A Frog's Anthropocene Story

An Ecofeminist Reading of Delta Amphibiousness Through the Novel *Chao Xi Tu*

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Abstract Lin Zhao's 2022 Chinese novel *Chao Xi Tu* (*Tidal Atlas*) is renowned for its unique use of vernacular southern Chinese dialects, recounted by its nonhuman protagonist Wa, a giant female frog. Through the lens of an ecofeminist reading of the novel informed by delta anthropology and migrant ecologies, this article analyzes the multifaceted amphibiousness and multispecies worlding of the Pearl River Delta in southern China in the early nineteenth century. The novel constructs a more-than-human histography through bold speculation set at the height of Western colonialism—a period that swept southern China into the material flows and displacements of the imperial-capitalistic-Anthropocene. As one of the world's largest and fastest-growing urban regions, the Pearl River Delta has been dominantly framed as China's past "World Factory" and present "Greater Bay Area." Such territorialized and developmentalist narratives, however, have overshadowed the delta's liquid geography, hybrid cultural identities, and fluid cosmologies. This article argues that Lin's novel provides a timely literary re-worlding of the delta and its amphibious, more-than-human materialities, while mounting a powerful critique of Anthropocene violence, a force that continues to extract from and marginalize both the delta's amphibious matter and its forms of knowledge.

Keywords: Pearl River Delta, amphibiousness, more-than-human, Anthropocene, ecofeminist

Introduction

Lin Zhao's 2022 award-winning Chinese novel *Chao Xi Tu* (*Tidal Atlas*) has stirred discussion through its unique use of vernacular southern Chinese dialects and nonhuman matters embedded in the Pearl River Delta's (PRD) Canton trade period (roughly 1757–1842) in the late Qing dynasty.[1] Through the sensorial eyes of a mystical giant female frog, Wa,[2] the novel narrates an epic journey through the waterways of the Chinese

1. To date *Chao Xi Tu* has only been published in its original Chinese, without an official English translation. I adopt Dingru Huang's translation of the novel's title. All other translations in this article are my own.

2. In the novel, the frog is referred to as "Wa" or "Ju Wa." Wa means "frog," and Ju means "giant." While Wa is portrayed as a feminine subject, Lin Zhao uses the first-person pronoun *I* and the third-person pronouns

Environmental Humanities 18:2 (July 2026)
DOI 10.1215/22011919-12383946 © 2026 Zimu Zhang
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Pearl River to Portuguese-occupied Macau all the way to the colonial heartland of London. Through speculative storying by its nonhuman and feminine subject, Lin supplies rich historical details and reconstructs multispecies interrelations and cross-species affective bondings across the delta.

Chinese literary critics have analyzed the work as a contemporary classic of the so-called New South Writing—a term coined by domestic scholars to describe a shifting paradigm in literature characterized by heterogeneous linguistic and aesthetic qualities from southern China and its historical diaspora communities in Southeast Asia. This body of work is distinguished from both northern Chinese literature and the socialist realist writers from Guangdong in the 1950s.[3] Dingru Huang has pointed out the essentializing risk and the sinocentric territorialization intension behind this institutionalizing rhetoric, noting that *Chao Xi Tu* offers a critical lens to engage with the ambiguity and paradox of this discourse.[4] The novel's multifaceted Southern matters and speculative, nonhuman historiography break from clear literary lineage and categorization. As Lin recounts in her postscript notes and interviews, her inspirations derive mainly from old trading dictionaries, export paintings, historical archives, and anthropological studies of the region, further animated by her extensive fieldwork and lived female experience in the delta.[5]

Mostly narrated in the first person from Wa's perspective, the novel traces Wa's journey and encounters in the first half of the nineteenth century, incorporating actual historical timelines and events. The novel's main stage is the Thirteen Factories trade area along the Pearl River in Canton before the First Opium War (1839–42). The extensive Pearl River network and the PRD have historically nourished rich agriculture, commerce, aquaculture, and water-centric cultural identities and cosmologies in the delta in southern China.[6] From 1757 to 1842, foreign trade with China was strictly regulated during the Chinese imperial court's self-seclusion. Guangzhou, then known as Canton to foreigners, was the only open port, creating the Canton trade system.[7] Foreigners were allowed to trade only with licensed merchants between seasonal monsoons in the business district along the Pearl River's north bank, where warehouses, stores, and accommodation villas came to be known as the Thirteen Factories. In addition to trade, burgeoning naturalist passions for collection also drove many traders to the remote forests and marshlands for exotic flora and fauna from the far East, where the PRD was a biodiverse hotspot and transfer depot connecting the ocean trading routes.[8] Lin's novel is rooted in this

Wa and *it* when writing for Wa, which is a conscious choice to situate Wa as beyond clear gender norms and anthropomorphism. I will follow Lin's method in referring to Wa in this article.

3. For discussions in Chinese, see Yang, "Xin nanfang xiezuo"; Zhang, "Guanyu 'xin nanfang xiezuo.'"
4. Huang, "'Nanfang yinan' de shitai."
5. Lin, *Chao Xi Tu*, 279–82; "Lin Zhao, *Chao Xi Tu*"; "Lin Zhao: Wo zai xie wo de tiyan."
6. Ruddle and Zhong, *Integrated Agriculture-Aquaculture in South China*; Liu, "Becoming Marginal."
7. Van Dyke, *Canton Trade*.
8. Fan, "Science in a Chinese Entrepôt."

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historical colonial contact. Wa's amphibious journey further deliberates on the imperial-capitalistic flow of more-than-human lives and afterlives that still haunts us today, in what we know as the Anthropocene crisis.

Echoing the novel's content rooting in historical records and feminist speculations, I propose an ecocritical reading of the novel using a hybrid method extracted from delta anthropology and eco-feminism. Building on a series of historical and anthropological studies on different deltas that highlight amphibiousness, and an ontological theorization that negates any clear demarcation of water and land, Franz Krause and fellow delta anthropologists develop an amphibious anthropology of delta life,[9] tending to hydrosociality in deltic materialities and power relationships. While Krause's focus is foregrounding water-human relationship in the delta, ecofeminists thinkers such as Anna Tsing, Serpil Oppermann, and Stacy Alaimo prompt contemplation of the inherent more-than-human sociality.[10] I argue that this more-than-human sociality also applied to the delta hydrosociality, which includes multifaceted trans-species relationships that are deeply entangled with different water bodies. These take the forms of care, symbiosis, exploitation, and spirituality. Serpil Oppermann draws our attention to "migrant ecologies" to situate our world as "a world of migrations—processes that happen across borders and in spite of the tendency of building new frontiers, new fences."[11] It also emphasizes the agential power of displaced more-than-human migrants and their spontaneous place-making, kinship building, and biopolitical resistance to social norms. We may also comprehend migrant ecology within the parameters of amphibiousness to politicize the engineered movement between land and water, ocean and river, and to measure the abruptions, iterations, and deprivations of the hydrosocial lives.

Building on these theorizations, I will offer a situated reading of amphibiousness in the PRD from Lin's novel and relevant histories, in which geographical formation, militarized exploitation, and creative resistance are an amalgamation of hydrosociality and other deltaic life parameters.

Amphibiousness in the Littoral River Delta

The PRD was not always framed as a delta. In local cartography and historical texts, it was seen as patchy riverine land and islands afloat in the South China Sea—an inherently liquid geography.[12] Island studies scholars Ping Su and Adam Grydehøj point out that it was Western engineers and geographers who produced the exterior zoning that gave birth to the idea of the Pearl River Delta in the early twentieth century.[13] Separated by the

9. Krause, "Towards an Amphibious Anthropology"; Krause and Strange, "Thinking Relationships Through Water"; Krause and Harris, *Delta Life*.

10. Tsing, "More-Than-Human Sociality"; Alaimo, "Trans-Corporeality"; Oppermann, "Introducing Migrant Ecologies."

11. Oppermann, "Introducing Migrant Ecologies," 243.

12. Gutierrez and Portefaix, "Liquid Stories," 40–43.

13. Su and Grydehøj, "Regionmaking and Conceptual Development," 6.

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Nanling mountain range, southern China, known as Lingnan, was historically regarded by northern Chinese political and cultural centers as a barbarian land where wild beasts, uncivilized tribes, and deadly diseases thrived. The abundant marshland and subtropical interstitial environment were considered a hotbed for *zhang*, a toxic contamination stemming from climate elements, plants, and insects, as described for centuries by northern Chinese literati and medical writings.[14] The Sinocentric ancient narration of *zhang* was sometimes translated as "miasma" and dominated Western colonizers' conception of southern China and Southeast Asia as drastically indifferent and hostile, prone to malaria and other endemic diseases when compared to European and American environments.[15]

In Lin's novel, we should foremost situate Wa as a true amphibious creature from the subtropical marshland, from the muddy riverine estuary and boat people's sampan, as a feral being created by this "impure" and hostile environment. Wa's journey and constant transformation by other powerful human actors as monstrous, auspicious, adorable, or exotic, could be read as expressing how a Southern subaltern being is inscribed in hierarchal power relations. Simultaneously, Wa's own transformative and metamorphic qualities serve as vital tactics of survival and resilience.

The novel's setting and narrative revolve around Wa's innate amphibiousness. Lavishly displayed in the novel are Lin's thick and sticky descriptions of the amphibious materialities of Wa's lifeworld: "Living colored water is catfish color, mud color, shit color, is a thin dash of smoke in the morning, a lump of thick smoke at sunset, wet clothes wet net half air spreading, slippery underfoot boat deck rope rotten bucket, water kids crawling with hollow gourd tied on their backs, women wives wash their boats and greet each other."[16]

Wa's first home on a boat epitomizes the traditional waterfaring life of the boat-dwelling communities in southern China, historically referred to by land settlers as *Tanka*. This term originated as a derogatory label composed of the Chinese character for "worm," exemplifying the dehumanizing rhetoric often directed at minority ethnicities and non-land-based populations. The communities themselves, however, self-identify as "people of the water" (*Shui Sheung Yahn* in Cantonese). In the PRD waterscape, the boat people developed distinct cultures centered on fishing, pearl diving, and hydrocosmologies. Rather than possessing a single bioethnic composition, boat people communities are loosely formed across history, absorbing war refugees, migrants, and those evading heavy taxes and conscription. For centuries, they were classified as *jianmin*

14. Leung, "'South' Imagined and Lived"; Yang, "'Zhang' on Chinese Southern Frontiers," 47; Mou and Wang, "Zhongguo lishi shang de zhangqi kaoshi."

15. Cowell, "Hong Kong Fever of 1843"; Yip, "Combating Malaria in East Asia." For miasma and wetlands in a European historical context, see Gruppuso, "Vapours in the Sphere." Additionally, for a creative reference, Wang Bo and Pan Lu's essay film *Miasma, Plants, Export Paintings* (2017), set in the PRD and the colonial trading period, is highly relevant.

16. Lin, *Chao Xi Tu*, 11.

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(menial class) by the Han land settlers and were heavily discriminated against, prevented from settling onshore, owning land, or having access to education.[17] Living on the littoral edge of the empire, these floating communities, were at times engaged in piracy, smuggling, prostitution, rebelling, and revolutions that deterritorialized the central state's control over this "unruly frontier" through "maritime nomadism."[18] In the novel Wa's early encounters with the boat people and its interactions with Qijia Sis showcase the community's hydrosocial life, revealing their reciprocal relationships with the seasonal monsoons, typhoons, water creatures, and spiritual beings.

In turn, this amphibious feature of the PRD was eyed by the British military in the nineteenth-century Opium Wars. The British used their first iron steam warship, the *Nemesis*, to bypass the seasonal monsoons, seizing the crucial Canton port and forcefully connecting several Chinese port cities to the Western saltwater vessels ready for lucrative Chinese products. Wa, in her cross-ocean journey to London, witnesses the *Nemesis*, "a spectacular doomsday image of a monolithic iron fleeting against the wind."[19] In Wa's perception, everywhere the iron warship passed, people were bewildered, fell under the spell of iron, and became part of it. Under this eye of iron modernity, natural amphibiousness was to be conquered and rationalized. In a map (fig. 1) prepared by a colonial cartographer for the operation of the *Nemesis*, the region's ocean-river main course was meticulously mapped while mostly reducing the inland river networks. The delta's amphibiousness was clearly targeted and exploited by military powers to seize control of the land for raw resources and transport them to market via water courses.

Amphibiousness is also central to "export paintings," a unique art-commodity from the Canton trade period that serves as a key visual and material reference for Lin's novel. As their name expresses, export paintings were produced primarily in the PRD and sold to foreign merchants as exotic Oriental souvenirs, encapsulating the foreign trade, cultures, and lifestyles of the Far East. In many of the export paintings, Chinese painters focused on the Thirteen Factories on the north bank and the river waterscape in front of it, which was the confined and familiar space for foreign traders (fig. 2). This vantage point reveals a selective landscape model: an imitative Western landscape contour, a disembodied, midair position that frames the geometrically depicted factory buildings and their national flags against an overly neat and unrealistic shoreline.[20] While the vast hinterland and buzzing local life behind the factories were often artificially erased, the various kinds of boats crowding the shore were rendered in great details.[21] The Pearl

17. Chen, *Dan Min De Yan Jiu*; Hansson, *Chinese Outcasts*, 107–28.

18. Lo, "Resistant Narratives at the Edge of the Sovereign State"; Watson, "Guarding the Shoreline," 94; Murray, *Pirates of the South China Coast*, 14.

19. Lin, *Chao Xi Tu*, 223.

20. Van Dyke and Mok, *Images of the Canton Factories*, 43.

21. Scholars have identified approximately four to five hundred varieties of boats and six to seven hundred human figures within a single export painting scroll in the British Library's special collections. See Wang et al., *Chinese Export Paintings*, 9.

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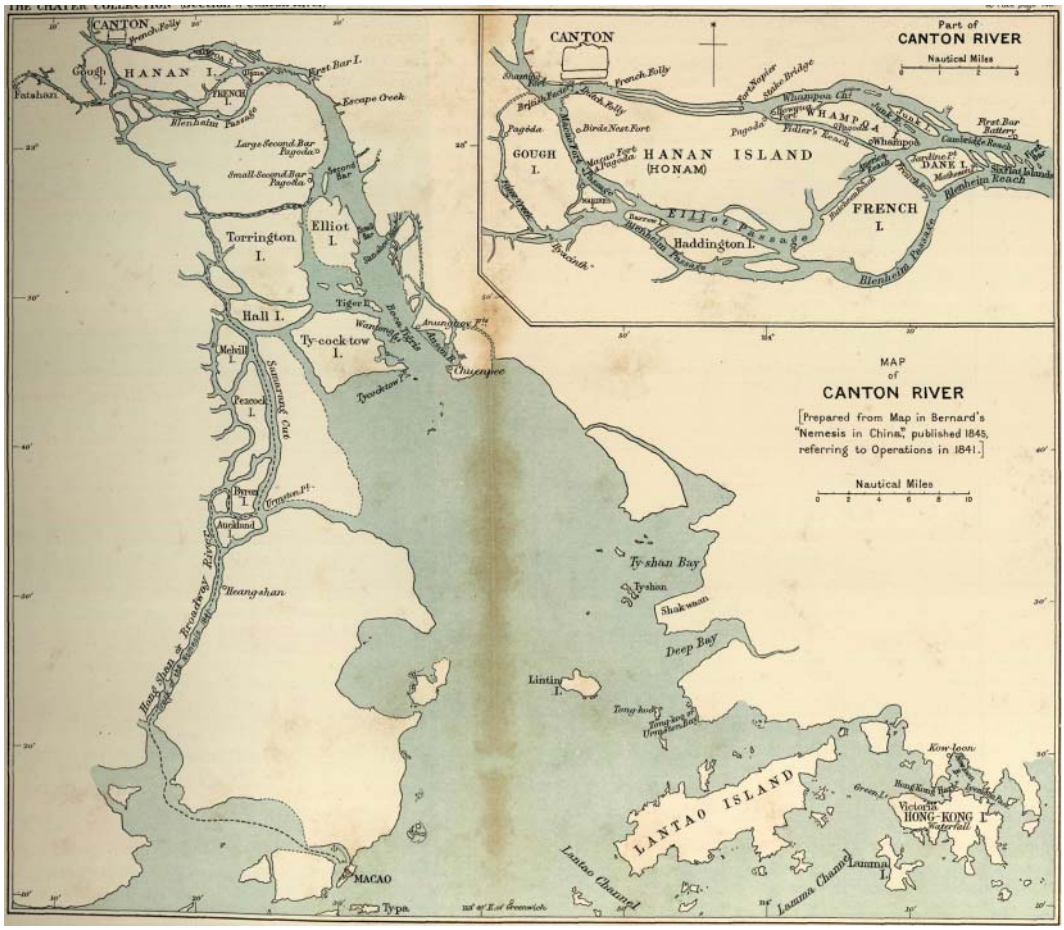


Figure 1. James Orange, map of Canton River, 1924. From *The Chater Collection: Pictures Relating to China, Hongkong, Macau, 1655–1860* (London: Thornton Butterworth Limited), p. 144. https://en.m.wikipedia.org/wiki/File:Map_of_Canton_River.jpg.

River thus mediated the physical, psychological, and aesthetic experience for the foreign traders in situ and, pictorially, for their Western audiences. This latent amphibiousness provided Lin with rich visual references and imaginative spaces to stage her historical speculations beyond the tidy waterfront frame. Due to export paintings primarily being commodities catering to Western colonial taste, their artistic value is often downplayed by mainstream art history. However, many export paintings portray realistic daily scenes and depictions of the rich materialities and naturalist knowledge of the PRD. Moreover, these works exhibit a hybrid aesthetic, blending different artistic traditions and techniques into a fascinating fusion, such as combining the Chinese "scatter perspective" of a long handscroll with Western single-point perspectives for depicting individual objects.[22]

22. Van Dyke and Mok, *Images of the Canton Factories*; Lau, "Trade Port Culture"; Poel, "Made for Trade."

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Figure 2. View of the Canton Roadstead, anonymous, ca. 1773. Oil on paper, 52 cm × 76 cm. The Rijksmuseum, Netherlands. https://id.rijksmuseum.nl/200549130.

The amphibian Wa also symbolizes a constant shifting of identity in the contact zone of different cultures, ideologies, ethnicities, and species. It functions to dissolve clear boundaries and categorizations and is closer to actual messy histories and materialities. One distinct aspect explored by the novel is the Sino-foreign relationship in the grassroots society of the PRD. At their farewell, Qijia Sis, the boat woman who was Wa's first human companion, complains to Wa that it was messing around with the *Fan Kwaes* (foreign devils) too much. *Fan Kwae* was a common epithet for foreigners in ancient China.[23] As Xie points out, the essential connotation of the "devil" in referring to foreign traders is not their stark physical differences, but their materialism-driven minds, in contrast with Confucian values' spiritual righteousness, which was especially apt in an ancient agriculture-centric society downgrading trade.[24] However, some historians have noted how this otherness also brought enchantment and ambiguous spaces of collaboration.[25] Lin narrates these in-between characters amid the waves of early global capitalism and lingering Chinese federal imperialism. Lin presents the reader with a PRD before the modern delta narrative and a not-so-human vantage point to navigate multivocal lived experiences. Such amphibiousness provided vibrant materialism for the early West-China trade and globalization; it could also be used to comprehend hybrid creations and affects, ranging from new business to new art forms that coevolve

23. Hunter, *"Fan Kwae" at Canton*.

24. Xie, "Partial Picture."

25. Ching, "Shui Shang Ren"; Luk, "Accommodating Foreigners"; Van Dyke, *Canton Trade*; Van Dyke, "Floating Brothels."

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beyond a black-and-white dualism of colonial violence and exploitation. This amphibious hybridity ontologically and empirically negates the isolated dualism of nature and culture, land and ocean, and other binary categories. Wa is a "material-semiotic actor" for visualizing and sensing the multifaceted PRD amphibiousness.[26]

More-Than-Human Displacement and Vibrant Migrant Ecology

The colonial-capital material movement is asymmetrical and hierarchical, resulting in the human and nonhuman displacement. The character H, a mysterious naturalist from Scotland who claims Wa's discovery and names it *Polypedates giganteus* (a fictitious taxonomy by the novelist), is modeled after European merchants and plant/animal hunters working for the East India Company (EIC) and European museums and naturalist collections in the 1800s. Wa's cross-continental journey is the epitome of slavery and human and nonhuman displacement under colonial violence in the name of science and progress. On HMS *Shijie* (*World*), Wa goes to London's Empire Zoo as part of H's collection. Wa calls itself prisoner of the floating jungle, along with all the other species transplanted from H's Macau botanical garden into conservatories and glass houses on the boat. The vessel is modeled after the real British vessel HMS *Bounty*, known for its failed mission to bring Tahitian breadfruit as slave food to the West Indies.[27] In 1819, the EIC merchant John Livingstone estimated for the British Royal Horticultural Society that only one out of every thousand plants shipped from China would survive the journey and make it to Britain.[28] The high shipping casualties of plants were only reduced after the 1840s with the invention of the Wardian case, a type of glass terrarium. However, birds and trees still found it difficult to survive the long sea journey. In the ports en route, Wa also witnesses multitudes of deaths arising out of the same colonial cause: "Rhino horns, ivories, shark fins, and black-skinned homo sapiens. . . . A corpse-producing business is emerging; the following ports then added this, there is also the business of reselling corpses."[29]

Even though Wa was trafficked and later exhibited as a naturalist trophy of the Orient, more than once, Wa emphasizes that it was the humans who were its captive, and it was this animal creature that found the colonial naturalist H, tracked him down, seduced him into "discovering" it, and is taken on its cross-continental adventure. Historian Christopher Morris, in his research about wetland colonies, adheres to a similar nonhuman agency, writing that "the river environments . . . influenced the history of colonialism to the extent that they determined where Europeans would go, what and who they would find, and what they would and would not do once there."[30] Morris points to

26. Haraway, "Promises of Monsters," 298.
27. DeLoughrey, "Globalizing the Routes of Breadfruit."
28. Fan, "Science in a Chinese Entrepôt," 73.
29. Lin, *Chao Xi Tu*, 219.
30. Morris, "Wetland Colonies," 138.

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the similarities between the four delta wetlands once under varied degrees of colonial control: the Chinese PRD, the American Mississippi Delta, the Indian Kaveri Delta, and the Senegal Delta. As recounted by Morris, early colonial engineers, botanists, and traders who traveled to these deltas, deeply impressed by local people's craft in co-living with the wetland, introduced these wetland production techniques to Europe. For example, Charpentier De Cossigny, an engineer of the French EIC, wanted to turn French wetlands into rice fields following Chinese and Native American models, a plan that was ultimately implemented in French colonies in the Bengal Delta.[31] Although there is a risk of downplaying the structural violence within the colonial-capitalistic complex, what Morris suggests and Lin's novel animates is closer to a more-than-human worlding and a vibrant agency of nonhumans in reiterating colonial history beyond the dominance-dominated power binary.

Under the nondualistic flow of migrant ecology in Lin's novel, we can also read a reciprocal displacement of the colonialists and animal species traveling to the East. The closest historical archetype of H is Thomas Beale, a Scottish opium and tea trader of the EIC and a passionate naturalist. Beale's private garden and exotic species aviary were internationally renowned, and H's Haojing Garden in Macau, where Wa resides, is similarly drawn. Beale allegedly committed suicide in 1841 amid the first Opium War and opium stock bankruptcy, a historical transition that resulted in the closure of the PRD's exclusive trading positions and the EIC merchants' privileged rights.[32] Beale's death, which epitomized the violent and gruesome nature of the opium trade, echoed the fate of H in the novel. It signified the rupture of a fragile China-West trading contract in the PRD, heralding an era of militarized colonial expansion.

Throughout Lin's novel, nonhumans are animated and sentient beings capable of expressing their displaced sorrow. In one segment, "Black and White Cow," Lin describes a Holstein Friesian dairy cow. Originally from the Netherlands' delta, it is transported to the Canton-Macao region to meet the increasing demand for dairy products among Western traders in a land without major dairy customs.[33] Lin gives a transcorporeal rendering of the animal's repeated and forced laboring and lactation along with the artificially contained natural water force:

> Her children are weeping, in highland pastures, behind wooden fences, in the shadow of the equator, in nameless afar. The wind is running back and forth, her breasts in distending pain, kicking hoofs agonizingly. The weight of milk pulls her down to the bottom of her uterus, where pain and the phantom of the fetus still linger. . . The delta in her breast

31. Morris, "Wetland Colonies," 136.

32. O'Regan, "Foreign Death in China."

33. For a study on the importation of cows from the West and the corresponding dairy culture for Western traders and their families in Macau and Canton during the mid- to late nineteenth century, see Ni, "Food and Drink as Negotiation Sites," 57–92. See also Van Dyke, *Canton Trade*, 53–54.

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> begins to tremble—reticular waterways, flood foreboding, everything is a mimesis of the ancestral land—white tides rise, she accepts the hallucination by reflex just like last time, like every time, like her grandmother, mother, daughter.[34]

Lin's writing materializes the ecological pawprints of animals in colonial global exchange and bears an empathetically trans-corporeal suffering and mourning of the animal and female subject. Lin also touches upon the animals' confined fates in the London Empire Zoo. Wa's captive neighbors include seemingly exotic animals from the Global South, such as the Malayan tapir, South American alpaca, and African elephant. Many of these creatures' fates are modeled after famous animal "stars" of that era, such as the elephant Jiamubu with a tower on its back to carry children that tears its skin apart. This story follows the real fate of Jumbo, the legendary elephant who traveled across continents and was displayed both in life and beyond in the form of its postmortal bones and media afterlives.[35]

The novel is set across three locations: Canton, Macau, and London (the colonial West). This is a conscious choice of triptych to link the three important geo-spaces of China's embroilment in European colonialism in the 1800s. Reworking the fusion aesthetic of an export painting, the novel depicts material details from a frog's amphibious vantage point as well as a proportion of scattered perspectives of various humans and nonhumans from Wa's encounters. The PRD as a contact zone of species, natures, and cultures gives rise to polyphonic and creolized languages and populations with mixed origins. In parallel with Wa's physical journey, the frog's language also changes seamlessly, from boat people's salty water songs and Guangzhou Cantonese to Pidgin English, Mandarin, and eventually an English-Mandarin "translationese." The novel constructs a vibrant, amphibious, and migratory world not only through an embodied visualization of a nonhuman dweller but also through these audible, linguistic, textual ambiances and contact languages grown from the Asian wetlands.[36]

Becoming Woman and Queer, Cross-Species Kinship

Lin has revealed that her novel's protagonist was set to be a woman in the late Qing dynasty, but she abandoned this idea as an ordinary Chinese woman's ability to travel was very limited in that time period.[37] Neither was a foreign woman possible, as the Thirteen Factories allowed only male merchants from the West to conduct business activities—their wives and families were not allowed to set foot inside. A female frog becomes the ideal solution for this historical speculation and cross-continental journey. As well as being amphibious, it is a subject that is conscious and also an object of desire.

34. Lin, *Chao Xi Tu*, 184–85.
35. Nance, "Jumbo."
36. Ansaldo, *Contact Languages*.
37. Lin, "Lin Zhao, Chao Xi Tu."

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Critical gender reflections are instilled throughout the book in a visceral and playful yet touching manner. When Wa is first found by boat children, they are most curious about its gender, poking around its organs and holes. Qijia Sis stops the children's cruel game and asks Wa to choose its gender. As the boat boys and girls each fight fiercely for their own gender, Wa cannot choose but to settle on just being "Wa," as ordered by Qijia Sis. It is only later, when Wa confirms its gender, that it also simultaneously rebels against these same norms. In a cathartic ovulation scene, Wa shoots out "freak balls" from its body, then swallows them: "Freak balls are soft, bouncy, fishy. Every one of them tells the sorrowful truth. How would I have tried such eccentric bitterness? I was counting while swallowing. My stomach has already been flooded with a sea of bitterness."[38] This vivid description of Wa's act against its motherhood instinct evokes a feminist sensibility and awakening. Prior to this act, Wa had just seen another female frog (a normal-sized one) being displayed with her stomach cut open, exposing her eggs, a scientific specimen showcasing the femininity and fertility of her species. Wa had also witnessed in the ocean the body of Akin, an infertile boat woman who, the book later hints, has been murdered by her own husband. However, it is only after Wa swallows her own eggs that it could finally identify its role as female and its embodied understanding of trans-species female sorrow.

Wa aligns a water-centric cosmological belief system with a feminine imprint of caring, nourishing, and healing. When Wa is first discovered the boat communities consider it spiritual and hang it high on the mast to protect them from typhoons. Only Qijia Sis worries for Wa's well-being and cuts off her tail for it to become the substitute holy object, sacrificing a small part of its body rather than the whole. The creator-author-mother of Wa and *Chao Xi Tu*'s fictional worlding sometimes shows herself between the lines. The character evokes the popular folk goddess Tianhou (the heavenly empress) or sometimes refers to Mazu (mother-ancestor), a deity of the water that has been widely worshiped by Chinese coastal communities since the early Song dynasty. The female author Lin even humorously resurrects Wa, imitating a video game respawning, after its deadly assault by a boat man.

If Qijia Sis and Wa's relationship symbolizes a root connection of water kinship, a mother-daughter archetype, Wa and the export painter Feng Xi point to a trans-species understanding and empathy, a more radical queering of their biological confinement. Feng Xi shows Wa a captivating world in his paintings, the city hinterlands and sailor adventures. They often walk down alleys and corners, a frog and a human together, a pair of unconventional flâneurs of the changing city. Feng inspires Wa to explore and dream of the far-away. Feng represents the agency of the ordinary and the lower class, with a genuine curiosity for the wider world, contradicting with the colonial mindset. He inspires Wa with an active place-making agency in the migrant vortex,

38. Lin, *Chao Xi Tu*, 92.

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although his final disappearance during the Macau fire hints at an abrupt end to his life and dreams.

In Macau, Wa meets two local Macanese inhabitants, Mingna and Diego, representing two divergent classes coming from mixed ancestry in colonial settlements. Mingna, as a Luso-Asian of extraordinary beauty, uses this beauty against men. She is the embodiment of the colonialist white man's ultimate desire, "heart of the Mundo, irregular pearl nurtured from the three oceans."[39] She keeps Wa as a pet, an unusual exotic creature to match her own status. But Mingna in turn is also used as a trophy. In Wa's description, all her excessive clothes, accessories, and laughter have a performative taste. As soon as her patron lover H dies, Mingna immediately disappears. Diego, a humble servant whose ancestry can be traced to slaves and servants from Swahili coast and Luanda along the Portuguese colonial trading paths, is orphaned at birth, adopted by the church, and bustles around doing illicit work and odd jobs for compradors at an early age. He is hired as Wa's keeper, but his dignity and livelihood completely rely on Wa, so he is effectively Wa's servant. In the cold winter in the London Empire Zoo, Wa and Diego, two (sub)tropical creatures dependent on each other, cling on to each other's warmth until Diego eventually freezes to death.

The entangled fates of human characters with intricate bloodlines, linguistic complexities, and turbulent lives materialize the profound impact and violent aftermath of colonial forced migrations and displacement. Meanwhile, the hybrid identities and cultures of the creole Macanese descendants also dissolve the hegemony of colonial order and impact.[40] These human characters are all marginalized, sharing intersectionality with Wa through historical biopolitical displacement. The two male companions Wa befriends, Feng Xi and Diego, also reveal a more feminine temperament than traditional masculinity. Feng's character has a delicate physicality and speaks and acts gently. His role as an export painter was often seen by mainstream Chinese society as the "little stepbrother of the foreign devil," which adds to his weakened masculinity and queer aura in the story. This "trans-species coalition" and queerness against gender norms,[41] as well as historical doctrine, liberates the suppressed agency of the marginal, making the PRD a liminal space for feminist speculations.

Storying the Anthropocene, an Open Conclusion

Lin is surely among the first and most perceptive Chinese novelists to directly name and respond to the Anthropocene in her writing. Although not officially recognized yet, the Anthropocene was proposed by scientists as the new geological epoch following the Holocene, referring to the unprecedented scale and impact of human activities on the planet's climate and ecosystem.[42] Wa's entire journey from the PRD to the British

39. Lin, *Chao Xi Tu*, 128.
40. Xavier, "Luso-Asians and the Origins"; Cheng, *Macau*, 202–5.
41. Zong, "Dragon Lovers and Plant Politics," 1049.
42. Crutzen, "'Anthropocene'"; Zalasiewicz et al., "Working Group on the Anthropocene."

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colonial-capitalist center could be regarded as one strand of the Anthropocene geological time. Lin pins down the very first World Expo held at the Crystal Palace in 1851 in London as a symbolic moment, as a pivotal showcase of the Anthropocene zeitgeist. Subtitled "Great Transparent" in the novel, the Crystal Palace described by Wa is an occult place where humans artificially build all kinds of transparent containers, from the glasshouse building itself to the Wardian cases, to the ongoing invention to store "busy planets, shooting meteors, and the silence of starless universe."[43] Wa itself is also on display there under the new name of "Bay Town Giant Frog," along with a fabricated legend of its origin and discovery by Wa's last owner, a geology professor. Toward the end of the novel, after Wa dies, its huge body is frozen within a carefully crafted gigantic block of ice and posted to the fictional "Imperial Natural Museum" for study. However, in transit Wa's body disappears along with the ice. The ending draws similarities with Amitav Ghosh's novel *River of Smoke* (2011), set in a similar historical period. In Ghosh's novel, the magical golden camellia with rejuvenating medical effects that the plant hunter seeks in the PRD was an invention pointing to a colonial fantasy of Oriental materialism. Differing from Ghosh, in *Chao Xi Tu* Lin reveals from the beginning that Wa is a creature of speculation. Yet its very material fabrication of journeys across lands and oceans, linking the East and the West, is like a literary reinvention of the golden spike, a geological encapsulation to identify the Anthropocene epoch.[44] Yet Wa disappeared. We are left with a disastrous and capricious world, and no mythical creature can give us any warnings. Wa is the embodiment of the material and spiritual more-than-human world beyond colonial naturalism and modern scientific taxonomy.

Lin's dive into history from a contemporary PRD setting not only reflects the scale of the Anthropocene but also draws a critical comparison to the region's ongoing mega constructions and urbanizations, which themselves manifest the Anthropocene conundrums. Spearheaded by the Chinese government and corporations, the making of a Greater Bay Area is one of the most important current development projects in China. It aims to integrate Hong Kong, Macau, Shenzhen, Guangzhou, and other PRD cities into a vast megaregion with a population of approximately sixty-seven million and a land area of fifty-six thousand square kilometers, much bigger in area size and population density than other urban bay areas like greater Tokyo, San Francisco, and New York.[45] The project is envisioned with innovative technological infrastructure and large land reclamation

43. Lin, *Chao Xi Tu*, 260.

44. "Golden spike" originally referred to the ceremonial gold spike to mark the completion of the first transcontinental railway across the United States. Today, the term denotes a Global boundary Stratotype Section and Point (GSSP) in stratigraphy to define geological time units. By July 2023, a golden spike for the Anthropocene is proposed to be a sediment core drilled from the bottom of Crawford Lake in Canada, in which sediments of chemicals and minerals show clear evidence of human activities altering the earth system on a planetary scale. See Zalasiewicz et al., "Working Group on the Anthropocene"; Max-Planck-Gesellschaft, "Locating the Anthropocene."

45. Yu, "Guangdong–Hong Kong–Macau Greater Bay Area."

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areas to further solidify material control over feral waters and cultures through a mindset of "terricentrism."[46] Juxtaposed against this top-down, present-future scenario of the PRD, Lin's reactivation of an amphibious historical geography and a multispecies, more-than-human world offers both a critique of and a lament for the anthropocentric development agenda—a continuity sustained from Western colonialism into postsocialist China. The occult palace witnessed and imagined by Wa is now emerging and merging with contemporary real scenarios. The once vibrant liquid geography and speculated cross-species kinships with a feminist spirit of the PRD, as narrated by a miraculous giant frog, may serve as an intimate, affective, and amphibious resistance to the Anthropocene, one with iron and melting ice.

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Acknowledgments

I would like to thank the journal editors and anonymous reviewers for their valuable feedback. I am especially grateful to Anna Barcz, Paolo Gruppuso, and Vera Fibisan for their constructive comments throughout the writing and revision process. Conversations with Anna and Paolo about the role of rivers in literature and history, which began at the Rachel Carson Center in 2022, deeply inspired this article. I also thank Kay Mei Ling Beadman and Johnathan Harrington for their kind support with language copyediting. This research was supported by the Early Career Scheme of the Research Grants Council of Hong Kong (Project no. 28606625, "Tracing the Chinese Pearl River Waterscape Through Eco-Arts").

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46. Ryan, "Hydropoetics," 487; Sheng et al., "Urban Morphology and Urban Fragmentation."

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