

RESEARCH ARTICLE

Seeking a Deadly Delicacy: Pufferfish, Regional Gastronomy, and Pharmacology in Middle Period China

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Abstract

Seafood gained prominence as a southern flavor in middle-period China. Among the southern products that piqued gourmets' fancy, the pufferfish as a deadly delicacy presented a special case. How did it come to acquire its contentious reputation? This article traces the process that transformed it from a dangerous ancient killer to an alluring treat by the early twelfth century. Its shifting cultural stature was propelled by demographic and geographical reconfigurations, negotiations between northern and southern culinary traditions, and the literati effort to collect and classify natural knowledge. Along the way, diverse encounters and experiences with different pufferfishes were coalesced into one uniform category *hetun* ("river-piglet"), connoting at once danger and delicacy. The metamorphosis of the pufferfish demonstrated the interplay between literary, medical, geographical, and natural knowledge across genres in middle-period Chinese history.

Keywords: Northern Song; pufferfish; natural knowledge; regionality; gastronomy

The renowned poet and gastronome Su Shi 蘇軾 (1037–1101) once rhapsodized about eating pufferfish at a banquet. When asked how it tasted, he cried out: "It is just to die for!"¹ This exclamation evokes the uniqueness of the pufferfish as a delicious yet fatal dish. "Pufferfish" is a common name for nearly two hundred species under the family *Tetraodontidae*. Many of them have a high concentration of the lethal tetrodotoxin in their ovary, liver, and skin. In modern-day East Asia, the pufferfish retains the aura of a risky treat that demands specialized culinary training and license to prepare. Incidents of

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¹Ding Chuanjing 丁傳靖, *Songren yishi huijian* 宋人軼事匯編 (Beijing: Zhonghua shuju, 2003), 12.617.

pufferfish poisoning have been reported annually.² The reputation of pufferfish's flavor, however, had a peculiar history in premodern China. Whereas early medieval records uniformly warned against consuming this fish, writers since the tenth century increasingly endorsed it as a southern regional flavor. How did the pufferfish emerge from an ancient killer to acquire its prestige as a delicacy? This paper traces this metamorphosis in correlation to demographic and geographical reconfigurations from the tenth to the early twelfth century. It was a process in which the northern and southern culinary traditions confronted and negotiated with each other across literary, medical, and miscellaneous genres. Alongside it, distinctive strands of historical encounters, experiences, and materialities were coalesced into the very name *hetun* 河豚 ("river-piglet"), which came to connote at once danger and delicacy.

Previous scholars have examined the literary representations of pufferfish in East Asia. Hsieh Chung-chih 謝忠志 and Chunghao Pio Kuo have traced the multivalent motif of the pufferfish in the Ming (1368–1644) and modern Japan back to Song China (960–1279).³ Others like Kakehi Fumio 笈文生 and Jonathan Chaves have focused on poetic depictions of the pufferfish and literary exchanges between Song literati.⁴ While poetry was a major medium whereby pufferfish lore was constructed and transmitted, a sole focus on it yields a monotonous view, as poets tended to replicate and circulate the same linguistic repertoire. These scholarly insights invite further exploration of the changing social, cultural, and political contexts that heightened Chinese writers' attention to pufferfish.

The imbrication of gastronomic writing, spatial movement of regional products, and the intellectual project of collecting and classifying natural knowledge in the Song has been of recent scholarly interest.⁵ In particular, seafood became prominent due to advances in water transportation and the fascination for southern flavors. Its shifting cultural stature bespoke the imperial reach into the south and the naturalization of its "exoticness." Peripatetic scholar-officials serving regional administrations valued local knowledge about sea products and organized and publicized it through their writings in various genres. The pufferfish was a peculiar example of these trends. It was listed as a

²Bernard E. Read, *Chinese Materia Medica: Fish Drugs* (Beijing: Natural History Bulletin, 1939), 79. Osamu Arakawa and Tamao Noguch, "Tetrodotoxin—Distribution and Accumulation in Aquatic Organisms, and Cases of Human Intoxication," *Marine Drugs* 6.2 (2008), 220–42.

³Hsieh Chung-chih 謝忠志, "Zhi na yi si—Mingdai de hetun wenhua" 直那一死—明代的河豚文化, *Hanxue yanjiu* 漢學研究 31.4 (2013), 179–208. Chunghao Pio Kuo, "Enjoying a Dangerous Pleasure: The Evolution of Pufferfish Consumption in Modern Japan," in *Routledge Handbook of Food in Asia*, edited by Cecilia Leong-Salobir (London: Routledge, 2019), 139–47.

⁴Kakehi Fumio 笈文生, "Bai Gyō-shin ron" 梅堯臣論, *Tōhō gakuho* 東方學報 36 (1931), 431–35. Jonathan Chaves, *Mei Yao-ch'ên and the Development of Early Sung Poetry* (New York: Columbia University Press, 1971), 178–85. Stephen H. West, "Cilia, Scale and Bristle: The Consumption of Fish and Shellfish in The Eastern Capital of The Northern Song," *Harvard Journal of Asiatic Studies* 47.2 (1987), 602–4; Chen Suzhen 陳素貞, "'Diya hetun' xianhua 'chi'—cong Song shihua zhong kan wenren/yinshi yu shige zhi guanxi" 「荻芽河豚」閒話「喫」——從宋詩話中看文人/飲食與詩歌之關係, *Zhongtai xuebao* 中臺學報 13 (2002), 171–87.

⁵Yi Sumei 易素梅, "Xianwei yu quanli—haixian zai Tang Song zhuanxingqi de weizhi" 鮮味與權力—海鮮在唐宋轉型期的位置, *Lishi renleixue xuekan* 歷史人類學學刊 15.1 (2017), 1–52. Huijun Mai, "The Double Life of the Scallop: Anthropomorphic Biography, 'Pulu,' and the Northern Song Discourse on Things," *Journal of Song-Yuan Studies* 49.1 (2020), 149–205. Xiaolin Duan, "Savoring Local Knowledge: Exploring Place-Specific Foods in Song China," *Journal of Song-Yuan Studies* 54 (2025), 69–97. For an early modern case concerning medical knowledge-making, see Meng Zhang, "Knowing Exotica: Edible Bird's Nest and the Cultures of Knowledge in Early Modern China," *Harvard Journal of Asiatic Studies* 85.1 (2025), 39–76.

tuchan 土產 (“local product”) in Zhejiang and Jiangsu gazetteers since the Southern Song.⁶ Yet before, and even after, it came to be celebrated by the rising southern gastronomes, it provoked contention in literary and medical discourses for its toxins. This paper draws on poetry, *bencao* 本草 (“*materia medica*,” “pharmacopoeia”), and *biji* 筆記 (“brush notes,” “miscellany”) to elucidate the multifaceted perceptions of the pufferfish and their gradual amalgamation from the tenth to the early twelfth century. It foregrounds the fluidity and interplay of different genres in constructing, contesting, and conglomerating natural knowledge of southern products.

I begin by pinpointing the tenth century as a critical moment when the pufferfish’s image diverged from a lethal fish into a Wu 吳 (lower Yangzi River, around Jiangsu and Zhejiang) regional and seasonal specialty, alongside the appearance of the popular name *hetun*. The second section zooms in on a moralizing poem in the early eleventh century that established the literary topos of the pufferfish as a wicked creature to be treated with special means. Despite this poem being a political allegory, its depiction of the pufferfish’s morphological idiosyncrasies implied certain piscine lore that circulated in the lower Yangzi region. The third section turns to *biji* in which the authors documented their observations of southeastern coastal inhabitants’ consumption of and attitudes toward pufferfish. These empirically-oriented accounts illuminated diverse types and representations of pufferfish from different culinary traditions, all grouped under the uniform category of *hetun*. I conclude with the medicalization of the pufferfish in the specialized field of *bencao*. Song pharmacologists eventually synthesized previous records about pufferfish into a single *hetun*, which signified a deadly delicacy that downplayed historical or regional specificities.

“River-piglet” from the South

The tenth century marked a pivotal point in the textual documentation of the pufferfish, its general reputation then shifted from that of a dangerous killer to an alluring treat. Involved in this transformation were the narrowing of its unruly nomenclature into one unified name and the perception of its consumption as a regional practice of the lower Yangzi area, especially among the Wu people. The modern Chinese term for the pufferfish, *hetun*, first appeared in a regional *bencao* treatise compiled in the Wu-Yue 吳越 Kingdom (902–978) and gradually became popular in other genres. There were earlier terms such as *gui* 鮓 and *houtai* 候鮐, which were textual, phonetic, or regional variants.⁷ Extant records of the pufferfish from the early medieval period were brief accounts of its fatal toxins that endangered consumers, without commenting on its taste. In works ranging from mytho-geographical, philosophical, and medical treatises, writers came to understand the specific poisonous parts of the pufferfish and dissuaded people from consuming it. For instance, the Sui physician Chao Yuanfang 巢元方 (fl. 610)

⁶Hsieh, “Zhi na yi si,” 186–88.

⁷The Southern Song lexicographer Luo Yuan 羅願 (1136–1184) compiled these names as precursors of *hetun*. See Luo, *Erya yi* 爾雅翼 (Hefei: Huangshan shushe, 2013), 29.339–40. Chiara Bocchi has documented how eighteenth-century philologists explicated the ancient names in “On the Hetun (Pufferfish) in Ancient China: Too Delicious for Words,” in *Marine Animals in Traditional China: Studies in Cultural History / Meerestiere im alten China: Studien zur Kulturgeschichte*, ed. Roderich Ptak and Marc Nürnberger (Wiesbaden: Harrassowitz, 2010), 29–36.

admonished: “This [*houtai*] fish’s liver and roe inside the abdomen are heavily poisonous and cannot be eaten. Eating them often results in death.”⁸

Some remarked on the taste and regionality of the pufferfish, hinting at a distinctive culinary culture in the lower Yangzi area. An early example was Liu Kui’s 劉逵 (fl. ca. 295) commentary on Zuo Si’s 左思 (ca. 250–305) poem, “Rhapsody of the Wu Capital” (“Wudu fu” 吳都賦). In the poem Zuo catalogued *houtai* as one submarine specialty of the Wu state capital, Jianye 建業 (in Jiangsu). Liu described the physicality and toxicity of the fish, but ended with a gastronomic statement: “Steaming and boiling it, it is luscious. Yuzhang (in Jiangxi) people treasure it.”⁹ Duan Chengshi 段成式 (803–863) noted one antidote to *houyi* 鰐鯢 fish poisoning as local lore in the lower Yangzi: “*Ai* (common mugwort, *Artemisia vulgaris*) could dispel its toxins. When people from the Yangzi and Huai rivers eat this fish, they must pair it with *ai*.”¹⁰ Both records portrayed pufferfish consumption as a rather common practice in southeastern localities, where the locals were not worried about its poisonous effects. As northern intellectuals documenting southern customs, Liu and Duan revealed a rather special geo-cultural realm in the lower Yangzi area. There developed a unique perception of the pufferfish as a common fish for consumption despite its toxicity, and the locals had their own ways of preparing and detoxifying it.

While these earlier records came from northern writers’ possible travel writings or hearsay, a tenth-century account produced in Wu accorded with their perception of the pufferfish as a regional and seasonal treat. This was an essay written by a certain Mao Sheng 毛勝, an official in the Wu-Yue Kingdom. Mao assumed the title of the imperial lord of the sea and conferred bureaucratic titles to local marine species based on their characteristics. The entry about the pufferfish records:

令黃薦可，爾澤嫩可貴，然失於經治，敗傷厥毒，故世以醇疵隱士為爾之目，特授三德尉兼春榮小供奉。¹¹

Decree: Huang Jianke [literally, “Huang, the one acceptable for recommendation”], you are lustrous, delicate, and praiseworthy. However, those who miss the regulation and treatment would be harmed by your toxins. Therefore, people address you as the “recluse of a mellow flaw.” I bestow upon you the special title of the Third Commandant of Virtue, along with the Dainty Attendant of the Spring Splendor.

The contemporaneous scholar Tao Gu 陶穀 (903–970) incorporated Mao’s essay into his own miscellany, the *Qing yi lu* 清異錄 (Record of the pure and the extraordinary), and described the motivation for Mao’s composition as to playfully document the Wu-Yue “sea products” (*haiwu* 海物) as regional specialties not found elsewhere. Mao’s entry foregrounded the peculiar paradox of the pufferfish being at once luscious and poisonous, which distinguished it from other marine creatures. For this reason its title was “specially

⁸Chao Yuanfang 巢元方, *Zhubing yuanhou lun jiaozhu* 諸病源候論校注 (Beijing: Renmin weisheng chubanshe, 1991), 748.

⁹Xiao Tong 蕭統, “Wudu fu,” in *Wenxuan* 文選 (Shanghai: Shanghai guji chubanshe, 1986), 5.205–6.

¹⁰Duan, *Youyang zazu jiaojian xuji* 西陽雜俎校箋 (Beijing: Zhonghua shuju, 2015), *xuji*, 8.2026–27. The identification of flora follows Bernard E. Reed, *Chinese Medicinal Plants from the Penn Ts’ao Kang Mu* (Beijing: Peking Natural History Bulletin, 1936).

¹¹Tao Gu 陶穀, *Qing yi lu* 清異錄 (Henan: Daxiang chubanshe, 2019), *juan shang*, *Shuizu jia’enbu* 水族加恩簿, 80–84.

bestowed" (*teshou* 特授), whereas all others were "appropriately bestowed" (*yishou* 宜授). The pufferfish's distinctiveness was also reflected in the necessity of its "regulation and treatment" (*jingzhi* 經治) to neutralize the toxins. Unlike Liu Kui and Duan Chengshi, Mao did not explain the precise mechanism but suggested only that the fish was an offering (*gongfeng* 供奉) in the spring. For a Wu local like Mao, the knowledge of proper preparation might have been implicit and need not be explicitly stated.

This brief survey from the early medieval period to the early tenth century reveals a layered and evolving perception of the pufferfish as a Wu regional specialty. On one hand, writers acknowledged its fatal toxins and many warned against its consumption, sustaining its image as a dangerous killer. On the other hand, some recognized the regionality of pufferfish consumption in the lower Yangzi area and recorded special methods of preparing and detoxifying pufferfish, treating it as a rather common food item with a delicate flavor to pursue, not to avoid. They painted a different image of the pufferfish and carved out a distinctive Wu gastronomic culture. The paradox inherent in the pufferfish as a dangerous treat manifested itself in the encounter between the outsiders and insiders to this regional culture. The close association between the pufferfish and the Wu area continued to transform how writers perceived the fish in the centuries to come, as the cultural center gradually shifted southward populated by more southern intellectuals.

Poeticization and politicization of a wicked creature

The fame of the pufferfish spread widely in eleventh-century literati circles thanks to a pioneering poem by Mei Yaochen 梅堯臣 (1002–1060) which imposed moral gravity on the fish and denounced its consumption as a deviant southern custom. Modern scholars unanimously quote Mei's poem as evidence of the paradoxical, if not pejorative, attitude Chinese literati held towards the pufferfish. They interpret it as a political allegory within the specific context of early Song (960–1279) political reform and emergent factionalism, in which Mei seized on the danger of the pufferfish to denounce the equally dangerous factionalism. Nonetheless, the power of the metaphor is rooted in Mei's vivid and precise delineation of the fish's morphological and gastronomical traits. Attending to the intertextual complexity and geographical allusions, I suggest that Mei embedded his thorough portrayal of the fish not only in state politics within the northern capital but also in the confrontation between northern and southern culinary customs.

Mei Yaochen's poem, "Conversing with Guests about Eating Pufferfish at Fan Raozhou's Banquet" ("Fan Raozhou zuo zhong ke yu shi hetun yu" 范饒州坐中客語食河豚魚), was likely the first and the most famous literary work on the pufferfish that contended that it was a wicked southern creature.¹² It was one of several of Mei's poems about animals, interweaving morphological descriptions with didactic messages.

Mei wrote this poem in 1037 at a banquet convened by Fan Zhongyan 范仲淹 (989–1052) in Jiangxi. Scholars have analyzed it as an argument against political cliques and highlighted the pun of *dang* 黨 ("biased," "partisan," line 14). In 1036, Fan Zhongyan was exiled to Raozhou (in Jiangxi) after he had accused the then-councilor Lü Yijian 呂夷簡

¹²Zhu Dongrun 朱東潤, *Mei Yaochen ji biannian jiaozhu* 梅堯臣集編年校注 (Shanghai: Shanghai guji chubanshe, 1980), 8.117. Chaves identifies Wang Yucheng's 王禹偁 (954–1001) heptasyllabic quatrain "Song of River Pig" 江豚歌 to be a precedent, but the *jiangtun* 江豚 Wang wrote about were actually dolphins. See Chaves, *Mei Yao-ch'en and the Development of Early Sung Poetry*, 184–85.

	春洲生荻芽，	Bamboo shoots sprout from spring islets,
	春岸飛楊花。	Willow down flies over spring banks.
	河豚當是時，	This is the time for pufferfish,
4	貴不數魚蝦。	Their price exceeds other fish and shrimp.
	其狀已可怪，	Its form is already grotesque,
	其毒已莫加。	its venom unsurpassed.
	忿腹若封豕，	A bristling belly like a huge boar,
8	怒目猶吳蛙。	enraged eyes like the frog of Wu.
	庖煎苟失所，	Cooking it, if you miss the way,
	入喉為莫邪。	It will become the sword Moyo entering your throat.
	若此喪軀體，	If you would thus lose your body,
12	何須資齒牙？	What need is there to sate your teeth？
	持問南方人，	When I questioned the southerners,
	黨護復矜誇。	Biased to defend it, they boasted about it again and again.
	皆言美無度，	They all said that its exquisite flavor has no limits.
16	誰謂死如麻？	Who said that people who died from it are as copious as hemp？
	我語不能屈，	My words could not get them to bend.
	自思空咄嗟。	Sighing in vain, I reflected upon myself:
	退之來潮陽，	When Tuizhi came to Chaoyang, ¹³
20	始憚餐龍蛇。	He initially recoiled at eating snakes.
	子厚居柳州，	When Zihou stayed in Liuzhou, ¹⁴
	而甘食蝦蟆。	He willingly ate toads.
	二物皆可憎，	These two creatures are both abominable,
24	性命無舛差。	Yet there is no mishap to life.
	斯味曾不比，	This flavor [of the pufferfish] has no compare,
	中藏禍無涯。	But within it lurked disasters without bound.
	甚美惡亦稱，	“In supreme beauty, malice is also matched.” ¹⁵
28	此言誠可加。	Such words are truly praiseworthy.

(979–1044) of political favoritism and denounced his leading role in a party of self-serving oligarchs. Fan himself, however, also assumed the leadership of an opposing reformist party that endeavored to restore good government.¹⁶ The intellectual historian Liu Zijian 劉子健

¹³Han Yu 韓愈 (768–824) was banished to Chaozhou (in Guangdong) in 819.

¹⁴Liu Zongyuan 柳宗元 (773–819) was banished to Liuzhou (in Guangxi) in 815.

¹⁵This alludes to a *Zuozhuan* 左傳 story that advises against marrying the daughter of a femme fatale. See *Zuo Tradition / Zuozhuan: Commentary on the “Spring and Autumn Annals,”* trans. Stephen Durrant, Wai-ye Li, and David Schaberg (Seattle: University of Washington Press, 2017), 1686–87.

¹⁶For a review of the early eleventh-century political conflicts between the entrenched aristocrats and the new bureaucratic elites, and between Lü Yijian and Fan Zhongyan, see Paul Jakov Smith, “A Crisis in the

(1919–1993) opined that Mei analogized pufferfish to factionalism, both seemingly desirable but actually devastating.¹⁷ The merit of Mei's poem, therefore, lies in the double entendre: literally, he castigates succumbing to gustatory desire that risks one's life; allegorically, he insinuates that both Lü and Fan have fallen prey to the allure of factionalism to achieve their political agenda at the expense of imperial stability. Other scholars are less conclusive about the specific target of this poem but concur that Mei skillfully employed the pufferfish's characteristics to discourse on politics and human relationships, leaving open multiple interpretations.¹⁸

This credible political reading risks relegating the pufferfish to a sheer metaphor of absolute poison. Despite the overwhelming censure, two points shed light on a different kind of politics related to Mei's ambivalence toward southern culinary customs: the geographical allusions and the detail about proper preparation. Considering the Wu origin of the pufferfish, the power of Mei's allusions comes to the fore. Mei deploys parallel images, the "huge boar" and the "frog of Wu," to picture pufferfish pejoratively and justifies such depictions through classical references (lines 5–8). Instead of *tun* 豚 ("piglets," often reared in one's household), Mei analogizes the fish to *shi* 豕 ("boars," often wild and mature) associated with the Wu area that connote voracity.¹⁹ The frog of Wu also conjures up the gastronomic image of the southern habit of eating frogs.²⁰ Mei interrogates the "southerners" in Jiangxi who would risk their life for just a bite (line 13). Though Mei was from Xuancheng (in Anhui), he aligns himself with the northern literati Han Yu and Liu Zongyuan, who were exiled to the far south but were judicious about assimilating local customs (lines 19–22). Mei's discussion of consuming pufferfish, snakes, and toads renders his poem a point of disagreement between the northern orthodoxy and its perceived moral deviance of the south. Although the pufferfish was itself poisonous, Mei's real target was the heedless southern consumers who craved excessive taste at the expense of their lives.

Was the pufferfish really so devastating then? Writing a poem in the ancient style, as this piece was often acclaimed to be, Mei Yaochen could not but saturate it with moral suasion. His close comrade Ouyang Xiu 歐陽修 (1007–1072) highly commended his depiction.²¹ Later poets, notably Su Shi and Fan Chengda 范成大 (1126–1193), also wrote pufferfish poems modeled after Mei's and perpetuated the creature's infamously dangerous allure. Those gourmets who lavished encomia on its alleged taste tended to overlook the importance of cooking. Though Mei portrayed the fish as *e* 惡 ("malicious," line 27), he also briefly mentioned that it became deadly if one did not prepare it correctly (lines 9–10), hinting at the proper way of rendering it safe for consumption. Mei did not elaborate on the method, but he could have gained this tip from his experience living in Jiangxi or

Literati State: The Sino-Tangut War and the Qingli-Era Reforms of Fan Zhongyan, 1040–1045," *Journal of Song-Yuan Studies* 45 (2015), 64–71.

¹⁷Liu, "Mei Yaochen Biyunxia yu Qingli zhengzheng zhong de shifeng" 梅堯臣碧雲驥與慶曆政爭中的士風, *Dalu zazhi* 大陸雜誌 17.11 (1958), 13–18.

¹⁸Kakehi, "Bai Gyō-shin ron," 434. Colin S. Hawes, *The Social Circulation of Poetry in the Mid-Northern Song: Emotional Energy and Literati Self-Cultivation* (Albany: State University of New York Press, 2005), 15–19.

¹⁹The state of Wu encroaches upon the state of Chu. See *Zuo Tradition*, 1760–61.

²⁰Michael Freeman, "Sung," in *Food in Chinese Culture: Anthropological and Historical Perspectives*, ed. K. C. Chang (New Haven: Yale University Press, 1977), 169.

²¹Ouyang Xiu, *Ouyang Xiu ji biannian jianzhu* 歐陽修集編年箋注 (Chengdu: Bashu shushe, 2007), 129.139–40.

heard about it elsewhere in the south. Considering the similar note about *jingzhi* 經治 that Mao Sheng had specified, it was likely that some culinary knowledge about pufferfish preparation and consumption was circulating around Mei's time, which was to be documented in greater detail by later authors.

The regionality and diversity of pufferfish in *biji*

Mei Yaochen's apprehension about careless consumers endangered by pufferfish was not merely a rhetorical or political pronouncement of his own but shared by *biji* writers throughout the eleventh century. The quest for authentic piscine knowledge prompted them to enquire into the taxonomy and toxicity of the pufferfish beyond what had previously been written about it. In their miscellaneous jottings, they weighed their personal observations and experiences against transmitted lore and attempted to establish themselves as reliable sources of natural knowledge. In different ways, they responded to contemporary hearsay about pufferfish being a dangerous and decadent food by delving into the diversity of Wu culinary customs. Whereas poetry presented the pufferfish as a uniform topic with conventionalized symbolisms, *biji* illuminated variegated encounters with different pufferfishes, be it horrific, celebratory, or mundane. As a result of the literati effort to taxonomize, these distinctive everyday experiences were conflated into the single category of pufferfish that hid their diversity.

The Hangzhou literatus Shen Gua 沈括 (1032–1096), steeped in the literate and material culture of Wu, set out to clarify and explicate the regional perceptions of pufferfish. He signaled a more complex world of pufferfish than Mei Yaochen's moralizing poem could suggest. In his late years of retirement, Shen Gua devoted himself to writing the *Mengxi bitan* 夢溪筆談 (Brush talks at Dream Brook) in pursuit of reliable knowledge through means such as observation and reasoning.²² There he included a discussion of pufferfish in an attempt to correct an official medical compendium (to be discussed in the next section). He opened with a general statement: "Wu people are addicted to *hetun* fish. In cases where they come upon the toxic ones, they often kill people. This should be a serious warning."²³ The rest of this entry reveals that the "*hetun* fish" was a category neither self-evident nor homogeneous:

規魚，浙東人所呼。又有生海中者，腹上有刺，名海規。吹肚魚，南人通言之，以其腹脹如吹也。

Gui [literally, "compass"] fish is what Eastern Zhejiang people call it [the pufferfish].²⁴ There are also those from the sea, with spiky abdomen,²⁵ named "sea-compass fish." "Belly-blowing" fish is what southerners call all of them, because their bellies are bloated as if having been blown.

²²For Shen's broad learning, including medicine, and his way of acquiring and verifying knowledge, see Ya Zuo, *Shen Gua's Empiricism* (Cambridge, MA: Harvard University Press, 2018), 179–200.

²³Shen, *Mengxi bitan* (Beijing: Zhonghua shuju, 2016), *bu bitan* 補筆談, 3.730–31.

²⁴"Compass" here refers to the tool used to draw a circle. This might have referred to pufferfish's round body.

²⁵This description is evocative of the porcupinefish from the family *Diodontidae*, morphologically similar to *Tetraodontidae* but distinguished by its spines.

The variation in nomenclature pointed not only to different regional designations but possibly also to distinctive species from different waters. Their morphological resemblance, namely, the puffed body, became the defining trait whereby Shen Gua categorized them altogether as *hetun*.

The Jiangsu literatus Zhang Lei 張耒 (1054–1114) left a detailed and revealing record of how Wu people consumed pufferfish, further suggesting that different kinds of pufferfish, some highly poisonous and others less so, were readily subsumed under the name *hetun*, resulting in seemingly incongruent descriptions. A rather conventional scholar-official, Zhang devoted his *biji*, the *Mingdao zazhi* 明道雜誌 (Mingdao miscellany), mostly to issues related to language, writing, art, and scholarly learning, but also showed keen interest in peculiar phenomena of the world.²⁶ He sampled local anecdotes while serving in Zhejiang and Anhui, presenting layered perceptions of pufferfish:

河豚魚，水族之奇味也。而世傳以為有毒，能殺人。中毒則覺脹，亟取不絜食乃可解，不爾必死。余時守丹陽及宣城，見土人戶食之。其烹羹亦無法，但用蘘蒿、荻筍、菰菜三物，云最相宜。用菰以滲其膏耳，而未嘗見死者。或云土人習之，故不傷，是大不然。蘇子瞻是蜀人，守揚州；晁無咎濟州人，作倅。河豚出時，每日食之，二人了無所覺，但愛其珍美而已。²⁷

The pufferfish is a marvelously tasty aquatic animal. Transmitted lore says that it is toxic and can kill people. Once poisoned, one would feel bloated. If they eat some unclean food right away, the poison can be dissipated,²⁸ otherwise they will definitely die. I was once the prefect in Danyang (in Zhejiang) and Xuancheng (in Anhui) and saw local families eat pufferfish. They did not have a particular way of cooking it but simply used mugwort, bamboo shoots, and cabbage, saying that they best complemented each other. They used cabbage to strain its fat. Never have I seen one who died from it. Some say that the locals are used to it and thus are not harmed. This is not the case at all. Su Shi from the Shu region (in Sichuan) was the prefect in Yangzhou (in Jiangsu). Chao Wujia (Chao Buzhi 晁補之, 1053–1110) from Jizhou (in Shandong) was the auxiliary in Yangzhou. When pufferfish came out, the two ate it every day and did not sense anything. They simply relished its delicious flavor.

The thrust of Zhang's documentation was the conundrum of the pufferfish's alleged toxicity. He sought to dispel the rumors with his own experience of living in the southeast and learning about local culinary customs. He began by asserting that the pufferfish is a marvelous dish (*qiwei* 奇味) that the locals in two southeastern towns had no problem consuming, contrary to contemporary rumors that dismissed it as a dangerous killer. He then refuted a second claim about how the locals were not harmed by the fish because they had become accustomed to it. Two non-locals daily delighted in the fish without risking their lives.

Apart from fulfilling his own intellectual agenda, Zhang Lei also tapped into common knowledge of preparing and consuming pufferfish in Wu, which previous writers had broached only briefly. As part of their culinary heritage, the local families had "no specific

²⁶Peter K. Bol, "A Literati Miscellany and Sung Intellectual History: The Case of Chang Lei's 'Ming-Tao Tsa-Chih,'" *Journal of Song-Yuan Studies* 25 (1995), 129.

²⁷Zhang, *Mingdao zazhi* (Zhengzhou: Daxiang chubanshe, 2019), 133–34.

²⁸"Unclean food" is a euphemism for excrement, used to induce vomiting.

method” (*wufa* 無法) and “simply only used” (*danyong* 但用) three kinds of plants. Mugwort had long been a traditional ingredient in fish stew among people living to the east of the Yangzi River.²⁹ They were said to excel in the cooking technique of “blending and harmonizing” (*tiaohe* 調和) and be able to properly season fish stew with mugwort.³⁰ Boiled bamboo shoots were a remedy for fish poisoning,³¹ as known from contemporary medical and botanical lore. However, it is unclear whether the practice of making stew with them originated from such medicinal awareness. More probably, the locals did so because the plants and the fish were mutually enhancing (*xiangyi* 相宜) in a gastronomic sense. Cabbage (i.e., bok choy 白菜) was a southern plant known to neutralize fishiness.³² This concoction suggests that Wu locals might not have been too worried about the fish toxin. They simply followed their regional tradition in cooking the fish with suitable plants for a fine combination of flavors.

Were Wu pufferfish benign to consume, or were Wu people negligent of the danger? In fact, the locals had their own ways for differentiating between different species and thus avoiding the poisonous ones:

南人言魚無頰無鱗與目能開闔及作聲者有毒，而河豚備此五者，故人畏之。而此魚自有二種，色淡黑有文點謂之班子，云能毒人，而土人亦不甚以捕也。

Southerners say that those fish without cheeks and scales, whose eyes can open and close, and who can make sounds, are poisonous. Pufferfish embody these five attributes, so people stay away from them. Now there are two kinds of pufferfish: those that are slightly dark and have speckles are called “the spotted ones.” It is said that they can poison people. The locals also do not catch them.

Southerners relied on orally transmitted sensory knowledge to discern poisonous fish. For them, pufferfish was only one among many types of fish that fulfilled the five criteria to be categorized as poisonous. Based on observations of their morphology, they designated them with the nickname “the spotted ones.” For southerners, Zhang’s account implied, there was not an overarching category of *hetun* denoting a dangerous fish but different types of pufferfish bearing distinctive traits, some poisonous and others not.

Zhang Lei continued to describe how Wu people transformed pufferfish into splendid fare and treated fish poisoning in a motley of portrayals of possibly different species. The people of Wu extolled pufferfish as a symbol of hospitality at spring banquets. The art of cooking lay in two temporal aspects. It was only in mid-spring that they could obtain quality fish. They cooked fish stew in the morning and warmed it up twice, for the consummate flavor, before serving it to guests. Nonetheless, Wu locals were far from being oblivious of its danger but dealt with it in various ways. Some said that pufferfish roe was highly poisonous and cannot be eaten. They adopted prophylactic means of adding Chinese olives to the fish stew to neutralize the toxins. Others proposed expedient

²⁹Luo, *Erya yi*, 4.52.

³⁰*Tiaohe* is a classical idea of achieving the *zhiwei* 至味 (“culminant flavor”) through a careful combination of ingredients. See Donald Harper, “Gastronomy in Ancient China—Cooking for the Sage King,” *Parabola* 9.4 (1984), 40–41.

³¹Tang Shenwei 唐慎微, *Chongxiu zhenghe jingshi zhenglei beiyong bencao* 重修政和經史證類備用本草, ed. Zhang Cunhui 張存惠, 1294 *Huimingxuan ben* 晦明軒本, rep. (Beijing: Remin weisheng chubanshe, 1957; hereafter *Zhenglei bencao*), 11.22a.

³²Tang, *Zhenglei bencao*, 27.18.

measures, such as anti-toxin decoctions and pills, after having been poisoned. Still others joked about eating human feces in order to spew the poison up. Notably, these therapeutic options targeted not specifically pufferfish poisoning but were general remedies to fish poisoning (*yudu* 魚毒) recorded in contemporary *bencao*. Zhang's account showed a rather mundane, gastronomic view of pufferfish as a common food item. Wu people did not view it as uniformly dangerous but tailored their treatment of different varieties of pufferfish by their individual traits.

A generation later, several other Wu writers weighed in on the discussion, accentuating the multiplicity and transformability of pufferfish. Via the emerging genre of *shihua* 詩話 ("remarks on poetry"),³³ they critiqued Mei Yaochen for his poetic representation of the fish's biological habits.³⁴ The most detailed critique came from the Suzhou 蘇州 literatus Ye Mengde 葉夢得 (1077–1148), a relatively lesser-known "bystander" in the Northern Song literary scene who strove to showcase his personal knowledge.³⁵ Ye wrote his *shihua* entry on pufferfish in the spirit of *biji* and probed beyond the parameter of poetic craft into natural knowledge entitled only to Wu locals:

歐陽文忠公記梅聖俞河豚詩:「『春州生荻芽, 春岸飛楊花。』破題兩句, 已道盡河豚好處。」謂河豚出於暮春, 食柳絮而肥, 殆不然。今浙人食河豚始於上元前, 常州江陰最先得。方出時, 一尾至直千錢, 然不多得, 非富人家預以金噉漁人未易致。二月後, 日益多, 一尾纔百錢耳。柳絮時, 人不食, 謂之斑子, 或言其腹中生蟲, 故惡之, 而江西人始得食。蓋河豚出於海, 初與潮俱上, 至春深, 其類稍流入于江。公, 吉州人, 故所知者江西事也。³⁶

Sir Ouyang Wenzhong (Ouyang Xiu) remarked on Mei Shengyu's poem on the pufferfish: "Bamboo shoots sprout from spring islets, / Willow flowers fly over spring banks.' These two beginning lines already fully express the fineness of pufferfish." He meant that pufferfish come out in late spring and grow fat feeding on willow catkins. This is probably not the case. Nowadays Zhe (Zhejiang) people start to eat pufferfish before the Upper Prime Festival (the fifteenth day of the first month). Changzhou and Jiangyin are the places where people first obtain pufferfish. When pufferfish have just come out, one is even worth a thousand coins. However, they are not abundant. Only the wealthy and distinguished families who bribe fishermen in advance can acquire them. After two months, their number multiplies day by day. One is worth merely a hundred coins. When the time of willow catkins comes around, people have already stopped eating them, calling them the "spotted ones." Some say that worms grow in the fish's belly, so they abhor it. Only from this time on do Jiangxi people get to eat it. This is because pufferfish first come out from the sea and flow upstream with the tide. As spring approaches its end, some of them flow into the Yangzi River. Sir Ouyang was from Jizhou (in Jiangxi), so what he knew was things from Jiangxi.

³³In its early stage of formation, *shihua* as a genre bordered on *biji*. See Ronald Egan, *The Problem of Beauty: Aesthetic Thought and Pursuits in Northern Song Dynasty China* (Cambridge, MA: Harvard University Asia Center, 2006), 64.

³⁴For a summary of their opinions, see Chaves, *Mei Yao-ch'en*, 178–85; Bocchi, "On the Hetun (Pufferfish) in Ancient China," 45–51.

³⁵Egan, *Problem of Beauty*, 91.

³⁶He Wenhuan 何文煥, *Lidai shihua* 歷代詩話 (Beijing: Zhonghua shuju, 2004), *Shilin shihua* 石林詩話, 405.

Ye's commentary was evidence of broadened criteria of poetic criticism.³⁷ Whereas Ouyang Xiu highlighted compositional craft and moral gravity, Ye valued empirical accuracy and examined poetic portrayals against real-world instantiations. Nonetheless, Ye's last comment about Ouyang's limited knowledge suggests that the issue was more about one's epistemological finitude. Ye's rather pedantic commentary resonated with Zhang Lei in illuminating the variety of pufferfish. Pufferfish had a peculiar migratory pattern that critically affected consumers' perception and enjoyment of it. Because they flowed upstream from the sea into the Yangzi River, people living closer to the coast, such as in Changzhou, could enjoy the freshest batches. Those from inland areas like Jizhou were left with nearly inedible ones (Figure 1). Ye recognized that since each writer was writing from different places, their experiences with pufferfish were all geographically contingent and thus limited. Between seasons, pufferfish's physiology might also change and that lent itself to varied perceptions.

Ye offered alternative insights about the taste and toxicity of pufferfish as related to seasonality and regionality.³⁸ There was a limited time window for consuming fresh and fatty fish, hence the drastic price decrease over the course of spring. The rarity and temporality of fresh pufferfish, more than its touted taste, enabled a tacit commercial network between fishermen and consumers. There was a curious silence on the toxicity of

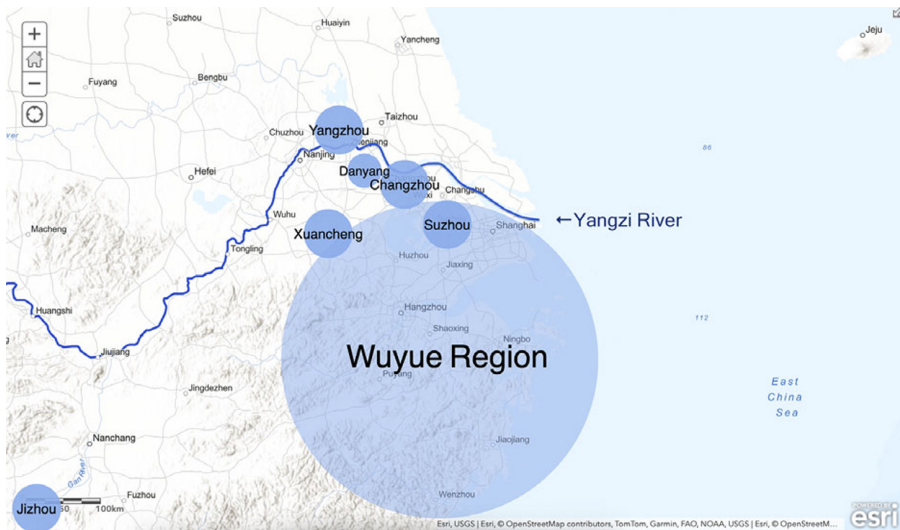


Figure 1. Map of Yangzi River. ChinaXmap 5.0 Five Dynasties and Song. Harvard World Map. <https://worldmap.maps.arcgis.com/home/webmap/viewer.html?webmap=490e1faedc944e5eaf838de1f2c0fa23>.³⁹

³⁷Xiuyuan Mi, "Informational Literature: The Pursuit of Empirical Accuracy in Song Literary Production," *Journal of Song-Yuan Studies* 51.1 (2022), 309–10.

³⁸Modern scientists have found the degree and distribution of toxins in pufferfish bodies to depend indeed on regionality (whether the fish are from fresh, marine, or brackish waters) and seasonality. Wild pufferfish from the East China Sea do migrate upstream into the Yangzi River. See Arakawa and Noguch, "Tetrodotoxin," 221–23.

³⁹See also Tan Qixiang 譚其驤, *Zhongguo lishi dituji* 中國歷史地圖集, 8 vols. (Beijing: Zhongguo ditu chubanshe, 1982–87), 6:24–25.

pufferfish but a recurrence of the phenomenon of vernacular naming. Zhe locals stayed away from what they called the “spotted ones” not explicitly because it was deemed poisonous, as in Zhang Lei’s account, but because it would not taste good. They explained some pufferfish’s speckled pattern as the result of worms growing in their bellies. Their attitude of *wu* 惡 (“hate,” “fear”) thus derived more from the perceived staleness than danger. Ye’s commentary suggested that in the southeastern area along the Yangzi River, consumers’ perception of pufferfish greatly varied by geography and temporality.

These diffusive, if not contradictory, depictions of the pufferfish revealed its diversity, shaded by their shared designation *hetun*. They also related to profound changes in Northern Song epistemic cultures: further decentralization in intellectual output and an emphasis on empirical and experiential knowledge.⁴⁰ Miscellany authors became increasingly self-conscious in documenting their observations from “hearing and seeing” (*wenjian* 聞見) to verify and revise canonical textual knowledge. The prosperity of *biji* as a scholarly endeavor enabled a new literati culture, where individual writers called attention to the granularity of the phenomenal world and displayed their erudition in miscellaneous knowledge.⁴¹ In *biji* accounts of Wu culinary customs, pufferfish was not one uniform category but a plurality of fishes bearing similar morphology. Some were benign and tasty, others grotesque and demanded careful treatment. Wu people devised various ways of detoxification and sought antidotes based on both local traditions and sensory experiences. *Biji* authors endeavored to preserve these regionally and historically specific encounters and yet could not but group them all as “pufferfish.” Once the pufferfish’s reputation spread more widely, these heterogenous strands of experiences came to be subsumed under the single popular name *hetun*, evoking a lethal but delicious fish.

Medicalization of a deadly delicacy

The pufferfish’s paradoxical reputation gradually infiltrated the *bencao*, which were specialized catalogues of medicinal substances. Song official *bencao* eventually medicalized and codified the name *hetun*. The Tang *Xinxu bencao* 新修本草 (Newly revised *materia medica*, 659), the first state-sponsored *bencao*, contained no entry about pufferfish under any of its known variant names. In the eighth century, pufferfish appeared in private medical treatises as *houyi* fish 鰐鰓魚 and *gui* fish 鰐魚, both described as heavily poisonous. The name *hetun* made its debut in the *Rihuazi* 日華子 (Sir Sun-Brilliance), a Wu-Yue regional *bencao*,⁴² also as a lethal fish. The Song official *bencao*, which culminated in the *Chongxiu zhenghe jingshi zhenglei beiyong bencao* 重修政和經史證類備用本草 (Revised Zhenghe-reign *materia medica* prepared for usage, verified and classified from the classics and histories, 1249; hereafter *Zhenglei bencao*), listed pufferfish in three entries: *gui* fish, *houyi* fish, and *hetun*. Whereas the first two replicated previous *bencao* to emphasize only the toxicity, the third unprecedentedly juxtaposed it with the supreme taste (Table 1). The intrusion of the vocabulary of sensual taste showed the hybridity of

⁴⁰Zuo, Shen Gua’s *Empiricism*, 5–19. Ruth Yun-ju Chen, *Good Formulas: Empirical Evidence in Mid-Imperial Chinese Medical Texts* (Seattle: University of Washington Press, 2023), 8–12.

⁴¹Ellen Cong Zhang, “To Be ‘Erudite in Miscellaneous Knowledge’: A Study of Song (960–1279) ‘Biji’ Writing,” *Asia Major* 25.2 (2012), 45.

⁴²*Rihuazi zhujia bencao* 日華子諸家本草 (Various *materia medica* compiled by Sir Sun-Brilliance). It was probably compiled around the Tianbao reign period (908–923) by anonymous author from Siming 四明 (in Zhejiang). See Shang Zhijun 尚志鈞, Lin Qianliang 林乾良, and Zheng Jinsheng 鄭金生, *Lidai zhongyao wenxian jinghua* 歷代中藥文獻精華 (Beijing: Kexue jishu wenxian chubanshe, 1989), 200–203.

Table 1. Entries of pufferfish in *bencao* treatises. Source: *Bencao gangmu*, 8: 44.318a–319b.⁴³

<i>Bencao</i> Treatise	Author or Compiler	First Publication	Heading	Description of Toxicity
<i>Xinxiu bencao</i> 新修本草	Official Su Jing 蘇敬 (599–674) et al.	659	/	/
<i>Shilitao bencao</i> 食療本草	Private Meng Shen 孟誥 (621–713) and 張鼎 (fl. 713–741)	ca. 713–741	<i>Houyi</i> fish 鯢魚	The liver is heavily toxic; inedible.
<i>Bencao shiyi</i> 本草拾遺	Private Chen Cangqi 陳藏器 (fl. 713–741)	739	<i>Gui</i> fish 鰐魚	Those from the sea are heavily toxic, those from the river are less toxic.
<i>Rihuazi</i> 日華子	Private Rihuazi 日華子	ca. 908–923	<i>Hetun</i> 河豚	Toxic; the liver is heavily toxic. If boiled and consumed with Japanese <i>rumex</i> , it is fine.
<i>Kaibao bencao</i> 開寶本草	Official Liu Han 劉翰 et al.	974	<i>Hetun</i> 河豚	Non-toxic.
<i>Bencao yanyi</i> 本草衍義	Private Kou Zongshi 寇宗奭 (fl. 1111–1117)	1119	<i>Hetun</i> 河豚	Highly toxic. Although the flavor is exquisite, if not prepared properly, eating them would kill people.
<i>Zhenglei Bencao</i> 証類本草	Official Tang Shenwei 唐慎微 (fl. 1086–1094)	1249	<i>Houyi</i> fish 鯢魚	Toxic; inedible; the liver is fatally toxic
			<i>Gui</i> fish 鰐魚	The liver and roe are highly toxic. The flesh is slightly toxic.
			<i>Hetun</i> 河豚	Heavily toxic; kills people if not prepared properly
<i>Bencao gangmu</i> 本草綱目	Private Li Shizhen 李時珍 (ca. 1518–1593)	1593	<i>Hetun</i> 河豚	Sweet, warm, non-toxic; the liver and the roe are heavily toxic

Chinese pharmacology in incorporating knowledge from different realms. It also reflected further and firmer sedimentation of pufferfish's gastronomic fame.

Why would a lethal substance devoid of therapeutic value enter the *bencao* tradition in the first place? The dialectical concept of *du* 毒, as both “poison” and “potency” to be carefully leveraged,⁴⁴ was not applicable, because pufferfish's *du* was understood by Song pharmacologists as sheer harm without medical utility.⁴⁵ The pufferfish should, therefore, have been an outlier in the *bencao* paradigm. The *Rihuazi* compiler might have included it to warn against its toxins and publicize antidotes:

河豚，有毒，又云胡夷魚。涼，有毒。煮和禿菜食，良。毒以蘆根及橄欖等解之。肝有大毒。又為鰐魚，規魚，吹肚魚也。⁴⁶

Hetun, poisonous, also known as *houyi* fish. Cold, poisonous. If you boil and eat it with the *tu* plant (Japanese *rumex*), it is fine. Relieve its poisoning with reed roots and Chinese olives. Its liver is heavily toxic. It is also known as *hui* fish, *gui* fish, and belly-blowing fish.

Like all previous records, the *Rihuazi* stressed the toxicity of the pufferfish, especially its liver, but also offered two recipes. The use of reed roots and Chinese olives as antidotes to fish poisoning might have been Wu local lore, as it had previously been recorded by the Zhejiang pharmacologist Chen Cangqi 陳藏器 (fl. 687–757).⁴⁷

In the late tenth century, a textual misidentification occurred in the first Song official medical compendium, the *Kaibao chongding bencao* 開寶重定本草 (Revised *materia medica* of the Kaibao reign era, 974; hereafter *Kaibao bencao*), which documented *hetun* 河豚 as non-toxic. To some extent, this incident was a byproduct of the Song imperial expansion into the south. Confronted with the political fragmentation of the Five Dynasties and Ten Kingdoms (907–979), early Song rulers endeavored to consolidate their sovereignty and integrate the southern regimes and their intellectual legacy through massive state-commissioned compilations.⁴⁸ The *Kaibao bencao* absorbed the Tang precedent, regional *bencao*, as well as other miscellaneous sources, resulting in a drastic increase in the total number of recorded drugs.⁴⁹ Adopting an accretional format, the compilers at court incorporated the *hetun*, a Wu specialty. However, likely because of the convoluted nomenclature and piscine taxonomy, they confounded different species and labeled *hetun* as non-toxic, having a sweet taste and warm thermo-influence (*xing* 性),

⁴³ Translation adapted from Paul U. Unschuld, trans., *Ben Cao Gang Mu*, vol. 8, *Clothes, Utensils, Worms, Insects, Amphibians, Animals with Scales, Animals with Shells* (Berkeley: University of California Press, 2021), 738–41. Information of authorship and publication is obtained from Paul U. Unschuld, *Medicine in China: A History of Pharmaceuticals* (Berkeley: University of California Press, 1986).

⁴⁴ For the concept and applications of *du*, see Yan Liu, *Healing with Poisons: Potent Medicines in Medieval China* (Seattle: University of Washington Press, 2021).

⁴⁵ A point of contrast is the crab, a renowned seafood in the Northern Song. Pharmacologists had recognized its toxicity but also noted its medicinal benefits. See Tang, *Zhenglei bencao*, 21.8b–10a.

⁴⁶ Tang, *Zhenglei bencao*, 21.29a–30b.

⁴⁷ Li Shizhen 李時珍, *Bencao gangmu* 本草綱目, 1885 *Weiguzhai ben* 味古齋本, rpt. (Beijing: Renmin weisheng chubanshe, 1957), 44.318b–319a.

⁴⁸ Johannes L. Kurz, “The Politics of Collecting Knowledge: Song Taizong’s Compilations Project,” *T’oung Pao* 87.4/5 (2001), 289–316.

⁴⁹ Asaf Goldschmidt, “The Song Discontinuity: Rapid Innovation in Northern Song Dynasty Medicine,” *Asian Medicine* 1.1 (2005), 77–79.

and even with health benefits.⁵⁰ This issue led to extensive textual calibration from later *biji* writers, who then firmly fixed *hetun* as a deadly delicacy in the *bencao*.

Two main figures contributed to this textual rectification: Shen Gua and Kou Zongshi 寇宗奭 (fl. 1111–1118). In Shen's entry about pufferfish, he deployed his own Wu knowledge and pointed out the issue of identifying pufferfish from the description in the *Kaibao bencao*. Around the lower Yangzi region, he implied, *hetun* and *hui* fish were likely similar species with different names depending on the specific locality. The compilers of the *Kaibao bencao* from the northern capital might have confounded the two in an attempt to incorporate *hetun* into the official pharmacology.

The later pharmacologist Kou Zongshi strove to update the medical record of pufferfish as well, with greater impact on the *bencao* documentation of it as a dangerous but delicious food. Similar to Shen Gua, Kou was also a peripatetic civil servant, though much more obscure, who recorded his empirical findings along his travels. Different from Shen the polymath, Kou was known mostly for his pharmacological manual, the *Bencao yanyi* 本草衍義 (Elucidated meaning of *materia medica*, 1119). In this work, Kou solicited information from a variety of sources, proffered his personal argumentation, and critiqued previous Song medical encyclopedias.⁵¹ In his entry about pufferfish, he stressed the fish's delicate flavor and suggested a high demand for it. Compared to earlier pharmacologists, his attitude toward pufferfish was less fearful:

河豚，經言無毒，此魚實有大毒。味雖珍，然脩治不如法，食之殺人，不可不慎也。厚生者不食亦好。蘇子美云：河豚於此時，貴不數魚蝦。此即詩家鄙諷之言，未足全信也。然此物多怒，觸之則怒氣滿腹，翻浮水上，漁人就以物撩之，遂為人獲。橄欖並蘆根汁解其毒。⁵²

Hetun. The *Classic* records that they are nontoxic, but this fish is in fact highly toxic. Although the flavor is delectable, if the preparation does not follow the proper method, eating them would kill people. One must be cautious. For those who cherish their lives, it is fine to not eat them. Su Zimei (Su Shunqin 蘇舜欽, 1008–1048) said: "This is the time for pufferfish, / Its price exceeds other fish and shrimp."⁵³ These are satirical words from poets and cannot be fully relied upon. This creature is easily irritated. When touched, anger fills its belly. Turning over, it floats above the water. Fishermen pull it up with something and thus catch it. Chinese olives along with the fluid of reed roots relieve its poison.

In addition to pointing out the misidentification of the *Kaibao bencao*, Kou recycles prior information, yet with a softened tone. He repeats the importance of proper preparation. However, though he also warns that eating pufferfish can kill people, he advises caution (*shen* 慎) rather than abstinence. His comment, "For those who cherish their lives, it is fine to not eat them," implies that consuming pufferfish was relatively ordinary for certain people other than the very prudent. Moreover, it had apparently become a common practice to catch pufferfish by Kou's time. Fishermen developed an efficient method for doing so based on the fish's biological and morphological traits: its body became bloated

⁵⁰Tang, *Zhenglei bencao*, 21.29b.

⁵¹For Kou's motivation of compiling it and his empirical strategy, see Chen, *Good Formulas*, 65–75.

⁵²Tang, *Zhenglei bencao*, 21.30a.

⁵³This line is not from Su Shunqin but from Mei Yaochen's poem discussed in the previous section.

when excited. While compilers of earlier *bencao* such as the *Rihuazi* emphasized the fatal toxins, Kou does not prescribe an absolute eschewal from pufferfish consumption. Rather, he recognizes the popularity and the demand and only recommends caution.

Kou Zongshi was also the first medical writer to juxtapose pufferfish's toxicity with its taste, as a result of genre interplay among medical, literary, and miscellaneous sources. Though Kou misattributed Mei Yaochen's poem and relegated it to mere "satirical words," he had clearly consulted it and was aware of pufferfish's touted supreme taste. This heightened attention to sensual flavor also signaled a subtle change in the *bencao* repertoire: the vocabulary of gustatory flavor blended with the pharmacological flavor. In its conventional format, a *bencao* entry would begin with defining a substance's *wei* 味 ("flavor") as a medicinal quality. Even though this quality employed the same linguistic terms as the *wuwei* 五味 ("five flavors": sweet, sour, salty, bitter, and pungent), it was differentiated from culinary taste. In a medical context, the *wei* of a substance was believed to stimulate the movement of one's *qi* 氣 and thereby exerted an effect on one's body.⁵⁴ The *Kaibao bencao* had defined the medicinal flavor of the pufferfish as sweet and warm (*wei gan wen* 味甘溫). However, Kou's statement "although the flavor is exquisite" referred to the sensual taste, now factored into the overall assessment of pufferfish as a pharmacological object. His attention to pufferfish's taste and his softened tone toward its consumption were likely informed by regional lore assembled and transmitted in different sources.

Kou Zongshi's account had an enduring legacy in anchoring the fatal toxicity and the supreme flavor to *hetun*. His *Bencao yanyi* became a frequent source of citation in Southern Song medical and literary works and later appended to the comprehensive *Zhenglei bencao*, printed and disseminated publicly. His specific entry of pufferfish also officially established *hetun* as not just deadly but also a delicacy. In the sixteenth century, the naturalist Li Shizhen 李時珍 (1518–1593) would attempt to explicate the name *hetun* by analogizing pufferfish to a suckling piglet: "*Tun* refers to its delicious flavor."⁵⁵ He imagined pufferfish as delicious pork from the river. The phonetic designation *tun* had been represented through variant graphs like *tun* 獐 and *tun* 鮠.⁵⁶ It was probably because of the reputation of pufferfish's sensual taste, as evinced in Kou's account, that Li eventually settled on *hetun* 河豚 and offered a gastronomic etymology. The process whereby variant names were eventually narrowed into one bespoke not only the lexicographical imperative to cleanse the nomenclature but also a profound change in the perception of the pufferfish from a dangerous killer to an alluring delight.

Conclusion

How did the pufferfish acquire its reputation as a deadly delicacy in middle period China? This process was, first and foremost, involved in the demographic and political reconfigurations of the tenth century and the concomitant interactions between the northern and southern gastronomic traditions. The Northern Song state emerged from the

⁵⁴For this reason the historian of medicine Vivienne Lo translates the medicinal *wei* as "sapor." See Lo, "Chinese Traditional Medicine and Diet," in *Routledge Handbook of Chinese Medicine* (London: Routledge, 2022), 322.

⁵⁵Li, *Bencao gangmu*, 44.318b.

⁵⁶The Southern Song writer Cheng Dachang 程大昌 (1123–1195) advocated for *tun* 鮠 because the linguistic radical indicates that it is a kind of fish. See Cheng, *Yanfanlu jiaozheng* 演繁露校正 (Beijing: Zhonghua shuju, 2018), 3.217–19.

interregnum and endeavored to consolidate its regime through incorporating southern scholarship and material culture. Whereas early medieval records warned against pufferfish, sources from the Wu-Yue Kingdom highlighted its status as a regional and seasonal specialty. Northern Song imperial compilers' effort to synthesize this natural knowledge raised the visibility of pufferfish as a Wu product, publicizing its taste, traits, and treatment. The pufferfish garnered further attention because of its controversial toxins. In the subsequent century, writers responded differently to hearsay about its danger, informed by their own individual concerns. Those who aligned themselves more with northern customs were wary about it, while others with lived experience in the south updated their perceptions with personal observations of Wu culinary traditions. Through the versatile venue of *biji*, literati authors foregrounded the diverse Wu perceptions of pufferfish as a delicious food item. Its paradoxical fame as risky food was thus born from the confrontation and negotiation between the orthodox prudence and abstinence toward taste and the regional culinary traditions that favored fresh seafood.

Tracing the transformation of the pufferfish from a dangerous killer to an alluring treat, this study also shows the interplay between literature, medicine, and geographical and natural knowledge across genres in middle period Chinese history. Written texts were major media whereby information and knowledge of the pufferfish were preserved and circulated. Therefore, shifting nomenclature and semantic accretion played an important role in shaping perceptions of the pufferfish. The name *hetun* rose from Wu-Yue regional lore and became popular enough to outshine other variants due greatly to Northern Song poetry that aestheticized and politicized the pufferfish as a multivalent symbol. Once its controversial reputation as a Wu specialty spread widely, curious *biji* authors sought to collect traces of everyday encounters from different localities to confirm or contest contemporary hearsay, unraveling when confronted with the diversity of pufferfish varieties in local culinary traditions. They came to use the mesmerizing name *hetun* to subsume a diverse range of experiences, some mutually reinforcing and others self-contradicting, with regards to the pufferfish's taste and toxicity. Song pharmacologists consulted and incorporated various sources of medical knowledge and eventually medicalized the pufferfish in the official *bencao* as a poisonous yet delicious fish, despite a lack of medicinal value. Throughout the course of the eleventh and early twelfth century, the regional and historical specificities of pufferfish were amalgamated into one single category *hetun* that codified a deadly delicacy, whose name and image remain evocative till this day.

Competing Interests. The author declares none.