guangdong, Guangxi, and Hainan.

²⁷⁴ Hanson, “Northern Purgatives, Southern Restoratives.”

Chapter 4

sea cucumbers as made of cowhide or fish skin, as discussed in section three. The outburst of these disparaging accounts during this period betrayed strong concerns among elite consumers about the emergence of tropical sea cucumbers in Chinese cuisine. These tropical sea cucumbers had begun to substitute temperate sea cucumbers and were destabilising the Chinese conceptualisation of the perfect sea cucumbers. Nie acknowledged that while the black and spiky temperate sea cucumbers tasted “tenderer and more delicious than white sea cucumbers” (柔軟可口，勝於白參), the latter still found a good market for their lower price. The problem, as Nie rightly identified, was that sea cucumbers were “recently demanded by banquets everywhere. As diners become numerous, their production range also expands” (邇來酒筵所需，到處皆是，食者既多，所產亦廣).²⁷⁵

Into the eighteenth century, cultural prejudices against white tropical sea cucumbers still lingered. A work quoted by Zhao Xuemin’s late eighteenth-century *materia medica* claimed that while the Liao/Manchu sea cucumbers’ meat tasted sticky (*nuo* 糯), the white sea cucumbers tasted less sticky (*jing* 粳). Stickiness, as a chewy sense, was essential in Chinese judgement of taste.²⁷⁶ The description of the taste here was drawn from a staple food, rice. *Nuo*, which was used in this case for expressing the appreciable stickiness of the Liao/Manchu sea cucumbers, is a term originally referring to the glutinous rice (*nuomi* 糯米). *Jing*, for the white sea cucumbers, originally refers to the less sticky Japonica rice (*jingmi* 粳米). In the case of sea cucumbers, stickiness carried more gustatory significance because sea cucumbers’ taste, as we have introduced in the previous chapter, depended on their capacity to carry the broth’s flavour, and, to no less extent, on the capacity of their meat to properly release the absorbed flavour during chewing.²⁷⁷ A sticky and chewy feeling, like the glutinous rice,

²⁷⁵ Nie, *Haicuo tu*, juan 2, 187.

²⁷⁶ A well-studied example is that stickiness influenced the price of rice in eighteenth century China. Cheung, “A Desire to Eat Well,” 91.

²⁷⁷ Akamine, *Namako o aruku*, 179-180.

helped the flavour be enjoyed more lastingly and substantially. Therefore, by essentialising their difference in stickiness, this account was undermining the legitimacy of the white sea cucumbers as a top sea delicacy.

As a result, as much as the black and spiky Liao/Manchu sea cucumbers were conceptualised as a perfect delicacy with both medical and culinary merits, the white and spike-less tropical sea cucumbers were conceptualised as a typical inferior variety, devoid of substantial medical and culinary values. With such a negative stereotype, it comes as no surprise that white sea cucumbers were initially undervalued in Makassar, sold for a mere two rijksdaalders per picul in 1730 and five rijksdaalders in 1740 (Tables 4 and 5).²⁷⁸ In 1754, they were even not purchased by the Amoy junk, perhaps because it was no longer worthwhile to transport such a low-value sort of sea cucumbers from such a distant place.²⁷⁹

However, in 1789, they re-appeared in the purchase list of the Amoy junk, with a new trade name, the *marege*.²⁸⁰ *Marege*, as introduced earlier, referred to the coast, presently known as Arnhem Land in northern Australia.²⁸¹ It originally referred to the aboriginal people who lived there and was later-on extended to the deeply processed white sea cucumbers from this region.²⁸² These sea cucumbers were, meanwhile, known by a different name among Hokkien Chinese traders in Makassar, *lambai* (南海), which literally means the South Sea.²⁸³ The “South Sea” here was apparently not the

²⁷⁸ NA, VOC 2163, fols. 132-139; Sutherland, “Trepang and Wangkang,” 465.

²⁷⁹ NA, VOC 2859, fol. 192.

²⁸⁰ NA, VOC 3858, “Bijlaagen gehoorende tot de resolutien beginnende met den 1 Maij anno 1789...N. 3,” fols. 5-7.

²⁸¹ For the geographical ranges of *Marege* and *Kayu Jawa* (Kaju Djawa), see Morwood and Hobbs, “The Asian Connection,” 197-198.

²⁸² Matthes, *Makassaarsch-Hollandsch woordenboek*, 255. For the different interpretations of this term, see Macknight, *The Voyage to Marege*, 151, notes 32-33.

²⁸³ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 162.

Chapter 4

South China Sea. It instead referred to the sea to the south of Makassar, implying that the Chinese in Makassar were aware that these sea cucumbers were from the south of the sea.

The emergence of this southern frontier of sea cucumbers is well documented in Dutch sources since the early eighteenth century.²⁸⁴ As early as the 1720s, the VOC's factory in Timor had noted that Sama fishers from Makassar were visiting the waters around Timor to collect sea cucumbers.²⁸⁵ Their activities raised the VOC's concerns over unauthorised private trade. The Company, therefore, introduced a new license system to regulate these southward sea cucumber collecting voyages.²⁸⁶ In 1754, the VOC found that the "Southland which is in the Southeast of Timor not far from thence, is made now and then from Timor and Makassar, but produces so far we know nothing but tripang, being dried jelly-fish, and wax".²⁸⁷ These voyages were an extension of the previous sea cucumber collecting around Timor and the Ashmore Reef (Pulau Pasir), situated halfway between Timor and Australia.²⁸⁸

The exact destination of these early voyages is an unsettled issue. Macknight suggests that the coast of Kimberley (Kayu Jawa), which was situated directly to the south of Timor, was first exploited in the mid-eighteenth century, and Kimberley (Marege), which was further away to the southeast of Timor, would be later exploited by *trepangers* from around the 1780s.²⁸⁹ However, I tend to believe that the order was more likely the opposite. As the following paragraphs will elaborate, the coast of Kimberley, albeit closer, was more difficult to reach, because the *trepangers* from Makassar usually sailed with the northwest monsoon, which would bring them to the southeast of Timor, corresponding to

²⁸⁴ Fox, "Notes on the Southern Voyages."

²⁸⁵ Ibid, 459-460.

²⁸⁶ NA, VOC 2100, "Van Macassar onder dato 17 Septb. 1728," fols. 64-73. Knaap and Sutherland, *Monsoon Traders*, 24.

²⁸⁷ Macknight, *The Voyage to Marege*, 94-95; Robert, *The Dutch Explorations*, 147.

²⁸⁸ Fox, "Reefs and Shoals," 117-120.

²⁸⁹ Macknight, "Harvesting the Memory," 136-137.

Arnhem Land. Therefore, the abovementioned 1754 Dutch account also referred to the “Southland” as “in the Southeast of Timor”, instead of the South of Timor. Further, if we take the Hokkien Chinese names of their products into consideration, we may find that the term for the *marege* was *lambai* (南海), meaning “the South Sea”, and the term for the *kayu jawa* was *lambai-pae* (南海白), meaning “the white of the South Sea”. The latter was most likely derived from the former, indicating it was the *marege*, instead of the *kayu jawa*, that first became well-known in the sea cucumber market.

Although the north coast of Australia had been exploited by sea cucumber fishers from Makassar since at least the 1750s, we may not assume that they had by then already focused on the mass production of the deeply processed white sea cucumbers known as the *marege* and the *kayu jawa*. As mentioned earlier, on the shipping list of the 1754 Amoy junk, there were no white sea cucumbers, including *marege* and *kayu jawa*, at all (Table 4.6). The 1789 report refers to the *marege* only, and it also indicates that that trade had yet to prosper. On the one hand, the captain of the 1789 Amoy junk and the local traders of Makassar were still discussing how to divide the *marege* into different grades, indicating that there had yet to be a clear standard for that trade.²⁹⁰ On the other hand, the *marege*'s price was by then very low, merely, 13 Spanish dollars per picul for the first grade and 12.5 for the second grade, much lower than the slimy sea cucumbers (*gama*), which were sold for 17 Spanish dollars per picul (Table 4.7). The price of the *marege* in the preceding year (1788) was even lower: 13 Spanish dollars for the first grade, 12 for the second grade, and 11 for the third grade.²⁹¹ For both years, the *marege* were among the least valued sea cucumbers in Makassar. Such a low price indicates that these *marege* sea cucumbers were likely received in the Chinese consumer market merely as ordinary low-value white sea cucumbers.

²⁹⁰ NA, VOC 3858, “Bijlaagen gehoorende tot de resolutien beginnende met den 1 Maij anno 1789...N. 3,” fol. 7. They were classified into three grades in 1788 and only two grades in 1789.

²⁹¹ Idem, fols. 5-7.

Chapter 4

The situation changed dramatically around the turn of the century. By the 1810s, the other two types of deeply processed white sea cucumbers, namely, skinned sea cucumbers and *kayu jawa* sea cucumbers, had appeared. Together with the *marege*, they all fetched a good price. The *marege*'s price had climbed to 19 Spanish dollars per picul, already substantially higher than slimy sea cucumbers, which were then sold at a mere 12.5 Spanish dollars. The price of skinned sea cucumbers was slightly higher, at 20 Spanish dollars. The *kayu jawa* were apparently the most successful, sold at 26 Spanish dollars per picul. This price was already higher than spiky sea cucumbers (24) and was approaching large black sea cucumbers (30) (Table 4.9).

Type	Price (Spanish dollars per picul)
<i>Tacheritang</i> (Unknown sort)	68
Large stone sea cucumbers (<i>batu-bāsar</i>)	54
Large black sea cucumbers (<i>itam-bāsar</i>)	30
<i>Kayu jawa</i> (<i>kayu-jawa</i>)	26
Spiky sea cucumbers (<i>tundang</i>)	24
Middle-size stone sea cucumbers (<i>batu-tāngah</i>)	22
Skinned sea cucumbers (<i>bankulī</i>)	20
<i>Marege</i> (<i>māreje</i>)	19
Middle-size black sea cucumbers (<i>itam-tāngah</i>)	15
Small stone sea cucumbers (<i>batu-kāchil</i>)	14
Foul sea cucumbers (<i>taikongkong</i>)	13.5
Slimy sea cucumbers (<i>gama</i>)	12.5
Japan sea cucumbers (Japon)	12
Burying sea cucumbers (<i>mosi</i>)	9
Yellow sea cucumbers (<i>kunyit</i>)	9
Small black sea cucumbers (<i>itam-kāchil</i>)	8
Bent sea cucumbers (<i>donga</i>)	7
Yellowish legume sea cucumber (<i>kawasa</i>)	5
Roasted-peanut sea cucumber (<i>pachang-goreng</i>)	5

Table 4.9 Price of sea cucumbers in Makassar (1810s).

Source: Crawford, *History of the Indian Archipelago*, vol. 3, 442-443.

The success of the *kayu jawa* was not without cost. For the early nineteenth-century *trepangers* based in Makassar, a voyage to the coast of Kimberley (Kayu Jawa) was adventurous. Albeit situated right to the south of Timor, Kimberley was difficult to reach, because a fronthaul from Makassar to North Australia normally took place during the north-west monsoon. While crossing the Timor Sea, a *trepanger* fleet, usually consisting of dozens of ships,²⁹² could be blown off-course by the monsoon to the east and end up on the coast of Arnhem Land (Marege). For those who managed to keep a due south course and reached the coast of Kimberley (Kayu Jawa), they would meet aboriginal people who were more hostile than the aborigines in Marege.²⁹³ In case the arrivals were not numerous enough to defend themselves, they would have to either leave Kayu Jawa and move to Marege or avoid landing and instead choose to process sea cucumbers on board.²⁹⁴ Vosmaer noted:

It is not rare that, when these vessels return to Makassar in the course of May, they also bring along news that some of the seafarers have died in a miserable way, by falling into the hand of the aborigines of Kayu Jawa, or by dragging away by sharks or other ravenous sea monsters.²⁹⁵

From the *marege* to the *kayu jawa*, the rise of these deeply processed white sea cucumbers in late eighteenth- and early nineteenth-century Makassar, interestingly, corresponds to a popular variety of reddish meaty sea cucumbers, also known as from Makassar, in the contemporary Chinese consumer market. These meaty sea cucumbers were arranged ahead of all other sea cucumbers in the repeatedly mentioned handbook of the Huizhou “southern goods” merchant. As we have discussed in section two of chapter three, this handbook was most likely compiled between 1784 and the 1820s, namely, during the crucial period when these deeply processed white sea cucumbers were emerging in

²⁹² Macknight, *The Voyage to Marege*, 27-28.

²⁹³ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 157-158.

²⁹⁴ Ibid, 157-158, 160.

²⁹⁵ Ibid, 161. Translated from Dutch. The behaviours of these *trepangers* were at least equally responsible for the hostility, and their relationship also changed over time. Crawford, “Late Prehistoric Changes in Aboriginal Culture on Kimberley,” 103-107.

Chapter 4

Makassar. In the section for sea cucumbers, the handbook first introduced meaty sea cucumbers (*roushen* 肉參), and noted that “those from Makassar are the best. They are rarely broken, smooth and clean, taste sticky, and have a reddish colour” (惟望加錫最高，破碎少，光吉，性糯，色道紅). In comparison, those from Johor “are often broken and taste tough” (破碎多，性帶硬). Those from Hainan “are smaller and whitish, but still taste sticky” (小些，帶白色，其性亦糯). “Most recently Luzon is also exporting [meaty sea cucumbers], better than Johor’s. Although their size is small, they are smooth and clean” (呂宋新出，比遊佛貨高些，只頭甚小，而光吉).²⁹⁶

Therefore, from the perspective of the compiler of this southern goods handbook, the reddish meaty sea cucumbers from Makassar were the best meaty sea cucumbers in the Chinese consumer market. The challenge is how to identify them in the classification of sea cucumbers in contemporary Makassar. Vosmaer noted that in early nineteenth-century Makassar, two groups of sea cucumbers were often be boiled together with mangrove bark and hence acquired a reddish colour.²⁹⁷ The first group consisted of low-value *gama* and white (*kebo*) sea cucumbers. These sea cucumbers were only simply boiled and dried without going through deep processing. For preventing these roughly processed sea cucumbers from quickly decaying in the tropical weather, the local fishers often added mangrove bark during boiling, whose dyeing components helped preservation.²⁹⁸ However, we can easily exclude this group, because the handbook identified the reddish meaty sea cucumbers from Makassar as a high-quality variety, which was “rarely broken, smooth and clean,” and tasted “sticky”. None of these low-value *gama* and white sea cucumbers possessed these merits, as they were usually meagre, rough, and carelessly prepared.

²⁹⁶ *Huizhou minjian zhenxi wenxian*, vol. 15, 295.

²⁹⁷ Vosmaer, “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes,” 159-160, 168-169, 172.

²⁹⁸ *Ibid*, 168-169, 172.

A World of Sea Cucumbers

The second group consisted of the *marege* and the *kayu jawa*. Vosmaer noted that the *trepangers* in northern Australia usually boiled their sea cucumbers with mangrove bark as they found abundant mangroves on the beaches and hence conveniently used the bark to dye their sea cucumbers for better preservation.²⁹⁹ As a result, both *marege* and *kayu jawa* sea cucumbers were typically reddish. Moreover, the distinctive features of the reddish meaty sea cucumbers from Makassar can further help us identify them with these varieties from northern Australia. According to the handbook, compared with meaty sea cucumbers from other places such as Johor, which was a centre of the Bugis network, and Luzon, which connected the Sulu Zone and China, Makassar's meaty sea cucumbers were renowned for their smooth and clean surface, sticky taste, and unbrokenness. All these features can be associated with the *trepangers*' professional operations on the north coast of Australia, including well-scheduled boiling and drying, thoroughly removing the unpleasant chalky skin, and eviscerating.

Therefore, these attentive works helped remove unpleasant features of white sea cucumbers and turn them into a clean and sticky meaty delicacy ready to be boiled and saturated with broth. These works also helped debunk the stigma that rendered white sea cucumbers from tropical waters as inferior and instead transformed them into a valuable sea delicacy, foremostly recommended by the compiler of this handbook, who had comprehensive knowledge about Chinese consumers' gustatory preferences for edible exotics. As a result of these changes, out of the previously disparaged white sea cucumbers, the *marege* and the *kayu jawa* became two unique varieties from Australia that arose in the world of sea cucumbers against the grain.

²⁹⁹ Ibid, 159-160.

Conclusion

From the Japan Sea to the north coast of Australia and from Liao/Manchu sea cucumbers to the *marege* and the *kayu jawa*, by the early nineteenth century, a world of sea cucumbers had taken shape after over two centuries of cross-cultural interactions between consumers and producers and between the temperate and the tropical species. This world was, moreover, still expanding. From the early 1820s, southern Pacific Islands such as Fiji would join it, when American traders sailed to Canton and Manila via the southern Pacific route which connected these islands with the Chinese consumer market.³⁰⁰ As a result of this expansion, the originally cross-China Seas world of sea cucumbers was now shifting further towards the Pacific World.

Reviewing the rising trajectory of this world from the late sixteenth through the early nineteenth centuries, we find that it manifests some unique features of sea cucumbers in comparison with the other top sea delicacies we have seen in chapter three. Unlike edible bird's nests and shark fins, sea cucumbers are not really rare in the natural world. They are an invertebrate animal widely distributed in coastal waters, with a good potential to be collected en masse and processed. Meanwhile, unlike another invertebrate, abalones, whose commercially important species are mostly from temperate waters, sea cucumbers are not confined by that. Besides the black and spiky temperate species, which shares the same habitat with abalones, there are furthermore diverse tropical sea cucumbers with distinctive features. Therefore, they have a good potential to be developed into a diversified trade in a broader geographic range.

From the late sixteenth century, along with the change of taste in China, these potentials were materialised in an expanding world of sea cucumbers. Liaodong, the militarised border society of the Ming Empire, can be considered as the first Chinese sea cucumber frontier of this world. Thereafter,

³⁰⁰ Ward, "The Pacific *Bêche-de-mer* Trade with Special Reference to Fiji"; Edward D. Melillo, "Making Sea Cucumbers out of Whales' Teeth."

in association with the Manchu Conquest of China, Shandong, the Manchu coast of the Japan Sea, Korea, and Japan joined this sea cucumber world at different stages through the seventeenth century.

From the late seventeenth century, a southern world of sea cucumbers was also emerging. Focusing on Makassar, a centre of this southern world, this research finds that the eastern Indonesian Archipelago became a sea cucumber frontier of China not simply because of a unidirectional expansion of a China-centric world economy. Instead, littoral society in this region, such as the Sama fishers and the merchant community of Makassar, had strong initiatives to join it, particularly in association with the economic transformation of this region in the wake of the Spice Wars.

However, their products initially faced cultural prejudices in the Chinese consumer market that perceived the black and spiky sea cucumbers from temperate waters, namely, the Liao/Manchu sea cucumbers, as the perfect sea cucumbers and disdained tropical species. To shed off these prejudices, Southeast Asian fishers exploited the biodiversity of tropical waters with their diving, fishing, and food-processing expertise to propose a wide range of tropical products. These products worked differently in the Chinese consumer market. Some were still undervalued, some were accepted by Chinese consumers as top delicacies, and some were transformed by professional *trepangers* from low-value to high-value. The availability of such diverse types of tropical sea cucumbers gradually destabilised the dominance of the Liao/Manchu sea cucumbers throughout the eighteenth century. By the late eighteenth and early nineteenth centuries, Chinese consumers no longer simply identified the spiky and black sea cucumbers from temperate waters as the best sea cucumbers. Instead, the distinction of taste gradually shifted towards size and texture for they mattered to the gustatory experience of chewing sea cucumbers more essentially.

As the final remark of the final chapter, I suggest that there was no monolithic dominance of Chinese high taste over non-Chinese littoral society. Instead, the taste was communicated and negotiated between Chinese consumers and non-Chinese producers. Even though they might have

Chapter 4

never met or corresponded with each other, they kept material, gustatory, and intellectual exchanges through the circulations of things and knowledge in this world of sea cucumbers. After all, a Southeast Asian collector's diving, fishing, and food processing knowledge was no less essential in shaping how a sea cucumber tasted in China, than a Chinese literatus' medical and culinary knowledge. They both mattered to the change of Chinese taste for edible exotics in a global context and deserve an equal level of scholarly attention from researchers of food and global history.

Epilogue

Now, let me first address the question raised at the beginning of this dissertation: “Why did pepper and sea cucumbers feature so prominently in China’s maritime trade with Southeast Asia?” I can now conclusively answer that it was because these two edible exotics were essential to two important food cultures in China, namely, a hot-spicy foodway that favoured pepper and a clear-broth-infused foodway that favoured sea cucumbers. These two food cultures were not timeless. They emerged and flourished at different time and in different contexts. They were also not only important to China and Southeast Asia, but had global implications for two broader worlds, namely, a trans-Indian Ocean world of pepper spanning from South India to China, and a cross-China Seas world of sea cucumbers spanning from the Japan Sea to northern Australia.

Situating the change of Chinese taste within these two worlds, I want to propose a Chinese gustatory revolution in global history. This concept aims to rethink how food mattered to global history from a non-western perspective. It contends that for the global connections from the Mongol Conquest through the Dutch and British colonial expansions, the shift from pepper to sea cucumbers in Chinese cuisine played a transformative role. To unpack how this transformative shift worked, I will first revisit how the worlds of pepper and sea cucumbers emerged, evolved, and were connected to each other, and then discuss how these changes shed new light on taste and global history.

From the World of Pepper to the World of Sea Cucumbers

To begin with, the emergence and expansion of the trans-Indian Ocean world of pepper mainly took place in the two decades following the Mongol Conquest of South China (1279). As chapter two has elaborated, in the 1280s and 1290s, the Great Khan in China and his supporters in Persia jointly built a trans-Indian ocean empire, which facilitated the rise of a trans-Indian Ocean trading network.

Epilogue

Through this network, pepper from South India flowed to China in large quantities, became unprecedentedly available to Chinese consumers, and gave rise to a Chinese culinary culture in which pepper was commonly used as a popular hot spice.

Such a change took place not simply because of the Mongol Conquest. As chapter one shows, since at least the tenth century, Chinese elite consumers had been favourably receiving pepper and other warming exotics as essential to energising digestion. Thereafter, through a critical change of the cold-damage theory in the eleventh century, the therapy of “warming the centre” with exotics rose to prominence in Chinese medicine. Also, since at least the eleventh century, Java had already managed to transplant pepper from South India. By the early thirteenth century, there had been a burgeoning export of Javanese pepper to China, which induced a large-scale outflow of Chinese copper coins, forcing the Southern Song dynasty to impose a trade embargo on Java. Moreover, in the early thirteenth century, there was a subtle change of Chinese cuisine represented by the rise of the hot-spicy Sichuan stir-frying, in which pepper was used as a main condiment. Piecing evidence together, it is safe to argue that Chinese demand for pepper had already been surging before the Mongol Conquest and that even, according to Yamada, China’s age of pepper had dawned in the early thirteenth century.

It was, however, only through the Mongol Conquest that China’s long-accumulated demand for pepper was eventually unleashed. For the first time in history, the pepper land of Malabar became a major destination for ships from the China Coast, who received sponsorship or even direct investments from the Mongol ruling elites. With these ships, traders from China also participated in the trans-Indian Ocean trade of fine spices, which were collected by them from the eastern Indonesian Archipelago and sold to West Asian traders in South India. As a result, they took the Malabar Coast not only as a pepper-supplier, but also a redistribution centre for selling Chinese merchandise and Southeast Asian fine spices to merchants from the Red Sea and Persian Gulf routes.

Epilogue

However, into the second half of the fourteenth century, China's Indian Ocean trade would be subject to temporary setbacks amid the collapse of the Mongol Empire and the erratic maritime policies imposed by the founding emperor of the Ming, Hongwu (r. 1368-1399). Thereafter, when Emperor Yongle (r. 1403-1424) dispatched Zheng He's fleets (1405-1433) to the Indian Ocean World in the early fifteenth century, Malabar once again became the principal pepper supplier of China. It was only after the end of Zheng He's voyages in 1433 that Southeast Asian pepper would eventually regain its long-lost primacy, for the Ming Empire turned to Melaka as its principal trading partner for tropical exotics. Melaka, as well-known, would tranship pepper from an emerging pepper frontier in northern Sumatra to China. Taking these changes into consideration, I suggest that it was not the beginning of the Zheng He's voyages, but their ending that triggered the Age of Commerce in Southeast Asia, for it eliminated competitions from the trans-Indian Ocean trading system.

Whereas the trans-Indian Ocean world of pepper existed only from the late thirteenth to the early fifteenth centuries, its gustatory consequence in China was much more lasting. Evidence from both culinary and medical texts indicates that a hot-spicy foodway seasoned by pepper remained popular in China until the sixteenth century. On the one hand, food recipes from the early fourteenth through the early sixteenth centuries continuously show the popularity of pepper in Chinese cuisine. It was widely used together with Sichuan pepper for making a strong flavour, which is known in present-day Chinese cuisine as "numbing- and hot-spicy" (*mala* 麻辣), but was referred to in those fourteenth-to-sixteenth-century texts only as "hot-spicy" (*la* 辣).

On the other hand, evidence from Chinese medical texts testifies that from the mid-fourteenth through the sixteenth centuries there was a widely shared concern among medical practitioners about this hot-spicy foodway. This kind of concern can be identified with the criticisms of pepper in the writings by Zhu Zhenheng (1281-1358) and Li Shizhen (1518-1593). Zhu's concern over warming exotics such as pepper stemmed from medical theories that first emerged in late twelfth-century North

Epilogue

China under the Jurchen Jin dynasty and advocated the use of cooling agents. These theories were originally part of a counter-movement against the above-mentioned “warming-the-centre” therapy. They were spread to the former territory of the Southern Song dynasty in the wake of the Mongol Conquest of South China (1279), and influenced Zhu Zhenheng, who was a southern physician, in the early fourteenth century. Zhu developed these theories and extended the criticisms from medicine to food. He even specifically targeted the use of pepper in the hot-spicy foodway. Zhu’s teachings, which were popularised in the fifteenth century, led to an irreconcilable conflict between the supposed fire nature of pepper and the doctrine of “yang is in excess, and yin is deficient”. Therefore, Li Shizhen, in the sixteenth century, would take Zhu’s criticisms seriously to renounce his own appetite for pepper. That personal experience urged Li to redefine pepper in his highly influential *Systematic Materia Medica* (1596), turning it from a benign warming agent to a dangerous hot spice with a fierce fire nature.

Into the seventeenth century, “China’s age of pepper” eventually lost momentum. On the one hand, as the *Systematic Materia Medica* became authoritative in China, Li Shizhen’s negative account of pepper prevailed over these earlier positive definitions. Li’s account was further cited and popularised by more concise versions of *materia medica*. Collectively, they contributed to a shift towards negative perceptions of pepper. On the other hand, chili pepper began to be integrated into Chinese cuisine from the early seventeenth century. It emerged as a cheap condiment locally cultivated in China and widely used by non-elite families in economically backward regions. It also superseded pepper for its more intense hot-spiciness.

While pepper was retreating from Chinese foodways, sea cucumbers were rising. From the late sixteenth century, sea cucumbers emerged in Chinese cuisine. As chapter three shows, this change should be understood as part of a chain of transformations in Chinese perceptions of seafood. As a result of these transformations, a select group of the preserved marine products, including edible bird’s nests, sea cucumbers, shark fins, and abalones, emerged as top sea delicacies in sixteenth- and

Epilogue

seventeenth-century China. Among them, edible nests and sea cucumbers were unknown to Chinese high cuisine until the sixteenth century, and then they suddenly rose from obscurity to top delicacies. To decipher their enigmatic rise, we need to return to the medical debates that led to the retreat of pepper. Like pepper, both sea cucumbers and edible nests were subject to the theoretical debates between the warming and cooling cultures. They bear witness to the revival of the warming culture from the sixteenth century, when a group of physicians reacted against the over-popularity of the cooling therapy. These physicians advocated a reformed warming therapy, known as warming and replenishing, which favoured no longer acrid spices and aromatics but relatively mild medicines that were sweet and warm, such as ginseng.

Sea cucumbers emerged in Chinese cuisine from the late sixteenth-century exactly as “sea ginseng” (*haishen*), a term originally borrowed from Korea. This term, on the one hand, aroused the warming and replenishing efficacy of ginseng, and on the other hand, through the sea link, created imaginative affinities with the kidneys. According to the *Inner Canon*, the kidneys correspond to blackness, the north, saltiness, and water. Black sea cucumbers from the North China Sea perfectly fit these symbols and were conceived by Chinese physicians in the mid-seventeenth century as extraordinary ginseng that was at once “warming and replenishing” and able to nourish the water and yin of the kidneys. As the preservation of the water and yin of the kidneys was essential for the cooling theory of Zhu Zhenheng. Sea cucumbers, therefore, became a perfect therapeutic accepted by both the warming and the cooling medicine.

Edible nests, being another top sea delicacy often mentioned together with sea cucumbers, were imagined as a metamorphosis from a marine creature. Among different versions of the metamorphosis, one popular account claimed that edible nests were transformed from a popular cooling agent *haifen* (egg masses of sea hares (*Anaspidea*)), whose nature was originally cold and salty. Through a process of being ingested, digested, and vomited by a seabird, it turned to be sweet and warm. This

Epilogue

transformation made edible nests also a perfect therapeutic that was both able to clear fire-related phlegm because of the original nature of *haifen*, and to take care of the digestive system because its nature had been “warmed” through the imagined metamorphosis.

Therefore, from the perspective of Chinese medical history, those seemingly unrelated changes of taste, including the retreat of pepper, the rise of sea cucumbers, and the transformation of edible nests, were all gustatory consequences of the theoretical debates between the two rivalling medical cultures in China. Pepper, for its supposed fire nature, became vulnerable to the criticisms from the cooling culture and eventually retreated from Chinese high cuisine after the publication of Li Shizhen’s *Systematic Materia Medica* (1596). Sea cucumbers and edible nests, for their imaginative links with the sea, were conceived in the seventeenth century by Chinese physicians as perfect therapeutics catering to both the warming and cooling cultures.

In association with the changing perceptions of these individual edible exotics, there was a fundamental shift of Chinese taste-scape throughout the sixteenth and seventeenth centuries. As we have mentioned, in the early sixteenth century, the hot-spicy foodway that widely used pepper remained popular in China. The 1504 recipe collection of Madam Zhu (published as *Songsbi yangsheng bu*) is arguably the most “peppered” cookery book in Chinese food history. However, by the end of this century, when Gao Lian (ca. 1527-1603) published his 1591 *Discourse on Food and Drink*, pepper became hard to find. As a well-studied topic in Chinese food history, Gao’s work played a critical role in the rise of a literati-style foodway. He drew on theories about the detriments of five flavours to the visceral systems to propose blandness as an elegant and exquisite flavour ideal for the literati body. Into the seventeenth century, the literati-style cuisine experienced another critical change. It no longer simply pursued blandness but identified *xian* as an ideal flavour. In this transition, Li Yu’s 1671 *Sketches of Idle Pleasures* was crucial, not only because it proposed *xian* as an elusive, delicate, and aestheticised flavour, but also because it suggested to use broths to transmit such a flavour.

Epilogue

This change had a profound influence on the integration of the top sea delicacies into the literati-style cuisine. A common feature of these sea delicacies was that they were all deeply dried and had gelatinous or fibrous texture that was prone to absorb water. Before being used for cooking, they had to be repeatedly washed and soaked with pure water, to soften their structure and to remove unwanted impurities and odours. During this process, they lost much of their original flavours, and could be thereafter reinvented with an aestheticised *xian* flavour through being infused with a delicately prepared broth. They hence became the favourite food ingredients in this new taste-scape, being able to embody the literati's aesthetic values and to address their medical concerns.

Behind the rise of these sea delicacies in Chinese cuisine, there were far-flung networks supplying them to the Chinese consumer market. Different from the trans-Indian Ocean network of pepper, the sea delicacy networks were concentrated around the China Seas region. This was because of the different trading patterns. Whereas there was a long-established pepper trading network in the Indian Ocean World supplying multiple consumer markets including not only China, the preserved marine products almost exclusively served the Chinese consumer market. Therefore, their networks were relatively China-centric. As Chinese demand surged from the sixteenth through the eighteenth centuries, their networks also expanded from the China Coast across the China Seas to the broader world.

In this cross-China Seas world, these sea delicacies had different distribution patterns. Edible nests could only be found in tropical regions. Abalones were mostly collected from temperate waters. Shark fins were from both tropical and temperate waters, but they relied on relatively unpredictable catches. In comparison to them, sea cucumbers had the best potential to be massively collected and traded from a wide geographic range. They had abundant distribution in coastal waters and had rich biodiversity including both temperate and tropical species. Therefore, they offered the best example for understanding how this cross-China Seas world took shape.

Epilogue

As chapter four shows, China was first supplied with sea cucumbers from Northeast Asia in the late sixteenth century. In the initial stage, Liaodong (present-day Liaoning province in Northeast China) featured prominently. This region was critical in establishing the first sea cucumber (sea ginseng) economy in China most likely because of influence from Korea, which was adjacent to Liaodong and had already developed its own sea cucumber economy since the early fifteenth century. Besides Liaodong, the Shandong Peninsula in North China, which was opposite to Liaodong, also developed a sea cucumber economy by the early seventeenth century and would play a prominent role in the mid-seventeenth century, when the coastal region of Liaodong was temporarily depopulated amid the Manchu Conquest.

Through the seventeenth century, the Manchu Conquest was a major factor in the rise of the northern world of sea cucumbers. Liaodong first became the centre of the emerging Manchu Regime in the 1620s. After a turbulent period in the mid-seventeenth century, the Manchu Conquest contributed to an important expansion of the northern world of sea cucumbers for it brought the Manchu coast of the Japan Sea into contact with the Chinese consumer market. Besides that, sea cucumbers also emerged in the tribute trade organised by the Korean and the Manchu courts, as well as in Manchu-sponsored maritime trade with Japan. As a result, by the end of the seventeenth century, when the Manchus had managed to establish a new world order in Northeast Asia, the northern world of sea cucumbers had enormously expanded, incorporating both the North China Sea and the Japan Sea. In this process, the typical temperate sea cucumbers from these two seas, with a spiky and black surface, were constructed as the ideal sea cucumbers, known in the Chinese consumer market as Liao/Manchu sea cucumbers (*liaosben*).

While the northern world of sea cucumbers was taking shape in the seventeenth century, a southward expansion was initially hindered by some deep-seated cultural prejudices. As chapter four shows, in the mid-seventeenth century, when tropical sea cucumbers first emerged in Chinese cuisine,

Epilogue

they were perceived as inferior for their appearance, origin, and texture were considered essentially different from the idealised Liao/Manchu sea cucumbers from temperate waters. As a result, till the end of the seventeenth century, Chinese elite consumers still attempted to exclude tropical species from their perception of perfect sea cucumbers, even though the demand in China had become so strong so that people had to look for more affordable substitutes for the expensive Liao/Manchu variety.

That strong demand was met with a new era in China's maritime trade with Southeast Asia. In 1684, as there was no longer a powerful overseas regime threatening the Manchu rule in China after the conquest of Taiwan (1683), Emperor Kangxi (r. 1662-1722) decided to open to the sea. The following over a century-long expansion of the overseas Chinese economy is well-known in Southeast Asian historiography as the Chinese Century. That expansion also became entangled with the post-Spice Wars transformation of archipelagic Southeast Asia. After the fall of the former spice trading centre, Makassar, to the Dutch in 1669, eastern Indonesian littoral society retreated from the previously profitable trade of fine spices with the Indian Ocean World because of the monopoly by the VOC. The open of China from the 1680s offered them new trading opportunities. Eventually, mediated by overseas Chinese living in Makassar, they joined the cross-China Seas world of sea cucumbers from around the 1690s.

The major challenge that the eastern Indonesian littoral society faced was not the long distance across the China Seas, but the above-mentioned cultural prejudices against tropical species. Their southern origin and often non-black colour excluded them from the theoretical framework that associated the natural features of black sea cucumbers from temperate waters with the medical efficacy of nourishing the water and yin of the kidneys. Against these prejudices, Southeast Asian collectors in eastern Indonesia explored a rich diversity of tropical species and produced various types of products with their own food-processing techniques. Some sorts closely emulated the black and spiky

Epilogue

Liao/Manchu sea cucumbers, some sorts superseded the latter for their larger size, and some deeply processed sorts even transformed originally low-value white tropical sea cucumbers into meaty and chewy products, catering to Chinese consumers' gustatory preferences. These diverse sorts of tropical sea cucumbers, with distinctive features, gradually destabilised Chinese conception of the perfect sea cucumbers and cultivated a new consumer market for tropical varieties.

By the late eighteenth and early nineteenth centuries, white sea cucumbers deeply processed by *trepangers* from Makassar in northern Australia had been sold together with spiky and black sea cucumbers from the Japan Sea in “sea taste” or “southern goods” ships in China, both perceived as desirable sea delicacies by Chinese consumers. The China Seas were now encompassed by the world of sea cucumbers. Thereafter, by the dawn of the Opium War (1839-1942), it further expanded far beyond the China Seas and drew sea cucumbers from the southern Pacific Islands.

Taste and Global History

The transformation from the world of pepper to the world of sea cucumbers had important consequences for the global connections from the Mongol Conquest to the Dutch and British expansions. As just mentioned, the emergence of the trans-Indian Ocean world of pepper caused a shift of spice trade from the trading entrepôts in Southeast Asia to the Malabar Coast of South India. This shift urged us to rethink the Mongol hiatus in Southeast Asian historiography. Taking the activities of the Mongol Empire in the Indian Ocean World into consideration, I suggest that it was not the negative maritime policy of the Mongols, but their pro-active involvement in the construction of their trans-Indian Ocean empire that contributed to the Mongol hiatus between the two ages of commerce in Southeast Asia. It is even possible to consider the period from the Mongol Conquest of South China until the end of the Zheng He's voyages, namely, approximately from the 1280s to the

Epilogue

1430s, as a trans-Indian Ocean age of commerce, when ships from China bypassed Southeast Asian intermediaries and directly participated in the Indian Ocean trade.

The rise of the cross-China Seas world of sea cucumbers in the seventeenth and eighteenth centuries created new connections for seemingly irrelevant regional developments from Northeast Asia to northern Australia. In Northeast Asia, it sheds light on the ignored global history of the Japan Sea. From the seventeenth through the eighteenth centuries, the littoral society of the Japan Sea was subject to three different political powers, namely, the Manchu Empire, the Chosŏn dynasty, and the Tokugawa shogunate. Sea cucumbers offer a unique angle to re-envision the connected past of this region beyond the segmentation caused by these powers. In the seventeenth century, with a long-established sea cucumber economy, the Japan Sea joined the Chinese consumption-centric world of sea cucumbers via three different channels: the Manchu trading town of Hunchun, the tribute missions of Korea, and the Nagasaki trading system. Nevertheless, by the end their sea cucumbers still converged in the Chinese consumer market and might even be collectively sold as Liao/Manchu sea cucumbers in a “sea taste” shop in China, because of their shared feature of being black and spiky.

Into the eighteenth century, such a shop would also offer various types of tropical sea cucumbers from Southeast Asia and northern Australia. Throughout that century, thanks to initiatives from fishers and traders in Southeast Asia, the southern world of sea cucumbers shed off the dominance of the Liao/Manchu sea cucumbers and proposed diversified and deeply processed tropical products, which gradually found market in China. That change exactly took place between the VOC’s monopoly of the spice trade in the late seventeenth century and the British expansion in Southeast Asia and northern Australia in the late eighteenth and early nineteenth centuries. It points to a transitional period in Southeast Asian history when the Age of Commerce had ended, and the local society was searching for new trading opportunities outside the monopoly of the VOC.

Epilogue

In this context, the emerging trade of sea cucumbers with China became crucial. The Dutch empire, while controlling several strategical ports in this sea cucumber world, could do little other than occasionally check junks and *padewakangs* sailing along the loosely patrolled waters of archipelagic Southeast Asia. On the same waters, Chinese traders in Makassar had been organising sea cucumber fishery since the 1690s. Iranun and Balangingi slave-raiders had been actively capturing coastal populations since the late eighteenth century for fuelling a prosperous sea cucumber economy on the Sulu Islands. Bugis sailors were weaving a cross-Java Sea network throughout the eighteenth century to carry sea cucumbers from the eastern Indonesian Archipelago to their trading bases along the Melaka Straits. That trading pattern inspired some EIC officials from the late eighteenth century and eventually contributed to the rise of the British Empire in Southeast Asia.¹

The rise of these expanding empires and far-reaching networks are, however, what can be observed on the surface. Underneath them, there was an evolving Chinese microcosm. In the aforementioned medical debates, pepper and sea cucumbers were associated with two sets of affinities. Pepper, for its hot-spiciness, was associated with fire, heat, and the therapy of warming the centre. Sea cucumbers, particularly temperate sea cucumbers, for their northern origin, black colour, and saltwater habitat, were associated with water, cold, and the therapy of nourishing the yin of the kidneys. Therefore, the transformation from the world of pepper to the world of sea cucumbers corresponded to the shift from a pepper-represented microcosm that favoured warming exotics for raising up yang, replenishing the spleen and the stomach, and energising digestion, to a sea cucumbers-represented microcosm that paid more attention to nourishing yin, preserving water, and taking care of the kidneys. These emblematic terms concerning the nature of the body in Chinese medicine, in fact, provide a

¹ Tagliacozzo, “A Necklace of Fins.”

Epilogue

coded language for exploring a global history that could profoundly change our understanding of the world since the Mongol Conquest.

Such an observation encourages us to further break away from the popular assumption that only European consumption of edible exotics, such as spices, sugar, and tea, mattered to early modern globalisation and the emergence of the modern world. Following Craig Clunas's criticism of "consumption and the rise of the west", I completely agree that we shall abandon the idea of exclusively identifying early modern European society as the consumer society, and exclusively associating European "consumer revolution" with modernity.² Since at least the eleventh century, along with the rise of the literati as social elites, the consumption of edible exotics in China had no longer been the privileges of the court and the aristocrats. It was after all the literati's concern about their self-perceived weak and partly-feminised body that propelled the evolution of Chinese medicine and contributed to the gustatory shift from pepper to sea cucumbers.

Also, apart from a period from the late fourteenth to the late fifteenth centuries, when the Ming imperial state attempted to monopolise overseas trade through the tribute system, Chinese consumers were primarily supplied with edible exotics by private merchants. Some of them, such as the so-called southern goods merchants, specialised in the domestic redistributions of these edible exotics, while others, such as the junk traders based on the China Coast, focused on importing them from overseas. Although many of them also received patronage from the Mongol or Manchu court, their profitability by the end depended on the sale of their imported exotics in the Chinese consumer market, instead of the consumption of the court and the aristocrats. Thanks to the existence of this consumer economy, the changes in Chinese taste for exotics had far-reaching influence on the world beyond the China Coast.

² Clunas, "Modernity Global and Local."

Epilogue

However, we shall also not glorify the global implications of the Chinese gustatory revolution. On the one hand, we have no reason to justify a dominance of Chinese literati culture over non-Chinese society at the margins of a China-centric world. Instead, as this dissertation reveals, Chinese literati culture received influence from everywhere, from Ayurvedic medicine, from the Mongol Conquest, from the Manchu Conquest, from the littoral society in the eastern Indonesian Archipelago, etc. While not denying the consumer power of the literati, we shall beware that their consumption patterns were not determined by Chinese literati culture alone but evolved amid everyday interactions with non-literati culture in China and non-Chinese culture in the world.

On the other hand, I must acknowledge that this research has yet to take the consumption of edible exotics in other non-western food cultures into consideration. As far as I am aware, the existing scholarship in this understudied field is not commensurate to its significance for global history. We may expect that the researchers of the food history of, for instance, India, Persia, Japan, Java, and Mexico to propose different types of gustatory revolutions and different food-defined worlds driven by these regions' evolving taste for exotics. I believe that "gustatory revolutions", like modernities, shall be plural instead of singular.³ I also believe that the change of taste for exotics in many locations in this world matters to global history. After all, I think that to global history, all taste matters.

³ For a critical review of modernity, see Cooper, *Colonialism in Question*, 113-149.

Bibliography

Abbreviations

- ANRI Arsip Nasional Republik Indonesia (National Archives of Indonesia, Jakarta).
- DXYJ *Danxi yiji* 丹溪醫集 [The medical collection of Danxi (Zhu Zhenheng)]. Beijing: Renmin weisheng chubanshe, 1999.
- EIC British East India Company.
- JYSDJYXQS *Jin Yuan sidajia yixue quanshu* 金元四大家醫學全書 [Complete medical anthology of the Four Masters in the Jin and Yuan periods]. Tianjin: Tianjin kexue jishu chubanshe, 1994.
- NA Nationaal Archief (National Archives of the Netherlands, The Hague).
- SKJHSCS *Siku jinhuishu congshu* 四庫禁燬書叢書 [Collectanea of the books prohibited and destroyed by the editors of the *Complete Library in Four Sections*]. Beijing: Beijing chubanshe, 1997.
- SKQS *Siku quanshu* 四庫全書 [Complete library in four sections] (Wenyuange copy). Taipei: Shangwu yinshuguan, 1983.
- SKQSCMCS *Siku quanshu cunmu congshu* 四庫全書存目叢書 [Collectanea of the books reviewed in the *Complete Library in Four Sections*]. Ji'nan: Qilu shushe, 1996.
- VOC Verenigde Oost-Indische Compagnie (Dutch United East India Company).
- XXSKQS *Xuxiu siku quanshu* 續修四庫全書 [Supplements to the *Complete Library in Four Sections*]. Shanghai: Shanghai guji chubanshe, 2002.

Dutch Archives

- Nationaal Archief (NA), The Hague.
VOC (1.04.02) 1579, 2100, 2163, 2859, 3858, 7969.
- Arsip Nasional Republik Indonesia (ANRI), Jakarta.
Makassar 115, 140, 141, 142, 143, 291/6, 3/2.
Hoge Regering 1178, 3578.

Primary Sources in Chinese and Japanese

Bibliography

- Chao Yuanfang 巢元方. *Zhubing yuanhou lun jiaoshi* 诸病源候论校释 [An annotated edition of *Treatise on the Origins and Signs of Various Kinds of Illnesses*] (610), edited by Nanjing zhongyi xueyuan. Beijing: Renmin weisheng chubanshe, 1980.
- Chen Cangqi 陳藏器. *Bencao shiyi jishi* 《本草拾遗》辑释 [A recollected and annotated edition of *Supplement to Materia Medica*] (739), recompiled by Shang Zhijun. Hefei: Anhui kexue jishu chubanshe, 2002.
- Chen Cheng 陳承, Pei Zongyuan 裴宗元, and Chen Shiwen 陳師文, comps. *Taiping huimin beji jufang* 太平惠民和劑局方 [Formulary of the Pharmacy Service for Benefiting the People in an Era of Great Peace] (first edition early 12th century; expansions in 1131-1161, 1225-1227, and 1241-1252). Beijing: Renmin weisheng chubanshe, 1985.
- Chen Hanhui 陳函輝. *Shancao* 刪艸 [Manuscript of poems with “delete” (*shan*) as the end rhyme] (preface 1634). In *Xiaohanshanzi ji* 小寒山子集 [Collection of Xiaohanshanzi]. SKJHSCS edition.
- Chen Hao 陳淏. *Huajing* 花鏡 [Mirror of flowers] (preface 1688). Hangzhou: Zhejiang renmin meishu chubanshe, 2019.
- Chen Maoren 陳懋仁. *Quannan zazhi* 泉南雜誌 [Miscellaneous jottings in Quannan (Quanzhou)] (ca. early 17th c.; *Congshu jicheng* edition). Reprint, Shanghai: Shangwu yinshu guan, 1936.
- Chen Maoxue 陳懋學, comp. *Shiyan yaoxuan* 事言要玄 [Succinct summary of things] (preface 1618). SKQSCMCS edition.
- Chongxiu zhenghe jingshi zhenglei beiyong bencao* 重修政和經史證類備用本草 [Newly revised *materia medica* of the Zhenghe period, ready to use, classified, tested, and based upon the classics and historical works] (1249). Reprint, Beijing: Renmin weisheng chubanshe, 1957.
- Danxi xinfa* 丹溪心法 [Danxi's methods] (preface 1481). DXYJ edition.
- Daoxuan 道宣. *Sifen li shanfan buque xingshichao* 四分律刪繁補闕行事鈔 [Emended commentary on monastic practices from the *Dharmaguptaka Vinaya*]. In *Taishō shinsū daijōkyō* 大正新修大藏經 [Taishō-era newly revised *Tripitaka*], 100 vols., edited by Takakusu Junjirō, Watanabe Kaigoku, and Gemmyō Ono, vol. 40, no. 1804. Tokyo: Taishō issaikyō kankōkai, 1924-1935.
- Duan Chengshi 段成式. *Youyang zazhu* 酉陽雜俎 [Miscellaneous morsels from Youyang], edited by Fang Nansheng. Beijing: Zhonghua shuju, 1981.

Bibliography

- Fan Chengda 范成大 et al., comps. *Wujun zhi* 吴郡志 [*Gazetteer of Wu Prefecture*] (1229). Reprint, Nanjing: Jiangsu guji chubanshe, 1999.
- Fan Ye 范曄. *Hou Hanshu* 後漢書 [The book of the Later Han], edited by Li Xian et al. Beijing: Zhonghua shuju, 1965.
- Gao Lian 高濂. *Yinzhuo fushi jian* 饮饌服食箋 [Discourse on food and drink] (1591), edited by Tao Wentai. Beijing: Zhongguo shangye chubanshe, 1985.
- Ge Hong 葛洪. *Baopuzi neipian jiaoshi* 抱朴子內篇校釋 [Collation and interpretation of the inner chapters of *Baopuzi*] (ca. early 4th c.), annotated by Wang Ming. Beijing: Zhonghua shuju, 1985.
- Han Yu 韓愈. *Han Changli shi xinian jishi* 韓昌黎詩繫年集釋 [Collected comments on Han Yu's poems by the age spectrum], 2 vols, annotated by Qian Zhonglian. Shanghai: Shanghai guji chubanshe, 1984.
- Han Zhihe 韓祗和. *Shanghan weizhi lun* 傷寒微旨論 [Profound meaning of cold damage], edited by Cheng Panji. Beijing: Zhongguo zhongyiyao chubanshe, 2015.
- Hao Yixing 郝懿行. *Haicuo yijuan* 海錯一卷 [One fascicle about a miscellany of marine creatures]. In *Haoshi yishu* 郝氏遺書 [The collection of Hao Yixing] (1879).
- . *Shaishu tang bilu* 曬書堂筆錄 [Jottings from the Hall of Basking Books in the Sunshine]. In *Haoshi yishu* 郝氏遺書 [The collection of Hao Yixing] (1879).
- Heo Gyun 許筠. *Domundaejag* 屠門大嚼 [Chewing before a butchery] (preface 1611). In *Chōsen no ryōri shō* 朝鮮の料理書 [Korean cookery books], translated by Chon Deson. Tokyo: Heibonsha, 1982.
- Hou Xianchun 侯先春. “Anbian ershisi yishu” 安邊二十四議疏 [Twenty-four commentaries on pacifying borderland] (1591). In *Ming jingshi wenbian* 明經世文編 [Selected works on statecraft in the Ming period] (Pinglu tang edition), compiled by Chen Zilong, vol. 6, *juan* 428:1a-39a. Reprint, Beijing: Zhonghua shuju, 1962.
- Huang Zhong 黃衷. *Hai yu* 海語 [Words of the sea] (preface 1536, epilogue 1846). Reprint, Taipei: Taiwan xuesheng shuju, 1984.
- Huangdi neijing lingshu* 黃帝內經靈樞 [Yellow Emperor's Inner Canon: Divine pivot]. In *Huangdi neijing zhangju suoyin* 黃帝內經章句索引 [The Yellow Emperor's Inner Canon, by chapter and section, with concordance], edited by Ren Yingqiu. Beijing: Renmin weisheng chubanshe, 1986.

Bibliography

- Huangdi neijing suwen* 黃帝內經素問 [Basic questions of the Yellow Emperor's Inner Canon]. In *Huangdi neijing zhangju suoyin* 黃帝內經章句索引 [The Yellow Emperor's Inner Canon, by chapter and section, with concordance], edited by Ren Yingqiu. Beijing: Renmin weisheng chubanshe, 1986.
- Huizhou minjian zhenxi wenxian jicheng* 徽州民間珍惜文獻集成 [Collection of rare local documents from Huizhou], 30 vols, compiled by Wang Zhenzhong. Shanghai: Fudan University Press, 2018.
- Husihui 忽思慧. *Yinshan zhengyao* 飲膳正要 [Proper and essential things for food and drink] (preface 1330). Shanghai: Shanghai shudian, 1989.
- Jia Sixie 賈思勰. *Qimin yaoshu yizhu* 齊民要術譯註 [A translated and annotated edition of *Essential Arts for the Common People*], edited by Miu Qiyu and Miu Guilong. Shanghai: Shanghai guji chubanshe, 2009.
- Jia Yi 賈誼. *Xinshu jiaozhu* 新書校注 [Commentary on *New Book*], annotated by Yan Zhenyi and Zhong Xia. Beijing: Zhonghua shuju, 2000.
- Jiao Hong 焦竑. *Yangzheng tujie* 養正圖解 [Cultivating Rectitude, Illustrated and Explained]. Wu Huairang edition, 1594. National Central Library (Taipei).
- Jujia biyong shilei quanji (yinsbi lei)* 居家必用事類全集 (飲食類) [Complete collection of classified affairs essential for households (food sections)] (ca. 14th c.), edited by Qiu Pangtong. Beijing: Zhongguo shangye chubanshe, 1986.
- Piao tongshi yanjie* 朴通事諺解 [A vernacular translation of *Interpreter Pak*]. Taipei: Lianjing, 1978.
- Qian Yong 錢泳. *Liyuan conghua* 履園叢話 [Collected conversations from Lü Garden] (1838). Reprint, Beijing: Zhonghua shuju, 1979.
- Kou Zongshi 寇宗奭. *Bencao yanyi* 本草衍義 [Dilatations on *materia medica*] (1116), edited by Yan Zhenghua, Chang Zhangfu, and Huang Youqun. Beijing: Renmin weisheng chubanshe, 1990.
- Laizhou fuzhi* 萊州府志 [Gazetteer of Laizhou Prefecture] (preface 1604). Erudition's Chinese gazetteer database (中國方志庫).
- Laoqida yanjie* 老乞大諺解 [A vernacular translation of *Experienced Chinese*]. Taipei: Lianjing, 1978.
- Li Chan 李梴. *Yixue rumen* 醫學入門 [Introduction to medicine] (epilogue 1575). Beijing: Zhongguo zhongyiyao chubanshe, 1995.

Bibliography

- Li Dou 李斗. *Yangzhou huafang lu* 揚州畫舫錄 [Record of the painted boats of Yangzhou] (1795), annotated by Wang Beiping and Tu Yugong. Beijing: Zhonghua shuju, 1960.
- Li Gao 李杲. *Nei wai shang bianhuo lun* 內外傷辨惑論 [Treatise on distinguishing internal and external damage]. JYSDJYXQS edition.
- . *Piwei lun* 脾胃論 [Treatise on the spleen and the stomach]. JYSDJYXQS edition.
- . *Yixue faming* 醫學發明 [Elucidation of medicine]. JYSDJYXQS edition.
- Li Hua'nan 李化楠. *Xingyuan lu* 醒園錄 [Notes from Awakening Garden] (mid-18th century), edited by Li Tiaoyuan. Beijing: *Zhongguo shangye chubanshe*, 1984.
- Li Rihua 李日華. *Weishuixuan riji* 味水軒日記 [Diary from the Tasting-Water House], edited by Tu Youxiang. Shanghai: Shanghai yuandong chubanshe, 1996.
- Li Shizhen 李時珍. *Bencao gangmu* 本草綱目 [Systematic Materia Medica] (1596). Beijing: Renmin weisheng chubanshe, 1975.
- Li Xun 李珣. *Haiyao bencao* 海藥本草 [Materia medica of overseas drugs], recompiled by Shang Zhijun. Beijing: Renmin weisheng chubanshe, 1997.
- Li Yu 李漁. *Xianqing ouji* 閒情偶寄 [Sketches of idle pleasures]. Hangzhou: Zhejiang guji chubanshe, 1991.
- Liangzhong haidao zhenjing* 兩種海道針經 [Two rutters], edited by Xiang Da. Beijing: Zhonghua shuju, 1961.
- Lin Hong 林洪. *Shanjia qingong* 山家清供 [Pure offerings from the house in the mountains], edited by Wu Ke. Beijing: Zhongguo shangye chubanshe, 1985.
- Liu Minzhong 劉敏中. *Zhong'an xiansheng Liu Wenjian gong wenji* 中庵先生劉文簡公文集 [Anthology of Liu Minzhong] (preface 1334). Beijing: Shumu wenxian chubanshe, 1991.
- Liu Wansu 劉完素. *Shanghan zhibe* 傷寒直格 [Direct examination of cold damage]. JYSDJYXQS edition.
- Meng Yuanlao 孟元老. *Dongjing menghua lu jianzhu* 東京夢華錄箋注 [An annotated edition of *Dream of the Splendors of the Eastern Capital*], annotated by Yi Yongwen. Beijing: Zhonghua shuju, 2006.
- Ming Qing Suzhou gongshangye beikeji* 明清苏州工商业碑刻集 [A collection of inscriptions about commerce and industry in Suzhou during the Ming and Qing periods]. Nanjing: Jiangsu renmin chubanshe, 1981.

Bibliography

- Mu Shixi 穆世錫. *Shiwu jiyao* 食物輯要 [Summary of edible things] (1614). Reprint, Beijing: Huaxia chubanshe, 1999.
- Nanjing jiaozhu* 難經校注 [An annotated edition of the *Classic of Difficulties*], edited by Ling Yaoping. Beijing: Renmin weisheng chubanshe, 1991.
- Naidewen 耐得翁. *Ducheng jisheng* 都城紀勝 [Splendors of the Capital] (preface 1235). Shanghai: Gudian wenhua chubanshe, 1957.
- Neige cangben Manwen laodang, Taizu chao, Hanwen yiven* 內閣藏本滿文老檔 太祖朝 漢文譯文 [Chinese translation of the old Manchu archive preserved in Neige, the Taizu period]. Shenyang: Liaoning minzu chubanshe, 2009.
- Neige cangben Manwen laodang, Taizong chao, Hanwen yiven* 內閣藏本滿文老檔 太宗朝 漢文譯文 [Chinese translation of the old Manchu archive preserved in Neige, the Taizong period]. Shenyang: Liaoning minzu chubanshe, 2009.
- Qingdai Henan, Shandong deng sheng shangren huiguan beike ziliao xuanji* 清代河南、山東等省商人會館碑刻資料選輯 [An epigraphic collection of merchant association halls in Henan, Shandong, and other provinces in the Qing period], compiled by Xu Tan. Tianjin: Tianjin guji chubanshe, 2013.
- Qingong yushan* 清宮御膳 [Imperial meals of the Qing court], 5 vols., edited by Zhongguo diyi lishi dang'an guan. Beijing: Huabaozhai shushe, 2001.
- Qu Dajun 屈大均. *Guangdong xinyu* 廣東新語 [New sayings about Guangdong] (late 17th c.). Beijing: Zhonghua shuju, 1985.
- Saying'e 薩英額, comp. *Jilin waiji* 吉林外紀 [Unofficial records of Jilin] (preface 1827), edited by Shi Jixiang and Zhang Yu. Changchun: Jilin wenshi chubanshe, 1986.
- Sejong sillok* 世宗實錄 [The Veritable Records of King Sejong]. <http://sillok.history.go.kr/>.
- Shanghai beike ziliao xuanji* 上海碑刻資料選輯 [A select collection of epigraphs in Shanghai]. Shanghai: Shanghai renmin chubanshe, 1980.
- Shao Bao 邵寶. *Rongchun Tang xuji* 容春堂續集 [Sequel to the Collection of Rongchun Hall]. SKQS edition.
- Shao Yong 邵雍, comp. *Menglin xuanjie* 夢林玄解 [An explication of the profundities in the forest of dreams] (11th c.), revised by Chen Shiyuan in 1564 and by He Dongru in 1636. XXSKQS edition.

Bibliography

- Shen Bang 沈榜, comp. *Wanshu zaji* 宛署雜記 [Miscellaneous records from the office of Wanping] (preface 1593). Reprint, Beijing: Beijing guji chubanshe, 1980.
- Shengji zonglu* 聖濟總錄 [Medical encyclopaedia of sagely benefaction] (1111-1117). Beijing: Renmin weisheng chubanshe, 1962.
- Shengjing tongzhi* 盛京通志 [The general gazeteer of Shengjing] (1684). Main Library, Kyoto University. <https://rmda.kulib.kyoto-u.ac.jp/item/rb00008733>.
- Shengjing tongzhi* 盛京通志 [The general gazeteer of Shengjing] (1736). Erudition's Chinese gazeteer database (中國方志庫).
- Sima Guang 司馬光. "Sima wengong shihua" 司馬溫公詩話 [Poetic remarks of Sima Guang]. In *Shuofu* 說郛 [Purlicus of exposition] (late 14th c.), compiled by Tao Zongyi, vol. 11. Reprint, Beijing: Zhongguo shudian, 1986.
- Sima Qian 司馬遷. *Shiji* 史記 [Records of the grand historian]. Beijing: Zhonghua shuju, 1959.
- Sinjŕng tongguk yŕji sŕngnam* 新增東國輿地勝覽 [Augmented survey of the geography of Korea] (preface 1530). Kyujanggak edition. <https://ctext.org/library.pl?if=gb&res=91772>.
- Song huiyao jigao* 宋會要輯稿 [Edited essential documents of the Song], recompiled by Xu Song and edited by Liu Lin et al. Shanghai: Shanghai guji chubanshe, 2014.
- Song Lian 宋濂. *Hanyuan xuyi* 翰苑續集 [Sequel to the anthology in the Hanlin Academy]. In *Song Lian quanji* 宋濂全集 [Complete anthology of Song Lian]. Hangzhou: Zhejiang guji chubanshe, 1999.
- Song Lian 宋濂 et al. *Yuan shi* 元史 [The history of Yuan]. Beijing: Zhonghua shuju, 1976.
- Song Xu 宋詡. *Songsbi yangsheng bu (yinsbi bufen)* 宋氏養生部 (飲食部分) [The life-nourishing collection of the Song family (food sections)] (preface 1504), edited Tao Wentai. Beijing: Zhongguo shangye chubanshe, 1989.
- Song Yingxing 宋應星. *Tiangong kaimu* 天工開物 [The works of heaven and the inception of things] (1637), edited by Zhong Guangyan. Guangzhou: Guangdong renmin chubanshe, 1976.
- Su Jing 蘇敬 et al. *Xinxiu bencao* 新修本草 [Newly revised materia medica], recompiled by Shang Zhijun. Hefei: Anhui kexue jishu chubanshe, 2005.
- Su Shi 蘇軾. "Fuyu xing" 鰓魚行 [Song of abalones]. In *Su Shi shiji* 蘇軾詩集 [Anthology of Su Shi's poetry], compiled by Wang Wengao, *juan* 26, 1384-1386. Beijing: Zhonghua shuju, 1982.

Bibliography

- Sun Simiao 孫思邈. *Beiji qianjin yaofang jiaoshi* 備急千金要方校釋 [An annotated edition of the essential formulary for emergencies worth a thousand gold], edited by Li Jingrong et al. Beijing: Renmin weisheng chubanshe, 1998.
- . *Qianjin yifang jiaoshi* 千金翼方校釋 [An annotated edition of supplement to the formulary worth a thousand gold], edited by Li Jingrong et al. Beijing: Renmin weisheng chubanshe, 1998.
- Tanba Yasuyori 丹波康賴, comp. *Isbinbō* 医心方 [Formulas from the heart of medicine] (984), annotated by Gao Wenzhu. Beijing: Huaxia chubanshe, 1996.
- Tiaoding ji* 調鼎集 [Collection of seasoning *ding* vessels], edited by Xing Botao. Beijing: Zhongguo shangye chubanshe, 1986.
- Tu Benjun 屠本峻. *Minzhong haicuo shu* 閩中海錯疏 [Commentaries on a miscellany of marine creatures in Fujian] (preface 1596, *Xuejin taoyuan* edition). Reprint, Beijing: Zhonghua shuju, 1985.
- Wang Dahai 王大海. *Haidao yizhi* 海島逸誌 [A desultory account of Islands], edited by Yao Nan and Wu Liangxuan. Hong Kong: Xuejin shudian, 1992.
- Wang Dayuan 汪大淵. *Daoyi zhibilie jiaoshi* 島夷誌略校釋 [An annotated edition of *Sketched Record of Island Barbarians*] (preface 1349), edited by Su Jiqing. Beijing: Zhonghua shuju, 1981.
- Wang Gong 王恭. *Baiyun qiaochang ji* 白雲樵唱集 [Collection of lumberjack's singing in white cloud] (preface 1411). SKQS edition.
- Wang Gun 王袞. *Boji fang* 博濟方 [Formulary of extensive relief] (1041-1048), edited by Wang Zhenguo and Song Yongmei. Shanghai: Shanghai kexue jishu chubanshe, 2003.
- Wang Huaiyin 王懷隱 et al. comps. *Taiping shenghui fang* 太平聖惠方 [Formulary of sagely grace of the Taiping period] (992). Reprint, Beijing: Renmin weisheng chubanshe, 1958.
- Wang Lun 王綸. *Mingyi zazhu* 明醫雜著 [Miscellaneous writings of enlightened physicians] (preface 1549), commented by Xue Ji. Beijing: Renmin weisheng chubanshe, 1995.
- Wang Pinzhen 王聘珍. *Da Dai Liji jiegou* 大戴禮記解詁 [Exegesis of Dai De's *Book of Rites*]. Beijing: Zhonghua shuju, 1983.
- Wang Shimao 王世懋. *Minbu shu* 閩部疏 [Commentaries on Fujian] (preface 1585). SKQSCMCS edition.
- Wang Tao 王燾. *Waitai miyao fang* 外臺秘要方 [Formulary of the outer terrace and the arcane essentials] (preface 752), edited by Gao Wenzhu. Beijing: Huaxia chubanshe, 1993.

Bibliography

- Wanli dichao* 萬曆邸鈔 [Court gazettes of the Wanli period]. Nanjing: Jiangsu guangling guji keyinshe, 1991.
- Wei Shou 魏收. *Weishu* 魏書 [The book of the Wei]. Beijing: Zhonghua shuju, 1974.
- Wei Zheng 魏徵 et al. *Suishu* 隋書 [The book of the Sui]. Beijing: Zhonghua shuju, 1973.
- Wu Rui 吳瑞. *Riyong bencao* 日用本草 [Materia medica for everyday use] (preface 1329), edited by Zheng Jinsheng. Beijing: Renmin weisheng chubanshe, 2002.
- Wu Weiye 吳偉業. *Wu Meicun quanji* 吳梅村全集 [The complete anthology of Wu Meicun], edited by Li Xueying. Shanghai: Shanghai guji chubanshe, 1990.
- Wu Yiluo 吳儀洛. *Bencao congxin* 本草從新 [Materia medica conforming to new standards] (preface 1757). Beijing: Zhongyi guji chubanshe, 2001.
- Wu Chenchen 吳振臣. *Ningguta jilie* 寧古塔紀略 [Brief accounts of Ningguta] (epilogue 1721). Reprint, Nanjing: Fenghuang chubanshe, 2006.
- Wu Zimu 吳自牧. *Mengliang lu* 夢梁錄 [A Record of the Millet Dream] (late 13th c.). Shanghai: Gudian wenxue chubanshe, 1957.
- Xie Zhaozhe 謝肇淛. *Wuzha zu* 五雜俎 [five assorted groups] (epilogue 1616). Reprint, Beijing: Zhonghua shuju, 1959.
- Xinbian zuantu zenglei qunshu leiyaoshilin guangji* 新編纂圖增類群書類要事林廣記 [Extensive records of the forest of affairs, newly compiled, illustrated, expanded with new categories, and classified and summarised with all sorts of books]. Xiyuan jingshe edition, ca. 1330-1333, Naikaku Bunko.
- Xu Shen 許慎. *Shuowen jiezi zhu* 說文解字注 [Commentary on *Explaining Graphs and Analyzing Characters*], commentated by Duan Yucai. Shanghai: Shanghai guji chubanshe, 1981.
- Xu Yang 徐楊. *Gusu fanhua tu* 姑蘇繁華圖 [Prospering Suzhou] (1759). Reprint, Beijing: Wenwu chubanshe, 1999.
- Xuanzang 玄奘 and Bianji 辯機. *Datang Xiyu ji* 大唐西域記 [Great Tang records on the Western Regions], edited by Ji Xianlin. Beijing: Zhonghua shuju, 1985.
- Yang Bin 楊賓. *Yang Bin ji* 楊賓集 [Anthology of Yang Bin], edited by Ke Yuchun. Hangzhou: Zhejiang guji chubanshe, 2011.
- Yao Kecheng 姚可成. *Shiwu bencao dianjiao ben* 食物本草點校本 [An annotated edition of *Materia Medica of Edible Items*] (preface 1638, supplement 1642), edited by Da Meijun and Lou Shaolai. Beijing: Renmin weisheng chubanshe, 1994.

Bibliography

- Ye Sheng 葉盛. *Ye Wenzhuang gong zouyi* 葉文莊公奏議 [The memorial collections of Ye Sheng] (preface 1457). XXSKQS edition.
- Yejong sillok* 睿宗實錄 [The Veritable Records of King Yejong]. <http://sillok.history.go.kr/>.
- Yeongjo sillok* 英祖實錄 [The Veritable Records of King Yeongjo]. <http://sillok.history.go.kr/>.
- Yi Su-Gwang 李睟光. *Jibong yuseol* 芝峰類說 [Topical Discourses of Jibong] (preface 1614). <https://ko.wikisource.org/wiki/번역:지봉유설>.
- Yuan Mei 袁枚. *Suiyuan shidan* 隨園食單 [Recipes from Harmony Garden] (preface 1792), annotated by Zhou Sanjin. Beijing: Zhongguo shangye chubanshe, 1984.
- Zhang Congzheng 張從正. *Rumen shiqin* 儒門事親 [Serving parents as Confucians] (ca. early 13th c.). JYSDJYXQS edition.
- Zhang Ji 張機. *Shanghan lun* 傷寒論 [Treatise on cold damage], edited by Gao Baoheng, Sun Qi, Lin Yi et al. in 1065. In *Zhongjing quanshu* 仲景全書 [Complete anthology of Zhang Ji (Zhongjing)], edited by Zhao Kaimei in 1599 and Zhang Xinyong in 2010. Beijing: Zhongyi guji chubanshe, 2010.
- Zhang Lu 張璐. *Benjing fengyuan* 本經逢原 [Encountering the origin with the *Canon of Materia Medica*] (1695). Beijing: Zhongyi guji chubanshe, 2017.
- Zhang Mu 章穆. *Tiaoji yinshi bian* 調疾飲食辯 [Discourse on medical diet] (preface 1813, first published 1823), edited by Yi Guangqian. Beijing: Zhongyi guji chubanshe, 1987.
- Zhang Xie 張燮. *Dongxi yangkao* 東西洋考 [Study of east and west oceans] (preface 1617), edited by Xie Fang. Beijing: Zhonghua shuju, 1981.
- Zhao Rukuo 趙汝适. *Zhufan zhi jiaoshi* 諸蕃志校釋 [An annotated edition of description of foreign countries] (preface 1225), edited by Yang Bowen. Beijing: Zhonghua shuju, 1996.
- Zhao Xianke 趙獻可. *Yiguan* 醫貫 [One principle through medicine] (ca. 1617-1628). XXSKQS edition.
- Zhao Xuemin 趙學敏. *Bencao gangmu shiyi* 本草綱目拾遺 [Supplement to systematic materia medica] (preface 1765). XXSKQS edition.
- Zhen Quan 甄權. *Gujin luyan fang* 古今錄驗方 [Tested recipes recorded from the ancient to present], recompiled by Xie Pan'gen. Beijing: Zhongguo yiyao keji chubanshe, 1996.

Bibliography

- Zhou Lianggong 周亮工. *Min xiaoji* 閩小記 [A short record of Fujian] (preface 1667). Reprint, Shanghai: Shanghai guji chubanshe, 1985.
- Zhou Mi 周密. *Wulin jiushi* 武林舊事 [Old affairs of the martial grove] (ca. late 13th c.). Shanghai: Gudian wenxue chubanshe, 1957.
- Zhou Qufei 周去非. *Lingwai daida jiaozhu* 嶺外代答校注 [An annotated edition of representative answers from the region beyond the mountains] (preface 1178), annotated by Yang Wuquan. Beijing: Zhonghua shuju, 1999.
- Zhu Gong 朱肱. *Shanghan leizheng huoren shu* 傷寒類證活人書 [Classified and tested book on cold damage for saving life] (preface 1118), edited by Liu Congming, Wei Min, and Ding Zheng. Beijing: Zhongyi guji chubanshe, 2012.
- Zhu Yu 朱彧. *Pingzhou ketan* 萍洲可談 [Talks from Pingzhou] (preface 1119), edited by Li Weiguo. Shanghai: Shanghai guji chubanshe, 2012.
- Zhu Zhenheng 朱震亨. *Bencao yanyi buyi* 本草衍義補遺 [Supplement to dilatations on *Materia Medica*]. DXYJ edition.
- . *Gezhi yulun* 格致餘論 [Further views on extending knowledge]. DXYJ edition.
- . *Jufang fahui* 局方發揮 [Exposition on the formulary of the Imperial Pharmacy]. DXYJ edition.

Other Works Cited

- Akamine, Jun. “*Namako* and *iriko*: Historical Overview on *holothurian* (Sea Cucumber) Exploration, Utilization, and Trade in Japan.” In *Food and Foodways in Asia: Resource, Tradition and Cooking*, edited by Sidney C. H. Cheung and Tan Chee-Beng, 23-36. London: Routledge, 2007.
- . *Namako o aruku: Genba kara kangaueru seibutsu tayosei to bunka tayosei* ナマコを歩く --現場から考える生物多様性と文化多様性 [Walking along with sea cucumbers: Thinking about biodiversity and cultural diversity from the field]. Tokyo: Shinsensha, 2010.
- . “The Role of Samas/Bajaus in Sea Cucumber Trades in the Sulu Sultanate Economy: Towards a Reconstruction of Dynamic Maritime History in Southeast Asia.” In *Perspectives on Bajau/Sama’ Diaspora*, edited by Mohd Anis Md Nor, 151-163. Kota Kinabalu: Dept. of Sabah Museum, 2017.
- Al-Sīrāfī, Abū Zayd. *Two Arabic Travel Books: Accounts of China and India*, edited and translated by Tim Mackintosh-Smith. New York: New York University Press, 2014.

Bibliography

- Allsen, Thomas. *Culture and Conquest in Mongol Eurasia*. Cambridge: Cambridge University Press, 2001.
- . *The Steppe and the Sea: Pearls in the Mongol Empire*. Philadelphia: University of Pennsylvania Press, 2019.
- Amir, Amrullah, and Nordin Hussin. *Pedagang Melayu di Sulawesi Selatan: Identiti dan kuasa*. Kuala Lumpur: Dewan Bahasa dan Pustaka, 2019.
- Andaya, Leonard Y. *Leaves of the Same Tree: Trade and Ethnicity in the Straits of Melaka*. Honolulu: University of Hawai'i Press, 2008.
- Andaya, Leonard Y. "Local Trade Networks in Maluku in the 16th, 17th, and 18th Centuries." *Cakalele* 2, no. 2 (1991): 71-96.
- . "The Bugis-Makassar Diasporas." *Journal of the Malaysian Branch of the Royal Asiatic Society* 68, no. 1 (1995): 119-138.
- . *The Heritage of Arung Palakka: A History of South Sulawesi (Celebes) in the Seventeenth Century*. The Hague: Martinus Nijhoff, 1981.
- . *The Kingdom of Johor, 1641-1728*. Kuala Lumpur: Oxford University Press, 1975.
- Anderson, E. N. *Food and Environment in Early Medieval China*. Philadelphia: University of Pennsylvania Press, 2014.
- . *The Food of China*. New Haven: Yale University Press, 1988.
- Aoyama, Sadao. "The Newly-Risen Bureaucrats in Fukien at the Five Dynasties-Sung Period, with Special Reference to Their Genealogies." *Memoirs of the Research Department of the Toyo Bunko* 21 (1962): 1-48.
- Appadurai, Arjun, ed. *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge: Cambridge University Press, 1986.
- Arai, Eiji. *Kinsei kaisanbutsu bōekishi no kenkyū: Chūgoku muke yushutsu bōeki to kaisanbutsu* 近世海産物貿易史の研究：中国向け輸出貿易と海産物 [A study of the history of early modern sea product trade: Focus on the export of sea products to China]. Tokyo: Yoshikawa Kobunkan, 1975.
- Ashtor, Eliyahu. *Levant Trade in the Late Middle Ages*. Princeton: Princeton University Press, 1983.
- Austin, Daniel F., and Richard S. Felger. "Sichuan Peppers and the Etymology of *Fagara* (Rutaceae)." *Economic Botany* 62, no. 4 (2008): 567-573.
- Bade, David. *Of Palm Wine, Women and War: The Mongolian Naval Expedition to Java in the 13th Century*. Singapore: Institute of Southeast Asian Studies, 2013.

Bibliography

- Benn, James A. *Tea in China: A Religious and Cultural History*. Honolulu: University of Hawai'i Press, 2015.
- Bian, He. "An Ever-Expanding Pharmacy: Zhao Xuemin and the Conditions for New Knowledge in Eighteenth-Century China." *Harvard Journal of Asiatic Studies* 77, no. 2 (2017): 287-319.
- . *Know Your Remedies: Pharmacy and Culture in Early Modern China*. Princeton: Princeton University Press, 2020.
- Bik, A. J. *Dagverhaal eener reis, gedaan in het jaar 1824, tot nadere verkenning der eilanden Kefing, Goram, Groot-en Klein Kei en de Aroe-eilanden*. Leiden: Sijthoff, 1928.
- Biran, Michal. *Qaidu and the Rise of the Independent Mongol State in Central Asia*. Richmond: Curzon, 1997.
- Blair, Emma Helen, and James Alexander Robertson. *The Philippine Islands, 1493-1898*, 55 vols. Cleveland, Ohio: Arthur H. Clark, 1903-1909.
- Blok, P.J., and P.C. Molhuysen. *Nieuw Nederlandsch biografisch woordenboek. Deel 8*. Leiden: Sijthoff, 1930.
- Blussé, Leonard. "Chinese Century: The Eighteenth Century in the China Sea Region." *Archipel* 58 (1999): 107-29.
- . "In Praise of Commodities: An Essay on the Cross-cultural Trade in Edible Bird's-Nests." In *Emporia, Commodities, and Entrepreneurs in Asian Maritime Trade, c. 1400-1750*, edited by Roderich Ptak and Dietmar Rothermund, 317-335. Stuttgart: Franz Steiner Verlag, 1991.
- . "Junks to Java: Chinese Shipping to the Nanyang in the Second Half of the Eighteenth Century." In *Chinese Circulations: Capital, Commodities, and Networks in Southeast Asia*, edited by Eric Tagliacozzo and Wen-Chin Chang, 221-258. Durham: Duke University Press, 2011.
- . *Strange Company: Chinese Settlers, Mestizo Women and the Dutch in VOC Batavia*. Dordrecht: Foris Publications, 1988.
- . "The Vicissitudes of Maritime Trade: Letters from the Ocean *Hang* Merchant, Li Kunhe, to the Dutch (1803-09)." In *Sojourners and Settlers: Histories of Southeast Asia and the Chinese*, edited by Anthony Reid, 148-163. St Leonards: Allen & Unwin, 1996.
- Blussé, Leonard, and Nie Dening. *The Chinese Annals of Batavia, the Kai Ba Lidai Shiji and Other Stories (1610–1795)*. Leiden: Brill, 2018.
- Bohnet, Adam. "'On Either Side the River': The Rise of the Manchu State and Chosŏn's Jurchen Subjects." In *The Exploitation of the Landscape of Central and Inner Asia: Past, Present and Future*, edited by Michael Gervers, Uradyn E. Bulag, and Gillian Long, 111-126. Toronto: Asian Institute, University of Toronto, 2008.

Bibliography

- Bol, Peter K. "This Culture of Ours": Intellectual Transitions in T'ang and Sung China. Stanford: Stanford University, 1992.
- Bossler, Beverly J. *Powerful Relations: Kinship, Status, and the State in Sung China, 960-1279*. Cambridge, Mass.: Harvard University Press, 1998.
- Bourdieu, Pierre. *Distinction: A Social Critique of the Judgement of Taste*, translated by Richard Nice. London: Routledge, 1984.
- Boyanton, Stephen. "The *Treatise on Cold Damage* and the Formation of Literati Medicine: Social, Epidemiological, and Medical Change in China, 1000-1400." PhD diss., Columbia University, 2015.
- Braudel, Fernand. *Civilization and Capitalism, 15th - 18 Century, Volume 1, The Structures of Everyday Life, The Limits of the Possible*, translated by Siân Reynolds. London: William Collins, 1981.
- Buchari. "Sri Maharaja Mapanji Garasakan: A New Evidence on the Problem of Airlangga's Partition of His Kingdom." *Madjalah Ilmu-Ilmu Sastra Indonesia* 4, nos. 1-2 (1968): 1-27.
- Buell, Paul D., and Eugene N. Anderson. *A Soup for the Qan: Chinese Dietary Medicine of the Mongol Era as Seen in Hu Sibui's Yinshan Zhengyao*. Leiden: Brill, 2010.
- Burkill, Isaac Henry. *A Dictionary of the Economic Products of the Malay Peninsula*. Kuala Lumpur: Ministry of Agriculture and Co-operatives, 1966. First published 1935 by Crown Agents for the Colonies.
- Cagle, Hugh. *Assembling the Tropics: Science and Medicine in Portugal's Empire, 1450-1700*. Cambridge: Cambridge University Press, 2018.
- Cao, Yimei. "Zhong Tang zhi Song dai shige zhong de nanshi shuxie yu shiren xintai" 中唐至宋代诗歌中的南食书写与士人心态 [Literati's perception and description of "southern food" in the poems from the mid-Tang through Song periods]. *Wenxue yichan*, no. 6 (2016): 68-77.
- Cao, Yu. *Zhongguo shila shi: Lajiao zai Zhongguo de sibai nian* 中国食辣史：辣椒在中国的四百年 [A history of eating spices in China: Four hundred years of chili pepper in China]. Beijing: Beijing lianhe chuban gongsi, 2019.
- Cense, A.A. *Makassaars-Nederlands woordenboek*. 's-Gravenhage: Martinus Nijhoff, 1979.
- Chaffee, John W. *The Muslim Merchants of Premodern China: The History of a Maritime Asian Trade Diaspora, 750-1400*. Cambridge: Cambridge University Press, 2018.
- Chaloupka, George. "Praus in Marege: Makassan Subjects in Aboriginal Rock Art of Arnhem Land, Northern Territory, Australia." *Anthropologie* 34, no. 1/2 (1996): 131-142.

Bibliography

- Chang, Shu-Hui. “Bei Song wenren yinshi shuxie de nanfang jingyan” 北宋文人飲食書寫的南方經驗 [The south experience in food and drink writing by the northern Song literati]. *Tamkang Journal of Chinese Literature* 14 (2006): 133-176.
- Chang, Tsun-wu. *Qing Han zongfan maoyi, 1637-1894* 清韓宗藩貿易，1637-1894 [Sino-Korean tributary trade, 1637-1894]. Taipei: Institute of Modern History, Academia Sinica, 1978.
- Chen, Bo. “Zhao Mengfu yu zhexi hanghai jiazu de jiaoyou: Yi Kunshan Gushi, Zhushi ji Changxing Feishi weili” 赵孟頫与浙西航海家族的交游——以昆山顾氏、朱氏及长兴费氏为例 [Correspondence between Zhao Mengfu and maritime trading families in the Zhexi region: Focus on the Gu and Zhu families in Kunshan and the Fei family in Changxing]. *Yuanshi ji minzu yu bianjiang yanjiu jikan* 36 (2018): 177-183.
- Chen, Chien-Hung. “Junliang gongxu yu Ming Qing Liaodong zhanzheng” 軍糧供需與明清遼東戰爭（1618-1642） [Military provisions in the Liaodong War between Ming and Qing dynasties]. PhD diss., National Taiwan Normal University, 2018.
- Chen, Ching-Mao. “Songdai haichan jiagong jiqi shiyong pingjia: Yi Songshi wei taolun yijun” 宋代海產加工及其食用評價——以宋詩為討論依據 [Seafood processing and its consumers' evaluation in the Song dynasty: Based on the Song poems]. *Journal of Chinese Dietary Culture* 8, no. 2 (2012): 103-143.
- . “Songshi zhong de haiyang yinshi fengshang” 宋詩中的海洋飲食風尚 [Seafood culture in Song poems]. *Journal of Chinese Dietary Culture* 7, no. 2 (2011): 1-34.
- Chen, Gaohua. “Yuandai de hanghai shijia Ganpu Yangshi: Jianshuo Yuandai qita hanghai jiazu” 元代的航海世家澈浦楊氏——兼說元代其他航海家族 [The maritime trading family of Yang in Ganpu during the Yuan period: Also about other maritime trading families]. *Haijiaoshi yanjiu* 1 (1995): 4-18.
- Chen, Kuo-tung. “Qingdai zhongye xiamen de haishang maoyi (1727-1833)” 清代中葉廈門的海上貿易 [Xiamen's maritime trade during the mid-Qing period]. In *Zhongguo haiyang fazhan shi lunwenji* 中國海洋發展史論文集 [Essays in Chinese maritime history], vol. 4, edited by Wu Jianxiong, 61-100. Taipei: Academia Sinica, 1994.
- Chen, Ming. “Fa chu boshi?: ‘Sanlejiang’ yuanliu kao” “法出波斯”： “三勒漿”源流考 [“It is from Persia”: A study of the origin of *sanlejiang* (the drink made up of *triphala*)]. *Lishi yanjiu*, no. 1 (2012): 4-23.

Bibliography

- . *Shufang yiyao: Chutu wenshu yu xiyu yixue* 殊方異藥：出土文獻與西域醫學 [Foreign medicine in medieval China: Medical manuscripts discovered in Dunhuang and the Western Regions]. Beijing: Beijing daxue shubanshe, 2005.
- . *Silu yiming* 丝路医明 [Medical culture along the Silk Road]. Guangzhou: Guangdong jiaoyu chubanshe, 2017.
- . “The Transmission of Foreign Medicine via the Silk Roads in Medieval China: A Case Study of *Haiyao Bencao* 海药本草.” *Asian Medicine* 3 (2007): 246-251.
- Chen, Peng. “Qingdai Dongbei diqu Kuyala “xin Manzhou” xingcheng chutan” 清代东北地区库雅喇“新满洲”形成初探 [A preliminary study of the formation of Kūyara “new Manchus” in the northeast region during the Qing period]. *Minzu yanjiu*, no. 1 (2008): 76-84.
- Chen, Shiu-an-yu. “Su Shi “Fuyu xing” zhi neirong yiyun yu zhangfa jiegou tanxi” 蘇軾<鮒魚行>之內容意蘊與章法結構探析 [Exploring the contents, connotations, and organisational structure of Su Shi’s “Song of *fuyu*”]. *Kaohsiung Normal University Journal (Humanities and Arts)* 37 (2014): 21-23.
- Chen, Su-Chen. “Songdai linjie tiyong zhong de ziran guancha yu shuxie” 宋代鱗介題詠中的自然觀察與書寫 [The observation and writing of nature in chanting poems on scaled and carapaced creatures in the Song dynasty]. *Xin guoxue* 8 (2010): 139-171.
- Chen, Yuan-peng. “Liangsong de shangyi shiren yu ruyi: Jian lun qi zai Jin Yuan de liubian” 兩宋的「尚醫士人」與「儒醫」——兼論其在金元的流變 [Literati with medical interests and literati physicians in the Song period: Also about their transitions in the Jin and Yuan periods]. PhD diss., National Taiwan University, 1997.
- . “Tang Song shiliao gainian yu xingwei zhi chuanyan: Yi *Qianjin shizhi* wei hexin de guancha” 唐宋食療概念與行為之傳衍——以《千金·食治》為核心的觀察 [Food and healing in the Tang and Song: The *Shib-chih* chapter in Sun Szu-miao’s *Ch’ien-chin yao-fang*]. *Bulletin of IHP* 69, no. 4 (1998): 766-825.
- . “Zhuiqiu yinshi zhi qing: Yi *Shanjia qinggong* wei zhuti de ge’an guancha” 追求飲食之清：以山家清供為主題的個案觀察 [Pursuance of purity in food: Focus on the *Pure Offerings from the House in the Mountains*]. *Journal of Chinese Dietary Culture* 3, no. 1 (2007): 1-40.

Bibliography

- Cheng, Jie. “Yuan Jia Ming yu Qing Zhu Benzong *Yinshi xuzhi zhenwei kao*” 元贾铭与清朱本中《饮食须知》真伪考 [A study of the authenticity of *Guidance of Food and Drink* by Jia Ming and Zhu Benzong]. *Yuejiang xuekan*, no. 3 (2018): 143.
- Cheng, Wing-Sheung. “Cong fanke dao tangren: Zhongguo yuanyang waishang (618–1433) shenfen zhi zhuanhua” 從蕃客到唐人：中國遠洋外商 (618–1433) 身份之轉化 [From foreign guests to Tang people: The transforming identity of the ocean-going foreign merchants, 618–1433]. In *Zhongguo haiyang fazhan shi lunwen ji dishi ji* 中國海洋發展史論文集 [A collection of papers on the development of maritime history of China], vol. 10, edited by Shi-yeoung Tang, 143-204. Taipei: Research Centre for Humanities and Social Sciences, Academia Sinica, 2008.
- Cheung, Sui-Wai. “A Desire to Eat Well: Rice and the Market in Eighteenth-Century China.” In *Rice: Global Networks and New Histories*, edited by Francesca Bray, Peter A. Coclanis, Edda L. Fields-Black, and Dagmar Schäfer, 84-98. Cambridge: Cambridge University Press, 2015.
- Cheung, Weichung. “Admiral Shi Lang’s Secret Proposal to Return Taiwan to the VOC.” In *Sea Rovers, Silver, and Samurai: Maritime East Asia in Global History, 1550-1700*, edited by Tonio Andrade and Xing Hang, 290-311. Honolulu: University of Hawai’i Press, 2016.
- Chiu, Chung-lin. “Bingjiao, bingchuan yu bingxian: Mingdai yijiang Jiang Zhe de bingxian yuye yu haixian xiaofei” 冰窖、冰船與冰鮮：明代以降江浙的冰鮮漁業與海鮮消費 [Ice houses, frozen ships and fresh seafood: The frozen fishery and seafood consumption in Jiangsu-Zhejiang China, 1368-1930s]. *Journal of Chinese Dietary Culture* 1, no. 2 (2005): 31-95.
- Choo, Poh-Sze. “Fisheries, Trade and Utilization of Sea Cucumbers in Malaysia.” In *Advances in Sea Cucumber Aquaculture and Management*, edited by Alessandro Lovatelli, Chantal Conand, Steven Purcell, Sven Uthicke, Jean-François Hamel, and Annie Mercier, 57-68. Rome: Food and Agriculture Organization of the United Nations, 2004.
- Chou, Cynthia. *Indonesian Sea Nomads: Money, Magic, and Fear of the Orang Suku Laut*. London: Routledge, 2003.
- Chuang, Shen. “Cong bazhen de yanbian kan Zhongguo yinshi wenhua de yanbian” 從「八珍」的演變看中國飲食文化的演變 [The development of Chinese dietary culture as viewed from the evolution of the “Eight Precious Dishes”]. *Bulletin of IHP* 61, no. 2 (1990): 433-479.
- Chung, Chia-Ling. “Cong shipu kan Songren de yangsheng yu shiliao: Yi *Shanjia qingong weili*” 從食譜看宋人的養生與食療——以《山家清供》為例 [Nourishing-life and dietary therapies of

Bibliography

- Song people through recipes: Focus on *Pure Offerings from the House in the Mountains*]. *Journal of the Historical Studies* 史學彙刊 30 (2012): 108-111.
- Clark, Hugh R. *Community, Trade, and Networks: Southern Fujian Province from the Third to the Thirteenth Century*. Cambridge: Cambridge University Press, 1991.
- . *Portrait of a Community: Society, Culture, and the Structures of Kinship in the Mulan River Valley (Fujian) from the Late Tang through the Song*. Hong Kong: The Chinese University Press, 2007.
- . *The Sinitic Encounter in Southeast China Through the First Millennium CE*. Honolulu: University of Hawai'i Press, 2016.
- Classen, Constance, David Howes, and Anthony Synnott, *Aroma: The Cultural History of Smell*. London: Routledge, 1994.
- Clunas, Craig. "Modernity Global and Local: Consumption and the Rise of the West." *The American Historical Review* 104, no. 5 (1999): 1497-1511.
- . *Superfluous Things: Material Culture and Social Status in Early Modern China*. Cambridge: Polity Press, 1991.
- Coedès, G. *The Indianized States of Southeast Asia*, edited by Walter F. Vella and translated by Susan Brown Cowing. Honolulu: The University Press of Hawai'i, 1968.
- Cong, Peiyuan. *Zhongguo dongbei shi* 中国东北史 [History of Northeast China], vols. 3-4. Changchun: Jilin wenshi chubanshe, 2006.
- Cooper, Frederick. *Colonialism in Question: Theory, Knowledge, History*. Berkeley: University of California Press, 2005.
- Crawford, I. M. "Late Prehistoric Changes in Aboriginal Culture on Kimberley." PhD diss., University of London, 1969.
- Crawford, John. *History of the Indian Archipelago*, 3 vols. Edinburgh: Archibald Constable, 1820.
- . *Journal of an Embassy from the Governor-General of India to the Courts of Siam and Cochin China*, 2 vols. London: Henry Colburn and Richard Bentley, 1830.
- Cummings, W. "The Melaka Malay Diaspora in Makassar, c.1500-1669." *Journal of the Malaysian Branch of the Royal Asiatic Society* 71, no. 1 (1998): 106-121.
- Da Orta, Garcia. *Colloquies on the Simples and Drugs of India*, translated by Clements Markham. London: Henry Sotheran, 1913.
- Dai, Yifeng. "Yinshi wenhua yu haiwai shichang: Qingdai Zhongguo yu Nanyang de haishen maoyi" 饮食文化与海外市场：清代中国与南洋的海参贸易 [Culinary culture and overseas market:

Bibliography

- Sea cucumber trade between China and Nanyang during the Qing period]. *Zhongguo jingjishi yanjiu*, no. 1 (2003): 83-91.
- Dardess, John W. “From Mongol Empire to Yüan Dynasty: Changing Forms of Imperial Rule in Mongolia and Central Asia.” *Monumenta Serica* 30 (1972-1973): 117-165.
- De Casparis, J. G. “Airlangga: The Threshold of the Second Millennium.” *ILAS Newsletter* 18 (February 1999): 30.
- . “Srivijaya and Malayu.” In *Final Report: Consultative Workshop on Archaeological and Environmental Studies on Srivijaya (I-W2B), Jakarta, Padang, Prapat and Medan, Indonesia, Sept. 16/30, 1985*, 245-255. Bangkok: SPAFA, 1985.
- De Vries, Leslie. “The Dangers of ‘Warming and Replenishing’ (wenbu 溫補) during the Ming to Qing Epistemic Transition.” *Asian Medicine* 10 (2015): 90-120.
- . “The Gate of Life: Before Heaven and Curative Medicine in Zhao Xianke’s Yiguan.” PhD diss., Universiteit Gent, 2012.
- De Weerd, Hilde. “Review of: Nicolas Tackett The Destruction of the Medieval Chinese Aristocracy.” *The Journal of Interdisciplinary History* 46, no. 4 (2016): 39-41.
- Degroot, Véronique. *Candi, Space and Landscape: A Study on the Distribution, Orientation and Spatial Organization of Central Javanese Temple Remains*. Leiden: Sidestone, 2009.
- Deng, Jinrong. “Yuanchao zheng Zhaowa shishi kao” 元朝征爪哇史事考 [Research on the war between Java and the Yuan dynasty]. *Hwa Kang Journal of the Historical Studies* 3 (2015): 185-220.
- Despeux, Catherine. “The System of the Five Circulatory Phases and the Six Seasonal Influences (wuyun liuqi), a Source of Innovation in Medicine under the Song (960-1279).” In *Innovation in Chinese Medicine*, edited by Elisabeth Hsu, 121-165. Cambridge: Cambridge University Press, 2001.
- Ding, Guangdi. *Jin Yuan yixue pingxi* 金元醫學評析 [Comments and analysis of medicine during the Jin and Yuan periods]. Beijing: Renmin weisheng chubanshe, 1999.
- Dohi, Yūko. *Sōdai Nankai bōekishi no kenkyū* 宋代南海貿易史の研究 [A study of Nanhai trade during the Song dynasty]. PhD diss., Kansai University, 2014.
- Dott, Brian R. *The Chile Pepper in China: A Cultural Biography*. New York: Columbia University Press, 2020.

Bibliography

- Du, Hongtao. *Shugu fengyan: Mingdai Liaodong de weisuo tizhi yu junshi shehui* 戍鼓烽烟：明代辽东的卫所体制与军事社会 [War drums and beacon fire: The garrison system and military society of Liaodong in the Ming dynasty]. Shanghai: Shanghai guji chubanshe, 2021.
- Dutt, Udo Chand. *The Materia Medica of the Hindus: Compiled from Sanskrit Medical Works*. Calcutta: Thacker Spink, 1877.
- Endo, Jiro, Nakamura Teruko, Yamaki Hidehiko, and Miyamoto Hirokazu. “Tan no kigen I” 痰の起源 [The origin of phlegm] I and II. *Nihon ishigaku zasshi* 39, nos. 3-4 (1993): 333-345, 543-553.
- Engelhardt, Ute. “Dietetics in Tang China and the First Extant Works of *Materia Dietetica*.” In *Innovation in Chinese Medicine*, edited by Elisabeth Hsu, 173-191. Cambridge: Cambridge University Press, 2001.
- Fan, Jinmin. “Ming Qing shiqi huoyue yu Suzhou de waidi shangren” 明清时期活跃于苏州的外地商人 [Nonlocal merchants active in Suzhou during the Ming and Qing periods]. *Zhongguo shehui jingjishi yanjiu*, no. 4 (1989): 39-46.
- . “Qingdai Suzhou chengshi gongshang fanrong de xiezhao: Gusu fanhua tu” 清代苏州城市工商繁荣的写照——姑苏繁华图 [A depiction of the prosperous urban industry and commerce in Suzhou during the Qing period: Prospering Suzhou]. *Shilin*, no. 3 (2003): 104-115.
- Fan, Ka-wai. *Beisong Jiaozheng Yishujia xintan: Yi guojia yu yixue wei zhongxin* 北宋校正醫書局新探——以國家與醫學為中心 [A new exploration on the Bureau for Revising Medical Texts of the Northern Song Dynasty]. Hong Kong: Chung Hwa Book, 2014.
- . “Yizhe Ge Yinglei yu Yuandai yixue fazhan: Yi Ge Yinglei muzhiming wei zhongxin” 醫者葛應雷與元代醫學發展——以葛應雷墓誌銘為中心 [Ge Yinglei and the development of medicine during the Yuan period: Focus on Ge Yinglei’s epitaph]. *Xin shixue* 28, no. 4 (2017): 103-153.
- Fan, Shuzhi. *Chongxie wan Ming shi: Neiyou yu waihuan* 重写晚明史：内忧与外患 [Rewriting late Ming history: Internal concerns and external troubles]. Beijing: Zhonghua shuju, 2019.
- Fan, Xingzhun. “Liang Song guanyao ju” 兩宋官藥局 [Imperial Pharmacy during the Northern and Southern Song dynasties]. *yimen* 1, nos. 1-4 (1943): 29-38, 33-40, 31-38, 27-32.
- . *Zhongguo bingshi xinyi* 中国病史新义 [New interpretation of Chinese disease history]. Beijing: Zhongyi guji chubanshe, 1989.

Bibliography

- . *Zhongguo yixue shiliie* 中国医学史略 [An outline of Chinese medical history]. Beijing: Beijing chubanshe, 2016.
- Feng, Lijun. “Luelun Ming Qing shiqi Zhongguo yu Dongnanya de yanwo maoyi” 略论明清时期中国与东南亚的燕窝贸易 [A concise study of edible bird’s nest trade between China and Southeast Asia during the Ming and Qing periods]. *Zhongguo jingshi yanjiu*, no. 2 (2015): 103-112.
- . “Qingdai Zhongguo yu Dongnanya de yuchi maoyi” 清代中国与东南亚的鱼翅贸易 [Shark fin trade between China and Southeast Asia in the Qing Dynasty]. *Journal of Xiamen University (Arts & Social Sciences)*, no. 2 (2017): 84-95.
- . “Renzhi, shichang yu maoyi: Ming Qing shiqi Zhongguo yu Dongnanya de haishen maoyi” 认知、市场与贸易：明清时期中国与东南亚的海参贸易 [Knowledge, market and trade: China-Southeast Asia sea cucumber trade during the Ming and Qing periods]. *Journal of Xiamen University (Arts & Social Sciences)*, no. 6 (2012): 49-56.
- Forrest, Thomas. *A Voyage to New Guinea and the Moluccas, from Balambangan*. London: G. Scott, 1779.
- Fox, James. “Notes on the Southern Voyages and Settlements of the Sama-Bajau.” *Bijdragen tot de Taal-, Land- en Volkenkunde* 133, no. 4 (1977): 459-465.
- . “Reefs and Shoals in Australia-Indonesia Relations: Traditional Indonesian Fishermen.” In *Australia in Asia: Episode*, edited by Anthony Milner and Mary Quilty, 111-139. Melbourne: Oxford University Press, 1998.
- Freedman, Paul. *Out of the East: Spices and the Medieval Imagination*. New Haven: Yale University Press, 2008.
- Fu, Yanling. *Zhang Zhongjing yixue yuanliu* 张仲景医学源流 [The pedigree of Zhang Zhongjing medicine]. Beijing: Zhongguo yiyao keji chubanshe, 2006.
- Fukami, Sumio. “Gendai no Marakka Kaikyō——Tsūro ka kyoten ka” 元代のマラッカ海峡——通路か拠点か [The Melaka Straits during the Yuan period: Passage or emporium?]. *Tōnan Ajia: Rekishi to bunka* 33 (2004): 100-118.
- . “Sanbutsusei no saikentō——Marakka Kaikyō kodaishi kenkyū no shiza tenkan” 三仏齋の再検討——マラッカ海峡古代史研究の視座転換 [Reexamination of *San-fo-ch’i*: Change of Perspective of the Study on Early History of the Western Part of Insular Southeast Asia]. *Tōnan Ajia kenkyū* 25, no. 2 (1987): 205-232.

Bibliography

- . “Shōbanshi no Sujidan no ichi ni tsuite” 諸蕃志の蘇吉丹の位置について [About the location of Sujidan in *Zhufan zhibi*]. *Tōnan Ajia shigakukai kaibō* 45 (1986): 17.
- Furth, Charlotte. *A Flourishing Yin: Gender in China’s Medical History, 960-1665*. Berkeley: University of California Press, 1999.
- . “The Physician as Philosopher of the Way: Zhu Zhenheng (1282-1358).” *Harvard Journal of Asiatic Studies* 66, no. 2 (2006): 423-459.
- Gamliel, Ophira. “Back from Shingly: Revisiting the premodern history of Jews in Kerala.” *The Indian Economic and Social History Review* 55, no. 1 (2018): 53-76.
- Gao, Rongsheng. “Gulifo/Gulin——Song Yuan shiqi guoji jisan/zhongzhuan jiaotong zhongxin de xingcheng yu yunzuo” 古里佛/故临——宋元时期国际集散/中转交通中心的形成与运作 [Calicut and Kollam: The formation and operations of international redistribution and transshipment centres during the Song and Yuan periods]. *Yuanshi luncong* 11 (2009): 62-65.
- . *Yuandai haiwai maoyi yanjiu* 元代海外贸易研究 [A study of overseas trade of the Yuan dynasty]. Chengdu: Sichuan Renmin Chubanshe, 1998.
- Gao, Zhichao. “Lun Houjin shiqi de qianhai” 论后金时期的迁海 [On the coastal evacuation during the Later Jin period]. *Qingshi yanjiu*, no. 1 (2016): 63-72.
- Gaynor, Jennifer L. *Intertidal History in Island Southeast Asia: Submerged Genealogy and the Legacy of Coastal Capture*. Ithaca, NY: Cornell University Press, 2016.
- . “Piracy in the Offing: The Law of Lands and The Limits of Sovereignty at Sea.” *Anthropological Quarterly* 85, no. 3 (2012): 817-857.
- Gernet, Jacques. *Daily Life in China on the Eve of the Mongol Invasion*, translated by H. M. Wright. Stanford: Stanford University Press, 1962.
- Gerritsen, Anne. “From Long-Distance Trade to the Global Lives of Things: Writing the History of Early Modern Trade and Material Culture.” *Journal of Early Modern History* 20, no. 6 (2016): 526–544.
- . *Ji’an Literati and the Local in Song-Yuan-Ming China*. Leiden: Brill, 2007.
- Gerritsen, Anne, and Giorgio Riello, eds. *The Global Lives of Things: The Material Culture of Connections in the Early Modern World*. London: Routledge, 2016.
- Glamann, Kristof. *Dutch-Asiatic Trade, 1620-1740*. ’s-Gravenhage: Martinus Nijhoff, 1981.
- Goitein, S. D., and Mordechai Akiva Friedman. *India Traders of the Middle Ages: Documents from the Cairo Geniza*. Leiden: Brill, 2008.

Bibliography

- Goldschmidt, Asaf. *The Evolution of Chinese Medicine: Song Period, 960-1200*. London: Routledge, 2009.
- Gordon, A. Ross, Sonny A. Djonler, and Hans Hägerdal, “The Killing of *Posthouder* Scheerder and *Jifar Folfolum* (The War of the Breasts): Malukan and Dutch Narratives of an Incident in the VOC’s Waning Days.” *Journal of Southeast Asian Studies* 50, no. 3 (2019): 324-346.
- Grant, Joanna. *A Chinese Physician: Wang Ji and the ‘Stone Mountain Medical Case Histories’*. London: Routledge, 2003.
- Grasskamp, Anna. “Branch and Bones: The Transformative Matter of Coral in Ming Dynasty China.” In *Gems in the Early Modern World: Materials, Knowledge, and Global Trade, 1450-1800*, edited by Michael Bycroft and Sven Dupré, 119-147. Basingstoke: Palgrave MacMillan, 2019.
- . *Objects in Frames: Displaying Foreign Collectibles in Early Modern China and Europe*. Berlin: Reimer, 2019.
- Griffiths, Arlo. “The Epigraphical Collection of Museum Ranggawarsita in Semarang (Central Java, Indonesia)” *Bijdragen tot de Taal-, Land- en Volkenkunde* 168, no. 4 (2012): 472-496.
- Groot, Hans. *Van Batavia naar Weltevreden: Het Bataviaasch Genootschap van Kunsten en Wetenschappen, 1778-1867*. Leiden: KITLV, 2009.
- Gu, Cheng. “Qingchu de qianhai” 清初的迁海 [Coastal evacuation in the early Qing]. *Journal of Beijing Normal University (Social Sciences)*, no. 3 (1983): 60-72.
- Guillot, Claude. *Banten avant l’Islam: Étude archéologique de Banten Girang (Java-Indonésie) 932?-1526*. Paris: EFEO, 1994.
- Hairul, Awang Sudjai, and Yusoff Khan. *Kamus Lengkap*. Petaling Jaya: Pustaka Zaman, 1977.
- Halikowski-Smith, Stefan. “Demystifying a Change in Taste: Spices, Space, and Social Hierarchy in Europe, 1380-1750.” *The International History Review* 29, no. 2 (2007): 237-257.
- . “Portugal and the European Spice Trade, 1480–1580.” PhD diss.: European University Institute, 2001.
- Hall, Kenneth R. “Indonesia’s Evolving International Relationships in the Ninth to Early Eleventh Centuries: Evidence from Contemporary Shipwrecks and Epigraphy.” *Indonesia* 90 (2010): 15-45.
- Han, Xingfang. “Mingmo Lüshun zhiyi ji Huang Long qiren qishi” 明末旅顺之役及黄龙其人其事 [The Battle of Lüshun in the end of the Ming and the biography of Huang Long]. *Journal of Liaoning Normal University (Social Sciences)*, no. 6 (1994): 86-88.
- Hanson, Marta E. “Depleted Men, Emotional Women: Gender and Medicine in the Ming Dynasty.” *NAN NÜ* 7, no. 2 (2005): 287-304.

Bibliography

- . “Northern Purgatives, Southern Restoratives: Ming Medical Regionalism.” *Asian Medicine* 2, no. 2 (2006): 115-170.
- . *Speaking of Epidemics in Chinese Medicine: Disease and the Geographic Imagination in Late Imperial China*. London: Routledge, 2011.
- Haridas, V. V. “The Emergence of a Medieval South Indian Kingdom: Calicut under the Zamorins.” *Proceedings of the Indian History Congress* 59 (1998): 393-403.
- Hartman, Charles. *Han Yü and the T'ang Search for Unity*. Princeton: Princeton University Press, 1986.
- Hartwell, Robert M. “A Revolution in the Chinese Iron and Coal Industries during the Northern Sung.” *Journal of Asian Studies* 21, no. 2 (1962): 153-162.
- . “Foreign Trade, Monetary Policy and Chinese ‘Mercantilism’.” In *Liu Zijian boshi songshou jinian Songshi yanjiu lunji* 劉子健博士頌壽紀念宋史研究論集 [Collected studies on Sung history dedicated to Professor James T. C. Liu in celebration of his seventieth birthday], edited by Tsuyoshi Kinugawa, 453-488. Tokyo: Dohôsha, 1989.
- Haw, Stephen G. “Śrīvijaya, Java, and the Sunda Strait During the Fifth to Tenth Centuries.” *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 169, no. 2 (2019): 409-436.
- He, Xi, and David Faure, eds. *The Fisher Folk of Late Imperial and Modern China*. London: Routledge, 2016.
- Heirman, Ann. “Vinaya: From India to China.” In *The Spread of Buddhism*, edited by Ann Heirman and Stephan Peter Bumbacher, 167-202. Leiden: Brill, 2007.
- Heng, Derek. “Export Commodity and Regional Currency: The Role of Chinese Copper Coins in the Melaka Straits, Tenth to Fourteenth Centuries.” *Journal of Southeast Asian Studies* 37, no. 2 (2006): 179-203.
- . “Shipping, Customs Procedures, and the Foreign Community: The ‘Pingzhou ketan’ on Aspects of Guangzhou’s Maritime Economy in the Late Eleventh Century.” *Journal of Song-Yuan Studies* 38 (2008): 1-38.
- . *Sino-Malay Trade and Diplomacy from the Tenth through the Fourteenth Century*. Athens: Ohio University Press, 2009.
- . “State Formation and the Evolution of Naval Strategies in the Melaka Straits, c. 500-1500 CE.” *Journal of Southeast Asian Studies* 44, no. 3 (2013): 380-399.
- . “The Trade in Lakawood Products Between South China and the Malay World from the Twelfth to Fifteenth Centuries AD.” *Journal of Southeast Asian Studies* 32, no. 2 (2001): 133-149.

Bibliography

- Henley, David. "Ages of Commerce in Southeast Asian History." In *Environment, Trade and Society in Southeast Asia: A Longue Durée Perspective*, edited by David Henley and Henk Schulte Nordholt, 120-132. Leiden: Brill, 2015.
- . *Fertility, Food and Fever: Population, Economy and Environment in North and Central Sulawesi, 1600-1930*. Leiden: KITLV Press, 2005.
- . "Review of James F. Warren, *The Sulu Zone: The World Capitalist Economy and the Historical Imagination*." *Bijdragen tot de Taal-, Land- en Volkenkunde* 156, no. 4 (2000): 834-838.
- Hinrichs, TJ. "The Catchy Epidemic: Theorization and Its Limits in Han to Song Period Medicine." *East Asian Science, Technology, and Medicine* 41 (2015): 19-62.
- . "The Medical Transforming of Governance and Southern Customs in Song Dynasty China." PhD diss., Harvard University, 2003.
- . "The Song and Jin Periods." In *Chinese Medicine and Healing: An Illustrated History*, edited by TJ Hinrichs and Linda L. Barnes, 97-128. Cambridge, Mass.: Harvard University Press, 2013.
- Hirth, Friedrich, and W. W. Rockhill. *Chau Ju-kua: His Work on the Chinese and Arab Trade in the Twelfth and Thirteenth Centuries, Entitled Chu-fan-chi*. St. Petersburg: The Imperial Academy of Sciences, 1911.
- Hoernle, A. F. Rudolf, ed. *The Bower Manuscript: Facsimile Leaves, Nagari Transcript, Romanised Transliteration and English Translation with Notes*. Calcutta: Superintendent Government Printing, India, 1909.
- Hoogervorst, Tom. "Southeast Asia in the Ancient Indian Ocean World: Combining Historical, Linguistic, and Archaeological Approaches." PhD diss., University of Oxford, 2012.
- Hornell, James. "The Indian *Beche-der-mer* Industry: Its History and Recent Revival." *Madras Fisheries Bulletin* 11, no. 4 (1917): 119-150.
- Hourani, George Fadlo. *Arab Seafaring in the Indian Ocean in Ancient and Early Medieval Times*. Princeton: Princeton University Press, 1951.
- Howes, David, ed. *Empire of the Senses: The Sensual Culture Reader*. Oxford: Berg, 2005.
- Hu, Yannan. "Wenrenhua de *Suiyuan shidan*: Genju Zhongguo yinshan wenxianshi zuo de kaocha" 文人化的《隨園食單》——根據中國飲膳文獻史作的考察 [*Suiyuan shidan: A literary recipe*]. *Journal of Chinese Dietary Culture* 1, no. 2 (2005): 97-122.
- Hua, Feng. "Erquan shuyuan yu Jiangnan de dushu wenhua" 二泉书院与江南的读书文化 [Erquan Academy and the reading culture of Jiangnan]. *Yishu baijia*, no. 2 (2014): 235-236.

Bibliography

- Huang, H. T. *Science and Civilisation in China, Volume 6, Biology and Biological Technology, Part V: Fermentations and Food Science*. Cambridge: Cambridge University Press, 2000.
- Huang, Ketai. “Chen Cangqi *Bencao shiyi* jiqi bowuxue jiazhi” 陈藏器《本草拾遗》及其博物学价值 [Chen Cangqi’s supplement to materia medica and its contributions to natural history]. *Zhonghua yishi zazhi* 22, no. 4 (1992): 222-223.
- Huang, Yi-long. “Liu Xingzhi xiongdi yu Mingji Dongjiang haishang fangxian de bengui” 劉興治兄弟與明季東江海上防線的崩潰 [Liu Xingzhi brothers and the collapse of the naval defense line in the Yellow Sea during the late Ming period]. *Chinese Studies* 漢學研究 20, no. 1 (2002): 131-161.
- . “Wuqiao bingbian: Ming Qing dingge de yitiao zhongyao daohuoxian” 吳橋兵變：明清鼎革的一條重要導火線 [The Wuqiao Mutiny: An important fuse for the Ming-Qing cataclysm]. *Tsing Hua Journal of Chinese Studies* 42, no. 1 (2012): 79-133.
- Huizinga, Johan. *The Autumn of the Middle Ages*, translated by Rodney J. Payton and Ulrich Mammitzsch. Chicago: The University of Chicago Press, 1996.
- Hunter, Thomas M. “The Body of the King: Reappraising Singhasari Period Syncretism.” *Journal of Southeast Asian Studies* 38, no. 1 (2007): 27-53.
- Hymes, Robert P. “Not Quite Gentlemen? Doctors in Sung and Yuan.” *Chinese Science* 8 (1987): 9-76.
- . *Statesmen and Gentlemen: The Elite of Fu-Chou, Chiang-Hsi, in Northern and Southern Sung*. New York: Columbia University, 1986.
- Ibn Battuta. *The Travels of Ibn Battūta, A.D. 1325-1354*, translated by H. A. R. Gibb and C. F. Beckingham, 5 vols. Cambridge: Cambridge University Press, 1958-2000.
- Isett, Christopher Mills. *State, Peasant, and Merchant in Qing Manchuria, 1644-1862*. Stanford: Stanford University Press, 2007.
- Iwai, Shigeki. “China’s Frontier Society in the Sixteenth and Seventeenth Centuries.” *Acta Asiatica* 88 (2005): 1-20.
- Iwao, Seiichi. “Anboina (Amboina) no shoki Shinamachi ni tsuite” アンホイナ(Amboina)の初期支那町について [On the Chinese quarter at Amboyna in the early days]. *Toyo Gakubo* 33, no. 3/4 (1951): 269–311.

Bibliography

- Jiang, Zhushan. *Renshen diguo: Qingdai renshe de shengchan, xiaofei yu yiliao* 人参帝国：清代人参的生产、消费与医疗 [Ginseng empire: Production, consumption, and medicine in the Qing period]. Hangzhou: Zhejiang University Press, 2015.
- Jiao, Peng. “Kuaguo maoyi yu defang shehui: 16 shiji yijiang Zhapu gang de yanjiu” 跨國貿易與地方社會：16世紀以降乍浦港的研究 [International trade and local society: Study on Zhapu Port since the sixteenth century]. PhD diss., Sun Yat-sen University, 2007.
- Jing, Shuhui, and Xiao Rong. “Zhonggu fusan de chengyin ji chuancheng: Cong Huangfu Mi dao Sun Simiao” 中古服散的成因及傳承：從皇甫謐到孫思邈 [The origin and evolution of *fusan* (drinking powder) in Medieval China: From Huangfu Mi to Sun Simiao]. *Tang yanjiu* 13 (2007): 337-368.
- Jordaan, Roy E. “Bèlahan and the Division of Airlangga’s Realm.” *Bijdragen tot de Taal-, Land- en Volkenkunde* 163, no. 2/3 (2007): 326-355.
- Jordaan, Roy E., and B.E. Colless. *The Mahārājas of the Isles: The Śailendras and the Problem of Śrīvijaya*. Leiden: Department of Languages and Cultures of Southeast Asia and Oceania, University of Leiden, 2009.
- Jullien, François. *In Praise of Blandness: Proceeding from Chinese Thought and Aesthetics*, translated by Paula M. Varsano. New York: Zone Books, 2004.
- Jussay, P. M. “A Jewish Settlement in Medieval Kerala.” *Proceedings of the Indian History Congress* 57 (1996): 277-284.
- Kakiuchi, Kojiro, and Kigoshi Yukei. “Noto no namako seisan to shokuyō bunka shi no kenkyū” 能登のナマコ生産と食用文化史の研究 [A study of the production and culinary culture history of sea cucumbers in Noto]. *Archaeology Bulletin, Kanazawa University* 33 (2012): 63-82.
- Karashima, Noboru. “Trade Relations Between South India and China During the 13th and 14th Centuries.” *Journal of East-West Maritime Relations* 1 (1989): 59-81.
- Kauz, Ralph. “The Maritime Trade of Kish During the Mongol Period.” In *Beyond the Legacy of Genghis Khan*, edited by Linda Komaroff, 51-67. Leiden: Brill, 2006.
- Kim, Seonmin. *Ginseng and Borderland: Territorial Boundaries and Political Relations between Qing China and Chosŏn Korea, 1636-1912*. Oakland: University of California Press, 2017.
- King, Anya. “The New *materia medica* of the Islamicate Tradition: The Pre-Islamic Context.” *Journal of the American Oriental Society* 135, no. 3 (2015): 499-528.

Bibliography

- Kishimoto, Mio. “Wan Ming de baiyin beiliu wenti” 晚明的白银北流问题 [The problem of the northern outflow of silver in the late Ming period]. *Zhongguo jingjishi yanjiu*, no. 1 (2020): 5-16.
- Knaap, Gerrit J. “A City of Migrants: Kota Ambon at the End of the Seventeenth Century.” *Indonesia* 51 (1991): 105-128.
- Knaap, Gerrit J., and Heather Sutherland. *Monsoon Traders: Ships, Skippers and Commodities in Eighteenth-Century Makassar*. Leiden: KITLV Press, 2004.
- Knapman, Gareth. *Race and British Colonialism in Southeast Asia, 1770-1870: John Crawford and the Politics of Equality*. New York: Routledge, 2017.
- Koh, Keng We. “Familiar Strangers and Stranger-kings: Mobility, Diasporas, and the Foreign in the Eighteenth-Century Malay World.” *Journal of Southeast Asian Studies* 48, no. 3 (2017): 390-413.
- . “Moving People and a Prelude to Colonialism: The Kingdom of Johor, 1784-1818.” PhD diss., University of Hawai‘i, 2007.
- Köhle, Natalie. “A Confluence of Humors: Āyurvedic Conceptions of Digestion and the History of Chinese “Phlegm” (tan 痰).” *Journal of American Oriental Society* 136, no. 3 (2016): 465-493.
- Koningsberger, J. C. *Tripang en tripangvisserij in Nederlandsch-Indië*. Batavia: G. Kolff, 1904.
- Korsmeyer, Carolyn, ed. *The Taste Culture Reader: Experiencing Food and Drink*. Oxford: Berg, 2005.
- Kotaka, Shuji. “So Shoku (Tōba Koji) o tsūshite Sōdai no igaku, yōjō o kangaeru: Kodai no kikō, ekibyōshi o fumaete *Shōkan ron* no kōtei o kangaeru” 蘇軾（東坡居士）を通して宋代の医学・養生を考える——古代の気候・疫病史を踏まえて「傷寒論」の校訂を考える [A study of medicine and regimen from the perspective of Su Shi (Dongpo jushi): Approach the editing of *Treatise on Cold Damage* through ancient climate and epidemic history]. *Nihon ishigaku zasshi* 50, no. 3 (2004): 349-370.
- Krishna Ayyar, K. V. *A History of the Zamorins of Calicut, Part 1 (From the Earliest Times to 1498 A. D.)*. Calicut: Ramakrishna Printing Works, 1929.
- Krom, N. J. *Hindoe-Javaansche geschiedenis*. 's-Gravenhage: Martinus Nijhoff, 1926.
- Kulke, Hermann, K. Kesavapany, and Vijay Sakhuja, eds. *Nagapattinam to Suwarnadvipa: Reflections on the Chola Naval Expeditions to Southeast Asia*. Singapore: Institute of Southeast Asian Studies, 2009.
- . “Śrīvijaya Revisited: Reflections on State Formation of a Southeast Asian Thalassocracy.” *Bulletin de l'Ecole française d'Extrême-Orient* 102 (2016): 45-95.
- Kuo, Chung-hao. “Quanli de ziwei: Ming Qing shiqi de shiyu, shigong ji shangci wenhua” 權力的滋味——明清時期的鱒魚、鱒貢及賞賜文化 [The taste of power: *Sbi* fish (shad), the tribute

Bibliography

- system of *shi* fish, and the culture of rewarding during the Ming and Qing periods]. *Jiu Zhou xuelin* 33, no. 3 (2013): 39-76.
- . “Xianqing de chi, yazhi de shi: Ming Qing Jiangnan de jielei shuichan yu yinshi shenghuo” 閒情的吃，雅致的嗜—明清江南的介類水產與飲食生活 [Leisured consuming and refined gustation: Shellfish and gastronomic life in Ming-Qing Jiangnan]. *Journal of Chinese Dietary Culture* 2, no. 1 (2006): 39-85.
- Kuriyama, Shigehisa. *The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine*. New York: Zone Books, 1999.
- Lai, Hui-min. “Qianjia shidai Beijing de yanghuo yu qiren richang shenghuo” 乾嘉時代北京的洋貨與旗人日常生活 [Foreign goods in Beijing during the Qianlong and Jiaqing periods and the daily life of Banner-men]. In *Cong chengshi kan Zhongguo de xiandaixing* 從城市看中國的現代性 [The city and Chinese modernity], edited by Wu Jen-shu, Paul Katz, and Lin May-li, 1-35. Taipei: Academia Sinica, Institute of Modern History, 2010.
- . “Suzhou de Dongyang huo yu shimin shenghuo (1736-1795)” 蘇州的東洋貨與市民生活 (1736-1795) [Japanese products and everyday life in Suzhou, 1736-1795]. *Bulletin of the Institute of Modern History Academia Sinica* 63 (2009): 1-48.
- Lambourn, Elizabeth. “India from Aden: *Khubā* and Muslim Urban Networks in Late Thirteenth-Century India.” In *Secondary Cities and Urban Networking in the Indian Ocean Realm, c. 1400-1800*, edited by Kenneth R. Hall, 55-97. Plymouth: Lexington Books, 2008.
- Laufer, Berthold. *Sino-Iranica: Chinese Contributions to the History of Civilization in Ancient Iran. With Special Reference to the History of Cultivated Plants and Products*. Chicago: Field Museum of Natural History, 1919.
- . “Vidanga and Cubebs.” *T'oung Pao* 16, no. 2 (1915): 286-288.
- Lee, Tae-Soo. *Laoqida si zhong banben yuyan yanjiu* 《老乞大》四種版本語言研究 [A linguistic study of the four editions of *Experienced Chinese*]. Beijing: Yuwen chubanshe, 2003.
- Leirissa, R. Z. “The Bugis-Makassarese in the Port Towns Ambon and Ternate through the Nineteenth Century.” *Bijdragen tot de Taal-, Land- en Volkenkunde* 156, no. 3 (2000): 619-633.
- Leung, Angela Ki-che. “Medical Learning from the Song to the Ming.” In *The Song-Yuan-Ming Transition in Chinese History*, edited by Paul Jakov Smith and Richard von Glahn, 377-382. Cambridge, Mass.: Harvard University Asia Center, 2003.

Bibliography

- Leung, Angela Ki Che, and Ming Chen. "The Itinerary of Hing/*Awei*/Asafetida across Eurasia, 400-1800." In *Entangled Itineraries: Materials, Practices, and Knowledges across Eurasia*, edited by Pamela H. Smith, 141-164. Pittsburgh: University of Pittsburgh Press, 2019.
- Li, Yueshen. "Songjiang fu Songshi jiazhu shixi ji wenxue chengjiu gaishu" 松江府宋氏家族世系及文学成就概述 [A sketched description of the literature achievements and lineage of the Song family in Songjiang Prefecture]. *Journal of Zhejiang University (Humanities and Social Sciences)* 36, no. 1 (2006): 117-125.
- Li, Yushang. *Haiyou fengqian: Huang Bobai de yulei yu huanjing bianqian* 海有丰歉：黄渤海的鱼类与环境变迁（1368-1958） [The harvest of the sea can be good or poor: Fishes of the Yellow Sea and the Bohai Sea and environmental change]. Shanghai: Shanghai Jiao Tong University, 2011.
- Liang, Yan. "A Recipe Book for Culture Consumers: Yuan Mei and *Suiyuan shidan*." *Frontiers of History in China* 10, no. 4 (2015): 547-570.
- Lieberman, Victor. "An Age of Commerce in Southeast Asia? Problems of Regional Coherence-- A Review Article." *The Journal of Asian Studies* 54, no. 3 (1995): 796-807.
- . "Charter State Collapse in Southeast Asia, ca. 1250-1400, as a Problem in Regional and World History." *The American Historical Review* 116, no. 4 (2011): 937-963.
- . "Maritime Influences in Southeast Asia, c. 900-1300: Some Further Thoughts." *Journal of Southeast Asian Studies* 41, no. 3 (2010): 529-539.
- Lin, Fan. "The Local in the Imperial Vision: Landscape, Topography, and Geography in Southern Song Map Guides and Gazetteers." *Cross-Currents* 23 (2017): 10-39.
- Lin, Hongrong. "Jiaoshi chutan" 椒史初探 [A preliminary exploration of *jiao* history]. *Zhongguo nongshi*, no. 2 (1985): 63-67.
- Lin, Li-Chiang. "Mingdai banhua *Yangzheng tujie zhi yanjiu*" 明代版畫《養正圖解》之研究 [Study of the Ming didactic woodblock-printed books, *Cultivating Rectitude, Illustrated and Explained*]. *Taida Journal of Art History* 33 (2012): 163-224.
- Lin, Tianwei. *Songdai xiangyao maoyi shi* 宋代香藥貿易史 [The history of aromatic-drug trade in the Song period]. Taipei: Zhongguo wenhua daxue chubanshe, 1986.
- Lin, Yu-ju. "Jinkou daoxiang: Shijiu shiji Taiwan haichan de shengchan yu xiaofei" 進口導向：十九世紀台灣海產的生產與消費 [Import-oriented: Production and consumption of marine products in nineteenth-century Taiwan]. *Taiwan Historical Research* 25, no. 1 (2018): 39-100.
- Lineton, Jacqueline. "Pasompe' Ugi': Bugis Migrants and Wanderers." *Archipel* 10 (1975): 173-201.

Bibliography

- Liu, Ching-Ming. *Songdai xiangpu zhi yanjiu* 宋代《香譜》之研究 [A study of treatises on aromatics in the Song period]. Taipei: Wenshizhe chubanshe, 2007.
- Liu, Hsü-feng. “Qingdai de Zhapu gang yu Zhong-Ri maoyi” 清代的乍浦港與中日貿易 [Zhapu Port in the Qing dynasty and Sino-Japan trade]. In *Zhongguo baiyang fazhan shi lunwen ji* 中國海洋發展史論文集, [Essays on Chinese Maritime History] vol. 5, edited by Chang Pin-tsun and Liu Shiji, 187-244. Taipei: Academia Sinica, 1993.
- Liu, Jing. “Yuandai mingchen Liu Minzhong shengping shilu kaoshu” 元代名臣刘敏中生平仕履考述 [A study of official career and biography of a famous official in the Yuan dynasty, Liu Minzhong]. *Journal of Huaibei Normal University* 32, no. 5 (2011): 73-78.
- Liu, Qiong. “Shanghan lun piwei xueshu sixiang dui Sui Tang Song Jin Yuan shiqi piwei xueshuo xingcheng de yingxiang” 《伤寒论》脾胃学术思想对隋唐宋金元时期脾胃学说形成的影响 [The influence of the spleen and stomach theory of the *Treatise on Cold Damage* on the spleen and stomach theories during the Sui, Tang, Song, Jin, and Yuan periods]. PhD diss., Hubei University of Chinese Medicine, 2013.
- Liu, Shijue. *Yongjia yipai yanjiu* 永嘉医派研究 [A study of the Yongjia medical cluster]. Beijing: Zhongyi guji chubanshe, 2000.
- Liu, Shu-fen. “Chanyuan qinggui zhong suojian de chali yu tangli” 《禪苑清規》中所見的茶禮與湯禮 [Tea and medicinal soup ceremonies as seen in the *Chanyuan qinggui*]. *Bulletin of IHP* 78, no. 4 (2007): 629-670.
- . “Kezhi ze shecha, yuqu ze shetang: Tang, Song shiqi shehui shenghuo zhong de cha yu tangyao” “客至则设茶，欲去则设汤”——唐、宋时期社会生活中的茶与汤药 [“When a guest arrives tea is served; on her/his departure decoctions are served”: Tea and decoctions in the social life of the Tang and Song periods]. *Yanjing xuebao* (new series) 16 (2004): 117-155.
- Liu, Xiaomeng. “Guanyu Qingdai “xin Manzhou” de jige wenti” 关于清代“新满洲”的几个问题 [A few questions concerning “new Manchus” in the Qing dynasty]. *Manzu yanjiu*, no. 3 (1987): 26-32.
- Liu, Xiaomeng. “Shuji kanke yu yixue chuancheng: Li Gao xueshuo zai Yuandai ji Mingchu de liubu” 书籍刊刻与医学传承：李杲学说在元代及明初的流布 [Printing and medical transmission: The spread of Li Gao’s thoughts in the Yuan and early Ming periods]. *Journal of Central China Normal University (Humanities and Social Sciences)* 57, no. 3 (2018): 127-139.

Bibliography

- . “Yi yu wen, shi yu yin: Mingchu Wuzhong yizhe zhi xingxiang yu shehui wangluo” 醫與文，仕與隱：明初吳中醫者之形象與社會網絡 [Confucian identity and social interaction: Physicians in early Ming Suzhou]. *Xin shixue* 26, no. 1 (2015): 18-23.
- Liu, Yingsheng. “Song Yuan shidai de Maba’er, Xiyang, Nanpi yu Yindu” 宋元時代的馬八爾、西洋、南毗與印度 [Maba’er, Xiyang, Nanpi and Yindu during the Song and Yuan periods]. *Wenhua zazhi* 33 (1997): 95-106.
- . “Yuanmo Fujian yanhai zhanluan yu yisibaxi yijun de zujian” 元末福建沿海战乱与亦思巴奚义军的组建 [The Turmoil in Coastal Fujian in the Late Yuan Dynasty and the Organization of Ispāh]. *Haijiaoshi yanjiu* 4 (2020): 1-20.
- Lo, Jung-pang. *China as a Sea Power, 1127-1368, A Preliminary Survey of the Maritime Expansion and Naval Exploits of the Chinese People During the Southern Song and Yuan Periods*, edited by Bruce A. Elleman. Singapore: NUS Press, 2012.
- Lu, Di. “Mingdai jingji shiyongjun zai ziran yu shehui jian de zhouzhuan jiqi yiyi” 明代经济食用菌在自然与社会间的周转及其意义 [The circulation of commodified fungi in the Ming Empire and its social significance]. *Shixue yuekan*, no. 11 (2015): 64-75.
- Ma, Guang. “Chaogong zhiwai: Mingdai Chaoxian fuhua shichen de siren maoyi” 朝贡之外：明代朝鲜赴华使臣的私人贸易 [Beyond tributary trade: Korean tributary missions and their private trade in Ming China]. *Journal of Nanjing University (Philosophy, Humanities and Social Sciences)*, no. 3 (2020): 134-143.
- Ma, Huan. *Ying-yai sheng-lan: “The Overall Survey of the Ocean’s Shores” [1433], Translated from the Chinese Text Edited by Feng Ch’eng-Chün with Introduction, Notes and Appendices by J. V. G. Mills*. Cambridge: Cambridge University Press, 1970.
- Ma, Tai-Loi. “The Authenticity of the “Nan-Fang Ts’ao-mu Chuang” 南方草木狀.” *T’oung Pao* 64, no. 4/5 (1978): 225-226.
- Macknight, Campbell. “Harvesting the Memory: Open Beaches in Makassar and Arnhem Land.” In *Strangers on the Shore: Early Coastal Contacts in Australia*, edited by Peter Veth, Peter Sutton, and Margo Neale, 133-147. Canberra: National Museum of Australia Press, 2008.
- . “Macassans and the Aboriginal Past.” *Archaeology in Oceania* 21, no. 1 (1986): 68-75.
- . “Studying Trepangers,” In *Macassan History and Heritage: Journeys, Encounters and Influences*, edited by Marshall Clark and Sally K. May, 19-39. Canberra: ANU E Press, 2013.

Bibliography

- . “The View from Marege’: Australian Knowledge of Makassar and the Impact of the Trepan Industry across Two Centuries.” *Aboriginal History* 35 (2011): 121-143.
- . *The Voyage to Marege’: Macassan Trepanners in Northern Australia*. Melbourne: Melbourne University Press, 1976.
- McCausland, Shane. *Zhao Mengfu: Calligraphy and Painting for Kubilai’s China*. Hong Kong: Hong Kong University Press, 2011.
- McHugh, James. *Sandalwood and Carrion: Smell in Indian Religion and Culture*. Oxford: Oxford University Press, 2012.
- McKinnon, E. Edwards. “Beyond Serandib: A Note on Lambri at the Northern Tip of Aceh.” *Indonesia* 46 (1988): 102-121.
- McKinnon, E. Edwards, and Tengku Luckman Sinar. “A Note on Pulau Kompei in Aru Bay, Northeastern Sumatra.” *Indonesia* 32 (1981): 49-73.
- Maejima, Shinji. “The Muslims in Ch’uan-chou at the End of the Yuan Dynasty.” *Memoirs of the Research Department of the Toyo Bunko* 31-32 (1973-1974): 27-51, 47-71.
- Mai, Huijun. “The Double Life of the Scallop: Anthropomorphic Biography, ‘Pulu,’ and the Northern Song Discourse on Things.” *Journal of Song-Yuan Studies* 49 (2020): 149-205.
- Makizumi, Kazuhiro. “Guanyu shanghan sanyin sanyang de bingtai lun” 关于伤寒三阴三阳的病态论 [On the pathology of three yin and three yang in cold damage], translated by Yang Wenzhe and Zhang Zailiang. *Guoyi luntan* 24, no. 2 (2009): 1-6.
- . “Songban *Shanghan lun* de teshuxing: Guanyu sanyin sanyang pian he kebuke pian de tiaowen bijiao yanjiu” 宋版伤寒论的特殊性——关于三阴三阳篇和不可篇的条文比较研究 [The uniqueness of the Song edition of *Treatise on Cold Damage*: A comparative study of the clauses in the three yin and three yang section and the can and cannot section], translated by Yang Wenzhe and Zhang Zailiang. *Guoyi luntan* 24, no. 1 (2009): 1-6.
- Malekandathil, Pius. “Coastal Polity and the Changing Port-Hierarchy of Kerala.” In *Coastal Histories: Society and Ecology in pre-Modern India*, edited by Yogesh Sharma, 75-90. Delhi: Primus Books, 2010.
- . *Maritime India: Trade, Religion and Polity in the Indian Ocean*. Delhi: Primus Books, 2013. First published 2010.

Bibliography

- . “Muziris and the Trajectories of Maritime Trade in the Indian Ocean in the First Millennium CE.” In *Imperial Rome, Indian Ocean Regions and Muziris: New Perspectives on Maritime Trade*, edited by K. S. Mathew, 339-368. London: Routledge, 2017.
- . *Portuguese Cochín and the Maritime Trade of India, 1500-1663*. New Delhi: Manohar, 2001.
- Manguin, Pierre-Yves. “At the Origins of Sriwijaya: The Emergence of State and City in Southeast Sumatra.” In *State Formation and Social Integration in Pre-modern South and Southeast Asia: A Comparative Study of Asian Society*, edited by Karashima Noboru and Horosue Masashi, 89-114. Tokyo: Toyo Bunko, 2017.
- . “Trading Ships of the South China Sea: Shipbuilding Techniques and Their Role in the History of the Development of Asian Trade Networks.” *Journal of the Economic and Social History of the Orient* 36, no. 3 (1993): 253-280.
- Marignolli, Giovanni de’. “John de’ Marignolli’s Recollections of Eastern Travel (1338-1353).” In *Cathay and the Way Thither: Being a Collection of Medieval Notices of China*, vol. 3, translated and edited by Henry Yule, 177-269. London: The Hakluyt Society, 1914.
- Matthes, B. F. *Makassaarsch-Hollandsch woordenboek met Hollandsch-Makassaarsche woordenlijst, opgave van Makassaarsche plantennamen, en verklaring van een tot opheldering bijgevoegden ethnographischen atlas*. Amsterdam: Het Nederlandsch bijbelgenootschap, 1859.
- Mayanagi, Makoto. “*Isbinbō* kan 30 no kiso teki kenkyū: Honzōgaku teki kachi nit suite” 『医心方』 卷30の基礎的研究—本草学的価値について [A basic research on the chapter 30 of *Isbinbō*: On its value to the studies of materia medica]. *Yakushigaku zasshi* 21, no. 1 (1986): 52-59.
- Meilink-Roelofs, M.A.P. *Asian Trade and European Influence in the Indonesian Archipelago Between 1500 and about 1630*. The Hague, Martinus Nijhoff, 1962.
- Melillo, Edward D. “Making Sea Cucumbers out of Whales’ Teeth: Nantucket Castaways and Encounters of Value in Nineteenth-Century Fiji.” *Environmental History* 20 (2015): 449-474.
- Menon, A. Sreedhara. *A Survey of Kerala History*. Kottayam: Sahitya Pravarthaka, 1967.
- Miller, W. G. “English Country Traders and Their Relations with Malay Rulers in the Late Eighteenth Century.” *Journal of the Malaysian Branch of the Royal Asiatic Society* 84, no. 1 (2010): 23-45.
- Milner, A. C., E. Edwards McKinnon, and Tengku Luckman Sinar. “A Note on Aru and Kota Cina.” *Indonesia* 26 (1978): 1-42.
- Mintz, Sidney W. *Sweetness and Power: The Place of Sugar in Modern History*. London: Penguin, 1985.

Bibliography

- Mitamura, Taisuke. *Shinchō zenshi no kenkyū* 清朝前史の研究 [A study of the Qing dynasty in the Manchu period]. Kyoto: Tōyōshi kenkyū kai, 1965.
- Morton, Timothy. *The Poetics of Spice: Romantic Consumerism and the Exotic*. Cambridge: Cambridge University Press, 2000.
- Morwood, M.J., and D.R. Hobbs. “The Asian Connection: Preliminary Report on Indonesian Trepang Sites on the Kimberley Coast, N.V. Australia.” *Archaeology in Oceania* 32, no. 3 (1997): 197-206.
- Mukai, Masaki. “Kubirai chō shoki Nankai shōyu no jitsuzō: Senshū ni okeru gunji, kōeki shūdan to konekushon” クビライ朝初期南海招諭の実像—泉州における軍事・交易集団とコネクション [The diplomatic missions to the South Sea during the early part of Khubilai's reign: Military and trade groups of Quanzhou and their connections]. *Tōbōgaku* 116 (2008): 127-145.
- Mukai, Masaki, and Francesca Fiaschetti. “Yang Tingbi: Mongol Expansion along the Maritime Silk Roads.” In *Along the Silk Roads in Mongol Eurasia: Generals, Merchants, Intellectuals*, edited by Michal Biran, Jonathan Brack, and Francesca Fiaschetti, 88-92. Oakland: University of California Press, 2020.
- Murray, Julia K. *Mirror of Morality: Chinese Narrative Illustration and Confucian Ideology*. Honolulu: University of Hawai'i Press, 2007.
- Nakahashi, Sota. “Cui Yuxi shijing no kenkyū” 『崔禹錫食經』の研究 [A study of the dietetic guide by Cui Yuxi]. Master thesis, Ibaraki University, 2005.
- Nappi, Carla. “Surface Tension: Objectifying Ginseng in Chinese Early Modernity.” In *Early Modern Things: Objects and Their Histories, 1500-1800*, edited by Paula Findlen, 31-52. London: Routledge, 2013.
- . *The Monkey and the Inkpot: Natural History and Its Transformations in Early Modern China*. Cambridge, Mass.: Harvard University Press, 2009.
- Narayanan, M.G.S. *Perumāḷs of Kerala: Brahmin Oligarchy and Ritual Monarchy - Political and Social Conditions of Kerala Under the Cēra Perumāḷs of Makōtai (c. AD 800-AD 1124)*. Thrissur: Cosmobooks, 2018. First published 1996 by Xavier.
- Needham, Joseph. *Heavenly Clockwork: The Great Astronomical Clocks of Medieval China*. Cambridge: Cambridge University Press, 1960.
- Ng, Chin-keong. *Trade and Society: The Amoy Network on the China Coast, 1683-1735*. Singapore: NUS Press, 2015. First published 1983.

Bibliography

- Nie, Huang. *Haicuo tu* 海錯圖 [Album of a miscellany of marine creatures] (preface 1698). Reprint, Beijing: The Forbidden City Publishing House, 2014.
- Nie, Youcai. “Qingdai Hunchun “Nanhai” haijiang yanjiu” 清代瑋春南海海疆研究 [A study of the maritime frontier of the “South Sea” of Hunchun in the Qing dynasty]. PhD diss., Jilin Normal University, 2017.
- Nierstrasz, Chris. *Rivalry of Trade in Tea and Textiles: The English and Dutch East India Companies (1700-1800)*. Hampshire: Palgrave, 2015.
- Nihom, Max. “Ruler and Realm: The Division of Airlangga’s Kingdom in the Fourteenth Century.” *Indonesia* 42 (1986): 78-100.
- Nolde, Lance. “Changing Tides: A History of Power, Trade, and Transformation among the Sama Bajo Sea Peoples of Eastern Indonesia in the Early Modern Period.” PhD diss., University of Hawai’i at Mānoa, 2014.
- Noorduyn, Jacobus. “De handelsrelaties van het Makassaarse rijk volgens de Notitie van Cornelis Speelman uit 1670.” *Nederlandse Historische Bronnen* 3 (1983): 97-123.
- Odoric of Pordenon. “The Travels of Friar Odoric.” In *Cathay and the Way Thither: Being a Collection of Medieval Notices of China*, vol. 2, translated and edited by Henry Yule. London: The Hakluyt Society, 1913.
- Okada, Kenkichi, Makizumi Kazuhiro, and Kotaka Shuji. *Sōizen shōkan ron kō* 宋以前傷寒論考 [Studies of the *Treatise on Cold Damage* before the Song dynasty]. Ichikawa: Tōyō gakujutsu shuppansha, 2007.
- O’Rourke, Kevin H., and Jeffrey G. Williamson. “Did Vasco da Gama matter for European Markets?” *Economic History Review* 62, no. 3 (2009): 655-684.
- Ota, Atsushi, “Role of State and Non-state Networks in Early-Modern Southeast Asian Trade.” In *Paths to the Emerging State in Asia and Africa*, edited by Keiji Otsuka and Kaoru Sugihara, 73-93. Singapore: Springer, 2019.
- Owen, Stephen. *The Poetry of Meng Chiao and Han Yü*. New Haven: Yale University Press, 1975.
- Papelitzky, Elke. “Editing, Circulating, and Reading Huang Zhong’s *Hai yu* 海語: A Case Study in the History of Reading and the Circulation of Knowledge in Ming and Qing China.” *Ming Qing yanjiu* 23 (2019): 1-38.
- Park, Hyunhee. “The Peak of China’s Long-Distance Maritime Connections with Western Asia during the Mongol Period: Comparison with the Pre-Mongol and Post-Mongol Periods.” In *Early*

Bibliography

- Global Interconnectivity across the Indian Ocean World, Volume I: Commercial Structures and Exchanges*, edited by Angela Schottenhammer, 53-78. Cham: Springer, 2019.
- Pearson, M.N., ed. *Spices in the Indian Ocean World*. Aldershot: Variorum, 1996.
- Pelliot, Paul. "Encore à propos des voyages de Tch'eng Houo." *T'oung Pao* 32, no. 1 (1936): 210-222.
- . *Notes on Marco Polo*, 3 vols. Paris: Imprimerie Nationale, Librairie Adrien-Maisonneuve, 1959-1973.
- Pelras, Christian. "Notes sur quelques populations aquatiques de l'Archipel nusantarien." *Archipel* 3 (1972): 133-168.
- Peterson, T. Sarah. *Acquired Taste: The French Origins of Modern Cooking*. Ithaca, NY: Cornell University Press, 1994.
- Pires, Tomé. *The Suma Oriental of Tomé Pires: An Account of the East, from the Red Sea to Japan, Written in Malacca and India in 1512-1515*, translated by Armando Cortesão, 2 vols. London: The Hakluyt Society, 1944.
- Po, Ronald C. *The Blue Frontier: Maritime Vision and Power in the Qing Empire*. Cambridge: Cambridge University Press, 2018.
- Polo, Marco. *The Description of the World*, 2 vols., translated by A. C. Moule and Paul Pelliot. London: Routledge, 1938.
- Power, Timothy. *The Red Sea from Byzantium to the Caliphate, AD 500-1000*. Cairo: The American University of Cairo Press, 2012.
- Prange, Sebastian R. *Monsoon Islam: Trade and Faith on the Medieval Malabar Coast*. Cambridge: Cambridge University Press, 2018.
- Ptak, Roderich. "China and Calicut in the Early Ming Period: Envoys and Tribute Embassies." *Journal of the Royal Asiatic Society of Great Britain and Ireland* 121, no. 1 (1989): 81-111.
- . "From Quanzhou to the Sulu Zone and beyond: Questions Related to the Early Fourteenth Century." *Journal of Southeast Asian Studies* 29, no. 2 (1998): 269-294.
- . "Ming Maritime Trade to Southeast Asia, 1368-1567: Vision of a System." In *From the Mediterranean to the China Sea: Miscellaneous Notes*, edited by Claude Guillot, Denys Lombard, and Roderich Ptak, 157-191. Wiesbaden: Harrassowitz, 1998.
- . "Some References to Timor in Old Chinese Records." *Ming Studies* 17, no. 1 (1983): 37-48.
- . "The Fujianese, Ryukyuan and Portuguese (c. 1511 to 1540s): Allies or Competitors?" *Anais de História de Além-Mar* 3 (2002): 447-467.

Bibliography

- . “The Northern Trade Route to the Spice Islands: South China Sea - Sulu Zone - North Moluccas (14th to early 16th century).” *Archipel* 43 (1992): 27-56.
- . “Wang Dayuan on Kerala.” In *Explorations in the History of South India: Essay in Honour of Dietmar Rothermund*, edited by Georg Berkemer, Tilman Frasch, Hermann Kulke, and Gürgen Lütt, 39-52. New Delhi: Manohar, 2001.
- Purcell, Steven W., Yves Samyn, and Chantal Conand. *Commercially Important Sea Cucumbers of the World*. Rome: Food and Agriculture Organization of the United Nations, 2012.
- Qiu, Yihao. “Background and Aftermath of Fakhr al-Dīn al-Ṭībī’s Voyage: a Reexamination of the Interaction between the Ilkhanate and the Yuan at the Beginning of the Fourteenth Century.” In *New Approaches to Ilkhanid History*, edited by Timothy May, Dashdondog Bayarsaikhan, and Christopher P. Atwood, 147-175. Leiden: Brill, 2020.
- Qiu, Zhirong. “Ma Boluo huicheng jing Bosi xingzong kao” 马可·波罗回程经波斯行踪考 [Marco Polo’s itinerary in Persia on his way back to Europe]. *Lishi yanjiu*, no. 1 (2021): 194-206.
- Ramos, Teresita V. *Tagalog Dictionary*. Honolulu: University of Hawai’i Press, 1971.
- Reid, Anthony. “An ‘Age of Commerce’ in Southeast Asian History.” *Modern Asian Studies* 24, no. 1 (1990): 1-30.
- . *Southeast Asia in the Age of Commerce, 1450-1680, Volume One: The Land below the Winds*. New Haven: Yale University Press, 1988.
- . *Southeast Asia in the Age of Commerce, 1450-1680, Volume Two, Expansion and Crisis*. New Haven: Yale University Press, 1993.
- Revel, Jean-François. *Culture and Cuisine: A Journey Through the History of Food*, translated by Helen R. Lane. New York: Doubleday, 1982.
- Robert, Willem C. H. *The Dutch Explorations, 1605-1756, of the North and Northwest Coast of Australia*. Amsterdam: Philo Press, 1973.
- Robinson, David M. “Chinese Border Garrisons in an International Context: Liaodong under the Early Ming Dynasty.” In *Chinese and Indian Warfare: From the Classical Age to 1870*, ed. Kaushik Roy and Peter Lorge, 57-73. London: Routledge, 2015.
- . *Empire’s Twilight: Northeast Asia under the Mongols*. Cambridge, Mass.: Harvard University Press, 2009.
- Robinson, Kenneth R. “An Island’s Place in History: Tsushima in Japan and in Chosŏn, 1392-1592.” *Korean Studies* 30 (2005): 40-66.

Bibliography

- . “Residence and Foreign Relations in the Peninsular Northeast During the Fifteenth and Sixteenth Centuries.” In *The Northern Region of Korea: History, Identity, and Culture*, edited by Sun Joo Kim, 18-61. Seattle: University of Washington Press, 2012.
- Sabban, Françoise. “Court Cuisine in Fourteenth-Century Imperial China: Some Culinary Aspects of Hu Sihui’s *Yinshan Zhengyao*.” *Food and Foodways* 1 (1986): 161-196.
- Salguero, C. Pierce. “Mixing Metaphors: Translating the Indian Medical Doctrine *Tridoṣa* in Chinese Buddhist Sources.” *Asian Medicine* 6 (2010): 55-74.
- . *Translating Buddhist Medicine in Medieval China*. Philadelphia: University of Pennsylvania Press, 2014.
- Salmon, Claudine. “La communauté chinoise de Makasar. Vie religieuse.” *T’oung Pao* (second series) 55, no. 4/5 (1969): 241-297.
- . “Le goût chinois pour les nids de salanganes et ses répercussions économiques en Indonésie (XVe/XVIe-XXIe s.)” *Archipel* 76 (2008): 251-290.
- Satari, Sri Soejatmi. *New Finds in Northern Central Java*. Jakarta: Pusat Penelitian Purbakala dan Peninggalan Nasional, 1978.
- Sather, Clifford. *The Bajau Laut: Adaptation, History, and Fate in a Maritime Fishing Society of South-eastern Sabah*. Kuala Lumpur: Oxford University Press, 1997.
- Schaab-Hanke, Dorothee. “The Capital Behind the Capital: Life in Kaifeng as Reflected in the “Duchengjiisheng.”” *Oriens Extremus* 50 (2011): 193-207.
- Schafer, Edward H. “Rosewood, Dragon’s Blood, and Lac.” *Journal of the American Oriental Society* 77, no. 2 (1957): 129-136.
- . *The Golden Peaches of Samarkand: A Study of T’ang Exotics*. Berkeley: University of California Press, 1963.
- . *The Vermilion Bird: T’ang Images of the South*. Berkeley: University of California Press, 1967.
- Scharfe, Hartmut. “The Doctrine of the Three Humors in Traditional Indian Medicine and the Alleged Antiquity of Tamil Siddha Medicine.” *Journal of the American Oriental Society* 119, no. 4 (1999): 609-629.
- Scheid, Volker. “Promoting Free Flow in the Networks: Reimagining the Body in Early Modern Suzhou.” *History of Science* 56, no. 2 (2018): 131-167.
- Schivelbusch, Wolfgang. *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants*, translated by David Jacobson. New York: Vintage Books, 1993.

Bibliography

- Schlegel, Gustaaf. *Nederlandsch-Chineesch woordenboek met de transcriptie der Chineesche karakters in het Tsiang-tsin dialect*. Leiden: Brill, 1886.
- Schlesinger, Jonathan. *A World Trimmed with Fur: Wild Things, Pristine Places, and the Natural Fringes of Qing*. Stanford: Stanford University Press, 2017.
- Schmidt, J. D. *Harmony Garden: The Life, Literary Criticism, and Poetry of Yuan Mei (1716-1798)*. London: RoutledgeCurzon, 2003.
- Schottenhammer, Angela. “The Role of Metals and the Impact of the Introduction of *huizi* Paper Notes in Quanzhou on the Development of Maritime Trade in the Song Period.” In *The Emporium of the World: Maritime Quanzhou, 1000-1400*, edited by Angela Schottenhammer, 95-176. Leiden: Brill, 2001.
- Sen, Tansen. “In Search of Longevity and Good Karma: Chinese Diplomatic Missions to Middle India in the Seventh Century.” *Journal of World History* 12, no. 1 (2001): 1-28.
- . “The Formation of Chinese Maritime Networks to Southern Asia, 1200-1450.” *Journal of the Economic and Social History of the Orient* 49, no. 4 (2006): 421-453.
- . “The Yuan Khanate and India: Cross-Cultural Diplomacy in the Thirteenth and Fourteenth Centuries.” *Asia Major* (third series) 19, no. 1/2 (2006): 299-326.
- Shang, Yongliang. *Bianzhe wenhua yu bianzhe wenxue: Yi zhong Tang Yuanhe wuda shiren zhi bian jiqi chuanguo wei zhongxin 贬谪文化与贬谪文学——以中唐元和五大诗人之贬及其创作为中心* [Exile culture and exile literature: Focus on the five great poets of the Yuanhe period of the mid-Tang and their literary works]. Lanzhou: Lanzhou University Press, 2004.
- Shang, Zhijun. “Dui Yaoxing lun zuozhe ji chengshu shijian de taolun” 对《药性论》作者及成书时间的讨论 [Discussions on the authorship and date of *Discourse on the Nature of Drugs*]. *Journal of Anhui TCM College* 11, no. 2 (1992): 57-58.
- Shim, Hosung. “The Postal Roads of the Great Khans in Central Asia under the Mongol-Yuan Empire.” *Journal of Song-Yuan Studies* 44 (2014): 405-469.
- Sidomulyo, Hadi. “From Kuṭa Rāja to Singhasāri: Towards a Revision of the Dynastic History of 13th Century Java.” *Archipel* 80 (2010): 77-138.
- . “Kṛtanagara and the Resurrection of Mpu Bharāda.” *Indonesia and the Malay World* 39, no. 113 (2011): 123-142.

Bibliography

- Simonis, Fabien. “Ghosts or Mucus? Medicine for Madness: New Doctrines, Therapies, and Rivalries.” In *Modern Chinese Religion I, Song-Liao-Jin-Yuan (960-1368 AD)*, edited by John Lagerwey and Pierre Marsone, 603-639. Leiden: Brill, 2009.
- . “Illness, Texts, and “Schools” in Danxi Medicine: A New Look at Chinese Medical History from 1320-1800.” In *Antiquarianism, Language, and Medical Philology: From Early Modern to Modern Sino-Japanese Medical Discourses*, edited by Benjamin A. Elman, 52-71. Leiden: Brill, 2015.
- So, Kee-long. “Dissolving Hegemony or Changing Trade Pattern? Images of Srivijaya in the Chinese Sources of the Twelfth and Thirteenth Centuries.” *Journal of Southeast Asian Studies* 29, no. 2 (1998): 295-308.
- . “Financial Crisis & Local Economy: Ch’üan-chou in the Thirteenth Century.” *T’oung Pao* (second series) 77, no. 1 (1991): 119–137.
- Soothill, William Edward, and Lewis Hodous, comps. *A Dictionary of Chinese Buddhist Terms: With Sanskrit and English Equivalents and a Sanskrit-Pali Index*. London: Routledge, 2014. First published 1937.
- Sopher, David E. *The Sea Nomads: A Study Based on the Literature of the Maritime Boat People of Southeast Asia*. Singapore: National Museum, 1964.
- Stapel, F. W. *Het Bongaais Verdrag*. PhD diss., Leiden University, 1922.
- Su, Heng-an. *Culinary Arts in Late Ming China: Refinement, Secularization and Nourishment: A Study on Gao Lian’s Discourse on Food and Drink*. Taipei: SMC Publishing, 2004.
- Su, Ying, and Zhao Hongyan, eds. *Bencao tujing de yanjiu 《本草图经》的研究 [Research on Illustrated Materia Medica]*. Beijing: Renmin weisheng chubanshe, 2011.
- Sun, Lin. “The Economy of Empire Building: Wild Ginseng, Sable fur, and the Multiple Trade Networks of the Early Qing Dynasty, 1583-1644.” PhD diss., Oxford University, 2018.
- Sutherland, Heather. “A Sino-Indonesian Commodity Chain: The Trade in Tortoiseshell in the Late Seventeenth and Eighteenth Century.” In *Chinese Circulations: Capital, Commodities, and Networks in Southeast Asia*, edited by Eric Tagliacozzo and Wen-Chin Chang, 172-199. Durham: Duke University Press, 2011.
- . *Seaways and Gatekeepers: Trade and State in the Eastern Archipelagos of Southeast Asia, c. 1600-c. 1906*. Singapore: NUS Press, 2021.
- . “The Sulu Zone Revisited.” *Journal of Southeast Asian Studies* 35, no. 1 (2004): 133-157.

Bibliography

- . “Trade, Court and Company: Makassar in the Later Seventeenth and Early Eighteenth Centuries.” In *Hof en handel: Aziatische vorsten en de VOC 1620-1720*, edited by Locher-Scholten and P. Rietbergen, 85-112. Leiden: KITLV, 2005.
- . “Trepang and Wangkang: The China Trade of Eighteenth-Century Makassar c. 1720s-1840s.” *Bijdragen tot de Taal-, Land- en Volkenkunde* 156, no. 3 (2000): 451-472.
- Swope, Kenneth M. “A Few Good Men: The Li Family and China’s Northern Frontier in the Late Ming.” *Ming Studies*, no. 1 (2004): 34-81.
- Tackett, Nicolas. *The Destruction of the Medieval Chinese Aristocracy*. Cambridge, Mass.: Harvard University Press, 2014.
- Tagliacozzo, Eric. “A Necklace of Fins: Marine Goods Trading in Maritime Southeast Asia, 1780-1860.” *International Journal of Asian Studies* 1, no. 1 (2004): 23-48.
- Tagliacozzo, Eric, and Wen-Chin Chang, eds. *Chinese Circulations: Capital, Commodities, and Networks in Southeast Asia*. Durham: Duke University Press, 2011.
- T’ien, Ju-kang. “Chêng Ho’s Voyages and the Distribution of Pepper in China.” *Journal of the Royal Asiatic Society of Great Britain and Ireland* 113, no. 2 (1981): 186-197.
- Trocki, Carl A. “Chinese Pioneering in Eighteenth-Century Southeast Asia.” In *The Last Stand of Asian Autonomies: Responses to Modernity in the Diverse States of Southeast Asia and Korea, 1750-1900*, edited Anthony Reid, 83-101. London: Macmillan, 1997.
- . *Prince of Pirates: The Temenggongs and the Development of Johor and Singapore, 1784-1885*. Singapore: NUS Press, 2007. First published 1979.
- Ts’ao, Yung-Ho. “Pepper Trade in East Asia.” *T’oung Pao* (second series) 68, nos. 4-5 (1982): 221-247.
- Tsurumi, Yoshiyuki. *Namako no me ナマコの眼* [The eyes of sea cucumbers]. Tokyo: Chikuma shobō, 1993.
- Tu, Dan. *Xiangyao maoyi yu Ming Qing Zhongguo shehui* 香药贸易与明清中国社会 [Aromatic-drug trade and Chinese society during the Ming and Qing periods]. Beijing: Renmin chubanshe, 2016.
- Tuwo, Ambo. “Status of sea cucumber fisheries and farming in Indonesia.” In *Advances in Sea Cucumber Aquaculture and Management*, edited by Alessandro Lovatelli, Chantal Conand, Steven Purcell, Sven Uthicke, Jean-François Hamel, and Annie Mercier, 49-55. Rome: Food and Agriculture Organization of the United Nations, 2004.
- Unschuld, Paul U. *Huang Di nei jing su wen: Nature, Knowledge, Imagery in an Ancient Chinese Medical Text*. Berkeley: University of California Press, 2003.
- . *Medicine in China: A History of Pharmaceuticals*. Berkeley: University of California Press, 1986.

Bibliography

- Vallet, Eric. *L'Arabie marchande: État et commerce sous les sultans rasūlides du Yémen (626-858/1229-1454)*. Paris: Publications de la Sorbonne, 2010.
- . “Yemeni “Oceanic Policy” at the End of the Thirteenth Century.” *Proceedings of the Seminar for Arabian Studies* 36 (2006): 289-296.
- Van Aelst, Arjan. “Majapahit Picis: The Currency of a “Moneyless” Society, 1300-1700.” *Bijdragen tot de Taal-, Land- en Volkenkunde* 151, no. 3 (1995): 357-393.
- Van der Chijs, J. A. *Nederlandsch-Indisch Plakaatboek, 1602-1811, vijftiende deel, 1808-1809*. Batavia: Landsdrukkerij, 1898.
- Van der Meulen, W. J. “In Search of “Ho-Ling”.” *Indonesia* 23 (1977): 87-111.
- Van Dissel, Anita. “Pioneering in Southeast Asia in the First Half of the Nineteenth Century.” In *Exploring the Dutch Empire: Agents, Networks and Institutions, 1600-2000*, edited by Catia Antunes and Jos Gommans, 43-58. London: Bloomsbury, 2015.
- Van Orsoy de Flines, E. W. “Onderzoek naar en van keramische scherven in de bodem in Noordelijk Midden-Java, 1940-'42.” *Oudheidkundig verslagen* (1941-1947): 66-84.
- Vance, Brigid E. “Textualizing Dreams in a Late Ming Dream Encyclopedia.” PhD diss., Princeton University, 2012.
- Velthoen, Esther Joy. “Contested Coastlines: Diasporas, Trade and Colonial Expansion in Eastern Sulawesi, 1680-1905.” PhD diss., Murdoch University, 2002.
- . “Wanderers, Robbers and Bad Folk: The Politics of Violence, Protection and Trade in Eastern Sulawesi, 1750-1850.” In *The Last Stand of Asian Autonomies: Responses to Modernity in the Diverse States of Southeast Asia and Korea, 1750-1900*, edited by Anthony Reid, 367-388. Basingstoke: MacMillan, 1997.
- Verheijen, Jilis A.J. *The Sama/Bajau Language in the Lesser Sunda Islands*. Canberra: A.N.U. Printing Service, 1986.
- Vogel, Hans Ulrich. *Marco Polo Was in China: New Evidence from Currencies, Salts and Revenues*. Leiden: Brill, 2013.
- Vosmaer, J. N. “Korte beschrijving van het zuid-oostelijk schiereiland van Celebes, in het bijzonder van de Vosmaers-Baai of van Kendari; verrijkt met eenige berigten omtrent den stam der Orang Badjos, en meer andere aantekeningen” (1835). *Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen* 17 (1839): 63-184
- Wada, Masahiro. *Chūgoku kanryōsei no fuhai kōzō ni kansuru jirei kenkyū: Min Shin kōtaiki no gunbatsu Ri Seiryō o megutte 中国官僚制の腐敗構造に関する事例研究：明清交替期の軍閥李成梁を*

Bibliography

- めぐつて [A case study about the structural corruption in Chinese bureaucratic system: Concerning the warlord Li Chengliang during the Ming-Qing transition]. Kitakyushu: Kyushu International University Graduate School of Social and Cultural Studies, 1995.
- Wade, Geoff. “An Early Age of Commerce in Southeast Asia, 900-1300 CE.” *Journal of Southeast Asian Studies* 40, no. 2 (2009): 221-265.
- Wagner, Donald B. “Blast Furnaces in Song-Yuan China.” *East Asian Science, Technology, and Medicine* 18 (2001): 41-74.
- Waley-Cohen, Joanna. “Food and China’s World of Goods in the Long Eighteenth Century.” In *Living the Good Life: Consumption in the Qing and Ottoman Empires of the Eighteenth Century*, edited by Elif Akçetin and Suraiya Faroqhi, 296-299. Leiden: Brill, 2018.
- Walker, Brett L. *The Conquest of Ainu Lands: Ecology and Culture in Japanese Expansion, 1590-1800*. Berkeley: University of California Press, 2001.
- Wallerstein, Immanuel. *The Modern World-System II: Mercantilism and the Consolidation of the European World-Economy, 1600-1750*. New York: Academic Press, 1980.
- . *The Modern World-System III: The Second Era of Great Expansion of the Capitalist World-Economy, 1730-1840s*. San Diego: Academic Press, 1989.
- Wang, Biao. “Meishi zhong de youqing: *Suiyuan shidan* renwu kao” 美食中的友情——《隨園食單》人物考 [Friendship in food: *Suiyuan shidan* character research]. *Journal of Chinese Dietary Culture* 5, no. 2 (2009): 45-86
- Wang, Binling. “Renshen yuanliu kao” 人參源流考 [A study of the origin of ginseng]. In *Renshen wenhua yanjiu* 人參文化研究 [Studies of ginseng culture], 1-32. Changchun: Shidai wenyi chubanshe, 1992.
- Wang, Gungwu. “The Nanhai Trade: A Study of the Early History of Chinese Trade in the South China Sea.” *Journal of the Malayan Branch of the Royal Asiatic Society* 31, no. 2 (1958): 3-135.
- Wang, Jinping. *In the Wake of the Mongols: The Making of a New Social Order in North China, 1200-1600*. Cambridge, Maas.: Harvard University Asia Center, 2018.
- Wang, Ke. “*Shilin guangji* banben kaolue” 《事林广记》版本考略 [A concise study of the editions of *Extensive Records of the Forest of Affairs*]. *Journal of School of Chinese Language and Culture, Nanjing Normal University*, no. 2 (2016): 167-175.
- Wang, Lihua. “*Guang zhi* chengshu niandai kao” 《广志》成书年代考 [A study of the date of *Extensive Records*]. *Gujin nongye*, no. 3 (1995): 51-58.

Bibliography

- Wang, Saishi. “Zhongguo gudai haichan zhenpin de shengchan yu shiyong” 中国古代海产珍品的生产与食用 [The production and culinary consumption of sea delicacies in Ancient China]. *Gujin nongye*, no. 4 (2003): 78-89.
- Wang, Tao. “Ming Qing yilai Nanhai zhuyao yuchang de kaifa, 1368-1949” 明清以来南海主要渔场的开发 (1368-1949) [The development of major fisheries in the South Sea during the Ming and Qing periods, 1368-1949]. PhD diss., Shanghai Jiao Tong University, 2014.
- Wang, Zijin. “Juyan hanjian baoyu kao” 居延汉简“鲍鱼”考 [Baoyu in the Han wood slips of Juyan]. *Journal of Hunan University (Social Sciences)* 33, no. 2 (2019): 19-24.
- Wang, Zhongxin. “Qingdai Shandong yimin “chuang Guandong” huodong yanjiu: Yi Liaoning de Shandong yimin wei zhongxin” 清代山东移民“闯关东”活动研究——以辽宁的山东移民为中心 [A study of Shandong migrants’ “Rush into Guandong” during the Qing dynasty: Focus on Shandong migrants in Liaoning]. PhD diss., Shandong University, 2008.
- Ward, R. Gerard. “The Pacific *Bêche-de-mer* Trade with Special Reference to Fiji.” In *Man in the Pacific Islands*, edited by R. Gerard Ward, 91-123. Oxford: Oxford University Press, 1972.
- Warren, James Francis. *Iranun and Balangingi: Globalization, Maritime Raiding and the Birth of Ethnicity*. Singapore: Singapore University Press, 2002.
- . “Saltwater Slavers and Captives in the Sulu Zone, 1768-1878.” *Slavery and Abolition* 31, no. 3 (2010): 429-449.
- . “The Balangingi Samal: ‘Pirate Wars,’ Dislocation and Diasporic Identities.” *The Great Circle* 33, no. 2 (2011): 43-65.
- . *The Sulu Zone, 1768-1898: The Dynamics of External Trade, Slavery, and Ethnicity in the Transformation of a Southeast Asian Maritime State*. Singapore: Singapore University Press, 1981.
- Watt, George. *Dictionary of the Economic Products of India*, 6 vols. London: W. H. Allen, 1889-1896.
- Wen, Cuifang. *Tangdai wailai xiangyao yanjiu* 唐代外来香药研究 [Exotic aromatic drugs in the Tang dynasty]. Chongqing: Chongqing chubanshe, 2007.
- . *Zhonggu Zhongguo wailai xiangyao yanjiu* 中古中国外来香药研究 [Exotic aromatic drugs in China in early medieval China]. Beijing: Kexue chubanshe, 2016.
- West, Stephen H. “Cilia, Scale and Bristle: The Consumption of Fish and Shellfish in the Eastern Capital of the Northern Song.” *Harvard Journal of Asiatic Studies* 47, no. 2 (1987): 595-634.
- Wheatley, Paul. “Geographical Notes on Some Commodities Involved in Sung Maritime Trade.” *Journal of the Malayan Branch of the Royal Asiatic Society* 32, no. 2 (1959): 3-139.

Bibliography

- Wills, John E. *Pepper, Guns, and Parleys: The Dutch East India Company and China, 1622-1681*. Cambridge, Mass.: Harvard University Press, 1974.
- Wirawan, Yerry. *Sejarah Masyarakat Tionghoa Makassar dari Abad ke-17 hingga ke-20*. Jakarta: KPG, 2013.
- Wisseman Christie, Jan. "Javanese Markets and the Asian Sea Trade Boom of the Tenth to Thirteenth Centuries A.D." *Journal of the Economic and Social History of the Orient* 41, no. 3 (1998): 344-381.
- . "Money and Its Uses in the Javanese States of the Ninth to Fifteenth Centuries A.D." *Journal of the Economic and Social History of the Orient* 39, no. 3 (1996): 243-286.
- . "Revisiting early Mataram." In *Fruits of inspiration: Studies in Honour of Prof JG de Casparis*, edited by Marijke J Klokke and Karel R van Kooij, 25-55. Groningen: Egbert Forsten, 2001.
- . "States without Cities: Demographic Trends in Early Java." *Indonesia* 52 (1991): 23-40.
- . "The Medieval Tamil-Language Inscriptions in Southeast Asia and China." *Journal of Southeast Asian Studies* 29, no. 2 (1998): 239-268.
- . "Trade and Value in Pre-Majapahit Java." *Indonesia Circle* 21, nos. 59-60 (1992): 3-17.
- Wolters, O. W. "A Note on the Capital of Śrīvijaya during the Eleventh Century." *Artibus Asiae*, Supplementum 23, no. 1 (1966): 225-239.
- . *Early Indonesian Commerce: A Study of the Origins of Śrīvijaya*. Ithaca, NY: Cornell University Press, 1967.
- . *The Fall of Śrīvijaya in Malay History*. Kuala Lumpur: Oxford University Press, 1970.
- Wolters, Willem G. "Heavy and Light Money in the Netherlands Indies and the Dutch Republic: Dilemmas of Monetary Management with Unit of Account Systems." *Financial History Review* 15, no. 1 (2008): 37-53.
- Wu, Jen-shu. "Ming Qing yinshi wenhua zhong de ganguan yanhua yu pinwei suzao: Yi yinshan shuji yu shipu wei zhongxin de tantao," 明清飲食文化中的感官演化與品位塑造——以飲膳書籍與食譜為中心的探討 [Changes in sense perception and the construction of taste in the dietary culture of Ming and Qing China: An investigation centered dietary writings and recipe books]. *Journal of Chinese Dietary Culture* 2, no. 2 (2006): 45-95.
- Wu, Mengting. "Cong "xiangyao" dao "xiangliao": Hujiao yu Mingdai Zhongguo shehui" 从“香药”到“香料”：胡椒与明代中国社会 [From “aromatic drugs” to “aromatic materials”: Pepper in Chinese society in the Ming dynasty]. Master thesis, Xiamen University, 2018.
- Wu, Yiyi. "A Medical Line of Many Masters: A Prosopographical Study of Liu Wansu and His Disciples from the Jin to the Early Ming." *Chinese Science* 11 (1993-94): 36-65.

Bibliography

- Wujastyk, Dominik. "Agni and Soma: A Universal Classification." *Studia Asiatica* 4-5 (2004): 347-369.
———. *The Roots of Ayurveda: Selections from Sanskrit Medical Writings*. New Delhi: Penguin Books India, 1998.
- Xia, Shihua. *Songdai xiangyaoye jingji yanjiu* 宋代香药业经济研究 [The aromatic-drug economy in the Song dynasty]. PhD diss., Shaanxi Normal University, 2012.
- Xiao, Rong. "Haiyao bencao yu Liuchao shiqi Lingnan de yiyao wenhua" 海藥本草與六朝時期嶺南的醫藥文化 [*Materia Medica of Overseas Drugs and the medical culture of Lingnan during the Six Dynasties period*]. *Jiuzhou xuelin* 6, no. 3 (2008): 2-27.
- Xu, Guanmian. "From the Atlantic to the Manchu: Taiwan Sugar and the Early Modern World, 1630s-1720s." *Journal of World History*, forthcoming.
———. "Junks to Mare Clausum: China-Maluku Connections in the Spice Wars, 1607-1622." *Itinerario: Journal of Imperial and Global Interactions* 44, no. 1 (2020): 196-225.
- Xu, Tan. "Qing Qianlong zhi Daoguang nianjian de Liaocheng shangye: Yi Shan Shaan huiguan beike ziliao wei zhongxin de kaocha" 清乾隆至道光年间的聊城商业——以山陕会馆碑刻资料为中心的考察 [The Commerce of Liaocheng from the reigns of Qianlong to Daoguang in the Qing period: Focusing on the inscriptions of the Merchant Association Hall of Shanxi and Shaanxi]. *Shixue yuekan*, no. 3 (2015): 109-120.
- Yamada, Kentaro. *Tōa kōryō shi kenkyū* 東亞香料史研究 [A study of the history of perfumery and spices in the Far East]. Tokyo: Chūō koron bijutsu shuppan, 1976.
- Yan, Yuming, and Zhu Jianping. "Bencao yanyi buyi xiaokao" 本草衍義補遺小考 [A short study of *Supplement to Dilatations on Materia Medica*]. *Zhejiang zhongyi zazhi* 52, no. 7 (2017): 511-513.
- Yang, Bin. "The "Zhang" on Chinese Southern Frontiers: Disease Constructions, Environmental Changes, and Imperial Colonization." *Bulletin of the History of Medicine* 84, no. 2 (2010): 163-192.
- Yang, Lianlian. "Mingke Mu Shixi shiwu jiyao kaolue" 明刻穆世锡《食物辑要》考略 [A study of the Ming edition summary of edible things by Mu Shixi]. Master thesis, East China Normal University, 2006.
- Yang, Xiaochun. "Yuandai Nanhai maoyi zhong de shangpin yu huobi wenti: Daoyi zhilüe xiangguan jizai de guina yu taolun" 元代南海贸易中的商品与货币问题——《岛夷志略》相关记载的归纳与讨论 [Commodities and currencies in the South Sea trade of the Yuan period:

Bibliography

- Summary and discussion of relevant records in *Daoyi zhibilüe*. *Yuanshi ji minzu yu bianjiang yanjiu jikan* 36 (2018): 157-176.
- Yang, Zhishui. “L’encens sous les Song (960–1279) et les Yuan (1279–1368).” In *Parfums de Chine: La culture de l’encens au temps des empereurs*, edited by Éric Lefebvre, 68-99. Paris: Musée Cernuschi, 2018.
- . *Xiangshi* 香識 [Knowing aromatics]. Guilin: Guangxi Normal University Press, 2011.
- Ye, Fazheng. *Shanghan xueshu shi* 伤寒学术史 [The academic history of cold damage]. Wuhan: Central China Normal University Press, 1995.
- Yeh, Kao-shu. “Ming Qing zhiji liaodong de junshi jiazhu: Li, Mao, Zu sanjia de bijiao” 明清之際遼東的軍事家族：李、毛、祖三家的比較 [Military families in Liaodong during the Ming-Qing transition: A comparative study of Li, Mao and Zu families]. *Bulletin of Historical Research (NTNU)* 42 (2009): 121-196.
- Yi, Shuqiong. “Liu Minzhong ci yanjiu” 刘敏中词研究 [A study of Liu Minzhong’s song lyrics]. Master thesis, Ji’nan University, 2004.
- Yi, Sumei. “Xianwei yu quanli: Haixian zai Tang-Song zhuanxing qi de weizhi” 鮮味與權力——海鮮在唐宋轉型期的位置 [Freshness and power: Seafood in the Tang-Song transition]. *Lishi renleixue xuekan* 15, no. 1 (2017): 1-52.
- Yi, Yongwen. “Beisong de jiandian tangchayao” 北宋的“煎点汤茶药” [Boiling decoctions and tea in the Northern Song]. *Nongye kaogu*, no. 4 (1991): 213-214, 163.
- Yokkaichi, Yasuhiro. “Chinese and Muslim Diasporas and the Indian Ocean Trade Network under Mongol Hegemony.” In *The East Asian Mediterranean: Maritime Crossroads of Culture, Commerce and Human Migration*, edited by Angela Schottenhammer, 73-102. Wiesbaden: Harrassowitz Verlag, 2008.
- . “Cong Fengshi Bosi bei kan Yuanchao tong Yili Hanguo shichen wanglai” 从《奉使波斯碑》看元朝同伊利汗国使臣往来 [Diplomatic exchange between the Yuan dynasty and the Ilkhanate through the inscription of *Fengshi Bosi bei*], translated by Zhao Yingbo. *Yuanshi ji minzu yu bianjiang yanjiu jikan* 30 (2015): 57-71.
- . “The Maritime and Continental Networks of Kīsh Merchants under Mongol Rule: The Role of the Indian Ocean, Fārs and Iraq.” *Journal of the Economic and Social History of the Orient* 62, no. 2/3 (2019): 428-463.

Bibliography

- Yu, Jiayi. “Hanshi san kao” 寒食散考 [A study of cold-food powder]. In *Yu Jiayi lunxue zazhu* 余嘉錫論學雜著 [Miscellaneous works by Yu Jiayi], 181-226. Beijing: Zhonghua shuju, 2007.
- Zhao, Gang. *The Qing Opening to the Ocean: Chinese Maritime Policies, 1684-1757*. Honolulu: University of Hawai'i Press, 2013.
- Zhao, Hua. “Zhao Mengfu tongzhi Ji'nan kao” 赵孟頫同知济南考 [A study of Zhao Mengfu's service in Ji'nan]. *Dongfang yishu*, no. 12 (2013): 8-29.
- Zhao, Shiyu, and Du Hongtao. “Chongguan Dongjiang: Ming Qing yidai shiqi de beifang junren yu haishang maoyi” 重观东江：明清易代时期的北方军人与海上贸易 [Revisiting Dongjiang: Northern military force and maritime trade during the Ming-Qing transition]. *Zhongguoshi yanjiu*, no. 3 (2016): 175-194.
- Zhang, Xueqian. “Danxi buyin wan: Mingdai de shenti, yaofang yu xingbie” 丹溪補陰丸——明代的身體、藥方與性別 [Reflections on the replenishing *yin* pill: Body, medicine, and gender in Ming Society]. *Chinese Studies* 漢學研究 34, no. 3 (2016): 89-117.
- Zhang, Zhibin, and Paul U. Unschuld. *Ben cao gang mu Dictionary, Volume One, Chinese Historical Illness Terminology*. Oakland: University of California Press, 2015.
- Zhao, Rongguang. *Manhan quanxi yuanliu kaoshu* 满汉全席源流考述 [A study of the origin of Comprehensive Manchu and Han Banquet]. Beijing: Kunlun chubanshe, 2003.
- Zheng, Jinsheng. ““Guijia, baigui, guiban” kaobian: Lun guijia dangyong shang, xia jia” “龟甲、败龟、龟板”考辨——论龟甲当用上、下甲 [A distinction of turtle shell, decayed turtle, and turtle's plastron: Both the upper and lower shell shall be used as turtle shell]. *Zhongyi zazhi*, no. 3 (1982): 56-58.
- . *Yaolin waishi* 药林外史 [An external history of the forest of medicines]. Guilin: Guangxi Normal University Press, 2007.
- Zheng, Yangwen. *China on the Sea: How the Maritime World Shaped Modern China*. Leiden: Brill, 2014.
- . “Qingdai yanghuo de liutong yu chengshi yang pinqian de chuxian” 清代洋貨的流通與城市洋(mosaic)的出現 [The circulation of foreign goods and the emergence of the foreign urban mosaic during the Qing]. In *Cong chengshi kan Zhongguo de xiandaixing* 從城市看中國的現代性 [The city and Chinese modernity], edited by Wu Jen-shu, Paul Katz, and Lin May-li, 37-52. Taipei: Academia Sinica, Institute of Modern History, 2010.
- . *The Social Life of Opium in China*. Cambridge: Cambridge University Press, 2005.

Bibliography

- Zou, Weiyi, and Zeng Weihua. "Handai de huguan yu heguan kao" 汉代的胡冠与鹞冠考 [A study of *hu* and *he* hats in the Han period]. *Journal of Shanghai Normal University (Philosophy & Social Sciences Edition)* 43, no. 6 (2014): 135-140.
- Zou, Zhenhuan. "Jiaoliu yu hujian: *Qinggong haicuo tu* yu dongxi haiyang dongwu de zhishi ji huayi" 交流与互鉴：《清宫海错图》与中西海洋动物的知识及画艺 [Exchanges and mutual learning: *Qinggong haicuo tu* and Chinese and western knowledge and painting craft about marine animals]. *Journal of East China Normal University (Humanities and Social Sciences)*, no. 3 (2020): 96-106.
- Zumbroich, Thomas J. "From Mouth Fresheners to Erotic Perfumes: The Evolving Socio-Cultural Significance of Nutmeg, Mace and Cloves in South Asia." *eJournal of Indian Medicine* 5 (2012): 37-97.

Curriculum Vitae

Guanmian Xu grew up in Wenzhou. He graduated from Shanghai Maritime University with a BBA degree in Shipping Management in 2007. He thereafter worked for a shipping company in Shanghai before moving to the Chinese University of Hong Kong (CUHK) in 2012 for a one-year MA program in comparative and public history. He then worked for the Centre for Historical Anthropology in CUHK in 2013. In 2014, he continued to stay in CUHK as a M.Phil. student in history. In 2015, he moved to Leiden University on being awarded a Cosmopolis Scholarship. After completing BA (2016) and MA (2017) at the Institute for History, Leiden University, he received the Hulsewé-Wazniewski Ph.D. fellowship (2017-2021) for working as a Ph.D. researcher at the Leiden Institute for Area Studies (LIAS) (Leiden University).

Summary

This dissertation addresses a long-standing question in Southeast Asian historiography, namely: Why did two seemingly irrelevant edibles, pepper and sea cucumbers, feature so prominently in Southeast Asian exports to China in the early modern period? It approaches this question through an intersection of Chinese cultural history and Asian maritime history. It argues that pepper and sea cucumbers were two of the most important edible exotics in Chinese food history and represented two distinct food cultures. These two cultures became important in two different stages and were associated with two broader worlds. Pepper became a popular hot spice in Chinese cuisine during the Mongol Yuan period, when the Mongol Conquest of China and Persia created a trans-Indian Ocean empire and facilitated the circulation of pepper from South India to China through a trans-Indian Ocean trading network. Sea cucumbers became a coveted sea delicacy in Chinese high cuisine in a much later stage, roughly from the late sixteenth through the eighteenth centuries. During this period, a Cross-China Seas World of sea cucumbers emerged in association with the Manchu Conquest of China and the Dutch and British expansions in Southeast Asia.

Connecting these two worlds, this dissertation contends that there was a Chinese gustatory revolution in between. That revolution mainly took place from the fourteenth through the seventeenth centuries and was energised by theoretical debates in Chinese medicine. These debates began with criticisms from a prominent physician, Zhu Zhenheng (1281-1358), who favoured cooling agents and discredited the mainstream medical culture of his age which preferred warming exotics like aromatics and spices. Zhu criticised the supposed fire and hot nature of pepper and developed deep concerns over its popularity of a condiment. Zhu's teachings became influential among elite physicians in China from the fifteenth century thanks to the wide-spread publications of his works, one of which eventually influenced Li Shizhen (1518-1593) in the sixteenth century, leading him to abandon his

own appetite for pepper and to redefine pepper in a very negative way in his authoritative *Systematic Materia Medica*. These criticisms gradually undermined the position of pepper in Chinese dietary practices and caused its retreat from Chinese high cuisine.

Yet, the popularity of Zhu's teachings, which were in some cases over-simplified by his followers, also induced a revisionist movement. From the early sixteenth century, some "warming and replenishing physicians" began to revisit the cooling culture. They argued for mildly warm and sweet medicines, such as ginseng, to balance the strong side-effects of cooling agents. Along with this movement, sea cucumbers, known as sea ginseng, appeared in Chinese high cuisine from the late sixteenth century. They were constructed as extraordinary ginseng from the sea that was at once warming and replenishing and able to nourish the water and yin of the kidneys. The former was essential for the warming culture and the latter addressed a major concern of the cooling culture as the water and yin of the kidneys were considered as most essential for balancing internal fire and yang in Zhu Zhenheng's medical theory. As a result, sea cucumbers arose as a perfect therapeutic amid these debates.

These medical debates had further manifestation in the change of Chinese taste-scape. Zhu Zhenheng extended his criticisms of spices and aromatics to all condiments with a strong flavour. This aversion to strong flavours was welcomed by Chinese literati who viewed blandness a key aesthetic value. Pepper for its strong hot spiciness was, therefore, rarely mentioned in literati-styled recipe collections which began to define Chinese high cuisine from the late sixteenth century. Into the seventeenth century, the pursuit of blandness was however subject to an important revision, as some literati-turned gourmets distinguished a subtle flavour, *xian* (鮮), as an aestheticised flavour more desirable than blandness. They suggested to use broths to store and transmit this elusive flavour. Along with this change, a select group of delicacies supposedly from the sea, including sea cucumbers, edible

bird's nests, shark fins, and abalones, became perfect food ingredients, because they were all deeply dried and had either gelatinous or fibrous texture to generously absorb *xian* flavour-rich broths.

The transition from pepper to sea cucumbers should not be isolated from the broader world in which these two edible exotics were situated. Without the large-scale circulation of pepper from the Indian Ocean World to China in the wake of the Mongol Conquest, there was likely no such strong concern from Zhu Zhenheng against the wide-spread use of pepper as a popular condiment in Chinese cuisine. Likewise, without the emergence of the Cross-China Seas World, sea cucumbers might not have become available to Chinese consumers in such abundance and diversity. In any sense, the planting, fishing, and processing technologies developed by non-Chinese communities at the margins of these two food-defined worlds mattered to the gustatory experience of eating pepper and sea cucumbers in China no less than Chinese cooking technologies and Chinese cultural interpretation of their medical efficacies. Taking these issues into consideration, I believe that the Chinese gustatory revolution not only connected the trans-Indian Ocean World of pepper and the Cross-China Seas World of sea cucumbers, but could not take place without them.

These arguments are presented in four long chapters. Chapter one focuses on why pepper was initially received in China in a positive way. It shows that pepper was appropriated by Chinese medicine from Ayurveda from the seventh century together with a group of warming exotics. From the seventh through the eleventh centuries, they became increasingly used in a popular therapy known as “warming the centre” for taking care of the two paired viscera supposedly responsible for digestion, namely, the spleen and the stomach. That practice created a close connection between pepper and food intake.

Chapter two further explains why out of these warming exotics, only pepper became a popular condiment. It shows that pepper was special for its lack of remarkable aroma and its idiosyncratic hot spiciness. It therefore assumed no function in Chinese smell culture but was strongly associated with

food. The Mongol Conquest further provided a major spur to the popularity of pepper as a daily-used condiment, as it led to a Trans-Indian Ocean World, making pepper unprecedentedly available to the Chinese consumer market. This change, however, also aroused criticisms from Zhu Zhenheng and induced pepper's retreat from Chinese high cuisine in the coming centuries.

Chapter three moves to sea cucumbers. It shows that the rise of sea cucumbers should be understood as a final stage in a chain of major changes in Chinese perceptions of seafood. These changes turned a group of preserved food ingredients supposedly from the sea, including sea cucumbers, edible bird's nests, shark fins, and abalones, into top sea delicacies. Among them, the rise of sea cucumbers and edible nests was especially related to the retreat of pepper, because they all drew on theories from the same medical debates.

Chapter four discusses how a Cross-China Seas World of sea cucumbers emerged from the late sixteenth through the eighteenth centuries. It shows that Chinese consumers originally only appreciated sea cucumbers from the temperate waters of the North China Sea and the Japan Sea because their northern origin and black surface manifested perfect affinities with the theory of nourishing the water and yin of the kidneys in Chinese medicine. However, from the end of the seventeenth century, the fishing and trading communities in the eastern Indonesian Archipelago began to challenge that gustatory hierarchy by proposing increasingly diversified and deep-processed tropical varieties. Throughout the eighteenth century, their strategies gradually worked and caused the rise of tropical sea cucumbers in Chinese cuisine, which in turn induced a southward expansion of the world of sea cucumbers to northern Australia.

In conclusion, although Chinese consumption of pepper and sea cucumbers seems to be a topic too trivial to deserve attention from researchers living in the age of COVID-19, it provides a different angle to understand how the modern world as we know today emerged. Students of global history are surely familiar with a powerful narrative that European pursuit of spices, sugar, and tea was crucial for

the early modern globalisation and the rise of the modern world economies. What is much less discussed is how non-European societies' taste for edible exotics also mattered to the same processes. This study, through addressing why pepper and sea cucumbers became so important in early modern Southeast Asian exports to China, reveals at least three points: 1) Chinese society developed strong demand for edible exotics represented by pepper and sea cucumbers; 2) That demand was dynamically changing over time, as manifested in the gustatory revolution from pepper to sea cucumbers; 3) That change had close connections with the rise of empires and networks in maritime Asia, such as the Mongol, Ming, Dutch, Manchu, and British empires and the Chinese, Bugis, and Sulu's networks.

Samenvatting

Dit proefschrift behandelt een al lang bestaande vraag in de Zuidoost-Aziatische geschiedschrijving, namelijk: waarom speelden twee schijnbaar irrelevante eetwaren, peper en zeekomkommers, zo'n prominente rol in de Zuidoost-Aziatische export naar China in de vroegmoderne tijd? Het benadert deze vraag via een kruising van Chinese cultuurgeschiedenis en Aziatische maritieme geschiedenis. Het stelt dat peper en zeekomkommers twee van de belangrijkste eetbare exoten in de Chinese voedselgeschiedenis waren en twee verschillende eetculturen vertegenwoordigden. De twee culturen werden belangrijk in twee verschillende stadia en werden geassocieerd met twee bredere werelden. Peper werd een populaire smaakmaker in de Chinese keuken tijdens de Mongoolse Yuan-periode. De Mongoolse verovering van China en Perzië creëerde één wereldrijk, dat zich uitstreckte tot aan beide uiteinden van de Indische Oceaan, en de circulatie van peper uit Zuid-India naar China via een trans-Indische Oceaan-handelsnetwerk vergemakkelijkte. Zeekomkommers werden in een veel later stadium, ruwweg van de late zestiende tot en met de achttiende eeuw, een felbegeerde zee-delicatesse in de Chinese haute cuisine. Tijdens deze periode ontstond één wereld van zeekomkommers rondom de Chinese Zeeën in associatie met de Mantsjoe-verovering van China en de Nederlandse en Britse expansie in Zuidoost-Azië.

Door deze twee werelden met elkaar te verbinden, stelt dit proefschrift dat er een Chinese smaakrevolutie tussen zat. Die revolutie vond vooral plaats van de veertiende tot en met de zeventiende eeuw en werd aangewakkerd door theoretische debatten in de Chinese geneeskunde. Deze debatten begonnen met kritiek van een prominente arts, Zhu Zhenheng (1281-1358), die de voorkeur gaf aan koelmiddelen en de algemeen geaccepteerde medische cultuur van zijn tijd in diskrediet bracht, omdat die de voorkeur gaf aan verwarmende exoten zoals aromaten en specerijen. Zhu bekritiseerde de veronderstelde vuur- en hete aard van peper en maakte zich grote zorgen over de populariteit van

deze pittige specerij. Zhu's leer werd vanaf de vijftiende eeuw zeer invloedrijk onder artsen in China dankzij de wijdverbreide publicaties van zijn werken. Eén van die werken beïnvloedde uiteindelijk Li Shizhen (1518-1593), wat Li ertoe aanzette zijn eigen voorkeur voor peper op te geven, en peper op een zeer negatieve manier te herdefiniëren in zijn gezaghebbende *Systematic Materia Medica* (本草綱目 *bencao gangmu*). Zhu en Li's kritiekpunten ondermijnden geleidelijk de status van peper in de Chinese voedingspraktijken en leidden tot de teruglopende populariteit van peper in de Chinese haute cuisine.

Toch bracht de populariteit van Zhu's leer, die op sommige vlakken door zijn volgelingen in te verre mate versimpeld was, ook een revisionistische beweging teweeg. Vanaf het begin van de zestiende eeuw wierpen sommige 'verwarmende en aanvullende artsen' een nieuwe blik op de verkoelende cultuur. Ze pleitten voor licht warme en zoete medicijnen, zoals ginseng, om de sterke bijwerkingen van verkoelende middelen te behandelen en zo de balans te herstellen. Samen met deze beweging verschenen zeekomkommers, bekend als zee-ginseng, vanaf het einde van de zestiende eeuw in de Chinese haute cuisine. Ze werden gepresenteerd als bijzondere ginseng uit de zee die tegelijk verwarmend en aanvullend was, en in staat was om het water en de yin van de nieren te voeden. Dat eerste was essentieel voor de verwarmende cultuur, en het tweede loste een groot probleem van de koelcultuur op, aangezien het water en de yin van de nieren in de medische theorie van Zhu Zhenheng als het meest essentiële tegenwicht van het vuur en de yang in het lichaam werden beschouwd. Zo raakten zeekomkommers te midden van deze debatten in zwang als een perfecte therapeutisch middel.

Deze medische debatten kwamen verder tot uiting in de verandering van het Chinese smaaklandschap. Zhu Zhenheng breidde zijn kritiek op specerijen en aromaten uit naar alle sterke smaakmakers. Deze afkeer van sterke smaken werd verwelkomd door de Chinese intelligentsia die smaakloosheid (*blandness*) als een belangrijke esthetische waarde beschouwden. Vanwege zijn sterke pittigheid werd peper daarom zelden genoemd in receptenverzamelingen van intelligentsia-stijl, die vanaf het einde van de zestiende eeuw de Chinese haute cuisine begonnen te definiëren. In de

zeventiende eeuw werd het nastreven van smaakloosheid echter onderworpen aan een belangrijke herziening, aangezien sommige fijnproevers, die behoorden tot de intelligentsia, een subtiele smaak, *xian* (鮮), onderscheidde als een geësthetiseerde smaak die wenselijker was dan smaakloosheid. Ze stelden voor om bouillon te gebruiken om deze ongrijpbare smaak op te slaan en over te brengen. Samen met deze verandering werd een selecte groep delicatessen die zogenaamd uit de zee kwamen, met inbegrip van zeekomkommers, eetbare vogelnestjes, haaienvinnen en zeeoren, perfecte voedsel ingrediënten. Omdat ze allemaal diep gedroogd waren en een gelatineachtige of vezelachtige structuur hadden, waren ze namelijk in staat om bouillons die rijk aan de smaak *xian* waren goed te absorberen.

De overgang van peper naar zeekomkommers mag niet los worden gezien van de bredere wereld waarin deze twee eetbare exoten zich bevonden. Zonder de grootschalige circulatie van peper uit de Indische Oceaan naar China in de nasleep van de Mongoolse verovering had Zhu Zhenheng zich waarschijnlijk niet gekeerd tegen het wijdverbreide gebruik van peper als een populaire smaakmaker in China. Zonder de opkomst van de wereld van zeekomkommers rondom de Chinese Zeeën zouden zeekomkommers misschien niet in zo'n overvloed en diversiteit beschikbaar zijn gekomen voor Chinese consumenten. In elk opzicht waren de plant-, vis-, en verwerkingstechnologieën, die door niet-Chinese gemeenschappen in de marge van deze twee door voedsel gedefinieerde werelden werden ontwikkeld, van belang voor de smaakervaring van het eten van peper en zeekomkommers in China, niet minder dan Chinese kooktechnologieën en Chinese culturele interpretatie van hun medische werkzaamheid. Als we deze kwesties in overweging nemen, geloof ik dat de Chinese smaakrevolutie niet alleen de werelden van peper en zeekomkommers met elkaar heeft verbonden, maar de revolutie had niet kunnen plaatsvinden zonder hen.

Deze argumenten worden gepresenteerd in vier lange hoofdstukken. Hoofdstuk één gaat in op waarom peper in eerste instantie positief werd ontvangen in China. Het laat zien dat peper door de

Chinese geneeskunde uit de Ayurveda vanaf de zevende eeuw werd toegeëigend samen met een groep verwarmende exoten. Van de zevende tot en met de elfde eeuw werden ze steeds vaker gebruikt in een populaire therapie die bekend staat als “het verwarmen van het centrum” voor het verzorgen van de twee gepaarde ingewanden die zogenaamd verantwoordelijk zijn voor de spijsvertering, namelijk de milt en de maag. Die praktijk zorgde voor een nauw verband tussen peper en voedselinname.

Hoofdstuk twee legt verder uit waarom van deze verwarmende exoten alleen peper een populaire smaakmaker werd. Het laat zien dat peper speciaal was vanwege het gebrek aan opmerkelijk aroma en zijn eigenzinnige sterke pittigheid. Peper had daarom geen functie in de Chinese geurcultuur, maar werd sterk geassocieerd met voedsel. De Mongoolse verovering gaf verder een belangrijke impuls aan de populariteit van peper als een dagelijks gebruikte smaakmaker, omdat het leidde tot een wereld die zich uitstrekte tot aan beide uiteinden van de Indische Oceaan, waardoor peper ongekend beschikbaar werd voor de Chinese consumentenmarkt. Deze verandering wekte echter ook kritiek bij Zhu Zhenheng en bracht het terugtrekken van peper uit de Chinese haute cuisine in de daaropvolgende eeuwen teweeg.

Hoofdstuk drie gaat over zeekomkommers. Het laat zien dat de opkomst van zeekomkommers moet worden gezien als een laatste fase in een keten van grote veranderingen in de Chinese perceptie van zeevruchten. Deze veranderingen maakten dat een groep geconserveerde voedsel ingrediënten die zogenaamd uit de zee kwamen, waaronder zeekomkommers, eetbare vogelnestjes, haaienvinnen en zeeoren, de voornaamste zee-delicatessen werd. De opkomst van zeekomkommers en eetbare vogelnestjes was vooral gerelateerd aan de verminderde populariteit van peper, omdat ze allemaal gebaseerd waren op theorieën uit dezelfde medische debatten.

Hoofdstuk vier bespreekt hoe een wereld van zeekomkommers rondom de Chinese Zeeën ontstond van het einde van de zestiende tot en met de achttiende eeuw. Het laat zien dat Chinese consumenten oorspronkelijk alleen zeekomkommers uit de gematigde wateren van de Noord-Chinese

Zee en de Japanse Zee waardeerden omdat hun noordelijke oorsprong en zwarte oppervlak perfect aansloten bij de theorie van het voeden van het water en de yin van de nieren in de Chinese geneeskunde. Vanaf het einde van de zeventiende eeuw begonnen de vissers- en handelsgemeenschappen in de oostelijke Indonesische archipel deze Chinese smaakhiërarchie echter uit te dagen door steeds meer gediversifieerde en diep verwerkte tropische variëteiten voor te stellen. Gedurende de achttiende eeuw begonnen hun strategieën geleidelijk te werken. Zo brachten ze de opkomst van tropische zeekomkommers in de Chinese keuken teweeg, die op zijn beurt leidde tot een zuidelijke uitbreiding van de wereld van zeekomkommers naar Noord-Australië.

Wellicht lijkt de Chinese consumptie van peper en zeekomkommers een onderwerp dat te onbeduidend is om de aandacht te verdienen van onderzoekers die in het tijdperk van COVID-19 leven. Die consumptie biedt echter een andere invalshoek om te begrijpen hoe de moderne wereld zoals we die vandaag kennen is ontstaan. Studenten van de globale geschiedenis zijn ongetwijfeld bekend met een krachtig verhaal dat de Europese jacht op specerijen, suiker, en thee cruciaal was voor de vroegmoderne globalisering en de opkomst van de moderne wereldeconomieën. Wat veel minder wordt besproken, is hoe de smaak van niet-Europese samenlevingen voor eetbare exoten ook van belang was voor dezelfde processen. Door te onderzoeken waarom peper en zeekomkommers zo belangrijk werden in de vroegmoderne Zuidoost-Aziatische export naar China, onthult deze studie ten minste drie punten: 1) De Chinese samenleving ontwikkelde een sterke vraag naar eetbare exoten, vertegenwoordigd door peper en zeekomkommers; 2) Die vraag veranderde dynamisch in de loop van de tijd, wat tot uiting kwam in de smaakrevolutie van peper naar zeekomkommers; 3) Die verandering had nauwe banden met de opkomst van rijken en netwerken in maritiem Azië, zoals de Mongoolse, Ming, Nederlandse, Mantsjoe, en Britse rijken en de Chinese, Bugis, en Sulu netwerken.